

A303 Amesbury to Berwick Down

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Final Detailed Archaeological Mitigation Strategy (DAMS)

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Executive Summary

An Outline Archaeological Mitigation Strategy (OAMS) for the Scheme was set out in Appendix 6.11 to the Environmental Statement (ES). The OAMS set out a draft Strategy as the basis for extensive consultation with members of the Heritage Monitoring Advisory Group (HMAG) (for sites within or affecting the WHS) and Wiltshire Council and Historic England (outside the WHS) to develop a Detailed Archaeological Mitigation Strategy (DAMS) to be implemented as part of the Outline Environment Management Plan (OEMP) submitted as part of the DCO application.

This document presents the Detailed Archaeological Mitigation Strategy (DAMS) and accompanying Overarching Written Scheme of Investigation (OWSI), setting out the scope, guiding principles and methods for the planning and implementation of essential archaeological mitigation. For each site or area of archaeological interest a Site Specific Written Scheme(s) of Investigation (SSWSI) will be prepared that outlines specific measures that would apply to particular pieces of archaeological fieldwork, to be carried out as part of the programme of archaeological mitigation works. Each SSWSI will be finalised in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, prior to work commencing in that site or area of archaeological interest.

In accordance with National Policy Statements, National Planning Practice Guidance and DMRB, the design of the Scheme has been developed to mitigate impact upon archaeological remains. In respect of archaeological remains within the footprint of the Scheme, a programme of archaeological mitigation fieldwork and recording will be implemented. This will include archaeological excavations, recording, reporting, publication, and dissemination to local communities, the wider general public and academics. The archaeological investigations will be carried out by a suitably qualified and experienced archaeological contracting company.

The majority of the archaeological mitigation fieldwork will be undertaken during the Preliminary Works (PW) stage of the construction programme, as Advanced Archaeological Works (AAW). The archaeological mitigation programme is secured as part of the OEMP which forms part of the DCO application and by a requirement of the DCO. The contractors appointed to undertake the PW and Main Works (MW) stages will produce Construction Environmental Management Plans (CEMPs) (based on and incorporating the requirements of the OEMP, as required by the OEMP itself) and Heritage Management Plans (required by the OEMP) that set out how the requirements for archaeological mitigation at each stage will be implemented.

A comprehensive publication and dissemination programme will be developed in parallel with a strategy for Public Archaeology and Community Engagement.

PART ONE – DETAILED ARCHAEOLOGICAL MITIGATION STRATEGY

1 Introduction

1.1 Project Background

1.1.1 An application for a DCO for the A303 Amesbury to Berwick Down Scheme ('the Scheme') was submitted to the Secretary of State on 18th October 2018. The Scheme would be approximately 8 miles (13km) long and comprise the following key components:

- A northern bypass of Winterbourne Stoke with a viaduct over the River Till valley;
- A new junction between the A303 and A360 to the west of and outside the WHS, replacing the existing Longbarrow roundabout;
- A twin-bore tunnel approximately 2 miles (3.3km) long, past Stonehenge; and
- A new junction between the A303 and A345 at the existing Countess roundabout.

1.1.2 Chapter 6 of the accompanying Environmental Statement (ES) [APP-044] considers the impact of the Scheme on Cultural Heritage and includes an Outline Archaeological Mitigation Strategy (OAMS) at Appendix 6.11 [APP-220]. The OAMS set out a draft Strategy as the basis for extensive consultation with members of the Heritage Monitoring Advisory Group (HMAG) (within the WHS) and Wiltshire Council and Historic England (outside the WHS), to develop a Detailed Archaeological Mitigation Strategy (DAMS), the implementation of which is secured by requirement 5 in Schedule 2 of the Development Consent Order (DCO). The archaeological mitigation programme will include provision for community engagement, education and outreach.

1.1.3 This document has been prepared by the Technical Partner on behalf of the Employer and presents a DAMS and accompanying Overarching Written Scheme of Investigation (OWSI). The scope, guiding principles and methods for the planning and implementation of essential archaeological mitigation are described. For each site or area of archaeological interest a Site Specific Written Scheme(s) of Investigation (SSWSI) will be prepared that outlines specific measures that will apply to particular pieces of archaeological fieldwork, to be carried out as part of the programme of archaeological mitigation works.

Status of this document

1.1.4 The DAMS has been prepared following review and comment by members of HMAG, Wiltshire Council and Historic England, as informed by advice provided by the A303 Scientific Committee. The DAMS supersedes and replaces the OAMS. The DAMS will be a certified document, with its implementation secured by requirement 5 in Schedule 2 of the DCO.

1.2 Purpose of the Strategy

- 1.2.1 The purpose of this document ('the Strategy') is to set out the scope, guiding principles and methods for the planning and implementation of essential archaeological mitigation works associated with the design and construction of the Scheme, following the approach to mitigation set out in the Environmental Statement submitted with the DCO application. It details the archaeological mitigation proposed to reduce the effect of the Scheme on the archaeological resource (either by protection / preservation of archaeological remains wherever possible or, where remains cannot be preserved, through a structured programme of archaeological investigation to mitigate the loss). Additional archaeological evaluation will also be carried out at certain locations along the Scheme where access was previously denied or where only a limited amount of work was possible, to confirm the presence/absence, extent and condition of archaeological remains, and to provide greater detail to inform the detailed mitigation requirements. The proposed investigations will be carried out at the Preliminary Works (PW) (construction preparation) and at the Main Works (MW) stages (Highways England, 2017b). This document presents the approach to consultation and approvals, project management, and the post-excavation analysis and publication stages.
- 1.2.2 The Scheme passes through a landscape of high archaeological significance, both inside and outside the WHS. Accordingly, the intention of the Strategy is to apply the highest practicable standards of mitigation, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of decision-making both at design and implementation phases.
- 1.2.3 The Strategy summarises the extent of previous investigations and describes the proposed mitigation works and methods that will be implemented, based on the results of previous archaeological surveys and evaluation associated with the Scheme.

1.3 Roles and Responsibilities

Implementation of DAMS

- 1.3.1 An Archaeological Contractor to be appointed on behalf of Highways England will be responsible for the delivery of the archaeological mitigation programme, as set out in this DAMS. This responsibility will include all on-site and off-site works, including preparation of SSWSIs. The Employer's Project Manager and Supervisor (the Technical Partner's Archaeologist) will be responsible for oversight of the archaeological mitigation programme and will be the principal point of contact for advisory groups, monitors and curators. Further details are set out in sections 5.1 and 6.1 of this document.

Advisory Groups and Monitoring of Investigations

- 1.3.2 The members of HMAG are Historic England and Wiltshire Council as statutory consultees and the National Trust and English Heritage as major landowners and heritage managers in the WHS and references to consultation with the members of HMAG within this DAMS means consultation with each of those organisations in accordance with the procedures set out in section 8.5 of this DAMS. HMAG has been convened to advise Highways England on evaluation, assessment and mitigation on matters pertaining to the WHS. HMAG is further advised by a Scientific Committee of independent specialists and experts. The Terms of Reference of both HMAG and the

Scientific Committee are published on the Scientific Committee's website: <http://www.a303scientificcommittee.org.uk/terms-of-reference>. The archaeological fieldwork will be closely monitored to ensure that it is being carried out to the required standard and that it will achieve the desired aims and objectives. Wiltshire Council and Historic England will attend site meetings and, for sites within the WHS, HMAG may also attend as outlined above and where matters directly affect their land ownership, to review the progress and results of the fieldwork. These meetings will also be used to inform sign off of sites prior to construction (see section 8.4 of this document). In addition, site visits will also be arranged to allow the Scientific Committee to view the archaeological investigations in progress, where appropriate and feasible (see 8.1.17 of this document).

- 1.3.3 Further details of the arrangements and reporting lines for the implementation and monitoring of the Strategy are provided in the Communications Strategy at section 8.1 and the flowcharts at Appendix A of this document.

1.4 Scope of the Strategy

- 1.4.1 The Strategy sets out the framework for archaeological mitigation as agreed with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. In format and content this document conforms with current good practice and takes account of guidance¹ outlined in:

- National Policy Statement for National Networks (NPSNN) (DfT, 2014);
- National Planning Policy Framework (NPPF) (MHCLG, 2018) and National Planning Practice Guidance (MHCLG, 2019);
- Design Manual for Roads and Bridges (DMRB Volumes 10 and 11) (Highways Agency, 2007; Highways Agency, 2008);
- Management of Research Schemes in the Historic Environment (Historic England, 2015a).
- Understanding Historic Buildings (Historic England, 2016a);
- Standard and guidance issued by the Chartered Institute for Archaeologists (CIfA): archaeological excavation (CIfA, 2014a), archaeological watching brief (CIfA, 2014b), archaeological field evaluation (CIfA, 2014c), the creation, compilation, transfer and deposition of archaeological archives (CIfA, 2014d); and for the collection, documentation, conservation and research of archaeological materials (CIfA, 2014e);
- Historic England have also issued a variety of guidance notes for environmental archaeology, human remains, scientific dating, preservation of archaeological remains and archaeological conservation (see Appendix B).

- 1.4.2 The Strategy and later the individual SSWSIs will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS,

¹References in this DAMS should be taken to refer to the current published policy, standards and guidance documents, as may be updated from time to time.

HMAG. Each SSWSI will be prepared prior to the fieldwork (the subject of that SSWSI) commencing.

1.5 Structure of the DAMS and OWSI

- 1.5.1 **Part One of this document comprises the Detailed Archaeological Mitigation Strategy.** It describes the principles to be applied in undertaking archaeological mitigation on the Scheme and proposes strategies and approaches for the protection of archaeological remains to be retained and for the investigation, recording and analysis of archaeological remains to be removed prior to construction. An overview of the archaeological baseline, including the results of the programme of archaeological surveys and evaluations undertaken in support of the Scheme is also presented.
- 1.5.2 Sites or action areas where the archaeological mitigation approaches will be applied are identified on Figure 12.1², building on the outline presented in the OAMS. Appendix D details the relevant archaeological baseline, survey results and rationale for mitigation for each of the identified mitigation areas. For those areas where archaeological investigation and recording is proposed, relevant research themes and period-based questions are indicated, as identified in consultation with specialists, drawing on (but not limited to) the Stonehenge and Avebury Archaeological Research Framework (SAARF) Agenda and Research Strategy (Leivers and Powell, 2016), the South West Archaeological Research Framework (SWARF, Grove and Croft 2012) and relevant period or specialist agendas. Scheme specific research questions have also been developed
- 1.5.3 **Part Two of this document comprises the Overarching Written Scheme of Investigation.** The application strategy for each of the mitigation approaches is discussed and outline method statements are presented. These will form the basis of the works to be detailed in SSWSIs. An outline programme for the archaeological mitigation works is also presented.
- 1.5.4 The requirements for communication, monitoring and reporting are identified and the procedure for completion of the archaeological works is set out. Assessment, reporting and archiving requirements are outlined.
- 1.5.5 **Part Three of this document comprises Tables, Figures and References.** This section also includes an abbreviations list and glossary of terms.
- 1.5.6 **Part Four** of the document comprises Appendices, as follows:
- Appendix A Communications Strategy: Flowcharts
 - Appendix B Archaeological Standards and Guidance
 - Appendix C OEMP requirements
 - Appendix D Archaeological Mitigation Action Areas
 - Appendix E Public Archaeology and Community Engagement Strategy

² Figures 12.1A-F and figures in Appendix D of this DAMS show indicative areas for archaeological mitigation: these are subject to further definition as part of the development and approval of SSWSIs in accordance with sections 8.5 and 8.6 of this DAMS.

2 Principles, Parameters and Objectives for Archaeological Mitigation

2.1 Principles for Archaeological Work

- 2.1.1 This section of the Strategy describes the principles that will apply to archaeological mitigation for the Scheme (both inside and outside of the WHS). These are similar to the Principles for the Archaeological Evaluation Strategy (AmW, 2018a) which in turn were developed from those set out in the WHS Management Plan (Simmonds and Thomas, 2015).
- 2.1.2 The Principles will be applied to all archaeological work carried out across the entire Scheme. Those that are relevant to a site or archaeological mitigation action area will be specifically mentioned in the SSWSI.
- 2.1.3 Archaeological mitigation (archaeological recording/preservation of archaeological remains) is required where there will be an unavoidable impact on archaeological remains and associated deposits, including elements of historic landscape character. The sites of archaeological interest which will require archaeological mitigation were initially identified in the ES [APP-044] and are further developed in Appendix D of this document.
- 2.1.4 The Principles set out below seek to guide actions to ensure the conservation of heritage assets within the WHS and throughout the Order limits.
- a) Avoid and minimise harm to the integrity or authenticity of the WHS or the assets that contribute to the OUV of the WHS.
 - b) The consideration of the cultural heritage of the World Heritage Site and the Scheme as a whole should be inclusive and include archaeological remains from palaeoenvironmental evidence up to and including remains of the last century, although not all remains contribute to the Outstanding Universal Value (OUV) of the WHS.
 - c) Historic building assets and the historic landscape, including Listed Buildings and Registered Parks and Gardens and other heritage assets should be given equal weight appropriate to their significance.
 - d) Archaeological works should be undertaken to a high standard that adequately reflects the significance of the World Heritage Site.
 - e) The design of mitigation work should take into account applicable Government guidelines on planning and archaeology, including the NPSNN, NPPF and National Planning Practice Guidance (which makes specific reference to World Heritage Sites); and Highways England DMRB, volumes 10 (Highways Agency, 2008) and 11 (Highways Agency, 2007).
 - f) Organisations and individuals undertaking archaeological work within the World Heritage Site and along the Scheme should do so within the ethical and professional standards set out in the ClfA Code of Conduct, Bylaws, Standards and Policy Statements (<https://www.archaeologists.net/codes/cifa>) (as updated

from time to time).

2.1.5 The Principles set out above acknowledge that not all archaeological remains within the WHS contribute to its OUV. The following principles have been applied in developing the Scheme proposals:

- a) The Scheme has been developed to avoid, wherever possible, known concentrations of archaeological remains that make a substantial contribution to the OUV of the WHS.
- b) Archaeological remains related to funerary and ritual activity contribute to the OUV of the WHS.
- c) Settlement sites are amongst the range of prehistoric monuments and sites mentioned in the SoOUV. Early Neolithic to Early Bronze Age settlement sites are considered to contribute to the OUV of the WHS as associated sites.
- d) Ploughzone artefact scatters of Neolithic or Early Bronze Age date have been identified at a number of sites, both within and adjacent to the WHS. Within the WHS these may contribute to the understanding of the OUV of the WHS as 'associated sites'. Within the WHS setting, they may have the potential to contribute to the understanding of the OUV of the WHS.

2.2 Parameters

2.2.1 The archaeological mitigation approach in this DAMS will be developed and implemented through the SSWSIs in line with the following parameters:

- a) Observe professional codes, guidance and standards (see Appendix B).
- b) Ensure that all field staff involved in the mitigation programme are aware of the significance of the WHS and its OUV through provision of a Scheme-specific training programme.
- c) Review and assess the considerable information already available from relevant prior investigations before commissioning any new works.
- d) Assess and undertake any necessary confirmatory or more detailed archaeological investigation across the Scheme, whether temporary or permanent.
- e) Consider archaeological and cultural heritage evidence from all periods and its contribution to the understanding of the historic landscape and its use over time.
- f) Only undertake extensive intrusive works in areas where there will be a direct impact through development (as identified in the ES [as certified by the DCO]), or where there is a need to consider management issues.
- g) Utilise the information provided by other disciplines (for example, geotechnical investigations).
- h) All works must take account of all statutory designations.

2.3 Objectives

- 2.3.1 All those designing or undertaking archaeological work in connection with the Scheme should:
- a) Ensure a detailed programme of archaeological work is in place to appropriately mitigate impacts on any archaeological remains due to the Scheme
 - b) The archaeological data generated from the Scheme has the potential to contribute to future national and international research projects. The DAMS will ensure that this data will be preserved and made accessible, and that it is reuseable and promoted as such.
 - c) Promote high quality research using innovative methodologies and reflexive approaches to explore a transect through the landscape and test existing landscape models, develop new research questions and feed back into the SAARF and SWARF.
 - d) The results of archaeological investigation should be published within an appropriate period following assessment and analysis (see indicative timeline at Appendix A.9). The results of various fieldwork interventions should be combined into a single report if possible.
 - e) Ensure that the results of the investigations (i) are made publicly available in an appropriate format for assimilation into the Wiltshire and Swindon Historic Environment Record (WSHER), (ii) develop an understanding of the historic environment resource of the World Heritage Site and the Scheme by the public at large; and (iii) disseminate in a timely manner via the Online Access to the Index of Archaeological Investigations (OASIS).
- 2.3.2 All archaeological mitigation works will only proceed in accordance with this DAMS and the securing DCO Requirement.

3 The Scheme, Previous Surveys and Studies

3.1 Introduction

- 3.1.1 Stonehenge and the surrounding landscape are rich in buried archaeological remains dating from the prehistoric period up to the present day and it has a long history of antiquarian and more recent scientific investigation. Assessment for the current and previous Schemes has completed gaps in the historical baseline data in order to determine the nature and character of the archaeological resource.
- 3.1.2 A comprehensive programme of archaeological evaluation field work has been undertaken for the Scheme, both inside and outside the WHS. The scope of the field work programme within the WHS has been developed in consultation with HMAG and the Scientific Committee to reflect approaches employed by current academic research projects in the WHS. Outside the WHS, a similarly detailed approach combining geophysical survey, sampling of artefacts in the ploughzone and targeted trial trenching has been employed to ensure a consistent approach across the Scheme.
- 3.1.3 This section provides an overview of the evaluation fieldwork undertaken for the Scheme and a summary description of the Scheme proposals and the archaeological resource identified in the Environmental Statement and from the archaeological evaluation programme. The indicative Scheme proposals are illustrated in the Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) [APP-059].

3.2 Overview of evaluation fieldwork undertaken for the Scheme

- 3.2.1 Intrusive field work has been undertaken for this project only where it was necessary to inform the design process. All field work has been designed to have the minimum impact possible and all archaeological works on the Scheme, including those located outside of the WHS, have been conducted with full consideration of the Research Framework for the Stonehenge, Avebury and Associated Sites WHS (Leivers and Powell, 2016).
- 3.2.2 The majority of the land within the Scheme boundary has been evaluated by recent detailed archaeological geophysical surveys, either as part of academic projects or in support of the Scheme. Additional evaluation fieldwork has been completed for sections of the Scheme within and adjacent to the WHS (Eastern Portal and Approaches, Western Portal and Approaches, new Longbarrow Junction and approaches, and the Rolleston Corner improvement). Much of the Winterbourne Stoke bypass alignment was archaeologically evaluated for previous A303 improvement schemes (see ES Appendix 6.10 [APP-219]); further fieldwork to supplement and confirm the results of this previous fieldwork outside the WHS was completed during 2018. The eastern section of the Scheme beyond the WHS has limited land take outside the existing highway boundary; archaeological geophysical survey at Countess East and Amesbury Road has been undertaken here to supplement and confirm the results of previous fieldwork.
- 3.2.3 The following evaluation techniques were employed:
- Detailed magnetometer survey across the area defined by the Scheme boundary, supplemented by targeted GPR surveys;

- Ploughzone artefact collection within the Scheme main line footprint and landtake for landscaping and excavated material deposition, as follows:
 - Within the WHS: field walking (where ground conditions permitted), hand sieved test pits and sieving of topsoil excavated in trial trenches;
 - Outside the WHS: field walking and sieving of topsoil excavated in trial trenches.
- Trial trenching and geo-archaeological investigations.

3.2.4 Detailed specifications for each of the techniques are given in the project's Archaeological Evaluation Strategy Report (AESR; see paragraph 6.26 of the ES [APP-044]) (AmW, 2018a), Overarching Written Scheme of Investigation (OWSI; see paragraph 6.27 of the ES [APP-044]) (AmW, 2018b) and Site Specific Written Scheme of Investigation (SSWSI) for each area. Table 11-1 (section 11 of this document) shows the evaluation work undertaken, with reference to the following sections of the Scheme:

- Winterbourne Stoke Bypass (west): Berwick Down to B3083 (Ch. 0-3550m)
- Winterbourne Stoke Bypass (east): B3083 to new Longbarrow Junction location (Ch. 3550-5200m)
- Longbarrow Junction (Ch. 5000-6240m)
- Western tunnel approaches & portal (Ch. 6240-7400m)
- Eastern tunnel approaches & portal (Ch. 10,400-11,600m)
- Countess East, Amesbury Road diversion
- Rollestone Corner

3.3 Scheme proposals and description of archaeological resource

3.3.1 The following paragraphs describe the indicative Scheme proposals (which are subject to detailed design) and archaeological resource in the vicinity of the Scheme from west to east along the Scheme carriageway, incorporating the results of the evaluation programme. The Scheme is described in the following sections:

- Chainage 0 to 1800 – Berwick Down to Winterbourne Stoke Bypass
- Chainage 1800 to 7400 – Winterbourne Stoke Bypass, Longbarrow Junction, Western Portal and approaches
- Tunnel (chainage 7400 to 10,375)
- Eastern portal and approaches, Countess Junction, to eastern Scheme origin (chainage 10,375 to 12,572)
- Rollestone Corner junction improvements

Section 1: Chainage 0 to 1800m – Berwick Down to Winterbourne Stoke bypass

- 3.3.2 This section of the Scheme closely follows the line of the existing A303. The works include construction of a Private Means of Access (PMA) on the south side of the A303 and a new restricted byway on the north side of the A303. Both the PMA and the restricted byway would be separated from the A303 by a low earth bund. The bunds, PMA and byway would all be constructed above existing levels, with existing topsoil retained in situ. Within the DCO boundary the land to north and south of the A303 would be managed as chalk grassland.
- 3.3.3 From its western origin, the Scheme passes through extensive relict field systems (UID 1004.01) identified from aerial photography, LiDAR (airborne laser survey) and geophysical survey; some parts survive as faint earthworks, but others have been ploughed out. These field systems are thought to have been laid out around 1500 BC, although they are likely to have been used over a sustained period of time and there are indications that many underwent subsequent reorganisations in the Iron Age, Roman and medieval periods.
- 3.3.4 Immediately to the northwest of the western origin of the Scheme, the Iron Age hillfort at Yarnbury Camp (UID 1000/NHLE 1005689; Asset Group AG01) is situated on the summit of a prominent hill, a local high point in the landscape. Some 500m further to the north is the Parsonage Down Camp earthwork enclosure and its associated field system (NHLE 1009646). Occupying an extensive area, this is also considered to be of Iron Age or Roman date; the field system is well-preserved and of particular importance because of its proximity to Yarnbury Camp. Between these two sites is a scheduled Bronze Age round barrow (NHLE 1005614), while another barrow stands in isolation to the south of the A303 on Steeple Langford Cow Down (NHLE 1004725).
- 3.3.5 South of the Scheme on a former turnpike road now extant only as a green lane, is a scheduled guidepost dating to 1750 (UID 6001/NHLE 1005621). This is one of several such markers or milestones near to the Scheme, all belonging to the turnpike era. Only this example is scheduled; four others within the 500m study area are listed at Grade II, while some non-designated examples are also present.
- 3.3.6 Trial trenching in this part of the Scheme (Highways England, 2019d [REP1-049, 050], Trenches 655-662) did not identify surviving remains of the field systems; tree throws were also absent in the trial trenches. Prominent modern plough scarring was apparent across the area.

Section 2: Chainage 1800 to 7400m – Winterbourne Stoke Bypass, Longbarrow Junction, Western portal

Winterbourne Stoke Bypass (west of B3083)

- 3.3.7 From approximate chainage 1800m, the new road alignment diverges from the existing A303 to the north in a deepening cutting to approximate chainage 3000m. The restricted byway extends on the north side of the new road to Green Bridge No. 1 at approximate chainage 2800m, where it crosses to the south of the road to join the existing A303 west of Scotland Lodge. Land either side of the A303 within the DCO boundary would be managed as chalk grassland.
- 3.3.8 Proceeding eastwards, the Scheme crosses an area containing a very large number of possible pits identified by geophysical survey. Trial trench evaluation suggests many of

the anomalies are not anthropogenic in nature, although a small number were archaeological and contained Early Bronze Age pottery and Late Bronze Age pottery (Wessex Archaeology, 2002d) (UID 1008). Recent trial trenching (Highways England, 2019d [REP1-049, 050], Trenches 663-672) did not identify extensive surviving remains, however; archaeological features were limited to a pair of undated possible postholes in Trench 666 and an undated possible ditch cut into the fill of a tree throw in Trench 667 (approximate chainage 2000-2100).

- 3.3.9 Trial trenching of components of a pair of possible rectilinear enclosures (UID2029) identified two undated ditches in Trench 673 (approximate chainage 2200). A single circular, flat-bottomed pit containing a small quantity of pottery broadly dated to the prehistoric period was also recorded in Trench 673; if contemporary, this pit would appear to be situated within the possible enclosure. Two further undated linear features (67704 and 67708) revealed in Trench 677 (approximate chainage 2400) and aligned perpendicular to each other may comprise a ditch and a former headland or lynchet.
- 3.3.10 An Early and Middle Iron Age to Roman period enclosed settlement (UID 2033; Asset Group AG02) west of Scotland Lodge Farm lies immediately south of the new road alignment at approximate chainage 2600. The Scheme alignment here was selected to avoid the known extent of the settlement enclosures, and trial trenches excavated north of the enclosure in support of the Scheme (Highways England, 2019d [REP1-049, 050], Trenches 678-690, approximate chainage 2400-2800) did not identify any archaeological features.
- 3.3.11 South of the proposed carriageway alignment at approximate chainage 2900, trial trenching in support of the Scheme has confirmed the presence of a focus of Neolithic and Early Bronze Age activity north-west of Scotland Lodge Farm, situated on a spur of high ground overlooking the River Till valley (Highways England, 2019d [REP1-049, 050], Trenches 1068 and 1070). This site includes two non-designated ring ditches (UID 2035.01/MWI6396, UID 2035.02/MWI7206) originally identified from aerial photographs and investigated by detailed magnetometer survey and GPR survey, together with two closely spaced sub-circular pits west of the ring ditches which contained red deer antlers and Middle Neolithic Peterborough Ware pottery.
- 3.3.12 From chainage 3000m a high embankment would carry the new road across the coombe north of Scotland Lodge. South of the road, the land would be contoured to blend the embankment into the landscape. Topsoil would be stripped within the footprint of the embankment and landscaping area. New tree planting would integrate the embankment with existing woodland on the northern boundary of Scotland Lodge.
- 3.3.13 North of the embankment, land within the DCO boundary at Parsonage Down East would be re-profiled to accommodate deposition of excavated material and drainage area one. Existing topsoil would be removed in areas where the depth of deposited material would be greater than 1m. Drainage of the filled area would be accommodated within the fill. The re-profiled filled area would be managed as chalk grassland with occasional areas of shrub planting. Drainage Area One would be located within the central part of the filled area.
- 3.3.14 An existing oil pipeline crossing Parsonage Down East would be relocated on a parallel alignment approximately 25m to the east. The pipeline would be protected where it passes beneath the new embankment and buried beneath excavated material to the

north of the embankment. An existing water supply pipeline in the eastern side of Parsonage Down East falls within the shallowest areas of landscape fill and would be filled over without the need for additional protection. The water pipeline would pass through the high embankment via the new B3083 underbridge.

- 3.3.15 An existing underground power line crossing the western part of Parsonage Down East would be diverted across Green Bridge No. 1. Within the area of proposed fill, the underground power line would be raised within the new fill. Existing overhead power lines crossing the northern and eastern parts of the Parsonage Down East fill area would be raised where additional infill is to be placed below them, except where they cross the new Winterbourne Stoke bypass alignment, where they would be undergrounded to pass below the new highway embankment west of the new B3083 underbridge.
- 3.3.16 Parsonage Down is occupied by an extensive field system that is likely to date to the later prehistoric (Middle Bronze Age to Iron Age) and Roman periods (UID 1004.01). Multi-period settlement over the same time span also appears to be evidenced by a number of enclosures and linear features (e.g. UIDs 2036; 2039) and by a profusion of pit-like features across the eastern parts of Parsonage Down (UID 2038). Extensive geophysical survey in this area has augmented the previous aerial photographic interpretations. The settlement and field system appear to overlie an older funerary and ceremonial landscape, evidenced by a group of potential barrows identified from aerial photographs and subsequently located by geophysical survey (UID 2030). An upstanding barrow is also present beyond the Scheme boundary, some 700m west of these features (NHLE 1004741).
- 3.3.17 Trial trenching in this part of the Scheme confirmed the presence of colluvial deposits within and on the sides of the coombe. Electrical resistance tomography (ERT) combined with geo-archaeological boreholes identified a series of stratigraphic units displaying a consistent pattern of deposition across the coombe, with a higher resistivity band likely related to a flint gravel lag deposit measuring 2m thick, above a generally homogenous, lower resistivity response that likely relates to more silty/chalk-sandy/clay deposits (Highways England, 2019m [REP1-051]). These latter deposits are thickest at the lower portion of the dry river valley in the south-east of the investigated site (Transects 3 and 4); there is consistently an interface between this deposit and the chalk bedrock, most likely caused by a process of weathering.
- 3.3.18 A series of 6 boreholes along the ERT transects recovered deposits typical of chalkland valleys, with chalk rock overlain by Coombe deposits that accumulated as a result of freeze/thaw processes during the Pleistocene, overlain by Holocene colluvial deposits. In two coring locations (BH 5 and BH 6) a dark brown flinty silty clay soil was recorded within the Coombe deposits themselves (Highways England, 2019m [REP1-051]). If in situ, this would be interpreted as an interstadial buried soil, most likely of Windermere date; the clarity of the boundaries indicate that this may not be an in situ soil, but possibly a clay-with-flint lined dissolution pipe formed as a result of periglacial processes.
- 3.3.19 ERT and borehole survey in the location of a subcircular feature, interpreted as a possible pond barrow in the gradiometer survey, identified an increased thickness of colluvium (up to 3m). The subcircular feature is re-interpreted as a probable geological solution feature, rather than a pond barrow (Highways England, 2019m [REP1-051]).

- 3.3.20 The Scheme proposals avoid two of the potential barrows situated on the highest ground within this area. A third ring ditch was investigated during the trial trenching but remains undated (Highways England, 2019d [REP1-049, 050], Trench 992).
- 3.3.21 Two shallow circular pits in the east of the Parsonage Down excavated material deposition area, close to the line of the realigned B3083 (Highways England, 2019d [REP1-049, 050], Trench 717, approximate chainage 3500) contained Beaker pottery; neither feature correlated with any geophysical anomaly. In the central part of the excavated material deposition area, an Early Bronze Age Food Vessel containing the cremated remains of a juvenile was found within a small circular pit in an area of superficial geology, sealed by colluvium in the base of the coombe (Highways England, 2019d [REP1-049, 050], Trench 985).
- 3.3.22 Immediately north of Scotland Lodge Farm, Trenches 696 and 1235, 699 and 1074 revealed undated linear ditches correlating with linear geophysical anomalies, which appear to form parts of a rectilinear enclosure, apparently cutting the possible Neolithic or Early Bronze Age ring ditch described above (see 3.3.11) (Highways England, 2019d [REP1-049, 050]).

Winterbourne Stoke Bypass (east of the B3083)

- 3.3.23 The B3083 Shrewton Road would be diverted to the west of its present alignment to pass beneath the new embankment in a culvert structure (B3083 underbridge). The new A303 embankment would pass over the existing B3083 alignment and across the southern edge of Fore Down in a shallow cutting (River Till cutting west). Drainage Area 2 would be located north of the cutting. A combination of chalk grassland and shrub planting would help to integrate the drainage area into the landscape. A temporary compound would be established on land north of the cutting and east of the B3083. South of the cutting land east of the B3083 would be re-profiled to help blend the new road into the landscape north of Winterbourne Stoke, before returning to agriculture. Land within the DCO boundary north and south of the River Till cutting west would be returned to agriculture. A new water supply pipeline from the B3083 will pass south of the temporary compound along the north side of the new road to the River Till crossing.
- 3.3.24 South of the proposed carriageway alignment, the village of Winterbourne Stoke is likely to be of Saxon origin. It may have been larger during the medieval period, as earthworks of deserted settlement plots are in evidence around the margins of the present village. The core of the village, to the south of the existing A303, is a conservation area in which a number of listed buildings are present, including the listed Manor House and the Church of St Peter (Grade II*; NHLE 1130971; 1130975).
- 3.3.25 To the north, at distances of between 400m and 800m from the proposed carriageway alignment, are three extensive scheduled areas: Winterbourne Stoke West round barrow cemetery, the Coniger enclosure and section of linear boundary earthwork (UID 2000/NHLE 1015019; Asset Group AG03); Winterbourne Stoke East round barrow cemetery and earthwork enclosure on Fore Down (NHLE 1015020; Asset Group AG04); and the Romano-British settlement on Winterbourne Stoke Down (NHLE 1015222; Asset group AG07). The latter lies within an extensive rectilinear field system that is also of likely Roman date (UID 2038).
- 3.3.26 Archaeological evaluation trenching in 2003 revealed an undated north to south aligned ditch predicted in a previous geophysical survey as a weak trend (Wessex Archaeology,

2003b: Area 4, Trenches 36 and 37; GSB Prospection Ltd, 2001a: Area 27). To the east, a broad, shallow pit of possible Iron Age date was recorded in Trench 38. Possible cart tracks (wheel ruts) aligned north-north-west to south-south-east in Trench 38 were also located in 2018 Trench 1317, some 65m to the south of Trench 38. The undated trackway is assumed to date to the medieval period or later.

- 3.3.27 At the River Till floodplain, an existing former quarry would be filled as part of the western bridge head for the viaduct crossing of the River Till. New tree planting would help integrate the bridge head embankment into the landscape. The new River Till viaduct will comprise two separate parallel decks to mitigate the shading effect on the designated SAC river fauna, supported on three pairs of bridge piers placed in the floodplain. A temporary river crossing would also be established as part of the works within the Scheme boundary here. The water supply pipeline would be bored beneath the river channel.
- 3.3.28 The River Till valley floor includes faint earthwork traces of a water management system or water meadows of probable post-medieval date (UID 2050). Geophysical surveys in 2001 (GSB Prospection, 2001) and 2018 (Wessex Archaeology, 2018a) identified an infilled relict river channel corresponding to historic map evidence and weak linear features possibly relating to former floodplain water management systems. Auger survey in 2001 concluded that the presence of alluvium in the River Till valley bottom is patchy, discontinuous and variable both across the valley profile and along its longitudinal corridor (Wessex Archaeology, 2002j, p. 9). The sequences recorded were shallow (generally less than 1m), however where present these provide the potential to mask, bury and seal archaeological horizons; no dating evidence was recovered from the recorded sequences or datable material within them. The localised presence of footslope colluvium on the edges of the floodplain also offers the potential to mask, bury and seal archaeological remains in restricted areas.
- 3.3.29 Little archaeology is known on the flanks of the River Till valley, although chalk coombes to the west and east have potential to contain deposits of colluvium (hillwash sediments) that can contain or seal archaeological remains.
- 3.3.30 From the viaduct over the River Till, the Scheme proceeds onto an embankment forming the eastern bridge head, then passes eastwards mostly in cutting through a dry valley towards Winterbourne Stoke Hill. Again, new tree planting would help integrate the eastern bridge head embankment into the landscape. Drainage Areas 3 and 4 would be incorporated within new chalk grassland. Green Bridge No. 2 would cross the cutting at approximate chainage 4650m. The tunnel production area will be situated east of Green Bridge No. 2. The new water supply pipeline will pass inside the northern DCO boundary.
- 3.3.31 Land north and south of the cutting would be re-profiled to integrate the new road into the landscape and returned to agriculture. Agricultural land would be provided with new hedgerow boundaries, as shown in the Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) (APP-059).
- 3.3.32 Two small possible prehistoric pits north of Winterbourne Stoke Hill (Highways England, 2019e [REP1-052, 053], Trench 754, approximate chainage 4700m) containing cattle bone, burnt and worked flint lay about 100m north of a small, ploughed-down non-designated round barrow cemetery on Winterbourne Stoke Hill immediately north of the

existing A303 (Asset Group AG05). The probable round barrow cemetery was previously identified as three ring ditches visible on aerial photographs; it was subsequently confirmed through geophysical survey as comprising five ring ditches located on a relatively flat high area of land at 101–104m aOD, with ground levels falling to the north. The trial trenching confirmed the survival of all five ring ditches as substantial below-ground features. Although closely datable material was rare, with pottery found only in secondary and tertiary contexts, the flint assemblage recovered is consistent with a Late Neolithic/Early Bronze Age date. The barrow cemetery is crossed by a linear feature, interpreted on investigation as a former hedged boundary, evidently of a much later date.

- 3.3.33 A large oval/sub-rectangular shallow possible pit (132209) measuring 3.8m by 2.8m in plan and 0.21m deep approximately 135m east of the River Till (Highways England, 2019e [REP1-052, 053], Trench 1322, approximate chainage 4200m) produced two sherds of Saxon pottery along with cattle and sheep bone, fired clay (possibly representing oven/hearth lining) and burnt flint. Although interpreted in the geophysical survey as possible archaeology in an area where irregular superficial geological deposits have been identified, on exposure the feature was initially thought to be a natural feature. However, the shape in plan and the fill (containing a variety of finds) suggests that this may be a Saxon sunken-featured building (SFB).
- 3.3.34 A linear ditch identified from geophysical survey (Highways England, 2019e [REP1-052, 053], Trenches 740, 1327 and 1329, approximate chainage 4250m) is of likely later prehistoric/Roman date, as its alignment is at odds to that of the probable medieval lynchets (below). The v-shaped ditch profile may form an enclosure with a perpendicular undated ditch of similar profile to the east. A further possible rectilinear enclosure is also undated, but the u-shaped ditch profile suggests a different phase of activity (Highways England, 2019e [REP1-052, 053], Trench 1338, approximate chainage 4625m).
- 3.3.35 North of the main carriageway alignment, a slightly curving north-west to south-east aligned boundary ditch equating with a geophysical anomaly following the lower slopes of the dry valley produced a single sherd of Roman pottery and may therefore be a further later prehistoric/Roman feature.
- 3.3.36 Trial trenching confirmed the survival as archaeological features of a series of lynchets visible in aerial photographs, which regularly divide up the landscape on the east side of the River Till valley, to the north of the existing A303. Finds were very rarely recovered from the plough-washed/colluvial fill of these features, formed by ploughing in order to cultivate sloping topography. Typologically and considering they are relatively spatially limited to the east of Winterbourne Stoke, the lynchets are most likely associated with medieval, rather than prehistoric cultivation.

Longbarrow Junction to WHS boundary

- 3.3.37 The new A303 alignment crosses the existing A303 at approximate chainage 5500m. The new Longbarrow Junction is located approximately 600m west of the existing Winterbourne Stoke Crossroads roundabout, at the eastern end of the dry valley. The A303 passes in cutting below the grade separated junction, which comprises twin 'dumb-bell' roundabouts connected by Green Bridge No. 3, with the northern roundabout located north of the existing A303 and the southern roundabout to the south of the existing road. East of the new junction, the A303 will run in a deep (9m below ground level) cutting to the WHS boundary. north of the new junction and A360 northern

link road, the Main Civils Compound will be laid out, with uses zoned to make best use of topography to screen larger installations in views from the WHS.

- 3.3.38 During construction, a temporary road would carry traffic between the northern dumb-bell roundabout and the existing Winterbourne Stoke Crossroads roundabout. This temporary road would be constructed above existing levels and would be fully reversible. A temporary bridge over the new A303 cutting will be constructed to the west of the A360, to carry A360 traffic during construction of the cutting through the existing A360.
- 3.3.39 The twin dumb-bell roundabouts will connect slip roads on and off the A303 with link roads north and south connecting to the A360. The existing A360 will be downgraded to a restricted byway between the link roads for approximately 1.5km. West of the new junction, the existing A303 will be connected to the southern dumb-bell roundabout to provide access to Winterbourne Stoke from the A360. The existing A303 between the new junction and the WHS boundary on the A360, together with the existing Winterbourne Stoke crossroads roundabout, will be removed and returned to chalk grassland (see Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) (APP-059)).
- 3.3.40 The dumb-bell roundabouts, the connecting bridge over the new A303 and the A360 link roads will be constructed below existing levels, to assist landscape integration and minimise visibility of traffic using the junction, when viewed from within the WHS. Land south of the southern A360 link road would be re-profiled to integrate the new link road into the landscape where it crosses the north-eastern slope of Oatlands Hill.
- 3.3.41 Limited new hedge planting along the slip roads and the southern edge of the new A303 cutting will help conceal traffic and integrate the new roads into the landscape, while limited shrub planting will help conceal traffic using the dumb-bell roundabouts in views from the WHS (see Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) (APP-059)). Land within the hedged boundaries will be managed as chalk grassland. The existing trees and shrubs north-west of the Winterbourne Stoke Crossroads roundabout will be removed. Land within the DCO boundary, including the Main Civils Compound area, will be returned to agriculture.
- 3.3.42 The Main Civils Compound will be situated north-west of the new junction and the new northern A360 link road. An electricity supply cable will be routed along the A360 from the south, over the temporary bridge and along the northern edge of the cutting before passing north-west beneath the existing A303 approximately 265m west of the existing roundabout, to a temporary substation located in the Main Civils Compound. The new water supply pipeline will enter the compound along the northern DCO boundary. From the compound, the water and electricity supplies required for the tunnel boring machine and tunnel service buildings will be routed along the same alignment as the incoming electricity supply to the WHS boundary.
- 3.3.43 On the west side of the present A360, to the west of, and outside, the WHS boundary a complex, dense array of linear and curvilinear features has been detected by geophysical survey and from aerial photography. The Winterbourne Stoke Crossroads barrow cemetery (Asset Group AG12), including its Neolithic long barrow and associated Early Bronze Age round barrows, are located to the northeast of the proposed Longbarrow Junction, whilst The Diamond group (Asset Group AG13) is

located to the southeast. Both monument groups lie outside the Scheme footprint for the construction of the new junction. Late Bronze Age settlement evidence is focused around the existing Longbarrow Roundabout along with a partly scheduled later prehistoric land boundary (Wessex linear) and field systems.

- 3.3.44 Excavation in 1967 prior to the construction of the present A303/A360 roundabout revealed an enclosure, four circular features thought to be Late Bronze Age huts and a number of pits (Vatcher and Vatcher, 1968). An archaeological watching brief along a cable route to the west of the roundabout and south of the A303 identified a number of ditches, a pit, post-holes and stake-holes (UID 2001).
- 3.3.45 On Oatlands Hill, south of the Scheme boundary, a later prehistoric and Romano-British settlement is known from aerial photographs (MWI7155, Asset Group AG09). On the northern flanks of Oatlands Hill, southwest of the proposed Longbarrow Junction, further archaeological features may represent a field system and possible settlement evidence of Bronze Age to Roman date. These include two potential barrows (UID 2069 and MWI7153); an incomplete oval or elongated C-shaped enclosure or possible barrow identified from aerial photographs and geophysical survey (UID 2072); a linear ditch or boundary of possible Bronze Age date visible as a cropmark on aerial photographs (UID 2068); a cluster of suspected prehistoric pits (main groups UID 2143 and MWI74878); and a boundary ditch and a probable trackway (UID 2073).
- 3.3.46 Archaeological evaluation in 2018 located loessic and coombe deposits captured within a solution feature in Trench 448 just east of the northern extent of the A360 link road (Highways England, 2019h [REP1-042, 043]); this survival demonstrates the potential for localised preservation of Pleistocene environmental evidence in such features. Deposits of colluvium in various locations are likely to preserve sequences of palaeoenvironmental interest and may also mask archaeological features.
- 3.3.47 Concentrations of flint both in the topsoil and in a small number of archaeological features suggest that activity was occurring from at least the Early Neolithic period (Highways England, 2019h [REP1-042, 043]). Scarce traces of Mesolithic and Early Neolithic activity within this dataset fit with the known pattern of very sporadic earlier evidence, with activity of Neolithic date concentrated around the major earthwork monuments to the east and south-east. Most of the evidence (predominantly lithic material, with small amounts of pottery and faunal remains) indicates later Neolithic activity. This evidence takes its place among other evidence of this type and date from The Diamond, the Winterbourne Stoke 71 long barrow, and in the vicinity of the later North Kite to the south-east. Contemporary ceremonial activity in the immediate vicinity is demonstrated by the hengiform structure west of The Diamond, and possibly a second 250m south-east of the existing Longbarrow Roundabout (Highways England, 2019h [REP1-042, 043]).
- 3.3.48 Early Bronze Age features on the realigned A360 north, comprising Beaker pits and an urned cremation, suggest activity on the periphery of a more densely-occupied area to the east (Highways England, 2019h [REP1-042, 043]). South of the A303 at the southern end of the realigned A360 south approach road, close to the A360, the geophysical survey and trial trenching revealed two sides of a possible rectangular enclosure, not itself Early Bronze Age, but containing a single sherd of grog-tempered ware of that date.

- 3.3.49 South of the A303, Middle and Late Bronze Age evidence is concentrated around a 'C'-shaped enclosure revealed by geophysical survey and from previous aerial photographic assessment (Highways England, 2019h [REP1-042, 043]). The C-shaped enclosure contained the remains of a Late Bronze Age vessel in the backfill of its southern arm. On its western side, trenching revealed a number of post-holes which may form the remains of a post-built structure, one of which contained a single sherd of later prehistoric pottery. A short length of a linear ditch like feature to the west of the enclosure may have formed a blocking ditch to close off the approach to the enclosure. The ditch backfill contained a complete vessel thought to date from the Late Bronze Age. The possible function of the enclosure and ditch could not be demonstrated, but the deposition of whole or substantial portions of pots and significant concentrations of burnt flint indicate activities of some importance. Contemporaneity or other connections with the settlement excavated by Vatcher and Vatcher at the existing Longbarrow Roundabout to the north-east also remains to be demonstrated (Vatcher and Vatcher, 1968).
- 3.3.50 North of the A303, sections of two later prehistoric long-distance land divisions ('Wessex Linears', assumed to be later prehistoric in date) were targeted, but no dating evidence was retrieved (Highways England, 2019h [REP1-042, 043]). These features are known to continue to the southeast of the existing Longbarrow Roundabout, where a section of one of them is designated as a scheduled monument.

Western tunnel portal and approaches

- 3.3.51 From the WHS boundary the new A303 approaches the western tunnel portal in a cutting up to 11m deep retained within near-vertical walls. The bored tunnel portal will be situated (within the limits of deviation) between chainages 7000m to 7200m. Immediately west of the bored tunnel portal a 200m section of cut and cover tunnel will help integrate the portal into the landscape. Tunnel service buildings will be located outside the cut and cover section of the tunnel.
- 3.3.52 The A360 at the WHS boundary will be removed by the cutting. Green Bridge No. 4 over the cutting between approximate chainages 6400m to 6550m will provide connectivity for non-motorised users along a restricted byway connecting to the downgraded A360 to the west and the downgraded A303 to the north. The permanent water supply pipeline to the tunnel service buildings will follow the northern edge of the retained cutting through the WHS, deviating northwards between approximate chainages 6350m and 6600m to avoid the construction area for Green Bridge No. 4. The permanent power cable route to the tunnel service buildings will follow the southern edge of the retained cut from the A360 to Green Bridge No. 4, where the route will cross the bridge to join the alignment of the water pipeline.
- 3.3.53 The existing A303 in this section of the Scheme will be downgraded to a restricted byway, with land within the existing highway boundary adjacent to this managed as chalk grassland (see Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) (APP-059)). Land between the downgraded A303 and the southern DCO boundary on both sides of the cutting and above Green Bridge No. 4 and the cut and cover section of the tunnel would also be managed as chalk grassland.
- 3.3.54 The western boundary of the WHS is delimited by the present A360. Immediately adjacent to the roundabout on its northeast side is the Winterbourne Stoke Crossroads barrow cemetery (Asset Group 12). Comprising some twenty-five individual monuments,

it is arranged in two groups and aligned on the prominent Neolithic long barrow with another cluster of barrows to the northwest. The group is of particular importance since it incorporates examples of all the main barrow forms: long, bowl, bell, saucer, pond and disc (UIDs 2003/NHLE 1011047; 2004/1011842; 2005/1011843; 2006/1011841; 2007/1012368).

- 3.3.55 To the south and east of Longbarrow Roundabout, within the WHS boundary, are a number of other significant monument groups. The extensive Diamond Group (Asset Group AG13) comprises three outlying bowl barrows, a nucleated group of seven bowl barrows and a pond barrow, three long barrows, a henge monument and hengiform feature. An outlying bowl barrow on the southwest side of the crossroads is also included in this group (UID 2002/NHLE 1011045). Only the scheduled long barrow still survives as an upstanding earthwork (UID 2012/NHLE 1010830).
- 3.3.56 The long barrows amongst The Diamond Group form part of a dense concentration of Neolithic long barrows in the western part of the Stonehenge WHS, including the Winterbourne Stoke long barrow, Normanton Down and Wilsford Down long barrows (Bowden et al. 2015). The apparent cluster of long barrows around the head of the dry valley between Wilsford and Normanton Downs may suggest an early significance to this area. A recent paper (Roberts et al., 2018) notes a clear pattern of differential preservation of long barrows away from the vicinity of Stonehenge: the two long barrows in The Diamond Group investigated for the Scheme (WS71 and WS86) were destroyed during later prehistory, however no long barrow within view of Stonehenge has been similarly fully ploughed out, and none are overlain by prehistoric field systems. The authors further postulate that the specific elaboration of long barrows WIL41 on Lake Down and WS1 at Winterbourne Stoke Crossroads by round barrow cemeteries may also be linked to their position around the Wilsford/Normanton dry valley.
- 3.3.57 This section of the Scheme passes between the Winterbourne Stoke long barrow and the long barrows of The Diamond Group.
- 3.3.58 A scheduled linear boundary bisects The Diamond Group, extending for some 3km on a southeast to northwest alignment from The Diamond cove to the southeast across Winterbourne Stoke Down to the northwest (UID 2014). South of the existing A303, the boundary feature survives as an upstanding earthwork (scheduled as NHLE 1010837). The boundary is an example of a 'Wessex linear ditch', a characteristic feature of the Salisbury Plain area, many of which appear to have been established in the Late Bronze Age (c.1200-700 BC), although they are often not closely dated and may have been maintained and elaborated over prolonged periods.
- 3.3.59 Other scheduled round barrows are present to the south of the present A303, including two bowl barrows (UID 2015/NHLE 1010831; UID 2017/NHLE 1013812) on Wilsford Down. South of the Scheme boundary, the Wilsford Shaft is a ploughed-out pond barrow that, on excavation in the 1960s, was found to contain a vertical shaft containing votive objects (UID 2016/NHLE 1010833). Further to the southeast, the North Kite Enclosure and Lake Barrow cemetery lie at 830m and greater from the Scheme carriageway alignment (Asset Group AG16).
- 3.3.60 Archaeological evaluation of the Western Portal and Approach cutting has generally confirmed the results of previous fieldwork, indicating limited Late Neolithic and Early Bronze Age activity (Highways England, 2019f [REP1-045, 046]). The only ceremonial

or funerary monument identified within the Scheme boundary is a small curvilinear anomaly observed in geophysical surveys, some 4m in diameter close to the existing A303, which may represent a shallow pond barrow, perhaps with a surrounding ditch feature, or a small hengiform monument (Wessex Archaeology, 2018a, feature 10000). Although within the Scheme boundary, this feature lies outside of the footprint of the works for the approach cutting and would not be affected by the Scheme; the feature was therefore excluded from the trial trenching programme.

- 3.3.61 Archaeological features were uncovered in nine of the 71 excavated trial trenches (Highways England, 2019f [REP1-045, 046]). A small sink hole or doline in Trench 241, south of the approach cutting footprint, contained evidence of human use in both the prehistoric and historic periods, while several tree hollows contained cultural material, mainly struck or burnt flint. Three pits contained prehistoric ceramics and other material, two (in Trenches 234 and 240) dating to the Beaker period, the third (in Trench 240) to the Early Bronze Age. The most significant results came from two Beaker inhumation graves, again situated outside the footprint of the approach cutting. One grave (Trench 244), cut into a large tree-throw hollow which also contained other features, contained small fragments of neonatal bone along with sherds from a fire-damaged plain Beaker. The other (Trench 260) contained a female inhumation accompanied by a Beaker, a copper alloy pin or needle fragment, and a shale object with no known parallel or function; a radiocarbon determination on a fragment of tibia returned a date of 2490-2300 cal. BC, a cereal grain from the grave 2340-2060 cal. BC [(Highways England 2019f p.51 [REP1-045]; 2019p p.15 Table 5-3 [REP3-023]). Smaller sub-surface features in Trenches 234 and 240 indicate that Beaker and Early Bronze Age activity was not restricted to graves, whether flat or beneath or immediately around barrows, but also involved the incorporation of material (flint, pottery, etc.) into small features (pits, tree hollows, etc.) (Highways England, 2019f [REP1-045, 046]). Radiocarbon dating showed the cereal grain from a Beaker pit in Trench 244 (2200-1970 cal. BC) and all dated hazelnut shells (to be consistently of Beaker or later Bronze Age date (Highways England, 2019f p.50 [REP1-045]; 2019p p.11 [REP3-023]). Charred plant remains from a Beaker pit in Trench 234 (radiocarbon dated to 2140-1920 cal. BC using hazelnut shell) were well preserved, with very little indication of post-depositional sediment infiltration or other processes that can be detrimental to identification (Highways England, 2019p p.12 [REP3-023]).
- 3.3.62 Finds recovered from the ploughsoil sampling also indicate a focus of activity in the Later Neolithic/Early Bronze Age, with some earlier and later components (Highways England, 2019f [REP1-045, 046]). Worked and burnt flint densities were generally higher in the west of the site, towards the Winterbourne Stoke barrow group.
- 3.3.63 Evidence for settlement activity is confined to artefactual material in the plough zone and several isolated Early Bronze Age pits. Although some concentrations of worked flint material in the plough zone are apparent within the evaluation area, these do not appear to correlate to surviving features below the surface of the agricultural fields and cutting into the underlying chalk, suggesting that if features did once exist they have since been ploughed out. Overall, the results from the Western Portal evaluation tend to support the notion of the area south and east of Winterbourne Stoke Crossroads as a preferred one for lithic tool use and deposition (Highways England, 2019f [REP1-045, 046]).

- 3.3.64 A series of small enclosures known from NMP data and a previous geophysical survey by Historic England (which only covered the far west of the site) (Linford et al., 2015) were not realised in the trial trenches (Highways England, 2019f [REP1-045, 046]).
- 3.3.65 A large feature in Trench 241 within a slight but noticeable topographic depression in the present land-surface is interpreted as a solution hollow/small sink hole/doline [REP1-045, p.27-8]. The fills were consistent with a Holocene date and are colluvial in nature (generally calcareous/slightly calcareous silt loams to silty clay loams; probably with some degree of loessic content). The feature will have acted as a natural capture-point for ploughed-in archaeological surface material, and this is reflected by the artefactual assemblage, which includes 73 pieces of flint debitage as well as Roman and medieval pottery. Snail taxa identified include specimens from mostly open country habitats, but intermediate snails were also present (Highways England 2019p p.8 [REP3-023]). A burnt deposit in the upper fill contained roundwood and rootwood charcoal and charred cereal grain, the latter producing a radiocarbon determination of cal. AD 1650-1950 (Highways England 2019p p.15, Table 5-3 [REP3-023]).
- 3.3.66 Also in this section, three Grade II listed milestones are present, one on the A360, 100m south of Longbarrow Roundabout (UID 6027/NHLE 1130972) and two on the A303 (UID 6031/NHLE 1130999; UID 6040/1131085).

Section 3: Chainage 7400 to 10,375m – Tunnel

- 3.3.67 The western portal would be located approximately 1.15km within the WHS boundary, the 3.3km tunnelled section of the Scheme passing through the heart of the WHS. Tunnel movement monitoring stations would be placed on the surface above the 3.0km bored tunnel.
- 3.3.68 The existing A303 in this section of the Scheme will be downgraded to a restricted byway; land within the existing highway boundary adjacent to this will be managed as chalk grassland (see Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) (APP-059)). Land above the 3.0km bored tunnel section would remain as agricultural land. East of Stonehenge Cottages, Stonehenge Road would be stopped up approximately 400m south of the existing A303; a private means of access would be provided along this section of Stonehenge Road with land within the existing highway boundary adjacent to the PMA managed as chalk grassland. East of Stonehenge Road, the existing A303 dual carriageway section would be removed over approximately 850m and the land managed as chalk grassland.
- 3.3.69 To the south of the tunnel alignment, the Normanton Down barrow cemetery (Asset Group AG19) dominates the southerly approach to Stonehenge. This extensive group spans over 1.5km north to south and a similar distance east to west. Scheduled monuments include 43 bowl barrows, seven disc barrows, four bell barrows, one pond barrow, one saucer barrow as well as a linear boundary and three long barrows. Non-designated assets include a long mortuary enclosure to the southwest and some further possible barrows identified from aerial photographs and geophysical survey. At least one of the barrows has been identified as a possible earlier henge. A possible circular pit alignment identified in geophysical surveys amongst the northern part of the Normanton Down barrow cemetery may be a plough-damaged Neolithic monument not previously recorded (Wessex Archaeology, 2018a; p 13, feature 10002).

- 3.3.70 The majority of the barrows within this group survive as extant and prominent earthworks. Particularly prominent is the 'Sun Barrow', so named for its position on the solstitial alignment of Stonehenge (midwinter sunset) (UID 3000/NHLE 1012370). While some other monuments within the group have been truncated or levelled by modern agricultural activity, geophysical survey indicates that surrounding ditches and satellite features survive as below-ground archaeological remains. Byways AMES 11 and 12, both byways open to all traffic (BOAT), pass through the Normanton Down barrow cemetery; vehicular use of the byways has an adverse impact on the setting of the monuments within the cemetery and in some cases directly impacts the fabric of the monuments.
- 3.3.71 An outlier of the Normanton Down barrow cemetery, a bowl barrow known as Wilsford G1 (UID 2018/NHLE 1010832), now levelled by ploughing, lies above the tunnel alignment, 25m east of the western portal. The barrow was completely excavated in 1960, revealing two ring ditches, two phases to construction of the mound and a total of 13 inhumation burials (Leivers and Moore, 2008). Investigations in 2002, in connection with previous proposals to improve the A303, revealed two further burials situated outside the barrow ditches to the north and northeast, indicating a possible associated 'flat' cemetery (i.e. burials without barrow mounds).
- 3.3.72 The bored tunnel passes beneath long barrow Amesbury 14 (NHLE 1008953, UID 3001), 250m north of Normanton Gorse and just south of the A303. The barrow mound is orientated NNW-SSE and survives up to 1.8m high, 32m long and c.18m wide. Flanking the mound on the east and west sides are quarry ditches from which material was taken during the construction of the monument. These have become partially infilled over the years but are still visible as slight earthworks. The ditch on the north-east side is c.6m wide; that on the south-west is c.8m wide. The barrow was partially excavated in the 19th century and produced three primary inhumations and two later burials.
- 3.3.73 To the north of the tunnel alignment, the Stonehenge Down barrow cemetery is a cluster of nine barrows, all reduced to some extent by ploughing (UIDs 3005-3008/NHLE 1012383-87; Asset Group AG21). Stonehenge itself stands approximately 150m from the present A303 at its closest point, and approximately 200m north of the tunnel alignment (UID 3010.01/NHLE 1010140; Asset Group AG22). Byway AMES 12 passes within 250m of the Stonehenge monument to the west and the presence of vehicles parking on the BOAT adversely affects the setting of the monument.
- 3.3.74 North of Stonehenge, the Greater Cursus runs parallel to the existing A303 for approximately 1km (NHLE 1009132; Asset Group AG23), together with its associated long barrows and the Cursus Barrows (Asset Group AG18). The Avenue (UID 3010.02/NHLE 1010140) and the King Barrows (UID 3018/NHLE 1012381; Asset Group AG26) lie to the east.
- 3.3.75 Other barrows immediately north of the present A303 include UID 3014/NHLE 1008947; UID 3018/1012420; and UID 3020/NHLE 1012129. Monuments to the south include a barrow cemetery north of Luxenborough Plantation (NHLE UID 3012/NHLE 1012372; included with other monuments to the south within Asset Group AG24), and the Coneybury Henge (UID 3019/NHLE 1012376) and King Barrow (NHLE 1012375), included within Asset Group AG29. Recent excavations at West Amesbury Farm have

also identified a group of Neolithic pits on the southern end of King Barrow Ridge, close to Coneybury Hill (UID 3072).

- 3.3.76 The tunnel passes beneath a bowl barrow situated east of Stonehenge Bottom, 300m south-west of New King Barrows (Amesbury 39, NHLE 1008947, UID 3014). This occupies a prominent location on the same hilltop as New King Barrows, with views across Stonehenge, The Avenue, The Cursus and related monuments. The barrow is now D-shaped having been cut on its south side by the A303, and has been partially excavated twice, once in the 19th century when a primary cremation together with amber, shale and jet objects was found, and again in 1960 when bone pins and other material was found.
- 3.3.77 At King Barrow Ridge, the tunnel passes beneath a bowl barrow situated at the southern end of the New King Barrows linear round barrow cemetery (Amesbury 26, NHLE 1012420, UID 3018). The cemetery (Asset Group AG26) is aligned north-south and contains a total of seven round barrows, including three bowl barrows and four bell barrows.
- 3.3.78 East of King Barrow Ridge, the Stonehenge Avenue (Asset Group AG27) is a linear feature providing a formal approach to Stonehenge and linking it with the River Avon at West Amesbury. From its junction with the north east entrance to Stonehenge, the Avenue is constructed to maintain the axis of the monument for 560m in a north east direction. On the west side of Stonehenge Bottom, it turns to run towards King Barrow Ridge, from which point it curves gradually towards the south east for a distance of 500m, running in a straight line again for the final 900m to the bank of the River Avon. The monument is visible as a slight earthwork for the first 1000m to the centre of Stonehenge Bottom, and from that point is difficult to identify on the ground but is visible on aerial photographs (NHLE 1010140, UID 3010.02).
- 3.3.79 Also, within this section of the Scheme, a 19th century listed milestone opposite Stonehenge on the A303 (UID 6040/NHLE 1131085) lies north of the proposed tunnel alignment.

Section 4: Chainage 10,375 to 12,572m – Eastern portal, Countess Junction to Eastern Scheme origin

- 3.3.80 The eastern bored tunnel portal would be located (within the limits of deviation) between 10,400m and 10,430m. Immediately east of the bored tunnel portal, a cut and cover tunnel section of 85m length will help to integrate the portal into the landscape. Tunnel service buildings will be located outside the cut and cover tunnel section.
- 3.3.81 The A303 emerges from the tunnel in cutting within a dry valley, which helps to conceal the portal and carriageway within the existing contours of the landscape, before re-joining the existing dual carriageway in the existing cutting north of Vespasian's Camp at approximate chainage 10,650m. Within the DCO boundary, including above the cut and cover tunnel section and the former A303, will be managed as chalk grassland (see Environmental Masterplan for the Scheme (ES Figure 2.5 A-S) (APP-059)).
- 3.3.82 A water supply pipeline to the tunnel boring machine (TBM) launch point and tunnel service buildings would follow the northern edge of the existing A303 embankment and cutting within the DCO boundary. The power supply cable would be routed along the

existing A303 dual carriageway and along the removed section of the A303 to the tunnel service buildings.

- 3.3.83 The tunnel section of the Scheme passes beneath the Avenue before emerging north of the existing A303, north west of Vespasian's Camp. To the west of the eastern portal location is a dispersed group of barrows that appear to relate to the Avenue (Asset Group AG30), situated both to the north and south of the current A303. To the northeast of the eastern portal is another broad grouping of scheduled barrows which mainly lack surface expression (the Countess Farm Barrows; Asset Group AG31). More recent landscape elements are also present, within what was formerly part of the extended Amesbury Abbey Park. Remnants of the former parkland survive as a series of small groups of trees to the north of the A303, commonly known as the Nile Clumps. Although popularly believed to commemorate the 1798 Battle of the Nile or the 1805 Battle of Trafalgar, the evidence suggests they pre-date both these conflicts and that some have been replanted in recent decades.
- 3.3.84 As the proposed carriageway alignment re-joins the existing Amesbury Bypass it passes immediately to the north of the Iron Age hillfort known as Vespasian's Camp. This is a large ramparted enclosure of 15 hectares, which incorporates several earlier barrows within its defences. The site is now entirely within mature woodland (UID 4012/NHLE 1012126/Asset Group AG32). Adjacent to Vespasian's Camp, south of the existing A303, is the Mesolithic site at Blick Mead (UID 4032). Situated on a spring line, archaeological excavations at this site have yielded large lithic assemblages, along with faunal remains and palaeoenvironmental material. This has been interpreted as evidence for a sustained or repeated large-scale presence at the site for a span of almost 3000 years, from the 9th-7th millennia BC, possibly continuing into the 5th millennium BC. Mesolithic lithics have also been recovered, incorporated in later colluvium deposits, on the northern edge of the Avon floodplain west of Countess Farm (UID 4036).
- 3.3.85 Geophysical survey in 2017 of the eastern portal and approaches identified a possible ring ditch and linear anomalies likely to be associated with former field boundaries (Wessex Archaeology 2017a). Comparison with geophysical survey data collected by the Stonehenge Hidden Landscapes Project (University of Birmingham, 2018) confirmed the form of two chalk combs within which the eastern portal location is situated, one extending approximately east-west and a second feeding into this from the north.
- 3.3.86 Trial trenching of the eastern portal location in 2017 revealed only a small (0.7m wide x 0.4m deep) undated north-south aligned ditch (Wessex Archaeology, 2017d)). Further evaluation in 2018 investigated the eastern approach cutting and a 30m buffer adjacent to this (Highways England, 2019b [REP1-047, 048]). Field walking and test pitting revealed an even distribution of worked and burnt flint across the area, with a small number of slightly higher concentrations which may be the remains of activity areas now dispersed within the plough zone. A natural hollow investigated in Trench 512 was filled with colluvium, at the base of which lay a stony horizon with a further colluvial layer below. A worked flint assemblage from this stony horizon and the overlying colluvium appears consistent with primary knapping debris largely of Late Neolithic date, with a limited Mesolithic component (one microlith, one burin and one bladelet from the colluvium).

- 3.3.87 As well as the small component amongst the later knapping debris, other Mesolithic material comprised 3 cores, some blades and trimming bladelet cores, and a single fragment from a tranchet axe, all from the ploughsoil (Highways England, 2019b [REP1-047, 048]). These occurrences suggest that localised activity was occurring from at least the Mesolithic period onwards. However, comparison with UID 4036 indicates that this and the Mesolithic material in Trench 512 are not part of the same archaeological site as Blick Mead, but represent different depositional sequences: a chalkland colluvial sequence on the flood-plain edge north of the A303, contrasting with a valley alluvial sequence over sand and gravels at Blick Mead, with a vertical difference of 3.5m between the floodplain edge locations north of the A303 and Blick Mead in the valley south of the road.
- 3.3.88 A buried soil identified by a geo-archaeological borehole survey and subsequently exposed in section was cut by a pair of parallel ditches, sealed by a colluvial sequence with Upper and Lower components (Highways England, 2019b [REP1-047, 048]). Optically Stimulated Luminescence (OSL) dating returned a date of between AD 1500-1600 for the Upper colluvium, AD 840 – 1050 for the Lower colluvium and 260 BC-AD 130 for the buried soil, indicating a likely late Iron Age or Romano-British date for the ditches cutting the buried soil, perhaps associated with field systems developed in the vicinity of Vespasian's Camp. Other features uncovered during the evaluation included an undated ditch, a small number of features of post-medieval/modern date, and a small number of natural features, including tree throws. No evidence for the ring ditch identified by the geophysical survey (Wessex Archaeology, 2017a) was located even though a trial trench was positioned on top of the geophysical anomaly (Highways England, 2019b [REP1-047, 048]).
- 3.3.89 Both Vespasian's Camp and Blick Mead fall within the Grade II* Amesbury Abbey Park (NHLE 1000469), which occupies all of the land immediately south of the Scheme for the kilometre leading up to the existing Countess Roundabout. The abbey was a Benedictine foundation of 979 AD, dissolved in 1177, with elements being incorporated into a subsequent priory. After the Dissolution, the priory manor was replaced by a new house, around which an extensive park developed, including modifications to Vespasian's Camp, and taking in land further to the north and west. The current house at the centre of the park is Grade I listed (NHLE 1131079), while several other structures are listed at Grade II*. The park is included within the Amesbury conservation area, which extends into the town's built-up core to the southeast, incorporating a substantial number of listed buildings including the Grade I listed church of St Mary and St Melor (NHLE 1182066). To the west, the West Amesbury Conservation Area is focused on a cluster of listed buildings, including the Grade I listed West Amesbury House (NHLE 1318515).

East of the WHS

- 3.3.90 East of the WHS, a satellite construction compound will be established at Countess East, north and east of the existing services. The water supply pipeline will cross the compound to connect with an existing pipeline within Countess East.
- 3.3.91 The current WHS eastern boundary follows the line of the River Avon, skirts the west side of Countess Roundabout and follows the A345 north to Durrington Walls. Immediately to the northwest of Countess Roundabout is a cluster of Grade II listed buildings at Countess Farm, comprising the main farmhouse and a series of barns and granaries (UID 6067-6071; NHLE 1131055-7; 1318487-8). To the south, within

Amesbury Abbey Park, another group of listed buildings is present, including several Grade II* listed buildings: Diana's House (UID 6062; NHLE 1131053); Gate Piers to Lord's Walk with flanking estate boundary walls (UID 6064; NHLE 1182498); and Kent House (UID 6065; NHLE 1131093).

- 3.3.92 Floodplain deposits in the River Avon have, in general, been found to comprise soft peat overlying silty and clayey deposits (alluvium). Peaty clay or peat layers were encountered in the Avon valley in historical ground investigations in 1965, in advance of construction of the existing Countess Roundabout but, with one exception in borehole 21762-WS181, were not present in ground investigations undertaken in connection with the 2003 published scheme. This suggests that the larger part of the peaty deposits was removed during the construction of the A303 Amesbury Bypass works at and around the Countess Roundabout in the late 1960s.
- 3.3.93 North-east of Countess Roundabout, the Scheme boundary includes land at Countess East. Amesbury Countess was formerly a separate settlement, distinct from the centre of Amesbury and West Amesbury, on the north bank of the River Avon. At Countess East, geophysical surveys for the Scheme and as part of the Stonehenge Hidden Landscapes Project identified extensive areas of mixed post-glacial geology (University of Birmingham, 2018). Previous investigations identified Early to Middle Saxon settlement remains (sunken featured buildings) above the floodplain (UID 4039), as well as the presence of Neolithic pits and flintwork (UID 4040-41) and a stone-built Roman building of uncertain function (UID 4042) (Wessex Archaeology, 2003c). A water meadow system is also present within the River Avon floodplain (UID 4034).
- 3.3.94 Ground penetrating radar (GPR) survey in 2018 examined two pilot areas positioned to examine previously identified Anglo-Saxon sunken featured buildings and the Romano-British stone-built structure, in order to establish the potential for further survey to supplement the previous evaluation work (Highways England, 2019k REP1-054). The GPR survey successfully located the Romano-British building and provided considerable additional layout detail, with three rooms to the north and south of a large pillared room or courtyard. Several anomalies surrounding the building may be evidence of further archaeological activity, such as pit features.
- 3.3.95 A total of eight anomalies across both pilot areas may relate to Anglo Saxon sunken featured buildings, however these could equally be evidence of natural solution features in the chalk bedrock. The pilot survey concluded that there was little potential for further survey confidently to locate any further sunken featured buildings (Highways England, 2019k [REP1-054]).
- 3.3.96 To the east of Amesbury, the Scheme will include stopping up of the direct connection between Allington Track and the A303 and stopping up a length of byway AMES1 (Amesbury Road) south of its junction with A303. Allington Track will be linked to Equinox Drive within Solstice Park by a new length of highway 5.5 metres wide with passing places. Byway AMES1 (Amesbury Road) will have a new connection to the southern end of Equinox Drive. The section of byway between this new connection and the new Allington Track link will be stopped-up. The section of byway between the new Allington Track link and the A303 will be converted to a public footpath to maintain public access to view the scheduled monument at the junction of AMES1 with A303.

- 3.3.97 A number of late prehistoric monuments are present around the area now occupied by Solstice Park, including the scheduled Earl's Farm Down and New Barn Down barrow cemeteries (Asset Group AG35). Within this widely-dispersed group, some of the monuments in closest proximity to the Scheme include barrows (UID 4060/NHLE 1009872, UID 4059/NHLE 1009566 and UID 4063/NHLE 1009871). Byway AMES1 (Amesbury Road) follows the line of the Roman road to Marlborough and passes through the scheduled area of barrow group UID4059; the proposed stopping-up of this section of the byway would remove the right of way from the edge of the western-most barrow. Seven ploughed down barrows, amongst the barrow groups on New Barn Down to the north of the A303 and on Earl's Farm Down, were investigated in advance of the construction of Solstice Park (AC Archaeology, 2012). Immediately east of these, geophysical survey of land required for diversion of the Amesbury Road byway away from UID 4059 did not locate any anomalies confidently interpreted as archaeology; a possible ditch feature may represent an extension of a Bronze Age – Romano-British field system recorded across the area but could equally relate to more recent activity on the site, evident on satellite imagery (Highways England, 2019c [REP1-055]).
- 3.3.98 Further east along the existing A303 at Double Hedges, the side road will be realigned within the existing highway boundary to improve the connection with the A303. A scheduled monument that incorporates parts of two linear boundary features (alternatively interpreted as trackways) of probable late Prehistoric or Roman date, and numerous undated incised trackways, possibly of medieval or later origin bisected, is by the existing A303 here. The scheduling covers sections of these features which are better preserved as earthworks (UID 4069.01/NHLE 1009613), with non-designated continuations of these features to the south, northwest and southeast (UIDs 4069.02-04).

Section 5 – Rollestone Corner

- 3.3.99 At the north-western corner of the WHS, the Rollestone Corner junction between the B3086 and the Packway will be improved to allow use as a high load and tunnel diversion route. A new section of carriageway will be constructed within the WHS, with a new junction to Rollestone on the west side.
- 3.3.100 From Longbarrow Junction, proceeding north on the A360/B3086, the route of the present A360 passes to the west of the Lesser Cursus (NHLE 1010901; Asset Group AG15) and the Lesser Cursus barrow cemetery (Asset Group 11, including within the 500m study area UIDs 2014/NHLE 1008951, 2015/1010893 and 2016/1008952). A further series of barrows is present along a ridge to the north of Greenland Farm, straddling the A360. Combined as Asset Group AG10, the Rollestone Barrows include 17 separate scheduled areas; the pair of monuments scheduled as NHLE 1010891 (UID 5006) is bisected by the A360.
- 3.3.101 Northwest of Rollestone Corner and the junction with the Packway are the non-designated Net Down barrow cemetery (Asset Group AG06; UIDs 5012-20) and areas of relict prehistoric and medieval field systems. The Neolithic causewayed enclosure of Robin's Hood's Ball (NHLE 1009593) and associated barrows, including a long barrow and a number of round barrows, lies beyond the northern boundary of the WHS, approximately 1.2km to the north of the Scheme boundary (Asset Group AG14). Eastwards from Rollestone Corner, the Packway currently impinges on a round barrow cemetery (UID 5010/NHLE 1009124) while south of the Packway further ceremonial monuments within the WHS include a tightly-clustered group of barrows, including a bell

barrow and three disc barrows (NHLE 1012170), the Durrington Down barrow cemetery (NHLE 1008943/Asset Group 20), a long barrow in Larkhill Camp (NHLE 1012167; Asset Group 38), a barrow cemetery south of Fargo Road (NHLE 1009062) and a further barrow cemetery in Larkhill Camp (NHLE 1009068).

3.3.102 Archaeological evaluation of the proposed junction land-take revealed very low levels of prehistoric activity in this part of the WHS and adjacent to the WHS boundary (Highways England, 2019g [REP1-044]). Geophysical survey noted the possible remnants of field systems, of probable late prehistoric or Romano-British date, in the locality (Highways England, 2019a [REP1-041]). Field walking and test-pitting did not identify any significant concentrations of material; the worked flint assemblage is typical of collections from the plough zone in the area, with a preponderance of heavily patinated, large fragments of debitage; no cores or retouched tools were recovered. Trial trenches revealed a number of tree-throws, two of which contained quantities of burnt and/or worked flint (including Neolithic material) and tiny fragments of prehistoric pottery (Highways England, 2019g [REP1-044]).

4 Archaeological Research Agenda

4.1 Introduction

- 4.1.1 This section 4 outlines the proposed Archaeological Research Agenda (ARA) for the mitigation programme. The ARA is the underpinning structure for the mitigation and the methodologies employed across the scheme. It is the key to unlocking the potential knowledge that the mitigation work will access and contribute to the potential legacy of enhanced understanding of an internationally iconic archaeological landscape which is essential in response to the impact of the Scheme. The project presents a unique opportunity to examine a transect through this landscape and the opportunity to deploy innovative approaches and methods to recover maximum information to develop our understanding of the development of this landscape and its use and re-use through time from at least the Mesolithic to the present day. The project has the potential to create a living legacy of archaeological knowledge from the Scheme.
- 4.1.2 The archaeological evidence identified by the archaeological evaluation programme for the Scheme, together with evidence of baseline conditions as set out in the ES [APP-044], are considered and relevant cross-period research themes and cross-period and period-specific research questions are identified. The research themes and questions proposed here will be reviewed and updated during preparation of SSWSIs, during fieldwork and during preparation of the post-excavation assessment report.
- 4.1.3 Section 5 of the Strategy considers the archaeological resource across the Scheme and details the archaeological mitigation requirements. Appendix D considers the archaeological mitigation areas ('sites') and provide details of the archaeological assets affected, the Scheme impact to be mitigated and the relevant research themes and questions, as outlined in this section 4. Table 11-2 summarises the research themes relevant to each site.

Published Research Frameworks and Agendas

- 4.1.4 The Scheme presents a transect across a landscape, including the full width of the Stonehenge part of the WHS, the character of which varies both spatially and through time. The proposed mitigation programme, therefore, has the potential to provide evidence well suited to addressing questions at both a micro (feature, site or period-based) level and macro (landscape or cross-period) level. Consequently, the research aims of the mitigation strategy should operate at both a broad thematic level and at a narrower level of specific questions. This section 4 outlines both a series of Research Themes, which investigate continuity and change at the level of the landscape and across (rather than within) archaeologically-defined periods, and a set of Research Questions which relate to those themes, but which are more tightly defined in terms of their applicability to particular parts of the Scheme (as detailed in Appendix D) and to particular time periods.
- 4.1.5 In order to allow ready comparison with other work in the area, both the Research Themes and Questions have been modelled on – and are intended to contribute to and expand from – those given in the Research Framework for the Stonehenge and Avebury and Associated Sites WHS ('SAARF', Leivers and Powell, 2016), the South West Archaeological Research Framework ("SWARF", Grove and Croft 2012; Webster, 2007). SAARF itself is a composite document, consisting of a comprehensive new

Resource Assessment for the Avebury part of the WHS, an update on research undertaken between 2005 and 2012 for the Stonehenge part of the WHS, and an Agenda and Strategy for the WHS as a whole. In consequence, some parts of the 2005 Stonehenge World Heritage Site: an archaeological research framework (Darvill 2005) remain current, namely the resource assessment for the Stonehenge part of the WHS, while the agenda and strategy in the 2005 research framework have been superseded by the SAARF. However, issues and objectives identified in the 2005 research framework have guided research projects since their publication and therefore relevant issues and objectives are cross-referenced below in Section 4.2.

- 4.1.6 The themes adopted for investigations ahead of earlier proposals to upgrade the A303 (Leivers and Moore, 2008)
- 4.1.7 and other relevant period-based and specialist agendas are also considered, including:
- Mesolithic Research and Conservation Framework of England (Blinkhorn and Milner, 2014)
 - Understanding the British Iron Age An Agenda For Action (Haselgrove et al. 2001)
 - The Rural Settlement of Roman Britain (Smith et al. 2016)
 - The Rural Economy of Roman Britain (Allen et al. 2017)
 - Research Strategy and Updated Agenda For the Study of Roman Pottery in Britain (SGRP n.d.)
 - A Research Framework for Post-Roman Ceramic Studies in Britain (Irving 2011)
- 4.1.8 The ARA adopts a landscape-based approach which focusses on long term trajectories of land use and inhabitation, examining both transition and continuity. Such an approach allows for the examination of, for instance, changes in subsistence practice in key periods of change such as the Mesolithic to Early Neolithic, Beaker into Early Bronze Age, Early to Middle Bronze Age, Iron Age to Romano-British or medieval to post-medieval periods, while at the same time requiring a consideration of the development and use of water meadows, the extents of arable as opposed to pastoral farming, and the changing degree and use of woodland.
- 4.1.9 The mitigation programme can also contribute to technical research development. Geophysical survey information has been collected across the project area using a range of techniques and methodologies. The mitigation phase offers the opportunity to further collate and assess this, especially where subsequent excavation evidence is available.

Chronological Scheme

- 4.1.10 The chronological scheme followed in this document follows that at <http://www.heritage-standards.org.uk/chronology/>. For the purposes of this report, periodization is as follows:
- Palaeolithic -1,000 000 to -10,000 (BC)

- Mesolithic -10,000 to -4,000
- Neolithic -4,000 to -2,200
- Early Neolithic -4,000 to -3,300
- Middle Neolithic -3,300 to -2,900
- Late Neolithic -2,900 to -2,200
- Bronze Age -2,600 to -700
- Early Bronze Age -2,600 to -1,600
- Middle Bronze Age -1,600 to -1,200
- Late Bronze Age -1200 to -700
- Iron Age -800 (BC) to 43 (AD)
- Roman 43 to 410 (AD)
- Early Medieval 410 to 1066
- Medieval 1066 to 1540
- Post-medieval 1540 to 1901
- 20th Century 1901 to 2000

4.1.11 To accommodate the overlap between Late Neolithic (-2,900 to -2,200) and Early Bronze Age (-2,600 to -1,600) in the above scheme, in this report these terms are used as broad chronological periods. The term 'Beaker' is used to refer to a material culture group that overlaps with both these chronological periods.

4.2 Research Themes

4.2.1 The ARA will be further developed through the SSWSIs. The themes and research questions outlined in the ARA are therefore overarching and will be developed for each individual site, considering its archaeological potential and relationship with the archaeological resource in other sites.

Overarching Themes

R.1 Transitions

4.2.2 The identification of, for instance, chronologically-distinctive ceramic types, styles of architecture, or lithic technologies - while essential for providing broad periodisation of human activity - tends to concentrate attention within specific and bounded periods (Early Neolithic, Middle Bronze Age, Late Iron Age, etc) and away from dynamic processes of continuity and/or change through time. Although enshrined in many of the research questions in the SAARF (and consequently within the DAMS), the question of the identification of 'transition' on the one hand or continuity on the other (or of varying

simultaneous trajectories of transformation or the maintenance of tradition) will be adopted as an over-arching research theme. This theme is relevant to Darvill 2005 Issue 26: *the hidden landscapes*, and Issue 27: *the missing slices of time*; and Objective 15: *filling the data gap*.

R.2 Changing Populations

- 4.2.3 The physical remains of individuals were not often encountered during evaluation, but the potential for further human remains to be found during mitigation exists, particularly of Beaker association. Any such remains (along with those few already recovered) would have the potential to be sampled for analysis of, for instance, stable isotopes or DNA, contributing to recent and on-going investigations into the movements of ancient people and the rates and trajectories of population change in the British Neolithic and Bronze Age.

R.3 Landscape Zones

- 4.2.4 Although there is no indication within the artefactual material recovered during the evaluation to support the contention that a 'zoned' landscape existed around Stonehenge during the Neolithic (as has been suggested on the basis of, for instance, the distribution of Earthen Long Barrows in earlier parts of the period), further material from any future mitigation would have the potential to shed further light on this hypothesis.

SAARF and SWARF research themes

- 4.2.5 SAARF identified six research themes reflecting different aspects of the unique character of the WHS. Although formulated on the basis of the evidence within the WHS boundary, the themes remain pertinent across the Scheme. They are sufficiently broad to accommodate within them the relevant Research Themes from the earlier South West Archaeological Research Framework (SWARF) and are therefore adopted here. The six themes, their overarching aims, and their connections to SWARF are:

R.4 Connected Landscapes

- 4.2.6 *To gain a better understanding of the complex monumental and mortuary landscapes: how and why they developed and changed; which elements of the landscapes were connected and how they were connected; how far those connections extended, and for how long they persisted."*
- 4.2.7 This theme encompasses aspects of Darvill 2005 Issue 13: Rivers, valleys and water, and Issue 22: contemporaneity and the relationships between monuments at the landscape, regional and world scale.

R.5 Ceremonial Monuments

- 4.2.8 *"To gain a better understanding of the social, symbolic and (in some cases) technological contexts of the communal and ceremonial monuments, individually and in groups – why they were built and altered; why they took the forms they did, and what they meant; what they were for, and what activities took place at them; why they were abandoned."*
- 4.2.9 This theme incorporates questions relating to social relations, identities and interactions, and religion (SWARF Research Theme and Research Aims 49 and 54) and Darvill 2005 Issue 11: *Sacred shapes, forms and intervisibility*.

R.6 Burials and Barrows

- 4.2.10 *"To gain a better understanding of how the Early Bronze Age mortuary landscape, dominated by round barrows, developed from the Neolithic monumental landscape – the factors that determined the locations of barrows, and how cemeteries developed; their chronology and dating; the significance of their variations in form, scale, elaboration, contents and burial practices; their secondary burials."*
- 4.2.11 This theme incorporates questions relating to social relations and mortuary practice (SWARF Research Theme and Research Aims 57) and Darvill 2005 Issue 9: *Barrow cemetery evolution, structure, and meaning*.

R.7 Landscape History and Memory

- 4.2.12 *"To gain a better understanding of the changing, long-term histories of the landscape, and particular locations within it – how places came to be seen as significant; how their meanings changed over time, and how they came to be viewed and treated after their periods of primary use had ended."*
- 4.2.13 This theme incorporates questions relating to transitions both between different parts of the landscape (close to/further from Stonehenge, for instance) and between archaeologically-defined periods, as well as within them (SWARF Research Theme and Research Aim 10). It is also relevant to Darvill 2005 Issues 10: *Monumentality, materiality, memory, identity and the changing landscape*, 15: *astronomy, attitudes, the sacred spaces, and cosmology*, and 17: *landscape evolution and design*.

R.8 Human Generations

- 4.2.14 *"To gain a better understanding, from the analysis of human remains, of the generations of people who have populated the area – their origins, diversity, movements, demography, health, diet, and conflicts."*
- 4.2.15 This theme incorporates questions relating to conflict (SWARF Research Theme and Research Aims 61 – 64) and Darvill 2005 Issue 24: *populating the record for post-Roman studies*.

R.9 Daily Life

- 4.2.16 *"To gain a better understanding of the changing, day-to-day lives of those living within, or passing through, the landscape, both as they related to the construction and use of its prehistoric monuments and separate from any involvement with them."*
- 4.2.17 This theme incorporates questions relating to past environments (SWARF Research Theme and Research Aims 17 – 27), settlement (SWARF Research Theme and Research Aims 28 – 33), and food production (SWARF Theme and Research Aims 39 – 43), as well as to human changes within the landscape, such as the changing extent, uses and nature of woodland. This theme is relevant to Darvill 2005 Issue 4: *Where did the builders and users of Stonehenge live?*; Issue 16: *field systems and the early agricultural landscape*; Issue 23: *filling the gaps and understanding distributions*; Issue 25: *environment and change to the physical landscape*; as well as Objectives 3: *modelling environment and landscape change*, 4: *understanding occupation*, and 12: *characterise and investigate the main field systems*.

4.3 Palaeolithic 1,000 000 to 10,000 BC

4.3.1 The known Palaeolithic archaeological resource within the Stonehenge landscape is very sparse. Darvill (2005, Map E) records only five lithic findspots (a Middle Palaeolithic Levallois core from Greenland Farm, and Lower or Middle Palaeolithic handaxes and flakes from Lake, and handaxes from near Stonehenge, at Amesbury and from Allington), and two instances of faunal remains (from the valley of the Avon, with mammoth and woolly rhinoceros remains at Amesbury and mammoth at Durrington).

4.3.2 No Palaeolithic artefacts were recovered during evaluations conducted as part of the current Scheme. Evidence of this date range identified by the evaluation programme comprises deposits of geoarchaeological interest from the Parsonage Down East on the Winterbourne stoke Bypass (West) and Longbarrow North evaluation areas.

Winterbourne Stoke West

4.3.3 At Winterbourne Stoke West, six boreholes drilled along a 68 m north to south transect located over a coombe encountered a sequence of deposits encountered as follows:

- Topsoil/ploughsoil;
- B horizon (subsoil);
- Lag deposit;
- Holocene colluvium;
- Possible buried soil;
- Structureless chalk deposits (Coombe chalk);
- Structural in situ cretaceous chalk bedrock.

4.3.4 Of particular interest is the possible buried soil within the periglacial deposits, recorded in two of the boreholes (BH5 and BH6), and located towards the top of the periglacial coombe deposits, close to the boundary with the overlying Holocene colluvium. The layer was well developed and thick (up to 0.37 m thick in BH5) and if in situ may have developed within the Windermere interstadial, before being buried by soliflucted chalk deposits after a return to periglacial conditions. The lower boundary of the soil, however, in both boreholes was sharp to clear and distinctive and not gradual or diffuse as seen in more typical soil profiles. The clarity of the boundaries indicate that this may not be an in situ soil, but rather a clay-with-flint lined dissolution pipe formed as a result of periglacial processes. If the deposit did prove to be a buried soil of Windermere Interstadial date it would be of particular interest as a rare survival from a period in which humans may have been present within the landscape. If not, its importance would be much reduced, being an indicator of processes of geoarchaeological interest.

Long Barrow North

4.3.5 At Long Barrow North, the presence of loessic and coombe deposits (>7.0m) captured within a solution hollow indicate the potential for localised preservation of Pleistocene environmental evidence in such features. The loess deposits are clearly Pleistocene in

age; this would indicate they date to at least Marine Isotope Stage (MIS) 2 (31-16 kya) but could be attributable to earlier periods within the Pleistocene epoch. Most of the loess deposits in southern England date from the Late Devensian cold stage, but there are also a few localised patches of older (mainly MIS 6; 191-123 kya and MIS 12; 478-424kya) loess. The evidence from the boreholes taken at Long Barrow North indicate that the deposits may reflect more than one phase of loess deposition and reworking of loessic material.

- 4.3.6 Loess and loessic slope wash deposits would once have been extensive across Salisbury Plain, but have been largely removed by subsequent erosion. Their presence within a solution feature demonstrates that these geological landform features act as important capture points preserving potentially significant sequences of Pleistocene deposits. Initial palaeoenvironmental assessment of samples taken from these deposits indicated that they preserve a range of palaeoenvironmental indicators, including ostracods, fish bones and large mammal bone fragments.
- 4.3.7 The geoarchaeological potential and significance of the deposits from the solution hollow at Long Barrow North is high. The deposits infilling it are regionally unique, and have the potential to preserve palaeoenvironmental remains (e.g. molluscs, pollen and other microfossils) which would be indicative of the Pleistocene landscape evolution of Salisbury Plain and the chalk downlands of southern Britain. The deposits also have potential to contain horizons that preserve Palaeolithic archaeology, providing potential primary contexts for such discoveries.

Research Questions

- 4.3.8 The palaeoenvironmental material from Long Barrow North has the potential to address directly two of the three priorities for Lower and Middle Palaeolithic research identified in the Research Framework for the Stonehenge, Avebury and Associated Sites World Heritage Site Research Agenda and Strategy (Leivers and Powell 2016):

P.1 – SAARF A.2.

- “A.2. Establishing the nature of the palaeo-environment”

P.2 – SAARF A.3.

- “A.3. Determining the effects of climate on the formation of the landscape, geological deposits and periglacial features, including those which may have influenced later activity, such as solution hollows... and periglacial striations...”

- 4.3.9 These tie in with some of the Primary Research Themes and Strategic Research and Conservation Themes outlined in the Research and Conservation Framework for the British Palaeolithic (‘RCFBP’) (Prehistoric Society and English Heritage 2008). Material already recovered during works associated with the Scheme, and material which may be encountered in future works, has the potential to address issues relating to:

P. 3. – RCFBP Primary Research Theme 1.

- 1. Hominin Environments and Climate Drivers (especially but not limited to):
 - “What effect did Pleistocene climate change have upon British environments and faunal communities?”

- “How much of Pleistocene time saw the presence of hominins in Britain or on the adjacent continental shelf?”
- “What were the specific environmental and climatic tolerances of hominins in Britain? Were there regional cultural differences in this or changes over time?”
- “How did hominin subsistence, technical and social strategies respond to climate change over the long-term?”

P.4. – RCFBP Primary Research Theme 2.

- **2. Hominin Demographics: the Palaeoecology of Hominin Colonisation and Settlement Processes [RCFBP] (especially but not limited to):**
 - “How did Pleistocene faunal communities change over time, and what was the pattern of human interaction with and impact on these?”

P. 5 – RCFBP Primary Research Theme 4.

- **4. Sharing Human Origins: Developing New Audiences:**
 - “What is the public perception of the Pleistocene?”
 - “How can Palaeolithic archaeology contribute towards an understanding of the long-term evolution of human societies and what it is to be human?”
 - “How can we engage the public with remote periods without any obvious surviving ‘monuments’? What should be our strategic marketing approach?”
 - “How can our understanding of Pleistocene environmental change inform the current climate change debate?”

4.3.10 Amongst the Strategic Research and Conservation Themes (SRCT) the following is particularly pertinent:

P.6 – RCFBP SRCT 2.

- **2. Understanding the record: The use of geomorphological and sedimentological modelling to understand the taphonomic processes that determine the significance of many Palaeolithic remains**

4.3.11 The following SRCT are more broadly relevant to the opportunities presented by the Scheme:

P.7 – RCFBP SRCT 3.

- **3. Dating frameworks**

P.8 – RCFBP SRCT 4.

- **4. Curation and Conservation**

P.9 – RCFBP SRCT 5.

- **5. Dealing with Development**

P.10 – RCFBP SRCT 7.

- 7. Education

4.4 Mesolithic 10,000 to 4,000 BC

- 4.4.1 The Early Mesolithic (c. 10,000–7000 BC) saw the transition from a largely open late glacial landscape to one dominated by forest. Pollen evidence for this period comes from sediments within the Avon valley adjacent to Durrington Walls in the north-eastern corner of the WHS (Cleal et al., 2004), the basal deposits of which were radiocarbon dated to c. 8280–7200 cal. BC (8640±200 BP; GU-3239). This indicated a forested landscape dominated by pine woodland with birch and hazel colonising a landscape previously dominated by herbs, grasses, and reeds. This pine woodland was itself gradually replaced, almost certainly during the course of the Mesolithic, by hazel and incoming oak and elm (Scaife, 2004).
- 4.4.2 Direct evidence for Early Mesolithic hunter-gatherer activity has been forthcoming from two sets of investigations. Excavations in the car park and visitor centre at Stonehenge provided evidence in the form of three large post pits, an associated tree hollow and a further pit, found in 1966 (Vatcher and Vatcher, 1973) and 1988-9 (Cleal et al, 1995., pp. 43-7). Pine wood charcoal within three of the features (Bayliss et al., 1997; Allen, 1995, 47), its size and quantity, the general absence of oak or other species, and the fact that pine was not recovered from later contexts (Gale, 1995) all imply that the post-pits themselves and their fills were of Early Mesolithic date, rather than the charcoal being reworked at a later period. This is supported by the pollen evidence, which demonstrates the same dominant pine and hazel woodland with some birch (Scaife, 1995) as seen in the deposits of the Avon sequence already noted. From the molluscan evidence, the pits appear to have been dug within open but long established mature woodland (Allen, 1995: p. 51).
- 4.4.3 Other, similar features may exist in the locality. Darvill notes subsoil hollows below later (Neolithic) structures which are potentially contemporary with the Stonehenge carpark features (Darvill, 2005: p.38). Excavations at Blick Mead, Amesbury, have produced a series of Early Mesolithic radiocarbon determinations, one of which is from a tree hollow. The Blick Mead hollow contained lithic artefacts including a possible roughout for a tranchet axe (Jacques et al., 2018: p.28). Other Early Mesolithic dates at Blick Mead come from a layer containing over 11,000 flint artefacts and over 2000 bones from large vertebrates. The radiocarbon determinations for this layer, however, span a period of some 2,900 years (Jacques et al., 2018: p.20).
- 4.4.4 The utilisation of the Avon Valley in the Mesolithic was not confined to the immediate environs of Stonehenge: at Downton, south of Salisbury, a substantial occupation site with scoops, hollows and stakeholes was associated with a large lithic assemblage. A colluvial sequence from Strawberry Hill on the northern edge of Salisbury Plain also indicated boreal woodland within the Mesolithic, with charcoal indicating the presence of pine, oak, juniper, and hazel (Allen and Scaife, 2007).
- 4.4.5 Late Mesolithic activity (c. 7000–4000 BC) in the Stonehenge region is becoming better known. Forty years ago, only some 30 artefacts were recorded by Wymer (1977), and there was some doubt over the chronological significance of some of these (Allen, 1995). Incontrovertibly Mesolithic pieces included five tranchet axes and a smaller number of perforated mace heads (Darvill, 2005). Understandings of the environment

were little better: in 1995 Allen wrote that ‘nowhere in the sequence is the Atlantic (late Mesolithic) represented’ (Allen, 1995: p.62).

- 4.4.6 With the exception of the pits and post holes in the Stonehenge carpark, Richards noted “little evidence for Mesolithic activity on the chalk areas adjacent to the River Avon,” in relation to the Stonehenge Environs Project, with a “relative paucity of finds from... extensive surface collection” and “no evidence of small-scale, mosaic clearance” (Richards, 1990: p.263).
- 4.4.7 In the western part of the WHS, Mesolithic evidence is restricted to occasional lithics, mostly recovered ex situ. Unstratified Mesolithic flint was recovered from the surface of the long barrow at Longbarrow Roundabout and possibly from pits beneath it (Bax et al., 2010: p. 37).
- 4.4.8 Most of the recorded evidence for Mesolithic activity has been identified within the eastern part of the WHS, towards the Avon. The Mesolithic activity at Blick Mead, south of the A303 at West Amesbury (Jacques et al. 2014; 2018) has already been mentioned, and continues into the Late Mesolithic. The on-going work at Blick Mead has been much discussed, but is by no means unique: sample excavation on colluvium on the west side of the Avon at Durrington Walls revealed an apparently in situ flint industry comprising blades and microliths (Richards, 1990: p.263), while excavation in 2004 revealed Late Mesolithic flintwork with good contextual associations from the A303 Stonehenge Improvements. This material (which included blades, bladelets and associated cores, a microlith, a truncation and microburins) was recovered from trial trenches and test pits at Drainage Treatment Area (DTA) 6, west of Countess Farm, Amesbury, in Area V. The site lay on the lower slopes of the valley side at the back of the higher floodplain of the River Avon, in an area of mapped calcareous gley alluvial soils (Frome 1 soil association) on chalky and gravelly river alluvium (Leivers and Moore, 2008).
- 4.4.9 Potentially Mesolithic material was recovered from two locations during the evaluations undertaken for the current scheme: on the realigned A360 north of Longbarrow Junction, and at the Eastern Portal approach.

Longbarrow Junction

- 4.4.10 The only diagnostic tool forms which could have been Mesolithic were a notched blade and the butt end of an axe, possibly of tranchet type. Neither is definitively Mesolithic. No blade or bladelet cores were retrieved, suggesting that knapping of this date was not occurring extensively on the site (or at least that cores were not being discarded there). Blades (including complete and broken examples) and bladelets, some with well-prepared butts, others plain or punctiform, were noted among the mass of later Neolithic and Bronze Age material, some of which trimmed the faces of bladelet cores. More formal core rejuvenation tablets and/or flancs de nucléus included triangular rejuvenation tablets from a blade cores and a flanc de nucléus struck from the base of a bladelet core, both types commonly found in Mesolithic technologies, although some or all of this material could be of later date.

Eastern Portal

- 4.4.11 A worked flint assemblage comprised mostly Neolithic knapping debris but contained a limited Mesolithic component: one microlith, one burin spall and one bladelet was

recovered from colluvium in a natural hollow investigated during trial trenching east of the Eastern Portal location in 2018: the deposit lies outside of the DCO boundary (Highways England, 2019b [REP1-047, 048]). Other Mesolithic material recovered from ploughsoil artefact sampling in the Eastern Portal evaluation area comprised 3 cores, some blades and trimming bladelet cores, and a single fragment from a tranchet axe. The colluvial assemblage is comparable with Mesolithic lithics incorporated in later colluvium deposits, found in trial trenching on the northern edge of the Avon floodplain west of Countess Farm in 2003 (UID 4036). These deposits of Mesolithic material on the floodplain edge are within a few hundred metres of the Mesolithic site at Blick Mead (UID 4032), south of the existing A303, although the topographic situations are notably different.

Research Questions

4.4.12 The Research Framework for the Stonehenge, Avebury and Associated Sites World Heritage Site: Research Agenda and Strategy ('SAARF') notes that "while it is clear that people were present in the WHS during the Mesolithic at least, the scale and nature of that presence remains unclear" (Leivers and Powell, 2016: p.15). Relevant priorities for research are identified as:

M.1 – SAARF B.1.

- "B.1. Living in a changing world: what was the impact of the human presence upon the environment, vegetation, and animal population? To what extent did environmental change impact upon Mesolithic technology and tool kits?"

M.2 – SAARF B.2.

- "B.2. Mesolithic lifeways: settlement and mobility: what is the range and nature of structural remains, how were they built and what did they represent?"

M.3 – SAARF B.3.

- "B.3. Investigating change and diversity: understanding the transition from the later Mesolithic to the earlier Neolithic: how can we investigate the character of final Mesolithic archaeology."

4.4.13 Although not numerous, there is an Early Neolithic component to the lithics recovered from the ploughzone sampling, and in places (Longbarrow Junction, Eastern Portal and Approach) in areas that also produced possible or definite Late Mesolithic material. While lithic forms are less susceptible to close dating than ceramics, the existence of this material alongside Mesolithic material points to the possibility of a continued human presence across the Mesolithic-Neolithic transition, and further work should consider the possibility of other forms of evidence (ceramic, environmental, etc.) that would allow these questions to be addressed (see also 4.5.24 below).

M.4 – SAARF B.4.

- "B.4. A clear understanding of the climate, environment, vegetation and animal populations in and around the WHS, and in particular the hydrology of the Rivers Kennet and Avon..."

4.4.14 No evidence has been recovered during the archaeological evaluations to suggest that the Scheme can contribute to this research question.

M.5 – SAARF B.5.

- “B.5. A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.”

4.4.15 The results of the evaluation exercise indicate that the Scheme may have some limited potential to contribute to this question. The evidence to date confirms rather than alters the existing pattern of Mesolithic activity, with indications of some small-scale and likely transitory activity in the area around Longbarrow Junction, and a further area of activity at the eastern end of the Scheme. Both of these locations are ones which have produced assemblages of Mesolithic flintwork in the past. The material from the Eastern Portal and Approach confirms the pattern of Mesolithic occupation in the Avon Valley. That from Longbarrow is more difficult to fit into a pattern of inhabitation, and may be further evidence of largely undocumented sporadic activity on the chalk.

M.6 – SAARF B.6.

- “B.6. Further refining the chronology of sites, lithic industries and change.”

4.4.16 The dating of charcoal assemblages from any Mesolithic features or contemporary deposits in geological contexts (e.g. solution hollows or palaeochannels) could add to our understanding of the impact of Mesolithic people on their environment, in particular woodland extent and composition.

4.4.17 In addition to the Research Questions in the SAARF, the Mesolithic Research and Conservation Framework (Edward Blinkhorn and Nicky Milner, 2013) identifies these themes:

M.7 MRCF Theme 1: Living in a changing world

4.4.18 it is not currently evident that there is a body of evidence from the Scheme that would address this theme, but the possibility of the recovery of environmental evidence from (for instance) sinkholes should be borne in mind.

M.8 MRCF Theme 2: Mesolithic lifeways

4.4.19 again, the body of evidence at present is quite limited, but considered alongside other material from the area may contribute to the following questions:

- **M.8.1** MRCF T2.1: “What can Mesolithic technology (e.g. stone, antler, bone and wood working), its production, use and deposition, tell us about Mesolithic lifeways?”
- **M.8.2** MRCF T2.3: “How can we better understand spatial and temporal variation in lithic technology, use and deposition?”
- **M.8.2** MRCF T2.5: “To what extent can the composition, size and geographical characteristics of lithic scatters be used to define different types of site in the Mesolithic?”

M.9 MRCF Theme 3: Investigating change and diversity

4.4.20 : The evidence from the Scheme as it currently exists has little potential to address this theme. Further work may contribute particularly to:

- **M.9.1** MRCF T3.9: “How variable was site use and landscape use through this period?”
- **M.9.2** MRCF T3.13: “Can we further refine the dating of final Mesolithic sites and how do these relate to the Early Neolithic?”

4.5 Neolithic 4,000 to 2,200 BC

- 4.5.1 The WHS is famous for and defined by its Neolithic monumental earth, stone and timber architecture. The quantity and visibility of the archaeological remains dating to the Neolithic period are such that the area is a part of one of the most recognisable and important prehistoric landscapes in Europe.
- 4.5.2 The traditional understanding of the Early Neolithic landscape is of woodland quickly cleared by early farmers. However, more recent evidence has led to a recognition that the landscape was more complex in terms of woodland use, clearance, regrowth, and seasonality: generally the landscape of the Stonehenge environs is described as an open ‘park’ (Roberts et al., 2018: para5.5).
- 4.5.3 Early Neolithic communities were the first to construct large upstanding structures in the area. Communal, ceremonial and mortuary structures (the long barrows, cursuses and causewayed enclosures) have historically dominated interpretations of the period. Other evidence exists, some important classes of which would have had little or no upstanding surface expression. These include substantial features such as the Coneybury ‘Anomaly’ and possibly the Wilsford Shaft, as well as more ephemeral evidence such as scatters of cultural material in the ploughzone, and groups of (or isolated) smaller pits (for instance on King Barrow Ridge), postholes and utilised natural features such as tree hollows. Since the Scheme will explore through archaeological mitigation a broad transect through the landscape it offers the opportunity to identify whether other features similar to Wilsford Shaft exist in this landscape, within the DCO boundary.
- 4.5.4 Long barrows are amongst the earliest substantial constructions in southern Britain and are generally understood to have been associated with communal mortuary practises in the early to mid-4th millennium BC. Several are in close proximity to the A303, and two have been discovered (or re-established after having been dismissed) during various phases of evaluation work for the Scheme.
- 4.5.5 The prominent Winterbourne Stoke long barrow (NHLE 1011841, also known as WS1) stands in the north-east angle of the current Longbarrow Roundabout (a burial has been radiocarbon dated to 3630–3360 cal. BC, confirming the Early Neolithic date) (Roberts et al., 2018). Three further long barrows are known between 500m and 800m south-east of Longbarrow Roundabout. These comprise the scheduled long barrow on Wilsford Down 300m north of The Diamond (NHLE 1010830; Winterbourne Stoke 71); a previously unknown long barrow (Winterbourne Stoke 86); and a previously dismissed long barrow. Results of investigations on two of these long barrows (Winterbourne Stoke 71 and 86) have recently been published (*ibid.*), together with a review of long barrows in the WHS.
- 4.5.6 Other classes of Early Neolithic monumental architecture (the Causewayed Enclosures, of which two are known within the Stonehenge environs and the cursuses, of which

there are also two) are not affected by the Scheme, and no evidence relating to them has been encountered in evaluation.

- 4.5.7 Other evidence of occupation in the Early Neolithic consists mostly of pits and scatters of cultural material in the ploughzone. No demonstrably Early Neolithic pits were encountered, and what evidence was recovered from the ploughzone (exclusively lithic material) was incorporated into larger distributions of material of later date. Individual instances of this material are presented below.
- 4.5.8 Demonstrably Middle Neolithic sites are scarce. Recent geophysical survey during evaluation has indicated that a barrow just beyond the DCO boundary, 250m south-west of Longbarrow roundabout (NHLE 1011045), has a segmented ditch and southern-facing entrance suggestive of a Neolithic hengiform monument (below).
- 4.5.9 Another previously unknown Middle Neolithic hengiform monument, situated west of The Diamond wood, was identified during evaluation (Wessex Archaeology, 2017d) and in work conducted by Historic England (Roberts et al., 2016).
- 4.5.10 Although the building of substantial earth and timber structures and (in the early part of the period at least) the adoption of arable agriculture are suggestive of more permanent foci of activity, no substantial traces of Early or Middle Neolithic dwellings or settlement areas have yet been conclusively identified in this part of the landscape. However, pits and concentrations of lithic material, which are occasionally identified throughout the Stonehenge landscape, are indicators of occupation during this period. Work south of the A303 carried out by Historic England revealed a cluster of Middle Neolithic pits containing Peterborough Ware at West Amesbury, and similar pits were encountered north of the current line of the road during evaluation for the Winterbourne Stoke Bypass (below).
- 4.5.11 Large earth, timber and stone structures remain the most conspicuous elements of the archaeological record into the Late Neolithic (2900-2200 BC). A range of distinctive new mortuary, communal and ceremonial structures appeared during these periods, notably henges, stone and timber circles, and various forms of barrow. It is during this period that much of Stonehenge itself was constructed.
- 4.5.12 Late Neolithic monumental evidence has been recovered during evaluation on Parsonage Down, where a hengiform ring ditch was encountered (Highways England, 2019d).
- 4.5.13 Neolithic evidence, including lithics and structural remains (pits, ring ditches, linear ditches), have been identified in all sections of the Scheme where evaluation has been undertaken, with the exception of Rollestone Corner.

Winterbourne Stoke Bypass

- 4.5.14 A focus of Neolithic activity has been identified on a spur of high ground overlooking the River Till, north-west of Scotland Lodge Farm (Highways England, 2019d [REP1-049, 0050], Trenches 1068 and 1070). The evaluation revealed three Middle Neolithic pits; two in Trench 1070, and one in Trench 1219. All three pits contained Peterborough Ware pottery (in varying quantities), and four red deer antlers were found on the base of one example (Trench 1070). Other finds retrieved from the pits included worked flint, burnt flint, animal bone and fired clay.

4.5.15 This site also included two non-designated ring ditches (UID 2035.01/MWI6396, UID 2035.02/MWI7206). The evaluation confirmed the existence of the ring ditches, which had previously been detected by geophysical survey. Both of these features, revealed in Trenches 992 and 1068, were relatively substantial in depth and width, and had similar profiles with steeply sloped sides and flat bases. The example in Trench 1068 was also found to contain a centrally placed grave (106803). Limited excavation of the grave demonstrated the presence of a layer of flint nodules just below the surface. The character of the ditch fill sequence in Trench 1068 is suggestive of a hengiform monument of Late Neolithic date (possible evidence for an external bank being deliberately slighted into the ditch).

Longbarrow Junction (north)

4.5.16 A cluster of three pits in Trench 439 corresponded to a discrete geophysical anomaly. Abraded body sherds (7g) of Woodlands-type Grooved Ware pottery were recovered from the single dumped fill of one, along with an assemblage of worked flint (including 50 flakes, 34 chips and 2 microdentulates) and rare animal bone fragments. The other two pits did not contain any pottery but had a similar range of other finds (again including worked flint assemblages). A tree hollow just to the south of this pit cluster did not contain any artefacts.

4.5.17 Two further pits, located some 80m to the south in Trenches 437 and 438, also belong to this phase, on the basis of the worked flint assemblages they contained. Animal bone (including aurochs) was recovered from one, as was flint knapping waste, burnt flint, and a 1g sherd of pottery that can only be ascribed a general prehistoric date. The other contained twenty-one worked flint flakes, but no other finds were retrieved.

4.5.18 A large quantity of lithic debitage was recovered from in and around the area of the Late Neolithic pits. Technological features that might be expected of the Late Neolithic are sufficiently recurrent to suggest that a large part of the material may be of this date. These features include faceted butts on flakes, discoidal cores and the more distinctive of the miscellaneous flake cores. Given the general prevalence of shorter, broader flakes in the assemblage, it is probable that a sizeable proportion of the material is of general later Neolithic date. This conclusion is borne out to some extent by the retouched tool component. These included a piercer of the short 'spurred' form which Isobel Smith considered to be Late Neolithic (Smith, 1965); three transverse arrowheads; and scrapers made on blanks with proportions shown elsewhere in the area to be more typical of Late Neolithic (shorter and thinner) than Early Neolithic (longer and thicker) forms. There is therefore an overall impression of a predominantly Late Neolithic component.

4.5.19 The material from the pits and tree hollows (and the majority of that from the overlying ploughsoil) is clearly broadly contemporary, and appears to form a coherent assemblage of knapping waste of Late Neolithic date. The material is in near-mint condition, lightly patinated but without significant wear, and appears to derive from single episodes of deposition of knapping waste. Associated material (Woodlands-style Grooved Ware and animal bone including red deer antler) add to the indication that material derives from Late Neolithic activity.

Western Portal approaches

- 4.5.20 A small curvilinear anomaly identified in multichannel GPR survey, which may represent a shallow pond barrow, perhaps with a surrounding ditch feature, or a small Late Neolithic monument (Wessex Archaeology, 2018a, feature 10000), is the only ceremonial or funerary monument identified within the Scheme boundary.
- 4.5.21 A possible circular arrangement of pits identified in geophysical surveys amongst the northern part of the Normanton Down barrow cemetery may be a highly plough-damaged Neolithic monument not previously recorded (Wessex Archaeology, 2018a; p.13, feature 10002).

Eastern Portal approaches

- 4.5.22 Field walking and test pitting revealed a generally even distribution of worked and burnt flint across the Eastern Portal evaluation area, with a small number of slightly higher concentrations which may be the remains of activity areas now dispersed within the plough zone (Highways England, 2019b [REP1-047, 048]). The worked flint assemblage from a natural hollow filled with colluvium appears consistent with primary knapping debris largely of Late Neolithic date, with a limited Mesolithic component (see 4.4.11 above). Small but elevated occurrences of individual blades at the western end of the Eastern Portal evaluation area may be indicative of (probably) Early Neolithic activity.

Countess East compound area

- 4.5.23 At Countess East, previous investigations identified Neolithic pits and flintwork in the south of the site (UID 4040-41).

Research Questions

- 4.5.24 The SAARF notes that, “one consequence of the understandable focus of attention on the ceremonial earthworks and other structures has been the neglect of smaller or less conspicuous elements of the... landscape” (Leivers and Powell, 2016, 15). Priorities for research which the Scheme has the potential to address are identified as:

N.1 – SAARF C.1

- “C.1. Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at the very end of the Mesolithic?”.
- 4.5.25 Although no diagnostically very early Neolithic material has been recovered from the scheme (i.e. Carinated Bowl pottery) the evaluations suggest that the Scheme has some potential to contribute to this question. Although not numerous, there is an Early Neolithic component to the lithics recovered from the ploughzone sampling, and in places (Longbarrow Junction, Eastern Portal and Approach) in areas that also produced possible or definite Late Mesolithic material. While lithic forms are less susceptible to close dating than ceramics, the existence of this material alongside Mesolithic material points to the possibility of a continued human presence across the Mesolithic-Neolithic transition, and further work should consider the possibility of other forms of evidence (ceramic, environmental, etc.) that would allow these questions to be addressed (see also 4.4.12 above).

N.2 – SAARF C.2

- “C.2. While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?”

4.5.26 In the case of Longbarrow Junction in particular, and other areas to a lesser extent, the Scheme allows the potential to investigate Late Neolithic occupation immediately outside the WHS, and to relate it to earlier and later occupation both within and beyond the WHS boundary. There is at present no indication of any Neolithic domestic architecture anywhere on the Scheme. Also of relevance to this question, the reflexive development of the approach to ploughzone artefact recovery strategies (6.3.11–6.3.20 below) may offer scope to examine the value and effectiveness of different sampling and sieving approaches to recover lithics.

N.3 – SAARF C.3

- “C.3. What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?”

4.5.27 At both Winterbourne Stoke Bypass and Longbarrow Junction, the evidence from the evaluations indicates that the Scheme has the potential to address the relationship between both earlier settlement (Peterborough Ware pits) and later monuments (hengiform ring ditches), and earlier monuments (long barrows) and later settlement (Grooved Ware pits). No architecture exists within the Scheme to address the final question.

N.4 – SAARF C.6

- “C.6. A key aim is to better understand the chronologies of key artefact types.... Specifically, what is the currency... of Peterborough Ware and its sub-styles...?”

4.5.28 The Middle Neolithic pits on the Winterbourne Stoke Bypass contained both Peterborough Ware and faunal remains, making them ideal candidates for absolute dating.

N.5 – SAARF C.20

- “C.20. What impact did monument construction have on the physical landscape?”

N.6 – SAARF C.22

- “C. 22. What potential exists to better understand diet, health and mortality among later Neolithic/Early Bronze Age populations within the WHS?”

- 4.5.29 The possible Neolithic monuments at Scotland Lodge will not be directly impacted by the Scheme. However, evidence relating to various barrows may be encountered during works to downgrade the A303 and A360 to a restricted byway (see Appendix D).

Scheme-specific Research Questions

- 4.5.30 The evidence recovered during evaluation indicates that the Scheme has the potential to address the following scheme-specific research questions:

N.7 – SSRQ.1

- Recent research elsewhere in the Stonehenge landscape has suggested that Woodlands Grooved Ware appears in the area very soon after 3000 BC. Can the evidence recovered from the Scheme corroborate this?

- 4.5.31 The occurrence of a possible Late Neolithic occupation site north of Long Barrow Junction has the potential to elaborate on the chronological span of the currency of Woodlands Grooved Ware, and on its contexts of use and deposition.

N.8 – SSRQ.2

- Research questions have tended to focus on changes in readily-identifiable artefact types (ceramics, lithics) other forms of evidence should not be overlooked. What can the evidence from the Scheme contribute?

- 4.5.32 Particular attention should be paid to faunal remains and the potential of other sorts of environmental evidence to inform on daily life and the world in which it took place.

4.6 Early Bronze Age and Beaker 2,600 to 1,600 BC

- 4.6.1 This period is typified by the emergence of new forms of ceramics (successively Beakers, Food Vessels and Collared Urns), lithic and other stone artefacts, metalwork, and mortuary architecture (varieties of flat graves and round barrows). Many of these were encountered during evaluation, suggesting that the Scheme has considerable potential to contribute to research into this period.
- 4.6.2 Large stone and earth structures remain the most conspicuous elements of the archaeological record into the Early Bronze Age (c. 2200–1600 BC). Some existing monuments constructed during the preceding millennium seem to have gone out of use by the Early Bronze Age, although others appear to have continued to influence activities in this landscape. The development of the substantial round barrow cemetery, known as the Winterbourne Stoke Crossroads group (NHLE 1012368) and its numerous outliers around the Early Neolithic long barrow (NHLE 1011841) represents one of the clearest examples of the continuing influence of earlier monuments.
- 4.6.3 The appearance and proliferation of round barrows appears to represent a distinct shift in ceremonial and mortuary traditions at the end of the Late Neolithic (c. 2900–2200 BC) and into the Early-Middle Bronze Age (c. 2200–1600 BC). It is generally accepted that, although round barrows were being constructed in the latter stages of the Late Neolithic, the majority date to between 2200 and 1520 BC with the tradition of barrow construction persisting into the early part of the Middle Bronze Age. In many cases, there is also evidence for multiple phases of construction and sequential interments.

- 4.6.4 At least some of the ring ditches in the Winterbourne Stoke Bypass area are likely to date to this period, as may the putative inhumation located in the centre of the (hengiform) ring ditch in that same area. The Wilsford G1 bowl barrow (NHLE 1010832) is located approximately 25m east of the proposed western tunnel portal location, at the eastern end of the Western Portal and Approach. Barrow cemeteries and other outliers to these groups are present within the surroundings of the site.
- 4.6.5 Approximately 30 distinctive Beaker burials have been recognised within the WHS, some beneath barrow mounds, others interred in earlier monuments (e.g. the 'Stonehenge Archer', or an example at Fargo Henge), or as flat graves, such as those immediately north of Wilsford G1. In some instances, barrows appear to have clustered around earlier Beaker burials. Further afield on the eastern side of the Avon, the discoveries known as the Amesbury Archer, (¹⁴C date range 2440–2290 BC) and the Boscombe Bowmen (2460–2280 BC) have provided evidence that long distance contacts existed at this time between communities in the Stonehenge landscape and groups elsewhere in continental Europe. One crouched Beaker burial was encountered during evaluation, in the area of the Western Portal and Approaches (but outside the footprint of the cutting) (Trench 260: Highways England, 2019f), while a tree hollow in that same area contained a very small quantity of human remains (a single petrous temporal) accompanied by Beaker pottery, probably all that survived of an infant burial. The bone has not been directly dated (an insufficient quantity of material survived to permit radiocarbon dating to be attempted) but a Beaker date is assumed from the accompanying ceramics.
- 4.6.6 Priorities for research in the Scheme have the potential to address the distribution and date of the non-monumental Beaker inhumation burials, and their chronological, spatial and qualitative relationship to those monumentalised in the round barrows and barrow cemeteries. There is a growing indication of a relationship between undecorated Beaker ceramics and infant burial, with the evidence from the Scheme adding to the picture. Beaker burials are often stereotyped as single inhumation burials, obscuring the considerable variety in which the body was treated at, and after, burial. Accordingly, attention will be paid to characterising the range of secondary burial rites evident in Beaker funerary practices. Careful attention will also be given to finds of complete objects in non-funerary contexts, for example beaker pots, as their deposition echoes their selection as grave goods.
- 4.6.7 Other Early Bronze Age mortuary evidence includes a cremation burial in a Collared Urn from Longbarrow Junction, and a second cremation burial, this time in a Food Vessel, from Winterbourne Stoke Bypass.
- 4.6.8 Occupation sites of this period are poorly attested. At least some portion of the substantial lithic assemblage from the Western Portal and Approach is likely to date to this period, although there is a notable paucity of diagnostic tool types. In the same area, pits containing Beaker ceramics and other material attest to activities other than burial. Similar evidence was recovered from Longbarrow Junction, south of the existing line of the A303, and on the Winterbourne Stoke Bypass.
- 4.6.9 Beaker and Early Bronze Age evidence, including lithics and structural remains (pits, ring ditches, linear ditches), have been identified in all sections of the Scheme where evaluation has been undertaken.

Winterbourne Stoke Bypass

- 4.6.10 Two non-designated ring ditches (UID 2035.01/MWI6396, UID 2035.02/MWI7206) north-west of Scotland Lodge Farm situated on a spur of high ground overlooking the River Till valley (Highways England, 2019d [REP1-049, 050], Trenches 1068 and 1070) north-west of Scotland Lodge Farm may be of Early Bronze Age, rather than Neolithic, date.
- 4.6.11 Two further cropmark ring ditches situated on the highest ground in the west of the Parsonage Down East excavated material deposition area likely to represent Early Bronze Age barrows. A third ring ditch was investigated during the trial trenching but remains undated (Highways England, 2019d [REP1-049, 050], Trench 992). Two shallow circular pits in the east of the Parsonage Down East excavated material deposition area, close to the line of the realigned B3083 (Trench 717, approximate chainage 3500), contained Beaker pottery. In the central part of the excavated material deposition area, an Early Bronze Age Food Vessel containing the cremated remains of a juvenile was found within a small circular pit, sealed by colluvium in the base of the coombe (Trench 985).
- 4.6.12 Two small possible prehistoric pits and a small, ploughed-down non-designated round barrow cemetery may represent Early Bronze Age activity on Winterbourne Stoke Hill immediately north of the existing A303 (Asset Group AG05). The five ring ditches here produced a flint assemblage consistent with a Late Neolithic/Early Bronze Age date (Highways England, 2019e [REP1-052, 053]).

Longbarrow Junction

- 4.6.13 Early Bronze Age features on the realigned A360 north, comprising Beaker pits and an urned cremation, suggest activity on the periphery of a more densely-occupied area to the east (Highways England, 2019h [REP1-042, 043]). South of the A303 at the southern end of the realigned A360 south approach road, close to the A360, the geophysical survey and trial trenching revealed two sides of a possible rectangular enclosure, dated to the Early Bronze Age by a single sherd of grog-tempered ware.

Western Portal Approach

- 4.6.14 Beaker and Early Bronze Age activity identified in evaluation of the Western Portal and Approach cutting includes a ceremonial or funerary monument, two Beaker inhumations, pits and a material assemblage from a probable sink hole. Finds recovered from ploughsoil artefact sampling indicate a focus of activity in the Later Neolithic/Early Bronze Age, with some earlier and later components (Highways England, 2019f [REP1-045, 046]), with higher densities of worked and burnt flint in the west of the site, towards the Winterbourne Stoke barrow group. Although some concentrations of worked flint material in the plough zone are apparent, these do not appear to correlate to surviving features below the surface and cutting into the underlying chalk.
- 4.6.15 A small curvilinear anomaly some 4m in diameter, close to the existing A303, may represent a shallow pond barrow, perhaps with a surrounding ditch feature, or a small hengiform monument (Wessex Archaeology, 2018a, feature 10000), of possible Late Neolithic or Early Bronze Age date. On the southern edge of the approach cutting, a small sink hole or doline contained evidence of human use in both the prehistoric and historic periods, while several tree hollows contained cultural material, mainly struck or

burnt flint. Three pits contained prehistoric ceramics and other material, two dating to the Beaker period, the third to the Early Bronze Age (Highways England, 2019f [REP1-045, 046]). One grave, cut into a large tree-throw hollow which also contained other features, contained small fragments of neonatal bone along with sherds from a fire-damaged plain Beaker. The other contained a female inhumation accompanied by a Beaker, a copper alloy pin or needle fragment, and a shale object of unknown purpose and with no known parallel. Smaller sub-surface features elsewhere in the western approach area indicate that Beaker and Early Bronze Age activity was not restricted to graves, but also involved the incorporation of material (flint, pottery, etc.) into small features (pits, tree hollows, etc.).

- 4.6.16 Overall, the results from the Western Portal evaluation tend to support the notion of the area south and east of Winterbourne Stoke Crossroads as a preferred one for lithic tool use and deposition (Highways England, 2019f [REP1-045, 046]). The combination of Late Neolithic or Early Bronze Age lithic scatters, Beaker pits and Beaker graves may suggest the presence of a zone of Beaker occupation in the Western Portal Approach.

Research Questions

- 4.6.17 The SAARF notes that, “although there is evidence in the landscape for non-mortuary activity during the Early Bronze Age/Beaker period... the archaeology of the period is dominated by the burial record” (Leivers and Powell, 2016: p.18). Priorities for research which the Scheme has the potential to address are identified as:

EBA.1 – SAARF J.1

- J. 1. Establish the chronology of individual barrows, and the phasing of their structures.

- 4.6.18 Evidence relating to various barrows may be encountered during works to downgrade the A303 and A360 to a restricted byway (see Appendix D).

EBA.2 – SAARF J.2

- J.2. Establish the dates and development of barrow cemeteries.

EBA.3 – SAARF J.3.

- “J.3. What patterns are evident in the spatial relationships between the locations of barrows and the existing monuments in the Stonehenge and Avebury landscapes, and how did these change over time?”

EBA.4 – SAARF J.4

- “J.4. What was the nature of the local environment, contemporary land-uses and other activity in the landscape?”

- 4.6.19 The pits and the lithic material contained predominantly within the ploughzone have the potential to allow investigation of non-mortuary activity within the landscape, and the possibility of identifying settlement sites, especially of Beaker date. Consideration should also be given to whether there is evidence suggesting that this period saw the re-introduction of cereal cultivation/arable agriculture, and if so what the tempo of that change was, as well as if there is evidence to indicate what was being cultivated in various locations and times.

EBA.5 – SAARF J.7

- “J.7. [dating of] Cremation burials...”

4.6.20 The Food Vessel and Collared Urn cremation burials would both be appropriate for dating.

Scheme-specific Research Questions

4.6.21 The evaluation evidence from the Scheme suggests additional research questions relating primarily to the distribution and date of the non-monumental Beaker inhumation burials, and their chronological, spatial and qualitative relationships to those monumentalised in the round barrows and barrow cemeteries.

EBA.6 – SSRQ.3

- Does lithic material within the ploughzone at Western Portal indicate that this was a preferred location for activity towards the end of the Neolithic period and/or at the start of the Early Bronze Age?

4.6.22 Further work is required to better characterise the material, not only in terms of chronology (there is demonstrable conflation of material from the earlier and later parts of the Neolithic period, at least, among the already-recovered material) but also in terms of the nature and duration of the activities it represents.

EBA.7 – SSRQ.4

- What are the distribution and date of individual inhumations in flat graves and how do these compare to the distribution and date of the placing of human remains in perhaps less formal contexts (for instance tree hollows), and to the distribution and date of burials beneath round barrows and in their mounds?

4.6.23 Beaker period human remains in the same area (likely to be contemporary with at least some of the lithics) allow the possibility to address questions relating to non-monumentalised mortuary practices.

EBA.8- SSRQ.5

- What is the nature of the relationship between undecorated Beaker ceramics and infant burial?

4.6.24 The evidence from the Scheme adds to this emerging picture.

4.7 Middle to Late Bronze Age (1,600 BC to 700 BC)

4.7.1 The Middle and Later Bronze Age saw extensive changes in land use and organisation across much of Britain, with the establishment of extensive field systems and the widespread adoption of farming and associated permanent settlement. The Stonehenge landscape was not exempt from these changes, although there is still scant evidence of activity at or immediately around Stonehenge itself (Roberts et al, 2017). The landscape was effectively transformed in the middle of the 2nd millennium BC when ‘its sacred and ceremonial significance seems to have diminished sharply; a more mundane agricultural regime of farmsteads and fields took over or intensified noticeably’ (Bowden et al., 2015: p.66). Although the interment of burials in and around barrows continued into the Middle Bronze Age, the tradition of constructing funerary and ceremonial monuments appears to have declined and eventually ceased by, or during, this period.

- 4.7.2 Field systems are extensive across much of the area, from west of the Till to east of the Avon. Those encountered within the Scheme are discussed below. Large linear ditches, commonly referred to as Wessex Linear Ditches, are a characteristic feature of the fossilised prehistoric landscape contained within the Salisbury Plain area and across the wider chalklands of southern England (Bradley et al., 1994). Although many of these features appear to have been established in the Late Bronze Age (c.1200-700 BC), they are often not closely dated and certain examples may be somewhat earlier (Bowden et al., 2015; Pollard et al., 2017). There are also indications that some linear boundaries were maintained and elaborated over prolonged periods. The tradition of constructing these landscape-scale features is frequently interpreted as the manifestation of increased territoriality and the emergence and consolidation of cultural, political and economic divisions during the 1st millennium BC.
- 4.7.3 Although evidence of settlement activity during preceding periods is comparatively rare, and typically insubstantial, traces of occupation become more conspicuous from the latter stages of the Bronze Age onwards, and at least four settlement sites of Middle and/or Late Bronze Age date are known, at the former Winterbourne Stoke Crossroads (Longbarrow Junction), at the northern end of Fargo Plantation, at the Egg enclosure, and at the Rollestone Grain Store.
- 4.7.4 Possible settlement features were encountered during the Longbarrow Junction evaluation, probably related to the remains of three small roundhouses uncovered during the construction of the roundabout in 1967 (MWI6924) (Richards, 1990: p.208-10; Lawson, 2007: p.208). The presence of Middle and Late Bronze Age burials amongst the barrows has also been highlighted as evidence that the earlier monuments may have retained some significance for the occupants of the neighbouring settlement (Bax et al., 2010). A scheduled enclosure (NHLE 1011048), visible on aerial photographs and confirmed by geophysical survey (GSB, 2001a; Wessex Archaeology, 2017a), is bisected by the A303 to the west of Longbarrow Roundabout. It is possible that the feature was associated with the nearby Bronze Age settlement; however, the enclosure has not been subject to recorded archaeological investigation.
- 4.7.5 Evidence dating to the Middle and Late Bronze Age identified in the evaluation programme relates primarily to remains of extensive field systems, previously known from aerial photographs and geophysical survey, and a possible settlement enclosure. Colluvial sequences with potential to seal buried soils provide evidence for intensification of agriculture in the later prehistoric periods.

Winterbourne Stoke Bypass

- 4.7.6 North of the proposed carriageway alignment across this section of the Scheme, Parsonage Down is occupied by an extensive field system that is likely to date to the later prehistoric (Middle Bronze Age to Iron Age) and Roman periods (UID 1004.01). Immediately north of Scotland Lodge Farm, a possible rectilinear enclosure appears to cut the possible Neolithic or Early Bronze Age ring ditch (Site 7.1) (Highways England, 2019d [REP1-049, 050]), suggesting it is of a later prehistoric date. The chalk coombe in this part of the Scheme contains colluvial sequences and coombe deposits which have potential to include and seal buried land surfaces and to preserve paleoenvironmental indicators. Scatters of later prehistoric pottery in the northern part of the area may relate to the periphery of unenclosed settlement.

- 4.7.7 A buried land surface and colluvial deposits have been mapped within the dry valley east of the River Till. The association of tree throws with brown earths here suggests the deposits are of some antiquity and probably represent a considerable time span, possibly Bronze Age to medieval.

Longbarrow Junction

- 4.7.8 South of the A303, Middle and Late Bronze Age evidence is concentrated around a 'C'-shaped enclosure which contained the remains of a Late Bronze Age vessel in the backfill of its southern arm (Highways England, 2019h [REP1-042, 043]). Post-holes on the western side of the enclosure may form the remains of a post-built structure, and a short length of a linear ditch-like feature to the west of the enclosure may have formed a blocking ditch to close off the approach to the enclosure. The ditch backfill contained a complete 'saucepan pot' vessel thought to date from the Late Bronze Age. The area between the enclosure and blocking ditch was also the focus of a considerable concentration of burnt flint, which, although undated, may have derived from activities taking place within or around the enclosure.
- 4.7.9 Sections of two later prehistoric long-distance land divisions ('Wessex linear') are intersected north and south of the A303 in the Longbarrow Junction section of the Scheme. These features are known to continue to the southeast of the existing Longbarrow Roundabout, where a section of one of them is designated as a scheduled monument. A trench excavated through the non-designated section of the feature in the early 2000s revealed a large ditch, the fills of which produced animal bone, worked flint and burnt flint, and a single sherd of Roman pottery from its upper fills (Wessex Archaeology, 2002f). The feature was subject to further excavation in January 2013 immediately to the south-west of the road junction. This established that the ditch was 4.6 m wide and was 1.5 m deep. Although no artefacts were recovered to confirm the suspected Late Bronze Age date of the ditch, this was considered most likely (Wessex Archaeology, 2014). Though the scheduled section of the feature has also been subject to targeted excavation (e.g. Wessex Archaeology, 1993), its precise date also remains uncertain. Elsewhere in south Wiltshire, there is evidence for long-distance boundaries having their origins in the Bronze Age, with some recorded associations with Neolithic pit alignments.
- 4.7.10 The western end of the Longbarrow Junction evaluation area also coincides with an extensive area of co-axial field systems and lynchets (MWI7003; MWI7094; MWI12625; MWI12695; MWI12748; MWI13128; MWI73295; MWI74633) identified south of the A303 from aerial photograph analysis and several episodes of geophysical survey (e.g. Wessex Archaeology, 2017a). Several other linear features (MWI13149) have also been identified further to the west, although it is less certain if these are of anthropogenic origin. In some instances, trial trenching and other small-scale excavation has confirmed the presence of archaeological features correlating with elements of the field systems identified via remote sensing techniques (e.g. [Roberts et al. 2016; 2017; Wessex Archaeology 2017a]). Although these boundaries may have been established during multiple phases of activity and subject to episodic alteration and reorganisation, the field systems as a whole are likely to date broadly to the later prehistoric to Roman periods, following a pattern observed across large swathes of Salisbury Plain. However, these field systems may also incorporate some elements derived from considerably later episodes of land division, including medieval lynchets and post-medieval field boundaries.

Western Portal Approach

- 4.7.11 Only limited evidence of Middle to Late Bronze Age date was recovered during the archaeological evaluations in the Western Portal Approach. The Wessex Linear boundary feature crossing the extreme south-west corner of the evaluated area (see 4.7.9 above) appears to be respected by cropmark field systems on its south-western and north-eastern sides. Small scale excavations and subsequent analysis undertaken by Historic England in relation to the fields southwest of the boundary Winterbourne Stoke Crossroads (UID 2089) (Roberts et al. 2016) uncovered inhumation burials interred in field system ditches dating to the earlier part of the Middle Bronze Age (UID 2173), yielding ‘new details of landscape structuration and the deposition of the dead during the Middle Bronze Age’ (Roberts et al. 2017, 1). Conversely, the 2018 trial trench evaluation found no subsurface remains of the cropmark field systems north-east of the Wessex Linear. The relationship of the Wessex Linear and field systems to the Middle Bronze Age settlement at Longbarrow Roundabout is unclear. In terms of artefactual material, eight sherds of pottery from the Western Portal evaluation have been tentatively assigned to this period, and no definite lithic material.

Research Questions

- 4.7.12 The SAARF notes that, “questions relating to Middle and Late Bronze Age land use are many” (Leivers and Powell, 2016: p.19). The establishment of widespread field systems across much of the area of the Scheme (as elsewhere in southern Britain at this time), but apparently absent from some areas, makes an investigation of changing land use and its economic and symbolic basis of particular importance in this period. Priorities for research which the Scheme has the potential to address are identified as:

MBA.1 – SAARF K.1

- “K.1. What was happening within, and immediately around the Neolithic monuments at Stonehenge and Avebury during the Middle and Late Bronze Ages?”

MBA.2 – SAARF K.4

- “K.4. What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?”

- 4.7.13 Field systems in the western parts of the Scheme lie in areas which also contain ring ditches of earlier date, allowing for the consideration of the influence of the latter on the former.

MBA.3 – SAARF K.5

- “K.5. What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?”

- 4.7.14 Possibilities for direct dating of field systems are few, but it is possible that this question may be addressed given the occurrence of ceramics and organic material suitable for dating. This applies equally to the dating of Wessex linears and their chronological relationship to other elements of field systems and land division. There is also opportunity to answer research questions about the specific dating of Wessex Linear Ditches through e.g. OSL dating: the intersections of Wessex Linears may have the best potential for surviving sequences which may facilitate scientific dating.

MBA.4 – SAARF K.6

- “K.6. How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?”

4.7.15 The settlement at Longbarrow Junction, and the scant evidence of later (possibly unenclosed) settlement on Parsonage Down allow for a consideration of this question.

MBA.5 – SAARF K.8

- “K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?”

4.7.16 Colluvial deposits encountered at Parsonage Down East and known from previous surveys on the Winterbourne Stoke Bypass east of the River Till have the potential to be dated.

4.8 Iron Age (800 BC to 43 AD) and Roman (43 to 410 AD)

4.8.1 There is relatively limited Romano British and Iron Age evidence beyond the continuing use of extensive field systems established in the Bronze Age, despite the presence of Yarnbury Camp and Vespasian’s Camp Iron Age hillforts (scheduled monuments) and a single stone Roman building in the east of the scheme area at Countess East. Although the Iron Age enclosure at Scotland Lodge is avoided, trackways to and from it within the field systems offer an opportunity to understand the transitional zone between the Iron Age and Roman village settlements and the field systems they continued to use, based on their Bronze Age antecedents. The role of the two hillforts and their relationship with the surrounding field systems could potentially be explored despite the fact that the scheme will not involve mitigation within either of the scheduled areas.

4.8.2 There is remarkably little evidence for settlement within the Iron Age and Romano British periods within the World Heritage Site, though there is evidence for more ephemeral activity, and burial evidence from Stonehenge itself. There is some evidence for settlement either side of the World Heritage Site, e.g. the Scotland Lodge enclosure, a burial within the Palisade ditch and at Stonehenge and reuse of settlement Durrington Walls (storage pits within henge), which may suggest continued recognition of the significance of Stonehenge. Bowden and Bayer’s recent earthwork survey at Vespasian’s Camp demonstrates a paucity of earthworks within the hillfort as a result post-medieval landscaping (<https://historicengland.org.uk/images-books/publications/historic-england-research-6/he-research-6/>). There is little evidence from the late Iron Age with the exception of Scotland Lodge.

4.8.3 The area has been subject to extensive survey and yet evidence of activity from these periods remains limited, perhaps suggesting that the landscape is being used differently. This may be because of the monuments, some of which were re-used for burial in the Roman period and later periods, perhaps suggesting that the Bronze Age ritual landscape was maintained and respected into the Iron Age and Roman periods.

Winterbourne Stoke Bypass

4.8.4 Immediately to the northwest of the western origin of the Scheme is the Iron Age hillfort at Yarnbury Camp (UID 1000/NHLE 1005689; Asset Group AG01). Some 500 m further to the north is the Parsonage Down Camp earthwork enclosure and its associated field system (NHLE 1009646). An Early and Middle Iron Age to Roman period enclosed

settlement (UID 2033; Asset Group AG02) west of Scotland Lodge Farm lies immediately south of the new road alignment at approximate chainage 2600. North of the proposed carriageway alignment an extensive field system on Parsonage Down is likely to date to the later prehistoric (Middle Bronze Age to Iron Age) and Roman periods (UID 1004.01), with possible settlement enclosures and linear features (e.g. UIDs 2036; 2039). Trial trenching has verified some possible enclosures and pits but evidence for any settlement focus in this part of the Scheme is limited.

- 4.8.5 A linear ditch identified from geophysical survey (Highways England, 2019e [REP1-052, 053], Trenches 740, 1327 and 1329, approximate chainage 4250m) identified in the evaluation is of likely later prehistoric/Roman date, as its alignment is at odds to that of probable medieval lynchets in the area. The v-shaped ditch profile may form an enclosure with a perpendicular undated ditch of similar profile to the east.

Eastern Portal Approach

- 4.8.6 As the proposed carriageway alignment re-joins the existing Amesbury Bypass it passes immediately to the north of the Iron Age hillfort known as Vespasian's Camp (UID 4012/NHLE 1012126/Asset Group AG32), on the south side of the existing A303. North of the hillfort, a buried soil cut by a pair of parallel ditches sealed by a colluvial sequence with Upper and Lower components (Highways England, 2019b [REP1-047, 048]). Optically Stimulated Luminescence (OSL) dating returned a date of between AD 1500-1600 for the Upper colluvium, AD 840 – 1050 for the Lower colluvium and 260 BC-AD 130 for the buried soil, indicating a likely late Iron Age or Romano-British date for the ditches cutting the buried soil.

Countess East compound site

- 4.8.7 North-east of Countess Roundabout, the Scheme boundary includes land at Countess East. Previous investigations identified a stone-built Roman building of uncertain function (UID 4042) (Wessex Archaeology, 2003c). Ground penetrating radar (GPR) survey in 2018 (Highways England, 2019k [REP1-054]) provided considerable additional layout detail. Several anomalies surrounding the building may be evidence of further archaeological activity, such as pit features.

Amesbury Road diversion

- 4.8.8 Geophysical survey of land required for diversion of the Amesbury Road byway did not locate any anomalies confidently interpreted as archaeology, however a possible ditch feature may represent an extension of a Bronze Age – Romano-British field system recorded across the area (Highways England, 2019c [REP1-055]).

Rollestone Corner

- 4.8.9 Archaeological evaluation of the proposed junction land-take at Rollestone Corner revealed very low levels of prehistoric activity in this part of the WHS and adjacent to the WHS boundary (Highways England, 2019g [REP1-044]). Geophysical survey noted the possible remnants of field systems, of probable late prehistoric or Romano-British date, in the locality (Highways England, 2019a [REP1-041]).

Research Questions – Iron Age

- 4.8.10 The SAARF notes that, “there is relatively little evidence for Early and Middle Iron Age activity... and... that the Iron Age of the WHS is ‘poorly understood’” (Leivers and

Powell, 2016: p.20). Priorities for research which the Scheme has the potential to address are identified as:

IA.1 – SAARF K.13

- “K.13. What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?”

IA.2 – SAARF K.14

- “K.14. How was the landscape reorganised over this transition, and how did society change?”

4.8.11 Research should address both the changing physical organisation of the landscape, and continuity and change in land use and farming regimes.

IA.3 – SAARF L.1

- “L.1. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.”

4.8.12 This question could potentially be addressed at the eastern end of the WHS in the vicinity of Vespasian’s Camp, and on Parsonage Down East, where limited scatters of late prehistoric material were found (primarily in the ploughzone) which may relate to settlement activity.

IA.4 – SAARF L.4

- “L.4. What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?”

4.8.13 Parsonage Down East again holds most potential to address this question, since a putative henge, ring ditches (probably ploughed-down round barrows), extensive field systems and Iron Age settlement occur in proximity.

Scheme-specific Research Questions

4.8.14 The evidence recovered during evaluation indicates that the Scheme has the potential to address the following scheme-specific research questions:

IA.5 – SSRQ.6

- Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape?

IA.6 – SSRQ.7

- Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas?

IA.7 – SSRQ.8

- Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception?

IA.8 – SSRQ.9

- Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments?

Research Questions - Roman

4.8.15 In terms of Roman evidence, SAARF notes that, “the density of Romano-British sites in the landscape around Stonehenge suggests that this area too may have been exploited during this period” (Leivers and Powell, 2016: p.21). Priorities for research which the Scheme has the potential to address are identified as:

RB.1 – SAARF M.1

- “M.1. How can we decide whether the later activity around these exceptional monuments was a particular response to them?”

4.8.16 Distributions of Romano-British evidence within and around the Scheme corridor cluster at the eastern and western ends, in the vicinity of Countess and Winterbourne Stoke respectively. Between these points, material is largely confined to very limited amounts of material in the ploughzone. This may suggest that areas closer to Stonehenge were differently utilised to those at a remove. This leads on to the following questions:

RB.2 – SAARF M.2

- “M.2. Are there recognisable patterns of activity, including ritual/religious activity, at the existing ‘ancient’ monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?”

RB.3 – SAARF M.5

- “M.5. Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries? ... Is there evidence that prehistoric monuments were seen as a useful source of stone for the construction of Roman villas (or other buildings)? If so, did this affect settlement location?”

4.8.17 Additionally, SWARF (Groves and Croft, 2012) identifies the improvement of understanding of “Romanisation” on plant and animal use and cultivation methods; and of non-villa Roman rural settlement as priorities, both of which have subsequently been addressed by the Rural Settlement of Roman Britain (RSRB) project. That project itself resulted in the formulation of questions for future research, among which the following is the most likely to be within the potential of the scheme to address:

RB.4 – SWARF/RSRB

- The production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy.

Scheme-specific Research Questions

4.8.18 The evidence recovered during evaluation indicates that the Scheme has the potential to address the following scheme-specific research questions::

RB.5 – SSRQ.10

- How do Romano-British communities respect previous field systems and at what point do the field systems extend across the Wessex Linears?

RB.6 – SSRQ.11

- Is there evidence for reuse of existing features (e.g. monuments, tree-hollows etc.) within the landscape? In particular, is there evidence for reuse of features for burials during the Roman or early medieval periods?

4.9 Early Medieval 410 to 1066

- 4.9.1 There is a relative paucity of recorded archaeological evidence for activity within the WHS throughout the early medieval period. This may be due to the use of this location, at the margins of adjoining parishes, as pasture.
- 4.9.2 Winterbourne Stoke (MWI6975) was one of several settlements which developed along the course of the River Till during the period. The settlement was comprised of some 50 households (a relatively large population by the standards of the period) by the time of the Domesday survey of 1086, suggesting that Winterbourne Stoke had already been established by the Late Saxon period as a relatively large settlement.
- 4.9.3 Early medieval evidence from the Scheme evaluation comprises known Saxon structures at Countess East and a possible sunken featured building east of Winterbourne Stoke.

Winterbourne Stoke Bypass

- 4.9.4 South of the proposed carriageway alignment, the village of Winterbourne Stoke is likely to be of Saxon origin. A large oval/sub-rectangular shallow possible Saxon sunken-featured building (SFB) (132209) was identified approximately 135m east of the River Till (Highways England, 2019e [REP1-052, 053], Trench 1322, approximate chainage 4200m). This produced two sherds of Saxon pottery along with cattle and sheep bone, fired clay (possibly representing oven/hearth lining) and burnt flint.

Countess East compound site

- 4.9.5 At Countess East, previous investigations identified Early to Middle Saxon settlement remains (sunken featured buildings) above the floodplain (UID 4039) (Wessex Archaeology, 2003c). Ground penetrating radar (GPR) survey in 2018 of two pilot areas positioned to examine previously identified Anglo-Saxon sunken featured buildings identified a total of eight anomalies that may relate to Anglo Saxon sunken featured buildings but could equally be evidence of natural solution features in the chalk bedrock (Highways England, 2019k [REP1-054]).

Research Questions

- 4.9.6 The following SAARF research themes and period-based research questions may be relevant, subject to the nature of the remains:

EM.1 – SAARF N.3

- “N.3. What role did the Avon Valley have as a communication route for Saxon migrants moving into Wiltshire from the south coast, and how did this impact on the existing communities?”

EM.2 – SAARF N.4

- “N.4. Is there evidence that the patterns of Saxon settlement and land use were affected by the presence within the landscape of the ‘ancient’ monuments?”

EM.3 – SAARF N.5

- “N.5. What determined the locations of the early Saxon settlements, and any subsequent shifts? What evidence is there for continuity in settlement and land use from the Romano-British period?”

4.9.7 This question also addresses issue raised in SWARF Research Aim 26, to investigate the changes in landscape and population at the end of the Roman period, using environmental studies as in “independent witness” to activities currently obscured by a lack of site-based evidence.

EM.4 – SAARF N.8

- “N.8. To what extent were prehistoric monuments, Roman settlements and other landscape features used in defining Saxon estates and other boundaries, and are they referred to in late Saxon charters?”

EM.5 – SAARF N.18

- “N.18. What role did prehistoric monuments play in the lives of Anglo-Saxon communities and to what extent were they ‘Christianised’ in the later 1st millennium AD, replacing earlier, and potentially very deep-rooted beliefs?”

EM.6 – SAARF O.2

- O.2. “Where, when and how did mid–late Saxon and medieval settlements develop? How were they internally organised, e.g., with tenement boundaries? Is there evidence for settlement shift?”

EM.7 – SAARF O.8

- “O.8. What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?”

4.9.8 Other applicable Research Aims are outlined in SWARF:

EM.8 – SWARF 27

- “Research Aim 27: Investigate the origins of free-threshing wheat.”

EM.9 – SWARF 33

- “Research Aim 33: Widen our understanding of the origins of villages.”

EM10 – SWARF 44

- “Research Aim 44: Develop an understanding and identification of Early Medieval Technologies.”

4.10 Medieval 1066 to 1540

4.10.1 Elements of the extensive field systems established in the later prehistoric periods may have remained in use into the medieval period. Traces of medieval cultivation and other forms of activity are evident across the landscape to the west and north of Winterbourne Stoke, in contrast to within the WHS. Extensive systems of lynchets and field boundaries have been recorded across this area (MWI7009; MWI7111) which may contain medieval elements. Traces of medieval or post-medieval ridge and furrow have

also been detected in previous geophysical surveys (GSB, 2001a; Wessex Archaeology, 2017a) and those undertaken in relation to the present scheme (Wessex Archaeology, 2018b).

- 4.10.2 With the notable exception of the Drinking Stone, a medieval cross base (MWI13139), there is a relative paucity of recorded archaeological evidence for activity in the WHS throughout the early medieval to early post-medieval periods. This may be due to the use of this location, at the margins of adjoining parishes, as pasture. However, faint traces of ridge and furrow have occasionally been recorded across the Stonehenge landscape, for example north of Vespasian's Camp, suggesting that at least some areas were under cultivation during this period.

Winterbourne Stoke Bypass

- 4.10.3 Extensive relict field systems (UID 1004.01) identified from aerial photography, LiDAR (airborne laser survey) and geophysical survey are thought to have been laid out around 1500 BC but are likely to have been used over a sustained period of time; there are indications that many underwent subsequent reorganisations in the medieval period.
- 4.10.4 Trial trenching has confirmed the survival as archaeological features of a series of lynchets visible in aerial photographs, which regularly divide up the landscape on the east side of the River Till valley, to the north of the existing A303 (Highways England, 2019e [REP1-052, 053]). Typologically and considering they are relatively spatially limited to the east of Winterbourne Stoke, the lynchets may be associated with medieval, rather than prehistoric, cultivation. Finds were very rarely recovered from the plough-washed/colluvial fill of these features, formed by ploughing in order to cultivate sloping topography.

Research Questions

- 4.10.5 The following SAARF research themes and period-specific research questions may be relevant, depending on the surviving remains:

LM.1 – SAARF O.5

- “O.5. What role (if any) did prehistoric monuments have in the delineating of land boundaries and communication routes, and to what extent were they impacted upon by them?”

LM.2 – SAARF O.8

- “O. 8. What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?”

- 4.10.6 Other Research Aims are outlined in SWARF:

LM.3 – SWARF 42

- “Research Aim 42: Improve our understanding of medieval farming.”

- 4.10.7 The majority of the evidence revealed during the evaluation works related to agricultural land use. SWARF identifies direct environmental evidence for the use of grassland, pasture and meadow as key objective. There is potential for environmental evidence to survive in the Till valley especially.

LM.4 – SWARF 47

- “Research Aim 47: Assess the archaeological potential for studying medieval economy, trade, technology and production.”

4.10.8 Although predominantly agricultural in nature (negative features such as field systems, enclosure ditches, etc), there is the potential for other classes of evidence to survive, and to be different in different parts of the landscape (downland versus valley bottom, for instance). The utilisation of the floodplains at this time is of particular interest, and should be the focus of geo-archaeological investigation.

4.11 Post-medieval to Modern 1540 onwards

- 4.11.1 The present day A303 and A360 are former turnpike roads which likely formalised existing routes. Although subject to alterations in recent times, and possibly earlier re-alignments of the road, Longbarrow Junction has been located approximately in its current location since the earliest accurate mapping was produced.
- 4.11.2 Much of the Stonehenge landscape remained in use for downland grazing until the 19th and 20th centuries, when large areas were enclosed and converted to arable cultivation or improved pasture or acquired by the army for military training purposes.
- 4.11.3 A large area of land to the north-east of the A303/A360 junction was used for the establishment of the Stonehenge Airfield (MWI12606), which operated between 1917 and 1919 and functioned as a finishing school for pilots and observers in both day and night bombing. The area to the west and south of the junction formed Oatlands Airfield (MWI6984), a grass airfield, which opened in 1941 as a training unit for fighter reconnaissance squadrons. Use of the site from 1942 was only intermittent and the site was closed in 1946 (Wessex Archaeology, 1998). Another military aerodrome was opened on a 65 ha site further to the south on Lake Down in 1917; this facility closed at the end of the First World War.
- 4.11.4 The Larkhill Military Railway (MWI12608; MWI73256) was a light military railway constructed in the early twentieth century, and largely dismantled by the mid-1930s. A branch of the railway ran parallel to the eastern edge of the A360, joining the Horse Isolation Hospital at Fargo Road to the Lake Down Aerodrome, via the Stonehenge Airfield. It was built following the outbreak of the First World War and closed in 1923 (Wessex Archaeology, 1998). Parts of the military light railway have been investigated archaeologically on several occasions, including during trial trenching in SW2 in 2016. This revealed that no substantial traces of the railway line survived, except for heavily truncated straight north–south shallow cuts (Wessex Archaeology, 2017d).

Winterbourne Stoke Bypass

- 4.11.5 South of the Scheme on a former turnpike road now extant only as a green lane, is a scheduled guidepost dating to 1750 (UID 6001/NHLE 1005621). This is one of several such markers or milestones near to the Scheme, all belonging to the turnpike era. Only this example is scheduled; four others within the 500m study area are listed at Grade II, while some non-designated examples are also present.
- 4.11.6 The Till valley floor includes faint earthwork traces of a water management system or water meadows of probable post-medieval date (UID 2050). Geophysical surveys in 2001 (GSB Prospection, 2001) and 2018 (Wessex Archaeology, 2018b [REP1-041])

identified an infilled relict river channel corresponding to historic map evidence and weak linear features possibly relating to former floodplain water management systems. Auger survey in 2001 concluded that the presence of alluvium in the River Till valley bottom is patchy, discontinuous and variable both across the valley profile and along its longitudinal corridor (Wessex Archaeology, 2002j; p.9). The sequences recorded were shallow (generally less than 1m), however where present these provide the potential to mask, bury and seal archaeological horizons; no dating evidence was recovered from the recorded sequences or datable material within them. The localised presence of footslope colluvium on the edges of the floodplain also offers the potential to mask, bury and seal archaeological remains in restricted areas.

Eastern Portal Approach

- 4.11.7 Further evaluation in 2018 investigated the eastern approach cutting and a 30m buffer adjacent to this (Highways England, 2019b [REP1-047, 048]). Features uncovered during the evaluation included an undated ditch, and a small number of features of post-medieval/modern date.

Research Questions

- 4.11.8 The following SAARF research themes and period-specific research questions may be relevant, depending on the surviving remains:

PM.1 – SAARF P.1

- “P.1. The layout and use of roads and tracks has been little explored, to the extent that it is not clear in detail how travellers passing through would have viewed the stones at different times in history.”

PM.2 – SAARF P.3

- “P.3. The history and development of the farms within the WHS and their associated built heritage is largely uninvestigated, the Victoria County History study remaining in large part the most recent.”

PM.3 – SAARF P.5

- “P.5. Water meadows (i.e., in the strict sense of constructed systems to create water flow over grass) were in the past highly visible features of the landscape around the monuments, particularly at Avebury. The surviving traces of these are not well recorded and their history has been very little investigated within the WHS.”

PM.4 – SAARF P.8

- “P.8. How has the military presence in both parts of the WHS developed?”

PM.5 – SAARF P.14

- “P.14. What archaeological remains survive from the removal of buildings (such as the First World War aerodrome and the late 1920s café at Stonehenge) and other features...”

5 Strategy for Archaeological Mitigation

5.1 Introduction

- 5.1.1 In accordance with National Policy Statements, National Planning Practice Guidance and DMRB, the design of the Scheme has been developed to mitigate impact upon archaeological remains: the impact of the Scheme upon archaeological resources has been minimised or avoided where possible. In accordance with DMRB, priority will be given to the preservation of archaeological remains within the DCO boundary. Where avoidance of remains is not possible, measures will include protection of remains within working areas, preservation of archaeological remains that are required to be covered over temporarily (e.g. in compound areas or beneath temporary roads), and preservation of archaeological remains that will be permanently covered beneath shallow fill.
- 5.1.2 In respect of archaeological remains within the footprint of the Scheme, a comprehensive programme of archaeological mitigation fieldwork and recording will be implemented. This will include archaeological excavations, recording, reporting, publication, and dissemination to local communities, the wider general public and academics. The archaeological mitigation programme will address the Archaeological Research Agenda (ARA, see section 4 above) and will be undertaken to the highest practicable standards, employing innovative data collection approaches and techniques. The question-led approach will aim to contribute to the corpus of archaeological research and understanding to mitigate the loss of archaeological remains.

Scope of Archaeological Mitigation

- 5.1.3 The archaeological mitigation requirements will apply (to the extent necessary) to the areas and works required for the Authorised Development (as defined in the DCO), including utility diversions, highway works on side roads, works on land temporarily possessed under Article 29, protective works to buildings within the Order limits or which may be affected by the Authorised Development under Article 14, surveys and investigations on or adjacent to land within the Order limits under Article 15, and felling or removing trees or hedgerows or cutting back their roots under Article 17 and any ancillary works, or other works authorised by the DCO requiring an archaeological response (including industry standard practice and control measures for environmental impacts arising during the relevant works). Works undertaken pursuant to the DCO following construction of the Scheme (including protective works to buildings within the Order limits or which may be affected by the Authorised Development under Article 14, surveys and investigations on or adjacent to land within the Order limits under Article 15, maintaining the Scheme under Articles 5 and 30 of the DCO and industry standard practice and control measures for environmental impacts arising during the relevant works) will be undertaken in accordance with the HEMP, which is required by provision MW-G11 of the OEMP, to include provisions of the DAMS as relevant to the archaeological response required for the protection of assets post-construction. Works outside the Order limits under Article 14 or 15 of the Order are subject to the requirement to obtain Scheduled Monument Consent, where required under the Ancient Monuments and Archaeological Areas Act 1979.

Phasing of Archaeological Mitigation

- 5.1.4 The majority of the archaeological mitigation fieldwork will be undertaken during the PW stage of the construction programme as advanced archaeological works. The contractors appointed to undertake the PW and MW stages will produce Construction Environmental Management Plans (CEMPs) (based on and incorporating the requirements of the OEMP, as required by the OEMP itself) and Heritage Management Plans (required by the OEMP) that set out how the requirements for archaeological mitigation at each stage will be implemented. The DAMS development and implementation process is summarised in the flowchart at Appendix A.1.

Preliminary Works

- 5.1.5 Preliminary Works (PW) are planned to start in 2020, soon after the DCO is made (subject to access to land) and in advance of the appointment of a Main Works contractor. The PW will include archaeological investigation and archaeological and ecological mitigation works, investigations for the purposes of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, erection of temporary means of enclosure, diversion and laying of underground apparatus, site clearance and two sections of highways works – completion of the Rolleston Crossroads highway improvement and minor highway works east of Solstice Park.
- 5.1.6 Where site conditions prevent archaeological fieldwork at the PW stage, archaeological fieldwork may be required during the construction stage. It is anticipated that such circumstances will generally be limited to small scale works, e.g. within the existing highway boundary. These works would be completed at the MW stage.
- 5.1.7 Archaeological mitigation works anticipated to be completed during the PW stage are discussed further in section 6.1 below.

Main Works

- 5.1.8 The main construction works ('Main Works', MW) are currently planned to commence in 2021 with the Scheme due to open to traffic in 2026. While broadly sequential, some phases of the PW and MW stages may overlap both in space and in time, for example:
- PW could still be being undertaken by a PW Contractor in some locations, whilst site establishment for the MW construction is being progressed by a MW Contractor in other locations; and
 - It is possible that some parts of the Scheme, e.g. the Winterbourne Stoke Bypass and Countess Flyover, could already be operational whilst other elements, such as the tunnelled section, would still be under construction.
- 5.1.9 Archaeological mitigation works anticipated to be completed during the MW stage are discussed further in section 6.1 below and are identified in Table 11-4.

Archaeological Contractor

- 5.1.10 An Archaeological Contractor will be appointed on behalf of Highways England, for the Preliminary Works stage ('the PW Archaeological Contractor'). The PW Archaeological Contractor will be responsible for the delivery of the archaeological mitigation programme, as set out in this DAMS, at the PW stage. Following completion of the PW

stage, responsibility for completion of the related off site works and reporting will remain with the PW Contractor.

- 5.1.11 A MW Archaeological Contractor will be appointed to undertake any remaining archaeological mitigation site works required at MW stage, together with the related off site works and reporting.
- 5.1.12 Meetings to ensure continuity, reflexive practice and sharing of information between the PW and MW archaeological contractors will be held immediately following appointment of the MW archaeological contractor. Subsequent meetings will be held as necessary during the course and on completion of the MW stage archaeological site works, to share information regarding progress of the MW site works and the PW post-excavation (off site) works. These meetings will be arranged by the TPA and ACoW. Wiltshire Council, Historic England and, for sites within the WHS, HMAG will be consulted on the handover process and will attend these meetings, in accordance with section 8 below. During the MW stage the ACoW will monitor fieldwork to ensure consistency of approach between archaeological contractors.
- 5.1.13 The requirements for reporting, publication and dissemination to be discharged by the PW and MW Archaeological Contractors are set out in section 9 below. An indicative timeline for delivery of the work set out in the DAMS by the PW and MW Archaeological Contractors is included at Appendix A.9.

Technical Partner's Archaeologist

- 5.1.14 The Employer's Project Manager and Supervisor (the Technical Partner's Archaeologist) will be responsible for oversight of the archaeological mitigation programme and will be the principal point of contact for advisory groups and monitors. This will include organisation of progress meetings and monitoring visits, review of progress reports, SSWSIs, Heritage Management Plans and Method Statements, and validation of site completion in consultation with Wiltshire Council and Historic England.
- 5.1.15 Appendix A.2 illustrates the phases and roles during the archaeological mitigation works.

Construction Environmental Management Plans

- 5.1.16 The construction of the Scheme will be subject to measures and procedures defined within CEMPs prepared for the relevant phase of the Scheme by the relevant contractor(s). The CEMPs will be based on, and incorporate, the requirements of the OEMP submitted as part of the DCO application. The implementation of the OEMP is secured by a requirement to the DCO. The OAMS was included as Annex A.2 to the OEMP contained within the DCO application and is superseded by this DAMS.
- 5.1.17 The OEMP requires the relevant contractor to develop a Heritage Management Plan, Method Statements, and Site Specific Written Schemes of Investigation.
- 5.1.18 The OEMP defines the responsibilities associated with the project team roles for construction, including both the PW and the MW that the relevant contractor must establish and maintain. An Archaeological Clerk of Works (ACoW) will form part of the Technical Partner's Archaeologist (TPA) site team, responsible for ensuring that the Scheme complies with all archaeological and historic environment legislation and consents, including the DCO and those arising from the ES throughout the relevant

project phase (see Appendix C for ACoW responsibilities). The phases and roles are summarised in the flowchart at Appendix A.2.

- 5.1.19 The procedure for dealing properly with any unexpected finds (as defined in 6.1.19 below) during the construction process will be agreed and recorded in the CEMP prepared by the PW and MW Contractor for the construction stage. The requirements for SSWSIs and related approvals in respect of unexpected finds are also set out in 6.1.19 .

Heritage Management Plans and Method Statements

- 5.1.20 During both the PW stage and the MW stage, procedures will be adopted in the CEMPs to ensure that sites of archaeological interest are protected. A site induction process and Tool Box Talks (see Glossary) will be provided to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the OEMP and generally to ensure that these are put in place and complied with. The Archaeological Contractor shall ensure that their field staff involved in the mitigation programme are aware of the significance of the WHS and its OUV through provision of a Scheme-specific training programme.
- 5.1.21 Heritage Management Plans (HMPs) will be prepared indicating how the historic environment is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The requirements for what the HMPs would include are set out in the OEMP (as certified by the DCO; items PW-CH1 and MW-CH1 – see Appendix C.2).
- 5.1.22 In areas where archaeology or heritage assets are to be preserved (protected by temporary perimeter fencing, or beneath fill materials), archaeological Method Statements³ (MSs) will be put in place at the start of the preliminary works and/or construction works that describes specific protection and other mitigation measures to be applied to the site or area of interest, and following procedures outlined in the OEMP (items PW-CH7 and MW-CH5) and the HMP. The Method Statements will be prepared with reference to relevant guidance (Historic England, 2016). Method Statements will also be required in respect of temporary haul roads and temporary traffic management diversions where archaeological remains will be preserved.
- 5.1.23 HMPs and MSs will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) (see section 6.1 and Appendix A of this document).
- 5.1.24 HMPs and MSs are discussed further in section 6.1 below.

Handover Environmental Management Plans

- 5.1.25 Towards the end of the construction stage (or stages) of the Scheme, the MW contractor will prepare a Handover Environmental Management Plan (HEMP), to be implemented by the maintenance authority during the operational phase of the Scheme (refer to paragraph 1.1.12 of the OEMP (as certified by the DCO)). In respect of cultural heritage and archaeology, the HEMP will identify heritage assets within land to be

³ In this DAMS, references to 'Method Statements' should be taken as 'Archaeological Method Statements' as described in OEMP items PW-CH7 and MW-CH5 unless stated otherwise.

retained by Highways England and, where relevant, any restriction or constraint on maintenance regimes and the exercise of other DCO powers necessary to ensure the continued retention or preservation of the asset: these assets will previously have been identified in HMPs and Method Statements.

5.2 Archaeological Mitigation Requirements

- 5.2.1 Different elements of the Scheme will require a different approach to archaeological mitigation, as summarised below; the mitigation approaches are outlined in section 5.3 below, Table 11-3 and in Appendix D, with reference to the Archaeological Research Agenda in section 4. Specific requirements for production of MSs are also identified here.
- 5.2.2 SSWSIs will set out in detail the research aims and objectives and the relevant mitigation measures for the detailed design of the Scheme (including confirming the detail of Appendix D), informed by the results of the evaluation surveys and will be based upon the strategy described in this DAMS. Existing models and new datasets collected during the fieldwork will be used to model deposit sequences to inform design of archaeological mitigation works in the SSWSIs, during the investigations (part of the on-site iterative process) and during the assessment and analysis stages.
- 5.2.3 SSWSIs will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council, in consultation with Historic England (see section 6.1 and Appendix A of this document).
- 5.2.4 In addition to the indicative elements of the proposed scheme discussed in this section 5.2 (which are subject to detailed design), to the extent other parts of the Authorised Development or other operations authorised by the DCO require an archaeological response, these will be captured by the SSWSI for the relevant action area.

Protection of Scheduled Monuments

- 5.2.5 The Scheme has been developed seeking to avoid negative impacts to scheduled monuments. In order to confirm the extent of scheduled areas in relation to the proposed works, Highways England has reviewed the Scheme LiDAR dataset and the results of the comprehensive geophysical surveys across the Scheme, with the Scheme design and the mapped scheduled areas. Figure 12.1 and the drawings in Appendix D of this DAMS, which illustrate the indicative areas for preservation of archaeological remains and their associated protection zones for Scheduled Monuments, have taken into account both the LiDAR and geophysical survey information in their mapping and the defining of the protection zones. Where works are proposed close to Scheduled Monuments or their protection zones, Historic England will be consulted on the scope and scale of the proposed works and the archaeological mitigation works that are proposed as set out in the relevant SSWSI.

Main road line

- 5.2.6 Sections of the new A303, Longbarrow Junction and A360 link roads will be constructed at grade (i.e. at existing ground level), in cutting, or on embankments. Topsoil will be removed prior to construction in these sections.
- 5.2.7 Archaeological mitigation will include preservation of archaeological remains, archaeological excavation and recording, strip, map and record, ploughzone artefact

collection, trial trench evaluation, archaeological topographic survey, as set out in Appendix D. These approaches are outlined in section 5.3 below and discussed in more detail in Part Two of this document (Overarching Written Scheme of Investigation).

Ground movement monitoring stations

- 5.2.8 Ground movement monitoring stations would be placed on the surface above the 3.0km bored tunnel section. Installations will be required in the first instance to provide a baseline, and subsequently to monitor ground movement during the construction of the tunnel. The form of the installations is currently under selection. Monitoring requirements will be confirmed through the production and consultation process of a Ground Movement Monitoring Strategy (GMMS) in accordance with OEMP item MW-CH1 and MW-CH8 and will be driven by the construction methodology and programme of the tunnelling contractor and the level of assessed risk, taking into account any restrictions to be imposed on the amount of ground movement that is acceptable. The GMMS will be subject to consultation with Wiltshire Council, Historic England and HMAG.
- 5.2.9 The GMMS will include provisions for baseline monitoring appropriate for collecting data at an appropriate frequency and accuracy in line with British Tunnelling Society: Monitoring Underground Construction, A best practice guide and shall be provided through a levelling system comprising a zero-ground disturbance, fully reversible surface mounted installation. Initial studies indicate that the use of pre-cast concrete blocks placed on the existing ground surface and fitted with equipment to allow either INSAR monitoring or the use of Robotic Total Stations would be suitable. The concrete block dimensions would be sufficient to ensure stability of the monitoring readings, but no larger than 1.5m x 1.5m base and 0.5m high. The concrete blocks would be painted in order to reduce the visual impact on the landscape; the final colour will depend on the monitoring location surroundings. All painting will be conducted at the manufacturer plant or in the site compound, prior to placement of the concrete at the proposed monitoring location. In the case that the proposed monitoring location is very uneven and stability of the settlement marker cannot be guaranteed, in the first instance the monitoring location will be re-sited within 5m of the original position, ensuring the system is still capable of functioning to the requirement. Where the ground is uneven and re-siting is not an option, building up to create a level surface will be required. Imported materials to build up an even surface will be placed on a geotextile membrane laid on the existing ground surface. A small amount of fill material would be placed first on a geotextile membrane to allow levelling-up of the blocks. No archaeological mitigation would be required, however the installation would be monitored by the ACoW to ensure no ground disturbance occurs. Alternative methods that meet the requirement for a levelling system that is a fully reversible surface mounted installation with zero-ground disturbance will also be considered, in consultation with Wiltshire Council, Historic England and HMAG. The means of access, installation and removal of any system for both baseline and main works monitoring would be subject to a Method Statement to be prepared in consultation with Wiltshire Council, Historic England and HMAG and approved by Wiltshire Council (in consultation with Historic England).
- 5.2.10 The monitoring requirements will be scoped to minimise the number of installations required. The locations of these installations will be selected to avoid known archaeological remains and, where the installation of monitoring equipment is phased between baseline and main works, baseline monitoring locations would be placed along

existing field boundaries to minimise obstructions. It is anticipated that survey teams will visit the monitoring locations regularly throughout the monitoring programme; the means of access and archaeological constraints will be identified in the MW Contractor's Heritage Management Plan, in consultation with Wiltshire Council, Historic England and HMAG, and approved by Wiltshire Council (in consultation with Historic England).

Tunnel Protection Zones

- 5.2.11 There are restrictions as to the archaeological works that can be carried out above the tunnel. Those restrictions will be contained within restrictive covenants over the affected land (referred to as the "zone of protection" in the restrictive covenants). As a result of those restrictive covenants, consent would be needed from Highways England in cases where works in the zone of protection would involve all or any part of the following (save for "Special Dispensation Activities" which are installation or renewals of standard agricultural style fencing up to a maximum depth specified in the restrictive covenants):
1. Development which would require:
 - (i) planning permission (whether or not this is deemed granted by a development order);
 - (ii) excavations, boreholes or drilling which are below depths specified in the restrictive covenants;
 - (iii) piling at any depth
 2. Changes in ground weight loading (either increasing or decreasing) being:
 - (a) Any excavation below a depth of 1.2m minimum in a defined area of the zone of protection and below a depth of 0.6m minimum in a defined area of the zone of protection;
 - (b) Any additional loading (greater than the amount specified in the restrictive covenants) as a result of building work, storage or the erection of any structure;
 - (c) Use by any vehicle of weight greater than 44 tonnes; or
 - (d) Any new tree planting with a potential root depth of more than 2 metres minimum in depth.
- 5.2.12 Highways England will provide Wiltshire Council and the National Trust with the necessary documentation about the restrictions and their location. A .shp file will be provided to the NT (as well as to WSHER and to Historic England) for use on the NT's National Trust Historic Buildings Sites and Monuments Record. Wiltshire Council must update the Wiltshire and Swindon Historic Environment Record (WSHER) to reflect the restrictions. Once Wiltshire Council is provided with the relevant documentation relating to the restrictions, it will have 8 business days in which it must confirm to Highways England that it has the necessary information in order to update the WSHER, or alternatively set out in writing for Highways England what further information it requires. Following confirmation that it has received the necessary information, Wiltshire Council must update the WSHER within 20 business days of giving such confirmation. Wiltshire

Council and (in respect of proposed works on land in which it has an interest) the National Trust must ensure the restrictions are brought to the attention of any person who approaches it (and in the case of Wiltshire Council requesting 'event' or mapping data), seeking to carry out works within the area affected by the restrictions. Wiltshire Council must provide the relevant data from the WSHER with respect to the tunnel restrictions within 15 business days of a request to do so.

Landscape fill and excavated material deposition areas

- 5.2.13 Landscape fill areas are proposed along the Winterbourne Stoke Bypass; excavated material deposition is proposed at Parsonage Down East, northwest of Winterbourne Stoke. In accordance with item MW-CH5 of the OEMP [as certified by the DCO], the MW contractor will prepare a Method Statement as described in 5.1 above, setting out how it intends to preserve sensitive archaeological remains and prevent deformation of topsoil/ subsoil horizons (including no-dig solutions), in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England). The Method Statement will be prepared with reference to Historic England published guidance (Historic England, 2016c). Where the fill depth is >1m, topsoil will be removed prior to deposition of fill material. Archaeological mitigation will include archaeological excavation and recording, ploughzone artefact collection, trial trench evaluation, archaeological topographic survey. Preservation of archaeological remains is proposed where the fill depth is <1m and topsoil is to be retained in situ (subject to load calculations: see 5.2.14 below). However, within the landscape fill areas where the proposed fill depth is <1m, there are a number of known sites which will be separately fenced off and not covered over (see Appendix D). At these locations, the MW contractor shall also include in their Method Statement how they intend to grade out the fill and topsoil next to the protected sites to ensure that the sites remain visible in the landscape and that they are not left in relatively deep hollows.
- 5.2.14 The Method Statement will be prepared with reference to the Materials Management Plan (OEMP item MW-MAT2) and will include technical details such as volumes, weight of material and loading calculations. The material to be used to protect and bury archaeological sites (in areas where the proposed fill depth is <1m) and to ensure the long-term preservation of archaeological remains will be selected in line with the Scheme requirements (including essential landscape mitigation), and following guidance provided by Historic England (Historic England, 2016c: Appendix 5, 'Materials for Use in the Reburial of Sites'). The guidance recommends that materials to rebury sites should be:
- Permanent and not subject to alteration or change over time;
 - Cause no mechanical damage to the stratigraphy or to sensitive artefacts
 - Release no new material into the stratigraphy;
 - Have no significant effect on soil water chemistry of the stratigraphy; and
 - Be visible to future archaeologists.
- 5.2.15 A geotextile barrier membrane or fabric sheeting will be used to provide a definitive boundary between the undisturbed stratigraphy and the fill material. This membrane will be of a geosynthetic composition (not an organic material due to danger of introducing

microbial activity into the buried environment). It will also be permeable and will also provide a degree of load protection during fill operations.

- 5.2.16 The implementation of the Method Statement will be monitored by the ACoW. A formal written and photographic record will be made for each location where fill is used to bury and protect an archaeological site. The report will be prepared by the ACoW, and it may be appropriate to combine several sites into a single report. The report will include technical details as built, such as volumes, weight of material and loading calculations. Each report will be informed by undertaking regular monitoring visits during all stages of construction of the fill areas. The reports will include a description of what was done to create the fill areas, what materials were used and what the aims were, in order to assist future archaeologists and to learn from the experience in the event that the fill material is removed at a later date. Each report will be submitted to the TPA for review and approval. A digital version of each finalised report will be submitted by the TPA to the Wiltshire and Swindon Historic Environment Record (WSHER), in accordance with section 10 below and Historic England recommendations (Historic England, 2016c).

Handling, storage and placement of excavated topsoil

- 5.2.17 The PW Contractor will develop a Soils Management Strategy, including a Soils Handling Strategy, in accordance with OEMP item PW-GE03. The SMS shall identify the nature and types of soil that will be affected and the methods that will be employed for stripping and processing soil (see 6.3.15 below) and the restoration of agricultural land (where restoration of agricultural land is required). The PW Contractor shall have regard to the guidance in Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (DEFRA, 2009) when handling agricultural soils and in particular the land to be reprofiled for use as permanent chalk grassland. It is noted, however, that the provisions of the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (DEFRA, 2009) will not override the more detailed, bespoke provisions of this DAMS, nor the documents prepared pursuant to it. In relation to the storage of soil in archaeologically sensitive areas the principles of Historic England guidance will be adopted 'Preserving Archaeological Remains. Decision-taking for Sites under Development' (Historic England, 2016c).
- 5.2.18 The Soils Handling Strategy will include consideration of the stockpiling, handling and use of topsoil (including topsoil that has been sieved, where the soil matrix and stone components have been separated) in relation to areas where preservation of archaeological remains is proposed. This will include controls to:
- ensure that topsoil excavated from inside the WHS is stockpiled separately and screened to remove any remaining artefacts before re-use within the WHS; and
 - require the origin and placement of topsoil to be mapped and for this information to be lodged with the WSHER.
- 5.2.19 The method for mapping and placement of topsoil will be set out in a Method Statement to be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Implementation of the Method Statement will be monitored by the ACoW.

Landscape planting and chalk grassland reversion

- 5.2.20 Areas of landscape planting (chalk grassland and new tree/shrub/hedgerow planting) are required as part of the landscape mitigation design in order to integrate the Scheme back into the existing landscape.
- 5.2.21 Chalk grassland will be created in areas of chalk fill, notably at Winterbourne Stoke bypass and at Parsonage Down. These areas of chalk grassland creation will have been subject to archaeological mitigation prior to placement of fill materials (see above and Appendix D). Within the WHS, arable land around the western and eastern tunnel portal approaches will be reverted to chalk grassland following construction. Chalk grassland reversion will retain the existing topsoil in situ as part of the archaeological mitigation requirements (see Appendix D). Outside the WHS, chalk grassland reversion on the Winterbourne Stoke Bypass west of Scotland Lodge will also retain the existing topsoil in situ. The method for chalk grassland creation or reversion will be set out in a Method Statement to be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Implementation of the Method Statement will be monitored by the ACoW. Chalk grassland will also be created along the existing A303, A360 and Stonehenge Road which will be downgraded to a restricted byway and private means of access (see 5.2.25 to 5.2.27 below).
- 5.2.22 New tree and shrub planting is proposed at Longbarrow Junction and elsewhere along the Scheme. New hedgerows are proposed to be planted west of Scotland Lodge (Site 7.2), along the realigned B3083 and along the realigned A360 slip roads at Longbarrow Junction. The footprint of new areas of planting will either be incorporated within archaeological mitigation fieldwork areas (e.g. Site 19, Site 16.1, Sites 64.1 and 64.2, and Site 62) or, if outside of the mitigation areas, the hedgerow planting will be on broad, low earthwork banks formed above the existing ground surface, with existing topsoil retained in situ (e.g. alongside Site 7.2 the hedgerow is proposed to be planted on a low bank over the existing topsoil: see Appendix D). The method for planting of hedgerows will be set out in a Method Statement to be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, for approval by Wiltshire Council (in consultation with Historic England). Implementation of the Method Statement will be monitored by the ACoW.

Rights of way: zero-impact construction methods

- 5.2.23 These are proposed along Private Means of Access (PMA) and/or Non-Motorised User (NMU) routes, with topsoil retained in situ and construction above existing levels. Works would be monitored by the ACoW to ensure no archaeological impacts.
- 5.2.24 In accordance with item MW-CH5 of the OEMP (as certified by the DCO), the MW contractor will prepare a Method Statement as described in 5.1 above, setting out how it intends to preserve sensitive archaeological remains and prevent deformation of topsoil/subsoil horizons, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Implementation of the Method Statement will be monitored by the ACoW.

Existing roads

- 5.2.25 Within the WHS, the existing A303 would be converted to a restricted byway accessible to pedestrians, wheelchairs and mobility scooters, cyclists, equestrians and horse drawn carriages. This restricted byway would extend along the stopped-up section of Stonehenge Road and would comprise a bound surface adjacent to chalk grassland habitat (see 5.2.21 above; Table 11-4 and Appendix D).
- 5.2.26 East of Stonehenge Road, the existing A303 will be removed and the land returned to chalk grassland habitat. This will rectify the severance of the Stonehenge Avenue where it is crossed by the existing A303. There will be no public right of way east of Stonehenge Road. A private means of access (PMA) for agricultural vehicles to access land north of the existing A303 will follow the line of the redundant section of the existing A303 across the line of the Avenue, passing northwards over the cut and cover tunnel section at the Eastern Portal. This PMA will take the form of a grassed surface suitable for occasional use.
- 5.2.27 Works to downgrade the existing A303 and A360 to restricted byways and to remove the redundant A303 east of Stonehenge Road will include breaking and removal of existing surfaces and establishment of chalk grassland within the existing highway boundaries. Archaeological excavation and recording and/or archaeological monitoring and recording will be required where works to existing roads may impact archaeological remains, for example, where the A303 crosses the line of the Avenue and at Winterbourne Stoke Crossroads. The method for planting of hedgerows will be set out in a Method Statement to be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).

Site compounds and working areas

- 5.2.28 As well as the Main Civils Compound north of the new Longbarrow Junction, satellite compounds are proposed at Winterbourne Stoke (off the B3083) and Countess East (north-east of Countess Services). In these locations surface disturbance will be minimised to ensure no impact to below-ground remains, with topsoil retained in situ and protected with imported stone to allow preservation of archaeological remains in situ. Provision is made in the Strategy for certain archaeological monuments to be excluded from fill areas, fenced off and protected (see Table 11-4 and Appendix D).
- 5.2.29 In accordance with item MW-CH5 of the OEMP (as certified by the DCO), the MW contractor will prepare a Method Statement as described in section 5.1 above, setting out how it intends to preserve sensitive archaeological remains and prevent deformation of topsoil/subsoil horizons (including no-dig solutions) and how the measures would be reversed following the end of construction (i.e. removal of compounds), and approved by Wiltshire Council (in consultation with Historic England). The Method Statement will be prepared with reference to Historic England published guidance (Historic England, 2016c).

Utility connections and service diversions

- 5.2.30 Utility connection and diversion alignments will avoid known archaeological remains wherever practicable. Installation of temporary and permanent service connections will require archaeological excavation and recording, and/or archaeological monitoring and recording of service trenches and/or where topsoil will be removed over construction

easements. Diversion of existing services will include replacement of an oil pipeline at Parsonage Down East and the temporary and permanent diversion of existing fibre optic cables along the A303.

- 5.2.31 Proposed (indicative) utility corridors are shown on Figure 12.1 and the proposed mitigation approach for each site is set out in Table 11-4 and Appendix D.
- 5.2.32 Diversion of the fuel pipeline will require archaeological mitigation along the proposed realignment prior to installation of the replacement pipe, and monitoring during removal of the existing pipeline, to investigate the potential survival and presence of archaeological remains.
- 5.2.33 Fibre optic cables will be diverted using temporary routes. At Longbarrow Junction, fibre optic cables will be temporarily diverted between the Winterbourne Stoke link road and Winterbourne Stoke crossroads, via the temporary bridge carrying the A303 and the temporary road between the northern dumb-bell roundabout. Archaeological investigations will be completed at the PW stage as part of the overall mitigation works prior to the temporary utility diversion. Permanent ducting for fibre optics will be installed along the Winterbourne Stoke Link road, crossing the mainline at Green Bridge No.3 and following the top of the cutting on the northern side of the mainline to Winterbourne Stoke crossroads. Beyond the crossroads the existing cable route will be retained along the downgraded A303. Archaeological investigations will also be completed at the PW stage as part of the overall mitigation works at these locations prior to the utility diversion.
- 5.2.34 The method for construction of utility connections and diversions will be set out in Method Statements to be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).

Temporary haul roads

- 5.2.35 Wherever possible, construction plant will travel along the alignment of the Scheme using the footprint of the proposed embankments and cuttings, for example from the Main Civils Compound northwest of the new Longbarrow Junction to the western tunnel portal. Paragraphs 2.4.17 – 2.4.20 of the ES set out the proposals for haul routes, and the indicative routes are illustrated on Figures 2.7A-E of the ES [APP-061].
- 5.2.36 No haul roads are proposed within the WHS, other than those within the footprint of the proposed new permanent works (see D-CH31 of the OEMP [as certified by the DCO]).
- 5.2.37 Two types of temporary haul roads will be required throughout the works, to allow access to all areas.
- 5.2.38 Earthworks haul roads will be used predominantly by site traffic such as dump trucks engaged in earthworks activities, hauling material from cut areas to stockpiles and fill areas. As the work proceeds, the routes of these temporary roads will be changed as required and will often travel through cuttings, across embankments and over the landscape fill areas. No surface stone will be placed over these transient roads, unless required to maintain passage. The haul roads will be used all year including the winter months and will be maintained in accordance with item MW-TRA9 of the OEMP (as certified by the DCO), however work will often cease if the weather is inclement.

- 5.2.39 All-weather haul roads, protected by a surface layer of stone, will be used by road vehicles delivering concrete and other materials to the structure sites. In accordance with item MW-CH5 of the OEMP, the MW contractor will prepare a Method Statement setting out how it intends to preserve sensitive archaeological remains. All-weather roads will be formed through the site from the Main Civils Compound at Longbarrow Junction North to Green Bridge No.1 at Ch. 2000; from the Tunnel Production Site to the Western Portal; and from the Eastern Portal to the Countess Interchange (see Figure 12.1). These roads will be between 4m and 6m wide, with passing places.
- 5.2.40 The all-weather road between the Main Civils Compound and Green Bridge No. 1 lies outside the earthworks trace and will cross archaeological sites which require protection and preservation of archaeological remains (Site 25, Appendix D), as well as sites where archaeological mitigation has been completed previously. In the former sections of the haul road, the topsoil would be retained in situ and the road would be formed from chalk fill placed on the existing topsoil, separated by a layer of High-Viz Orange Geotextile. The chalk fill would be stabilised with quicklime to increase its strength and durability and a surface covering of stone applied. The all-weather road in these sections will be removed once no longer required, taking care to expose the High-Viz Orange Geotextile so as not to penetrate the retained topsoil. Topsoil preparation prior to return to agriculture would be limited to ploughing to the depth normally applied by the landowner.
- 5.2.41 All other temporary all-weather roads will run within the chalk cutting.
- 5.2.42 In accordance with item MW-CH5 of the OEMP (as certified by the DCO), the MW contractor will prepare a Method Statement as described in section 5.1 above, setting out how it intends to preserve sensitive archaeological remains and prevent deformation of topsoil/subsoil horizons (including no-dig solutions), and how the measures would be reversed following the end of construction (i.e. removal of the all-weather haul roads). The Method Statement will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Implementation of the Method Statement will be monitored by the ACoW.

Temporary access crossing of the River Till

- 5.2.43 A temporary access crossing of the River Till Valley will be required to permit early continuous access along the line of the new works. A pre-fabricated temporary crossing bridge system approximately 8m wide would be employed, positioned on the south side of the new proposed permanent bridge. The foundations for the temporary bridge could consist of reinforced concrete bank seats or simple gabions with rock fill. The bridge section would likely be launched from one side using a temporary nosing. Approach ramps to the temporary bridge would be constructed using compacted stone laid onto a geogrid system over a layer of High-Viz Orange Geotextile, which would be laid directly onto the existing topsoil.
- 5.2.44 Construction of the river crossing will require targeted archaeological monitoring and recording and/or archaeological excavation and recording where topsoil is required to be stripped, such as bank seat locations (Site 13, Appendix D). A Method Statement will be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England).

Permanent crossing of the River Till

- 5.2.45 The permanent crossing of the River Till would comprise a two-deck viaduct, consisting of 5-span structures approximately 7m apart, supported on four reinforced concrete piers for each deck on reinforced concrete pile caps. The bridge abutments would also be founded on piles. Cast in-situ piles would be employed, with the bore excavated by an auger machine and a leading edge inserted to seal the bore from ground water entry.
- 5.2.46 A temporary working platform for the piling operation -would be laid on each side of the floodplain at the MW stage; this could consist of approximately 400mm of stone laid on a High-Viz Orange Geotextile placed directly on the existing ground surface and extending approximately 4.5m beyond the limits of the reinforced concrete pile caps to the piers and abutments.
- 5.2.47 Temporary works for the excavation and construction of the reinforced concrete pile caps could include battered excavations, or a piled cofferdam.
- 5.2.48 A Method Statement will be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England). This will include technical details such as loading, compaction etc.
- 5.2.49 Geotechnical investigations accompanied by archaeological investigation and monitoring will be undertaken during 2019. The approach to archaeological mitigation, including if possible the preservation of archaeological and palaeoenvironmental remains would be informed by the results of the 2019 assessment and may also inform the detailed construction methodology. Further targeted archaeological and palaeoenvironmental assessment may be required to clarify the nature, character and extent of the buried remains and deposit sequence. The requirements for any archaeological investigation would be contained within SSWSIs to be prepared in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England). Prior to construction, archaeological mitigation will include archaeological topographical survey of earthwork remains of water meadow features (Site 13, Appendix D). Archaeological mitigation could include geo-archaeological investigations prior to and/or during excavations.
- 5.2.50 The assessment process outlined in Historic England published guidance (Historic England, 2019a) will inform the identification of potential archaeological avoidance measures.

Horizontal directional drilling

- 5.2.51 Directional drilling may be employed (subject to detailed design) in relation to the installation of utilities, for example at Site 47.1 where it crosses beneath the River Till (Wessex Water pipeline) and at Site 49 (combined Wessex Water pipeline and SSEN power cable corridor). The directional drilling will require localised excavation for the commencement of the horizontal directional drilling (access and exit chambers). The location of the access and exit chambers will be subject to archaeological investigation, including consideration of geoarchaeological potential. A Method Statement will be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England).

- 5.2.52 The mitigation requirements will depend on the scale of the impact and will be described in SSWSIs to be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England).

Temporary roads

A303

- 5.2.53 During the MW stage, a temporary section of the A303 will be constructed to connect the existing Longbarrow (A303/A360) junction with the new northern roundabout of the new Longbarrow (dumb bell) junction (see Figures 2.7 A-E of the ES [APP-061]).
- 5.2.54 The alignment of this temporary route is outside the permanent earthworks outline and any archaeological remains that it crosses will be protected and preserved (Site 54.1, Appendix D). The temporary road would be formed above existing levels, with topsoil retained in situ and the road sub-base placed on the existing topsoil, separated by a layer of High-Viz Orange Geotextile. The required depth of stone would be determined in accordance with item MW-TRA9 of the OEMP (as certified by the DAMS)].
- 5.2.55 Construction of the temporary road will require targeted archaeological monitoring and recording (AMR) in respect of highway tie-ins (Site 54.2, Appendix D), or any other location where topsoil may be required to be stripped. The requirements for archaeological investigation would be contained within SSWSIs to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).
- 5.2.56 Once the tunnel is operational this section of temporary road will be decommissioned and removed. The geotextile will be carefully exposed during the removal of the temporary road, taking care not to penetrate the original topsoil.
- 5.2.57 In accordance with item MW-CH5 of the OEMP (as certified by the DCO), the MW contractor will prepare a Method Statement as described in section 5.1 above, setting out how it intends to preserve sensitive archaeological remains and prevent deformation of topsoil/subsoil horizons (including no-dig solutions) and how the measures would be reversed following the end of construction, in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England). The Method Statement will be prepared with reference to the guidance on preserving archaeological remains published by Historic England (Historic England, 2016c).

A360

- 5.2.58 During the MW stage, a temporary diversion of the A360 will be constructed west of its existing alignment via a temporary bridge over the new A303 cutting, in order to connect the A360 to the existing Longbarrow roundabout (see Figures 2.7 A-E of the ES [APP-061]).
- 5.2.59 The Main Works Contractor will be required to limit direct physical impacts on archaeological remains from the construction of the temporary road diversion for the A360 as far as possible in this location. Some topsoil will, however, necessarily need to be removed where each end of the temporary road diversion ties in with the level of the

existing road. The northern end of this temporary road diversion would tie into the existing roundabout and the southern end would tie into the existing A360. The diversion is likely to be of insufficient length to achieve the height required to retain topsoil in situ. For mitigation purposes, it has therefore been assumed that the topsoil would need to be removed as a worst case.

- 5.2.60 Depending on the above, archaeological mitigation may include preservation of archaeological remains, trial trench evaluation and archaeological excavation and recording, as set out in Appendix D. These approaches are outlined in section 5.3 below and discussed in more detail in Part Two of this document (Overarching Written Scheme of Investigation).
- 5.2.61 A Method Statement will be prepared by the MW Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). The Method Statement will be prepared with reference to the guidance on preserving archaeological remains published by Historic England (Historic England, 2016c).

Topsoil stockpiles

- 5.2.62 Topsoil stockpiles will be managed in accordance with item PW-GEO3 of the OEMP (as certified by the DCO). Topsoil to be stripped from the earthworks trace during the MW stage will be temporarily stockpiled until it is required for re-using on the various batters, verges and landscape areas. These temporary topsoil stockpiles are all located within the DCO boundary and their indicative size shape and position are shown on Figures 2.7 A-E of the ES [APP-061]. Stockpiles will also be used to screen some working areas of the site, such as parts of compounds, from the public and to lessen the impact on views from the WHS. Stockpiles will normally be no more than 2m high.
- 5.2.63 No topsoil will be stockpiled within the WHS during construction works. An area within the Longbarrow Interchange has been allocated for the topsoil removed from the western tunnel portal approach cutting within the WHS; this topsoil will be used during works to downgrade the redundant section of the A303 within the WHS to a restricted byway.
- 5.2.64 The existing topsoil under and around the stockpiles will be retained in situ. A layer of High-Viz Orange Geotextile would be laid over the topsoil after light compaction by a smooth drum roller, and the topsoil stockpile placed over this. The geotextile would be carefully exposed during removal of stockpiles, taking care not to penetrate the original topsoil. A Method Statement will be prepared by the MW or PW Contractor (as relevant) describing the stockpile requirements, in consultation with Wiltshire Council and Historic England, and for locations within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). The Method Statement will be prepared with reference to the guidance on preserving archaeological remains published by Historic England (Historic England, 2016c). Where topsoil is to be stockpiled as part of the archaeological mitigation works (PW stage), the methods will be included in SSWSIs, in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England).

Geotechnical and other intrusive surveys and works

- 5.2.65 The DCO will provide powers to undertake any necessary additional geotechnical or other intrusive surveys as well as to do protective works to buildings and fell or remove trees or hedgerows or cut back their roots. The requirements for archaeological mitigation as identified in the DAMS will apply in respect of any such surveys or tree or hedgerow works. The PW contractor will also describe in the HMP how the historic environment would be protected and recorded during GI work or vegetation clearance in accordance with OEMP item PW-CH1, with reference to the Arboricultural Mitigation Strategy (see OEMP item MW-LAN3).
- 5.2.66 The requirements for any required archaeological investigation would be contained within SSWSIs to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Archaeological mitigation may take the form of targeted archaeological monitoring and recording (AMR) and/or archaeological excavation and recording (AER), where relevant. Archaeological mitigation in respect of works carried out for the assessment or remediation of contaminated land will be undertaken in accordance with Historic England guidance including 'Land Contamination and Archaeology' (Historic England, 2017a).
- 5.2.67 To the extent archaeological mitigation works are required at Parsonage Down and Winterbourne Down for the purposes of creating stone curlew replacement plots, the detail of the archaeological response will be contained within SSWSIs to be prepared for those plots, in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England). Archaeological mitigation may take the form of strip, map and record or archaeological monitoring and recording. The same approach will be taken to the extent archaeological mitigation works are required in relation to tree planting at Countess Farm, and the detail of the archaeological response required at this site will be contained within a SSWSI, in consultation with Wiltshire Council, Historic England and HMAG, and approved by Wiltshire Council (in consultation with Historic England). Archaeological mitigation may take the form of strip, map and record or archaeological monitoring and recording.

5.3 Archaeological Mitigation Measures

- 5.3.1 A range of archaeological mitigation measures are proposed, taking into account the form and significance archaeological remains or other heritage assets that would be impacted by the Scheme. The principal techniques are listed below; Table 11-3 describes the scope of these measures and the works stage (PW or MW) at which they would be relevant.
- Preservation of archaeological remains
 - Archaeological recording:
 - Archaeological Excavation and Recording
 - Strip, Map and Record
 - Archaeological Monitoring and Recording

- Ploughzone artefact collection (fieldwalking and topsoil test pitting)
- Trial Trench Evaluation
- Geo-archaeological and palaeoenvironmental investigation
- Archaeological Topographic Survey
- Archaeological Photographic Recording
- Publication and dissemination

5.3.2 A total of 61 sites have been identified that require either preservation of archaeological remains or archaeological recording (Sites 1 to 39 and Sites 44 to 65); for ease of description and to allow targeting of mitigation measures, some of these sites have been sub-divided into individual action areas, giving a total of 138 sites for mitigation (Table 11-3).

5.3.3 31 sites have been identified that require preservation of archaeological remains (Sites 1, 2, 6, 7, 8, 9, 14, 15 (part), 17, 18, 20, 21, 22, 23, 25, 26, 27, 31, 32 (part), 34, 36, 37, 38, 39, 53, 54 (part), 58, 60, 61 and 63). Measures for preservation of archaeological remains comprise protective fencing, cover and fill, or a combination of both. Details for each of the action areas for preservation of archaeological remains are presented in Appendix D.

5.3.4 A total of 34 sites have been identified that require archaeological recording (Sites 3, 4, 5, 10, 11, 12, 13, 15 (part), 16 (part), 19, 24, 28, 29, 30, 32 (part), 33, 35, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54 (part), 55, 56, 57, 59, 62, 64 and 65). Mitigation measures will include, but will not be limited to, archaeological excavation and recording (AER), strip, map and record (SMR), and geo-archaeological investigation.

5.3.5 5 sites where access for detailed and/or confirmatory assessment was denied prior to Examination have been identified for archaeological evaluation, to inform any proposed detailed mitigation measures, comprising the south side of Site 19 and Sites 40-43.

5.3.6 Details for each of the action areas for archaeological mitigation fieldwork are presented in Appendix D.

Preservation of archaeological remains

5.3.7 A total of 62 individual action areas will require protective fencing and/or burying/sealing sites beneath fill material (to prevent unintended incursion/damage by plant or other vehicles) at PW and MW stages (Table 11.3 and Appendix D). The indicative areas of these sites are shown on Figure 12.1 and in Appendix D. The exact areas will be defined in Method Statements to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Some sites will also require archaeological photographic recording prior to protection measures to ensure that there is a record of their existing condition, prior to the start of any groundworks. Sites for preservation of archaeological remains will be included in the HMP (to be appended to the CEMP), which will also include arrangements for regular site inspections by the ACoW, maintenance requirements, and Tool Box Talks to inform all site personnel of

the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the DAMS and OEMP and generally, to ensure that these are put in place and complied with. New sites may be added to the number of sites for preservation of archaeological remains, or existing sites may be adjusted, as a result of detailed evaluation (see 5.3.5 above), or as a result of clarification of the Scheme design.

- 5.3.8 Archaeological photographic recording of sites will be undertaken by the Archaeological Contractor before protection measures are deployed and after their removal (see paragraph 6.2.1 in Part 2 of this document).

Protective fencing

- 5.3.9 Protective fencing will be erected around the sites at the start of the PW stage to prevent accidental damage during the works. The sensitivity of the site will be taken into account in selecting the type of fencing and the type of archaeological mitigation to be employed. Where practicable, freestanding metal site fencing systems will be preferred: where this is not practicable, post and wire fencing or post and rail fencing may be suitable (see 5.3.10 below). Notices prohibiting works will be attached to the fencing.
- 5.3.10 For each site, a MS will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) that describes the decision-making process, site-specific protective measures and the methods for their establishment and decommissioning, and the scope of associated archaeological recording, where relevant. If robust temporary fencing is needed that requires earth fast posts, then either archaeological excavation and recording (for example, hand-excavated test pits) or archaeological monitoring and recording would be carried out. The requirements for any archaeological investigation would be contained within SSWSIs to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Each SSWSI would also outline the decision making process.
- 5.3.11 Existing fencing or boundary forms, where present, may be used to protect the sites. The condition and effectiveness of such fencing or boundary forms will need to be checked by the PW contractor to confirm that it is fit for purpose.
- 5.3.12 Work areas will be fenced at PW stage for archaeology and utilities works, including protected sites, as required by the programme for those elements. DCO boundary fencing will be installed at the start of the MW stage where the MW contractor chooses to do so for reasons of safety. DCO boundary fencing will therefore either need to incorporate the existing protective fencing or replace the relevant section of fence. In the latter situation the MW contractor will consult with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, before replacement boundary fencing is installed at the protected sites.
- 5.3.13 Where practicable, the fencing will include a c.10m buffer beyond the boundary of designated and non-designated heritage assets: e.g. where a square or rectangular fenced area is proposed, this shall extend out to the circumference of the 10m buffer. Fencing around individual milestones/stones will be determined by the scale and complexity of the stone setting and local site conditions (including any potential ecology constraints) but will incorporate a buffer area wherever possible.

- 5.3.14 Sites within protective fencing shall be maintained by the PW or MW Contractor (as relevant) to prevent scrub growth whilst the protective fencing is in place. The proposed means of maintenance will be described in the MS for the site, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).
- 5.3.15 Following construction, the protective fencing will be removed by the MW Contractor under the supervision of the Archaeological Contractor.

Protection beneath fill material

- 5.3.16 National guidance for preservation of archaeological remains is provided in, Preserving Archaeological Remains. Decision-taking for Sites under Development. Historic England (Historic England, 2016c). Stages of assessment to determine the potential impact of compression could include, as necessary:
- baseline assessment of current conditions and stability of archaeological remains;
 - develop a geotechnical engineering model of compression effects;
 - develop a project design for the preservation of archaeological remains at relevant sites; and
 - carry out monitoring and remedial works to rectify any identified issues.
- 5.3.17 A combination of suitable fill material and a suitable barrier membrane will be used to bury and protect sites to ensure that they are not disturbed at construction and to preserve them for future generations. Existing topsoil will be left in place. During the detailed design stage, the design team will liaise with the TPA to ensure that the intended loading values will not affect buried archaeological remains (see 5.2.13 to 5.2.16 above). The TPA will consult with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. On-site monitoring of fill areas will be the responsibility of the ACoW during the PW and MW stages; this will be set out in the CEMP.

Construction working areas and land not required for construction

- 5.3.18 There are a number of areas within the DCO boundary, both within and outside of the WHS, that will either be used as construction working areas or that lie outside of the working areas and where there will be no impacts from construction activities (refer to Table 11-5, Figure 12.1 and Appendix D).
- 5.3.19 Within the proposed working areas, a 'no-dig' approach will be adopted that will require topsoil to be retained and the surface protected as necessary. Construction activities at these locations, and those outside of working areas, will be routinely monitored by the ACoW to ensure that the existing ground surface is not impacted to the extent that it would disturb archaeological remains.
- 5.3.20 Proposed working areas will be identified in the HMP to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). In the event that any use of these areas requiring ground disturbance is proposed, SWSIs would be prepared in consultation with Wiltshire Council and Historic England and, for

sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England), which will set out the approach to assessment and mitigation which may include parts of these areas being subject to preservation. Where archaeological remains for preservation are located within these areas, the indicative extents of these are shown on Figure 12.1 and in Appendix D; the exact extents will be defined in Method Statements to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).

Preservation by record

- 5.3.21 A total of 34 sites identified in the ES following evaluation and baseline assessment), comprising 67 individual mitigation areas, require preservation by record. These sites will be investigated by a range of measures during the PW and MW stages (Table 11-3 and Appendix D). New sites may be added to the number of sites for preservation by record as a result of evaluation (see 5.3.5 above), or as a result of clarification of the Scheme design. Preservation by record will also be required in advance of installation of temporary and permanent utility connections.
- 5.3.22 SSWSIs would be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England), which will describe in detail the scope and extent of the recording works at each site. Sites for preservation by record will be included in the HMP (to be appended to the CEMP) which will also include arrangements for regular site inspections, maintenance and Tool Box Talks, to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the DAMS and OEMP and generally, to ensure that these are put in place and complied with.

Archaeological Excavation and Recording

- 5.3.23 Archaeological Excavation and Recording (AER) will be the main method to be deployed where the archaeological evaluation results support targeting of defined areas, such as activity foci, or where the assessed significance of the archaeological remains requires a more detailed excavation strategy to be determined in advance. AER will be the preferred technique for preservation by record for areas within the WHS.
- 5.3.24 The approach to AER is set out in more detail in section 6.3 below.

Strip, Map and Record

- 5.3.25 Strip, Map and Record (SMR) is a flexible approach suited to areas of more extensive archaeological remains with few or no apparent focus of activity, or areas where the assessed significance of the remains is lower. The technique may also be applicable to particular construction impacts, such as utility corridors. SMR is only applicable in sections of the Scheme outside of the WHS.
- 5.3.26 The approach to SMR is set out in more detail in section 6.4 below.

Archaeological monitoring and recording

- 5.3.27 Works that are alongside historic routes/roads will require archaeological monitoring and recording (AMR) during construction in order to record any surviving fabric of the

historic road or its associated roadside features. The clearance of service/utility corridors in compounds or in advance of or during construction of temporary and permanent service connections will be subject to AMR (combined with SMR or AER in sensitive areas, as identified in SSWSIs).

5.3.28 The approach to AMR is set out in more detail in section 6.5 below.

Ploughzone Artefact Collection

Fieldwalking

5.3.29 In some locations along the Scheme, surface artefact collection was not possible due to ground conditions (crop growth). In these locations the ES findings were based on ploughzone artefact sampling as part of the trial trenching programme, and/or topsoil test pitting. Surface artefact distributions will be investigated in areas where conditions did not allow for this to take place prior to Examination. Fieldwalking is proposed in these areas, to be completed prior to the commencement of other forms of intrusive archaeological mitigation. The full extent of the DCO boundary in these areas will be included in the fieldwalking programme, including areas where there will be ground disturbance and areas of landscape fill. These areas are identified in Appendix D.

5.3.30 The timing of the fieldwalking programme will take account of the prevalent agricultural regime and opportunities will be sought to undertake this non-intrusive survey work prior to the making of the DCO, through voluntary land access agreements. Where existing land uses, such as grassland, preclude fieldwalking prior to compulsory acquisition, arrangements will be made for the ground to be prepared for fieldwalking (ploughing, then harrowing) at the earliest opportunity once access is taken (south end of Site 19, Sites 40 to 43). Opportunities for such preparation as part of voluntary access agreements will also be pursued to ensure timely completion of the survey.

Topsoil artefact sampling

5.3.31 The AESR applied a gridded test pitting programme within the WHS, which aimed to map artefact distributions and support identification of potential activity areas, in particular where artefacts in the topsoil may be the only visible evidence for archaeological activity at that location. The artefact distributions identified in the topsoil artefact sampling programme undertaken as part of the AESR, combined with the results of topsoil sample sieving conducted as part of the trial trenching programme and artefactual evidence from excavated sub-surface features, will be utilised to identify areas of activity and define locations in which further ploughsoil artefact sampling will form part of the mitigation fieldwork strategy. The strategy to be employed is discussed further in the OWSI in Part Two of this document.

Geo-archaeological investigations

5.3.32 Geo-archaeological investigations will be required in areas identified through previous and current archaeological evaluations as of particular interest. These will be designed to address specific research questions. Provision for geo-archaeological advice throughout the mitigation programme will be made as part of the Archaeological Project Team as set out in section 6.1, below.

5.3.33 The approach to geo-archaeological investigations is set out in more detail in section 6.7 below.

Auger investigations

- 5.3.34 Augering may be required to establish how far deposits extend below the surface, the character of buried deposits and to confirm that a deposit does not seal other archaeological deposits. Hand/power augers (e.g. window sample of other shallow borehole equipment) may be used to log/describe deposit sequences and to collect samples, where this is the most suitable methodology to address clear research questions. Augering may be undertaken as part of archaeological or geo-archaeological investigations, where it will be employed under the guidance of the APT Environmental archaeology and/or Geo-archaeology specialists. The requirement for hand or power augering will be set out in the SSWSIs and MSs prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).

Archaeological Topographic Survey

- 5.3.35 Topographic survey using electronic survey equipment (including use of laser scanning and LiDAR) may be required in combination with preservation by record (AER, SMR or AMR), or in connection with preservation of archaeological remains. This will include production of feature profiles, contour and/or hachure plans, and a photographic record where required.
- 5.3.36 Topographic survey will apply to extant land surfaces and features as identified in the SSWSIs. Where relevant, topographic survey will also apply to buried land surfaces that may be exposed in plan; this will be identified in each SSWSI.
- 5.3.37 The approach to archaeological topographic survey is set out in more detail in section 6.8 below.

Detailed evaluation

- 5.3.38 There are a number of areas along the Scheme where, although all evaluation necessary for the purposes of the ES was completed, detailed evaluation was not completed prior to Examination due to access issues, or where a more limited amount of survey work has been undertaken, but where additional detailed evaluation (ploughzone artefact collection and trial trenching) will be carried out at the PW stage (Figure 12.1). The results of the evaluation will inform both the scope and type of archaeological mitigation in these areas (refer to Appendix D). Currently five sites have been identified for detailed reconnaissance/evaluation (other areas may be identified at a later date and added to the list):
- Two areas North of Winterbourne Stoke that are bisected by the existing B3083 road. These sites are required for landscape fill: Site 40 and Site 41 (refer to Appendix D);
 - The proposed Tunnel Production Area at the Main Civils Compound (Site 42);
 - The proposed site of a temporary electricity substation within the Main Civils Compound (Site 43); and
 - Detailed evaluation in respect of the realigned A360 northern link to the new Longbarrow Junction (Site 19, south side)

Publication and dissemination

- 5.3.39 Integral to the mitigation programme will be the publication and dissemination of the results of the investigations. This will include popular and academic publication and the dissemination of information to a wide technical and lay audience via a variety of forums. Professional and technical papers will be published assessing the outcomes of archaeological processes, methods, logistical organisation and techniques applied in the course of Scheme assessment and mitigation works.
- 5.3.40 At the end of the fieldwork the post-excavation assessment would determine the scope and content of the academic publication which will take the form of a monograph(s) and articles in relevant local, period and technical heritage journals. Fieldwork roundups will be published annually in local and period journals. Data will be fed periodically into Wiltshire and Swindon Historic Environment Record. Popular booklets will be produced for a general readership as part of the Public Archaeology and Community Engagement strategy (see section 5.4 below). Open access publication will be considered for both academic and popular products (see section 9.2 below).
- 5.3.41 The dissemination strategy will include the transfer of the complete project archive (site archive and research archive) to Salisbury Museum for long-term storage and curation. This will preserve the archive for use in future research projects and allow continued presentation of material to the public by the Museum. The digital archive will be deposited in an appropriate digital archive (see section 6.9 below).
- 5.3.42 The approach to publication and dissemination is set out in more detail in section 9.3 below.

5.4 Public Archaeology and Community Engagement

- 5.4.1 The universal value of Stonehenge and its landscape generates an unusually high level of public interest. The A303 Stonehenge Public Archaeology and Community Engagement Strategy (PACE strategy) will aim to collaboratively interpret and communicate the results of the archaeological evaluation and mitigation programmes to a wide audience, including local communities directly impacted by the Scheme (that is, people living and working within the A303 corridor); visitors to the WHS and travellers passing through it; and wider national and international audiences.
- 5.4.2 The Strategy will aim to deliver a lasting legacy from the archaeological investigation and recording works undertaken for the Scheme. The objective will be to provide information to a wide variety of audiences, ranging from those with a strong interest in archaeology and heritage to those with no specific involvement.
- 5.4.3 The Public Archaeology and Community Engagement Strategy is outlined in Appendix E.

PART TWO – OVERARCHING WRITTEN SCHEME OF INVESTIGATION

6 Approaches to Archaeological Mitigation

6.1 General

- 6.1.1 The final Strategy will be implemented in accordance with advice in DMRB Volume 10 Section 6 Part 1 (Highways Agency, 2008).
- 6.1.2 Sites that require investigation will include those identified in Table 11-4 and Appendix D: new areas for investigation may be identified as a result of emerging results and unexpected discoveries.

SSWSIs, Heritage Management Plans and Method Statements

- 6.1.3 Site Specific Written Schemes of Investigation (SSWSIs) will be prepared setting out in detail specific mitigation measures for the detailed design of the Scheme, informed by the strategy described in the DAMS. Existing models and new datasets collected during fieldwork will inform design of mitigation works in the SSWSIs during the investigations. These SSWSIs will be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England), prior to works commencing in the area to which each SSWSI applies. Nothing in this DAMS prevents Wiltshire Council from undertaking further consultation with Historic England (or any other party) as it considers appropriate, as part of its approval of the SSWSIs.
- 6.1.4 The specification for the archaeological works contained within the SSWSIs will be written in accordance with the DAMS, the current version of DMRB (Volume 10, Section 6, Part 1), and the current Standard and Guidance for archaeological excavation prepared by the ClfA (ClfA, 2014a) and the current ClfA Code of Conduct (ClfA, 2014f), and will adhere to all current and relevant best practice and standards and guidelines (see Appendix B)⁴.
- 6.1.5 Each SSWSI will set out the timing and order of the investigative works and will include details of how the archaeological programme will interact with other construction activities, and the parties undertaking them, at the PW or MW stages. Each SSWSI will include a programme for the archaeological work that will be referenced against key milestones/events in the overall design and construction programme.
- 6.1.6 During both the PW stage and the MW stage, procedures will be adopted in the CEMP and Heritage Management Plans (HMPs) to ensure that sites of archaeological interest are protected. The ACoW and/or the Archaeological Contractor will give Tool Box Talks (see Glossary) to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the DAMS and OEMP and generally, to ensure that these are put in place and complied with.

⁴ SSWSIs and MSs shall refer to the latest current adopted policy, standard and guidance documents, as updated from time to time.

- 6.1.7 HMPs will be prepared by the PW or MW contractor (as relevant) prior to the commencement of the relevant works, based on the DAMS, indicating how the historic environment (relevant to the scope of works) is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The requirements for what the HMPs would include are set out in the OEMP (PW-CH1 and MW-CH1, as certified by the DCO).
- 6.1.8 The PW or MW Contractor (as relevant) will prepare a Method Statement (MS) for activities requiring archaeological mitigation, prior to the commencement of the relevant archaeological intervention. In areas where archaeological remains or other heritage assets are to be retained (e.g. protected by temporary perimeter fencing, or beneath fill materials, or control measures for plant movements at construction), the MS will be prepared at the start of the PW stage and/or MW stage in order to describe specific protection measures to be applied to the site or area of interest, and following procedures outlined in the OEMP and the HMP.
- 6.1.9 HMPs and Method Statements will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). Nothing in this DAMS prevents Wiltshire Council from undertaking further consultation with Historic England (or any other party) as it considers appropriate, as part of its approval of the HMPs and Method Statements. Any material amendments required to the SSWSIs, HMPs or Method Statements will be made in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).
- 6.1.10 The reporting lines for sign-off of SSWSIs, HMPs and Method Statements are illustrated in the flowcharts at Appendix A.3.

Archaeological Research Agenda and Research Frameworks

- 6.1.11 Relevant ClfA Standards and Guidance (2014a-e) require clearly defined research questions which the archaeological programme will seek to address. The research themes and period-based questions set out in the ARA (Section 4) provide a framework and context for the incorporation of the results of the evaluation programme and will be developed through the SSWSIs to include detailed site based research questions, developed in consultation with the relevant APT specialists. Table 11-2 summarises the research themes relevant to each site.
- 6.1.12 The ARA provides a framework for focusing archaeological recording work which will ensure that information collected during the course of the proposed fieldwork interventions is valid for meaningful archaeological research through development of detailed site based research questions (see 6.1.11 above). Throughout the design, implementation and review of the ARA, a question-led approach will be adopted with decision-making based on the significance of the archaeological remains, with particular reference to the contribution made (where relevant) to the OUV of the WHS.

Archaeological Project Team

- 6.1.13 The archaeological mitigation works will be delivered by an Archaeological Project Team (APT) under the leadership of an experienced Project Manager. The APT will be provided by one or more Archaeological Contractors, to be appointed by the PW and

MW Contractors. The Archaeological Contractor will have prime responsibility for delivery of the full programme of archaeological mitigation as set out in the DAMS, including: all on and off site works; technical and non-technical publication and dissemination; and preparation and deposition of the archaeological project archive with the recipient museum. The relationship between the APT, the PW and MW Contractors, the ACoW/TPA and the statutory (Wiltshire Council and Historic England) and advisory bodies (HMAG) is illustrated in the flowchart at Appendix A.2.

6.1.14 The APT will include named key specialists who will either be site-based or have a regular site presence, or who will be on-call at short notice. These will include (without limitation) the following roles:

- Project Manager
- Environmental archaeology co-ordinator
- Environmental archaeology supervisor
- Archaeobotanist
- Charcoal specialist
- Archaeomalocologist
- Materials scientist
- Finds co-ordinator/processing specialist
- Lithics specialist with relevant period expertise
- Ceramics specialist with relevant period expertise
- Geo-archaeologist
- Geophysicist
- Archaeological surveyor
- Digital data co-ordinator/manager
- Human remains specialist
- Animal bone specialist
- Scientific dating specialist
- Conservation specialist
- Statistician
- Metal-detectorist

- Public Archaeology and Community Engagement Team (see Appendix E)

- 6.1.15 The names and qualifications of the individuals fulfilling these roles will be provided to Wiltshire Council, Historic England and HMAG for information and comment immediately after appointment of the Archaeological Contractor. The postholders shall be in place at the start of the mitigation programme. Any changes to the named APT postholders will be notified to Wiltshire Council, Historic England and HMAG, for information and comment.
- 6.1.16 The specialists appointed to the APT will be fully integrated into the archaeological contractor's project team to actively input to the design of strategies for the SSWSIs, the public archaeology and community engagement elements, and to advise throughout the PW and MW fieldwork and post-excavation stages. Regular communication between specialist members of the APT and the fieldwork Project Manager and field staff will be ensured through off-site planning meetings, site visits and progress meetings (see section 8.2).
- 6.1.17 Archaeological staff (part of the Archaeological Contractor's site team) supervising the investigative works as described in the DAMS shall be highly experienced in directing machine stripping/hand stripping of archaeological sites in chalk, Head and colluvial deposits, with direct experience in and knowledge of the archaeological character of the area in general. The staff member(s) shall be familiar with the content of the results of the relevant previous geophysical surveys, artefact collection, trial trenching, SSWSI and DAMS.

Archaeological Clerk of Works

- 6.1.18 As noted at 5.1.18 above, in accordance with the OEMP an Archaeological Clerk of Works (ACoW) will form part of the Technical Partner's Archaeologist (TPA) site team to, inter alia, monitor archaeological site works and facilitate access and monitoring arrangements with relevant heritage stakeholders (see Appendix C.1 for ACoW responsibilities; and Table 2-1 of the OEMP [as certified under the DCO]).

Unexpected finds

- 6.1.19 If unexpected finds (sites, artefacts, environmental remains or ecofacts, monuments or features) are made during the PW or MW stages a site consultation meeting(s) will be convened between the Archaeological Contractor, Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and the TPA to consider the significance of the find. Depending on the outcome of the consultation meeting, an addendum to the SSWSI or a new SSWSI will be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).
- 6.1.20 Prior to the start of the PW or MW stages, procedures will be adopted in the Construction Environmental Management Plan (CEMP) to ensure that sites of archaeological interest are protected (as provided for by the OEMP, PW-CH1 and MW-CH1, as certified by the DCO). This will involve temporary fencing for sites to be retained (see Appendix D) and clear notices on site fences. Tool Box Talks will be provided by the ACoW and/or the Archaeological Contractor to inform all site personnel of the archaeological and historic environment constraints on site, the protection

measures that are required and their obligations under the DAMS and OEMP and generally to ensure that these are put in place and complied with. The Tool Box Talks will identify sensitive areas/sites that must not be disturbed until investigation is completed and the site signed-off to construction, or where long-term protection is required.

- 6.1.21 The procedure for dealing properly with any unexpected finds during the construction process will be set out in each approved SSWSI and recorded in the CEMP (as required by the OEMP).

Interruptions and delays

- 6.1.22 Archaeological remains and the information that they contain or convey will be treated in an ethical manner, in accordance with current ClfA standards (ClfA, 2014f). The mitigation works will likely extend over different seasons of the year and from time to time it may be necessary to temporarily suspend archaeological work or activities at a site, in order to preserve archaeological remains or to prevent potential damage until conditions improve (for example, as a consequence of episodes of heavy and persistent rain or prolonged wet weather); or to comply with environmental guidelines for the handling of material such as topsoil; or to comply with animal disease control; or for health & safety reasons. The PW's HMP shall address how these issues will be treated.
- 6.1.23 Day-to-day decisions regarding site conditions will fall to the Archaeological Contractor, in consultation with the ACoW. Where extreme conditions arise requiring an immediate decision on site as to whether work should be suspended for a prolonged (more than 24 hours) period, the Archaeological Contractor will liaise directly with the ACoW and the PW or MW Contractor (as relevant). The TPA will be informed of which sites are affected and the reason(s) and likely duration of the interruption and delay, and whether any remedial actions are necessary or are planned (e.g. use of protective shelters or covers to protect exposed archaeological remains during episodes of wet weather, frost etc.). The TPA will consult Wiltshire Council and Historic England and, for sites within the WHS, HMAG, regarding the circumstances of any interruptions and delays. Resumption of work in such circumstances will be subject to consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG. Nothing in this clause is intended to prevent Wiltshire Council (in consultation with Historic England and for sites within the WHS, HMAG) making representations regarding cessation or resumption of work, through the monitoring provisions described in section 8 of the Strategy (below). Wiltshire Council may, acting reasonably, and following consultation with the TPA, Archaeological Contractor, ACoW and PW Contractor or MW Contractor (as appropriate) require cessation or resumption of work in the circumstances set out in this paragraph.

Iterative development of the mitigation strategy

- 6.1.24 Where required (for example, for environmental sampling (refer to section 6.3)), an iterative site strategy for excavation, artefact recovery and for sampling will be agreed with the TPA, Archaeological Contractor, Wiltshire Council, Historic England and for sites within the WHS, HMAG, at a site consultation meeting (see section 8.1). Where agreement cannot be reached the iterative site strategy (or relevant aspect of it that is sought to be agreed) will be approved by Wiltshire Council in consultation with Historic England. Departures from the provisions of the SSWSI or the relevant requirements of sections 6.3 – 6.7 below will be agreed as part of the agreement on the iterative site

strategy (or approved by Wiltshire Council in consultation with Historic England where agreement cannot be reached). The working parameters in the iterative site strategy will be pro-actively used on other areas of the same site by the Archaeological Contractor in order to maintain progress on site, under the guidance of the relevant APT specialists. However, in the event of unexpected circumstances or where requirements change and evolve as part of the responsiveness of the strategy (as detailed below in sections 6.3 – 6.7),, further consultation (as part of normal or additional site meetings) will be required to request advice, and agree any change to the strategy (with any such change being approved by Wiltshire Council in consultation with Historic England where agreement cannot be reached), as part of the iterative development of the mitigation strategy. Regular meetings between the TPA and the Archaeological Contractor, Wiltshire Council and Historic England and, for sites within the WHS, HMAG will be held on site to ensure that the fieldwork strategy is able to develop during the course of the investigations (see section 8.1).

6.2 Preservation of Archaeological Remains

Site Protection Measures

Photographic recording

- 6.2.1 Photographic recording will be undertaken before and after vegetation clearance. The photographic record will be commensurate with Historic England’s Level 1 record (Historic England, 2016a). It will include general and specific views of the site (even if there are no visible remains), to record its appearance, condition and to give an impression of the size and shape of the site and to record details such as dates or inscriptions, any signage, marker plates or graffiti (milestones/stones). The basic visual record will be supplemented by a written account (descriptive record) that provides a basic context to the photographic record.

Protective fencing

- 6.2.2 In order to demarcate those sites that require preservation of archaeological remains and to avoid unintentional damage during construction, temporary fencing will be installed during the start of the PW stage. The fencing will be installed by a fencing contractor under the supervision of the Archaeological Contractor.
- 6.2.3 The location and type of fencing for each site for preservation of archaeological remains will be set out in a MS (it may be helpful for the Archaeological Contractor to combine various sites into a single MS). It will also set out whether any preliminary archaeological investigative work is required (before or during the installation or removal process). Requirements for archaeological investigation will be contained within the SSWSIs. The MSs and SSWSIs will be developed in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG (see section 6.1 above). The presence of each asset requiring protective fencing will be recorded in the HMP (to be appended to the CEMP) and shown on the detailed engineering drawings. The ACoW will be responsible for regularly monitoring the condition of the fencing and the PW or MW Contractor (as relevant) will be responsible for its maintenance until either construction work in that area is complete or at Scheme opening, at which time the removal of the fencing will be monitored by the ACoW (see Table 2-1 of the OEMP[as certified under the DCO]).

Preservation of Archaeological Remains Beneath Fill

- 6.2.4 At a number of locations along the Scheme suitable fill material on top of a protective barrier membrane as identified in the MS will be used to bury sensitive archaeological remains, to ensure that they are not disturbed during construction and to preserve them for future generations (refer to Appendix D). Sites will either be temporarily buried beneath fill (e.g. compounds or temporary roads) or permanently preserved beneath shallow (<1m deep) fill areas (e.g. in parts of the Parsonage Down excavated material deposition area).
- 6.2.5 The Contractor will include in the CEMP methods that they intend to use to protect sensitive buried archaeological remains, including measures to prevent damage (such as deep rutting) caused by vehicles or plant.
- 6.2.6 The PW or MW Contractor (as relevant) will describe in a Method Statement the effects of compression and loading (whether dynamic or static) and site specific protective measures, including the extent of the area to be protected, the depth of fill required and the type of fill. The Method Statement will set out suitable methodologies for filling areas without disturbing or impacting sensitive archaeological remains, and also for removing the fill at the end of construction (see OEMP MW-CH5, as certified by the DCO). The Method Statement will be developed in line with the principles of Historic England's 'Preserving Archaeological Remains' guidance (2016) in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England) (see section 6.1 above). At each site measures will be put in place to avoid rutting or the compaction of soft ground (topsoil and fill) until or unless adequate protection is provided (vehicles will be restricted or prohibited from traversing sensitive areas prior to fencing, the laying of a protective membrane and fill deposits/vehicle running surface, and at decommissioning). The ACoW and/or Archaeological Contractor will give Tool Box Talks to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the DAMS and OEMP and generally to ensure that these are put in place and complied with. Following construction, the protective fill material will be removed by the MW Contractor, leaving the sites in their original condition.

Removal and Relocation of Heritage Assets

- 6.2.7 The removal and relocation (in the original or a modified location) of any identified heritage asset is not required by the illustrative design: all milestones will be retained in situ. However, should a situation arise during the works that requires the relocation of a heritage asset, the Archaeological Contractor (and, if relevant, the APT Conservation Specialist, or a stone/architectural/metals conservator appointed by the Archaeological Contractor) will consult with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and carry out an initial condition survey. This survey will inform a Method Statement to be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) (see section 6.1 above) prior to the start of works associated with the asset's removal. The Method Statement will deal with:
- a) Temporary works (physical protection and control systems to protect the asset during removal activities);

- b) Dismantling (additional protection measures to ensure that the asset is not damaged during the removal process);
 - c) Lifting (methods to be described to prevent damage), transport (how the asset will be taken and stored during construction);
 - d) Re-erection (how and where it will be relocated, how it will be brought back to site);
 - e) Maintenance (measures for long-term conservation); and
 - f) Security (dismantled stonework to be left on site at end of each working day within the protected area, measures to be used during storage).
- 6.2.8 If the asset requires specialist conservation treatment before it is removed or when it is in storage this will also be included in the Method Statement, informed by an initial condition survey undertaken by the specialist.
- 6.2.9 Requirements for archaeological investigation will be contained within a SSWSI which will also be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG (see section 6.1 above).

6.3 Archaeological Excavation and Recording

General Approach

- 6.3.1 Archaeological excavation and recording (AER) is defined in paragraph 5.3.23 above and Table 11.3(see section 11 below). The following general approach will apply for AER at the PW and MW stages.
- 6.3.2 Sites that require investigation will be those that are identified in Appendix D, but may also include new areas that arise as a result of emerging results, detailed design and unexpected discoveries.
- 6.3.3 Sites designated for AER will be stripped with mechanical plant as set out in the SSWSI (refer to Appendix D), except in areas where further ploughzone sampling is taking place. The sequencing of stripping, location of soil storage areas and arrangements for backfilling, together with other relevant logistical considerations, will be set out in a Method Statement (see section 6.1 above).
- 6.3.4 For sites where machine stripping is required (following completion of any ploughzone sampling), topsoil, subsoil and other overburden will be removed by the Archaeological Contractor to the correct archaeological horizon under archaeological supervision. The relevant horizon will be informed by the evaluation results, the ARA (refer to section 4), and the aims and objectives described in the SSWSIs.
- 6.3.5 In accordance with the research aims and objectives outlined in the ARA (section 4), which will be further developed through the identification of site specific aims and objectives within the SSWSI's in consultation with relevant APT specialists, the archaeological site will then be subject to hand excavation of key features designed to recover artefactual and scientific dating evidence. All specialist samples will be

accurately located in three dimensions. At the same time selected feature complexes would be subject to further hand excavation designed to resolve stratigraphic relationships.

- 6.3.6 The works will also include sampling of archaeological remains for palaeoenvironmental and palaeoeconomic indicators (for example, charred plant remains, molluscs, pollen, etc.) (see to 6.3.59 to 6.3.69 below, Environmental Sampling Strategy), in accordance with the SSWSI and the ARA. Artefact and palaeo-environmental assessments will be carried out during the course of the fieldwork; selected key features/structures will be subject to more detailed excavation and sample recovery to address the evolving research objectives of the archaeological programme.
- 6.3.7 The proportion of features excavated will be determined by the significance of the remains and the requirements of the research objectives set out in the SSWSI. This iterative process is intended to allow the approach to excavation sampling to be both flexible and closely targeted to address specific questions, rather than being tied to a pre-determined excavation strategy.
- 6.3.8 The research objectives and excavation strategy will be kept under review during the investigation at each site. In order to facilitate this approach, relevant data, artefact and environmental sample processing will be undertaken whilst the investigation proceeds on site (including artefact spot-dating and preliminary assessment of environmental samples). The preliminary assessment of materials, including faunal remains, ecofacts and palaeoenvironmental proxies recovered from samples, undertaken whilst the investigation is underway will support the outlined iterative approach to sampling. Decisions on further investigation at a given site will be made once sufficient information becomes available.
- 6.3.9 Palaeo-environmental sampling and environmental sequences of Pleistocene date have the potential to recover information about past human environmental interactions, human activities and evidence of environmental change. Waterlogged deposits or sequences where waterlogged deposits are present within a sequence will receive particular attention. Such deposits may also preserve organic artefacts and textiles which are not ordinarily preserved in dry conditions. In the event that waterlogged deposits are identified, the Conservation specialist and the Environmental Archaeology Co-ordinator or Environmental Archaeology Supervisor will be contacted for advice in the first instance (see section 6.3.61 below), and the Historic England Regional Science Advisor (South West) and the TPA will be notified.
- 6.3.10 Geo-archaeological investigations (see section 6.7) will focus on areas of particular interest as identified through previous and current archaeological evaluations, and in the ARA, and will be specifically designed to address particular research questions. Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) will be contacted by the Archaeological Contractor and consulted with regard to an appropriate sampling strategy and to comment on site retrieval methods. The sampling methodologies and specific research questions for Geoarchaeological Investigations will be clearly outlined in the SSWSI for each relevant area.

Ploughzone Artefact Collection

- 6.3.11 Artefactual evidence in the topsoil may represent a substantial proportion of the archaeological evidence for earlier prehistoric periods, in particular Mesolithic, Neolithic,

and Early Bronze Age material (including Beaker tradition material). The strategy for ploughzone artefact collection will be developed with a specific emphasis on the ARA and how the artefactual resource within the ploughzone can contribute to and identify specific research questions that they have the potential to answer. Surface artefact collection will be carried out within the DCO Boundary (inside and outside of the WHS) where conditions did not allow this to take place prior to Examination, including areas where there will be ground disturbance and areas of landscape fill (refer to Figure 12.1 and Appendix D). The results of the surface artefact collection will inform the development of SSWSIs for the proposed archaeological mitigation (see Appendix D).

- 6.3.12 Ploughzone artefact collection will also be undertaken through topsoil sieving incorporated into the trial trenching programme (section 6.6 below), in accordance with the approach adopted at the archaeological evaluation stage, and as set out in section 4.3 of the Archaeological Evaluation Strategy Report ('AESR'; Highways England, 2018a), and section 4.2 of the Overarching Written Scheme of Investigation for Archaeological Evaluation ('OWSI'; Highways England, 2018b).
- 6.3.13 The results of surface artefact collection and ploughzone artefact collection as provided for above will be reviewed alongside the ARA and proposals for further artefact sampling developed in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG.
- 6.3.14 Analysis of the results of the ploughzone sampling exercise undertaken at the evaluation stage suggests at least 5 areas of lithic material concentrations in and close to the western part of the WHS that would repay closer examination, based on distribution of the material, incidence of chronologically and/or typologically distinctive pieces, coincidence with subsurface features encountered in trial trenching, and possible topographical or activity-related distributions (Highways England, 2019n) [REP3-024]. Areas for investigation within the WHS will include parts of the Eastern Portal approach and the footprint of the proposed junction improvement at Rolleston Corner as well as the Western Portal approach. Outside the WHS, they will include areas at Longbarrow.
- 6.3.15 Statistical analysis will be undertaken as one of a suite of interpretative tools in order to propose a suitable ploughzone artefact sample that will be able to address specific research questions. The statistical analysis will model the overall artefact population characteristics within the WHS and contribute to and identify further research questions that the recovery of artefacts from the ploughzone can address. This work will be utilised to develop a focused, research driven strategy. The aim of the statistical analysis will be to maximise the potential of the material record to understand the archaeological resource overall as part of the mitigation strategy across the Scheme, to understand spatial distribution of the artefacts within the ploughzone generally and in relation to other influencing factors (including land use and agricultural practice, taphonomic processes, topography, geology and relationship to other archaeological and natural features, etc.). This combined work will assist in targeting the mitigation works in terms of the level of intervention required and the precise methodological approach to sampling to be utilised in a given area. The work will ultimately contribute to our understanding of human activity within the WHS landscape and its environs as a whole. The statistical analysis will continue reflexively throughout the process to identify additional research questions based on the spatial distribution of the material in the

plough zone and factors that may influence this. The APT Statistician will have access to data throughout the project to inform direct advice to the site team.

- 6.3.16 The sampling conducted during the evaluations has characterised key aspects (mean assemblage richness and mean total artefacts per test excavation) of the ploughzone artefact population. Further sampling will aim to over-represent rarer artefact classes that, where present, add greater value to the findings. The sampling will consider lithic material concentrations and areas that may be transitional between areas of activity, as well as areas that contain lower concentrations of lithics or appear to be devoid of lithics. In some areas, a sample of up to 100% of the artefact content of the ploughsoil may be necessary, combined with a systematic sample to capture background distributions and transitional areas. Sample excavation will be utilised to test hypotheses and assumptions and in order to answer and continually review specific research questions in an iterative and reflexive manner, in consultation with Wiltshire Council and Historic England, and for sites within the WHS, HMAG.
- 6.3.17 The statistical approach and the relevant research questions will be developed in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. The work will be progressed by the Technical Partner prior to commencement of the PW stage to inform a Method Statement and SSWSIs to be prepared by the Archaeological Contractor for approval by Wiltshire Council (in consultation with Historic England) (see 6.3.21 below).
- 6.3.18 It is proposed that in areas where further sampling of the ploughzone is undertaken, the scalable test pitting strategy employed at the evaluation stage (as set out in section 4.2 of the Archaeological Evaluation Strategy Report ('AESR'; Highways England, 2018a), and section 4.2 of the Overarching Written Scheme of Investigation for Archaeological Evaluation ('OWSI'; Highways England, 2018b)) will be developed based on the results of the statistical analysis. The scope of the work will be set out in each SSWSI, to be developed by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England). The application of the sampling strategy will be developed as an iterative process at site consultation meeting(s) between the Archaeological Contractor, Wiltshire Council and Historic England, the TPA and, for sites within or affecting the WHS, HMAG (see paragraph 6.1.24 above and section 8.1 below).
- 6.3.19 While the evaluation phase test pitting employed dry hand-sieving, use of a bulk wet-sieving system, such as that used on the Carlisle Northern Development Road, may be preferred for test-pitting in advance of AER. Depending on the system adopted, this could entail washing of topsoil samples from the test pits through sieving plant set up on site or at a suitable compound location, with the retained coarse fraction dried, weighed, bagged, labelled and logged, before detailed sorting and assessment to inform development of the test pitting strategy in line with the principles set out above. Any decision on the adoption of a mass bulk wet-sieving system will consider the potential impact on vulnerable artefact types such as ancient metalwork or prehistoric pottery.
- 6.3.20 The Archaeological Contractor will set out in a Method Statement how they would achieve the level of performance necessary to process a large amount of topsoil, in consultation with Wiltshire Council and Historic England and, for sites within or affecting

the WHS, HMAG, for approval by Wiltshire Council (in consultation with Historic England).

Machine Excavation

- 6.3.21 AER will be carried out at the locations identified in the SSWSIs. Each AER area will be positioned using electronic survey-grade equipment. The initial stage of excavation will be undertaken using a 360° mechanical excavator or other similar back-acting plant fitted with a toothless bucket, used in such a manner as to expose cleanly the archaeological surface. The Archaeological Contractor shall ensure that hired-in plant and operators have the capability to achieve a consistently high standard of work. The MSs and SSWSIs for each site will include proposals for the stockpiling, handling and replacement of topsoil with reference to the Soils Management Strategy and Soils Handling Strategy (see PW-GE03, MW-GE03 and MW-GE07 of the OEMP), the Materials Management Plan (OEMP item MW-MAT2) and the Pollution Incident Control Plan (see OEMP item MW-G20, Emergency Preparedness and Response Plan).
- 6.3.22 Machine excavation will proceed under the direct supervision of the Archaeological Contractor in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered (the decision to employ spits will be set-out in each SSWSI). Particular attention will be paid to achieving a clean and well-defined horizon with the machine. Under no circumstances will the machine be used to cut arbitrary trenches down to natural deposits. The mechanical excavator will not be permitted to traverse any stripped areas.
- 6.3.23 The surface achieved through machine excavation will be inspected for archaeological remains. The resulting surface will be cleaned by hand in order to identify or define the extent of archaeological remains present: this is of particular importance where Neolithic or Early Bronze Age settlement traces may be present, since most evidence of domestic structures will take the form of stake-holes and small post-holes, the successful identification of which is critical. Areas where hand cleaning is likely to be required will be identified in the SSWSI: decisions regarding where additional hand cleaning is required will be made on site as part of the iterative process (see paragraph 6.1.24 and section 8.1).
- 6.3.24 Provision will be made for targeted geophysical survey following topsoil stripping, in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG, in order to enhance recognition of features (for example in areas of colluvium where anomalies/features may have been beyond a detectable depth at the evaluation stage and where it is useful to have an understanding of the location, complexity and extent of potential buried remains). It will also be aimed at validating the previous geophysical surveys and providing a check on the visual identification of potential archaeological features. The results of targeted geophysical survey have the potential to contribute to research questions identified in the ARA (e.g. MBA.5, *Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?*; and EM.7, *What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility?*). The use of detailed magnetometer survey, GPR, electrical resistance survey and electromagnetic induction will be considered.

- 6.3.25 The extent of the area for AER will be clearly demarcated to ensure that persons or vehicles cannot inadvertently traverse the area of investigation whilst archaeological works are in progress; the method of demarcation will be set out in the MS for the archaeological work and in the SSWSI. Dump trucks and other plant will not be permitted to track over stripped areas until archaeological investigations at that location are complete and the archaeological site is signed-off for construction. All fencing/bunds associated with the archaeological works area will be regularly inspected by the ACoW and maintained by the PW or MW Contractor (as relevant) until the archaeological works in that area have been completed, inspected and approved as set out in section 8.4 below.
- 6.3.26 Topsoil will be subject to a rapid metal-detector scan prior to stripping, to identify and recover metal objects within the topsoil. All archaeological metal artefacts (except those that cannot be X-rayed, such as lead artefacts) will be subject to X-ray, which will be used to rapidly scan material for retention or disposal (with reference to the Salisbury Museum policies for retention of artefacts and the ClfA selection toolkit). The APT Finds co-ordinator/processing specialist and the Conservation specialist will be consulted. Stripped surfaces and archaeological features will also be subject to a rapid metal-detector scan to identify loose artefacts from uncleaned surfaces, and on cleaned surfaces to help identify areas for careful excavation. Hand-excavated spoil will also be scanned. This will be undertaken by an appropriately qualified or experienced metal-detectorist. The SSWSIs will set out how metal detecting will be used as part of the artefact recovery strategy for individual sites. Provision will also be made for 3D location recording of artefacts within features, but also within unstratified deposits where significant quantities are identified. The Archaeological Contractor will consider the use of metal-detecting at the end of each day in order to assist in site security.

Hand Excavated Trenches and Hand Excavated Test Pits

- 6.3.27 Hand excavated trenches and test pits will be opened using hand tools instead of mechanical plant in circumstances where sensitive/fragile archaeological remains are predicted to survive based on the results of ploughzone artefact sampling and/or trial trenching (refer to Table 11-4 and Appendix D). These circumstances may include, for example, in situ lithic assemblages whose fabric could be damaged by the use of mechanical equipment, or distortion of spatial distributions, or where the scale of the investigations is significantly smaller, or where greater control is required (for example where deposits of buried colluvium have been exposed).
- 6.3.28 Hand excavation will be used to establish the presence/absence of remains/artefact distributions, the extent and condition of the remains or concentrations of artefacts, and to inform additional mitigation requirements. It may be necessary to limit the depth of the investigation so as not to compromise the integrity of a high value potential resource, such as a buried ground surface. Hand excavation will be conducted with due regard to the potential survival of cultural material at the interface with the topsoil and the potential survival of microtopographic features, as identified in the SSWSIs. It may also be necessary to excavate deposits using spits of pre-determined thickness to allow cross-site comparisons with work undertaken at the evaluation stage. The proposed use of spits will be set out in the SSWSIs.

Artefact Recovery Strategy

- 6.3.29 As well as the routine collection of artefacts that will be carried out during normal site works, other techniques may be deployed as identified in the SSWSI, to recover datasets relevant to the investigation and site specific or Scheme-wide research objectives.
- 6.3.30 The Archaeological Contractor will consult the APT specialists during the preparation of the SSWSIs, regarding the artefact recovery strategy. If changes are required during the course of the investigation at a site then these will be developed as an iterative process at site consultation meeting(s) between the Archaeological Contractor, Wiltshire Council and Historic England, the TPA and, for sites within the WHS, HMAG (see paragraph 6.1.24 above and section 8.1 below).
- 6.3.31 The site artefact recovery strategy may include, for example:

Ploughzone artefact collection

- The hand collection of artefacts according to a scalable strategy, from the surface of the ploughsoil or a buried ground surface;

Artefact recovery (in situ lithic scatters)

- In the field these would be initially identified through a collaborative approach from the APT lithic specialist and geo-archaeologist. The identification, recording and collection of lithic material that is in situ (potential target deposits/areas could include surface hollows, buried land surfaces, or soils buried beneath earthworks, or within or beneath buried sediments such as colluvial or alluvial deposits which might occur in the valleys of the River Till or River Avon) will be in line with Historic England draft guidance which will be consulted during the preparation of a SSWSI or as an addendum to an existing SSWSI (Historic England, 2019b). In situ lithic scatters will require 3D recording;

Artefact recovery (dry sieving)

- The collection of surface and buried artefacts in the ploughzone using a scalable strategy in combination with different mesh sizes (initial 10mm and 4mm mesh for topsoil dry sieving) depending upon the number and significance of finds per excavated unit;

Artefact recovery (wet-sieving)

- The collection of surface and buried artefacts in the ploughzone using an automated wet-sieving system which may be used to process large scale amounts of soil (refer to paragraph 6.3.15). Wet sieving will include a mesh size of 1mm for recovery of microliths and microdebitage. When sieving is automated it will be combined with metal detector scanning prior to soil stripping to allow for spatial distribution recording and to help avoid damage to more vulnerable metal artefacts;

Bulk sampling for finds

- Mesh sizes will depend on the material to be recovered (for example, microliths, small faunal remains and ecofacts), e.g. 1-4mm mesh might be required for recovery of the smallest lithics. Consideration will be given in the SSWSIs to how the recovery of multiple material can be maximised through a single sieving programme e.g. faunal remains and lithics, with the smallest mesh size required to

capture the smallest class of material used; and

Metal detection

- The collection of surface and buried metal artefacts in the ploughzone using a discriminating metal-detector in accordance with a scalable strategy, either from the topsoil prior to excavation, stripped surfaces following stripping, during hand excavation, and/or scanning of hand-excavated spoil. Each SSWSI will set out how metal detection will be used as part of the artefact recovery strategy and will describe the artefact collection and retention policy (with reference to the Salisbury Museum policies for retention of artefacts and the ClfA selection toolkit). relevant to the stated aims and objectives of the investigation and the ARA, in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG, for approval by Wiltshire Council (in consultation with Historic England).

- 6.3.32 All retained artefacts shall be collected, stored and processed in accordance with standard methodologies and national guidelines (see Appendix B.2) and in line with the requirements of Salisbury Museum as the recipient museum for the project archive. Retained artefacts will be monitored by the APT Conservation Specialist to minimise further deterioration. It is noted however, that where artefacts are found on land that Highways England is occupying under its temporary possession powers in the DCO, the provisions set out in this document with respect to artefact retention may be subject to the landowner's consent.
- 6.3.33 Finds may be recorded three dimensionally depending upon their significance and the value of understanding spatial distributions (in situ lithic scatters will require 3D recording). Bulk finds (including material collected by bulk wet-sieving) will be collected and recorded by context. Finds may also be recorded according to a pre-determined grid or by spit. The volume of features or specific deposits excavated will be recorded to allow assessment of the density of artefactual material recovered.
- 6.3.34 Initial care of finds including first-aid and preventive conservation will be in line with current conservation guidelines and standards (including English Heritage, 2008a; English Heritage, 2010; Historic England, 2018b; and Watkinson & Neal, 2001). A conservation assessment will be undertaken in accordance with English Heritage guidance (English Heritage, 2008a) and make recommendations for investigative and remedial conservation and work required to meet the requirements of Salisbury Museum. The APT Conservation Specialist will inform the site team about the potential range of materials, likely condition, 'first aid' and preventive conservation treatment measures required.
- 6.3.35 Metal finds will be X-rayed as part of the post-excavation process in accordance with Historic England published guidelines (English Heritage, 2006a) to assist in the identification and interpretation of the finds which will contribute to the understanding of a site; and, to meet the requirements of Salisbury Museum. Material will be selected for X-ray by the APT Conservation specialist and APT Finds co-ordinator/processing specialist. Material will not be selected for X-ray where it will not produce informative X-rays e.g. lead alloys, heavily leaded copper alloy, very dense/thick material and obviously modern material (English Heritage, 2006a).

Excavation Sampling Strategy

- 6.3.36 Archaeological features, layers or deposits identified for excavation will be hand excavated in an archaeologically controlled and stratigraphic manner, in order to meet the aims and objectives of the investigation as set out in the SSWSIs. Machine assisted excavation of large deposits will only be permitted at the discretion of the TPA, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. Sufficient deposits/features will be investigated through hand excavation in each archaeological excavation area in order to record the horizontal and vertical complexity of the stratigraphic sequence to the level of underlying sterile geological strata. Excavation will also target the inter-relationships between features and major feature intersections to understand and record their relationships.
- 6.3.37 The excavation sampling strategy will be dictated by the significance of the remains, their stratigraphic complexity and their artefactual and palaeoenvironmental content (including absence of artefactual content). The Archaeological Contractor, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, will describe in their SSWSIs an appropriate sampling strategy as determined by the results of the archaeological evaluation and key research questions, for approval by Wiltshire Council (in consultation with Historic England), prior to works commencing in the area to which the SSWSI applies.
- 6.3.38 The strategy will be kept under review during the investigation. Site data, artefact and environmental sample processing will be undertaken whilst the investigation proceeds on site (including artefact spot-dating and preliminary assessment of environmental samples). Initially, the minimum sample sizes (see 6.3.39 to 6.3.51 below) will be implemented on site by the Archaeological Contractor in accordance with the approved SSWSI. The reflexive process will allow the recovery of finds and samples for dating and assessment for their palaeoenvironmental and geoarchaeological potential. Changes to the strategy will be developed as an iterative process at site consultation meeting(s) between the Archaeological Contractor, Wiltshire Council and Historic England, the TPA and, for sites within or affecting the WHS, HMAG (see paragraph 6.1.24 above and section 8.1 below).
- 6.3.39 The following minimum sampling requirements will be used as a standard, within the iterative excavation sampling strategy; these may be varied to suit the research value of the remains, subject to agreement with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and the TPA at a site consultation meeting (see paragraph 6.1.24 above and section 8.1 below).: the SSWSI will identify the initial minimum sample for excavation.

Linear features

- 6.3.40 Sufficient sections through linear features will be targeted in key locations to address research questions. It may be necessary to increase percentage excavation to address research questions where a higher volume sample would achieve this. Segments will be hand excavated along the length of the feature to understand its depositional sequence and character. Each segment will be not less than 1m long and will be regularly spaced along its length. Segments will be located away from intersections with other features, although key intersections will also be targeted to provide an understanding of the deposit sequence and the relationship between different feature types/classes: for

example, the intersections of Wessex Linears may offer potential for surviving sequences which may facilitate scientific dating. All ditch ends will be investigated.

- 6.3.41 Within the WHS, at least 50% and up to 100% of each linear feature will be excavated, in consultation with Wiltshire Council, Historic England and HMAG. Outside the WHS, a minimum of 20% of each linear feature will be excavated (increasing to 40% for enclosure ditches and 100% for smaller curvilinear features). Linear features identified as of later prehistoric (Middle Bronze Age to Iron Age) date from spot-dating material content or stratigraphically will be considered for up to 100% excavation, in consultation with Wiltshire Council and Historic England, to take account of the frequency of human burials and other intentional deposits (e.g. animal burials) encountered within the palisade system linears excavated west of Stonehenge and at West Amesbury. The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated.

Discrete features

- 6.3.42 Within the WHS, pits, post-holes and other isolated features (including natural features that have been shown to contain archaeological remains) will be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG). Outside the WHS, these types of feature will normally be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG as part of the iterative process) (see paragraph 6.1.24 and section 8.1); half-sectioning of features may be adopted, in consultation with Wiltshire Council, subject to the significance of the remains and the research questions identified in the SSWSIs. The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated.

Buried ground surfaces, floor surfaces, hearths

- 6.3.43 Buried ground surfaces, floor surfaces and hearths have the potential to contain important remains, including finds distributions, ecofacts and palaeoenvironmental remains. It may be possible to recognise individual turves or deposits representing dumped material: if laminated sequences are identified e.g. turves, the APT Geoarchaeologist will attend site with the APT Environmental Specialist to devise a sampling strategy, which may include recovery of monoliths. Grid sampling and bulk sampling may be adopted depending upon the significance of the remains and the research questions identified in the SSWSIs. Hearths and areas of in situ burning will be completely excavated (in plan or by quadrant) and sampled for palaeoenvironmental remains and to recover material suitable for scientific dating, such as archaeomagnetic dating, to address key research aims. The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated.

Animal Bone Groups or other structured deposits

- 6.3.44 Where structured deposits or animal bone groups are identified during excavation, the Archaeological Contractor will follow Historic England guidance 'Animal bones and Archaeology: Recovery to archive' (Historic England, 2019c) and will consult with

Wiltshire Council and Historic England (and, for sites within the WHS, HMAG). The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated.

Structures

- 6.3.45 Each structure, including stone structures, will be investigated/sampled to define the extent, form, stratigraphic complexity and depth of the component features and its associated deposits. Intersections between components will be investigated to determine their relationship(s). Particular care will be taken to ensure that areas of in situ burning are not investigated prior to the consideration of scientific dating.
- 6.3.46 Later prehistoric round house structures have previously been identified in connection with Bronze Age settlement activity at the existing Longbarrow Roundabout location (Vatcher and Vatcher, 1968), although none were identified during extensive trial trench evaluation carried out for the Scheme. If prehistoric house structures are found or suspected after topsoil stripping, careful hand cleaning will be undertaken at the level of initial definition to establish the full extent of the structure and any associated or related contemporary features, in order to understand its complexity, state of preservation, significance and to contribute to answering research questions set out in the SSWSIs. It may be necessary to re-clean areas to achieve an acceptable level of feature definition. Features/contexts that are part of the structure or which may have contributed to its construction (such as drip gullies, post holes, internal or external surfaces, hearths, etc.) will be 100% excavated. Contexts will be routinely sampled for ecofacts, palaeoenvironmental remains and dating material following the strategy outlined in this section.
- 6.3.47 The hand excavation of wells, or similar deep structures, will only proceed following a safe working practice, as required by national health & safety guidance, and as recorded in the MS to be prepared by the Archaeological Contractor. Preliminary hand augering of potential deep deposits may be able to identify depth and would inform an excavation strategy which may include machine excavation or stepping-out to ensure that there is no depth restriction in areas subject to archaeological mitigation. The excavation sampling strategy will be developed as an iterative process at site consultation meeting(s) between the Archaeological Contractor, Wiltshire Council (in consultation with Historic England) the TPA and, for sites within the WHS, HMAG (see paragraph 6.1.24 above and section 8.1 below). The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated.

Burials

- 6.3.48 Burials (including features suspected of being burials) will be investigated in accordance with the strategy for the recovery of human remains (see paragraphs 6.3.75 to 6.3.88 below).

Tree hollows

- 6.3.49 Tree hollows were encountered across all evaluation areas, with some local variations in density which may relate to historic ploughing, topography and drainage, or possibly to specific prehistoric land use (Highways England, 2019n) [REP3-24]. The distribution

of tree hollows has potential to contribute to studies of landscape evolution and change across the WHS and its environs. The comprehensive mapping and investigation of a representative sample of tree throws for artefactual, ecofactual and palaeoenvironmental evidence is therefore proposed, comprising:

- Mapping and investigation of all possible tree hollows encountered in mitigation areas (i.e. interpretation);
- Archaeological excavation of a sample of confirmed tree hollows; and
- Recovery of a sample of 150 litres of the fill of excavated tree hollows to be sieved for small artefact recovery. If sieving produces significant quantities of settlement debris, particularly hazelnut shell, then flotation samples will also be processed, in line with the iterative approach taken (see Environmental Sampling Strategy).

6.3.50 The following factors, informed by the results from the evaluation stage and in general in this landscape, will be considered in identifying a representative sample for excavation, in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG:

- Proximity and location in relation to lithic scatters;
- Proximity and location in relation to monuments;
- Proximity and location in relation to landform;
- Proximity and location in relation to known archaeological remains e.g. tree throws near identified pits.

6.3.51 A representative sample (but no less than 12.5% of the confirmed tree hollows) will be identified as above for 100% excavation. The strategy will adopt a reflexive approach as part of the iterative process such that the sample size may be revised in response to the results of the systematic sampling, in order to ensure the sample remains representative and areas of high potential for meaningful interpretation are maximised (refer to paragraph 6.1.24).

Recording

6.3.52 Once open, the extent of the excavation area(s) will be accurately recorded using metric survey-grade equipment (or its equivalent) and fixed in relation to any existing survey markers. The data will be overlaid onto the Ordnance Survey national grid (using digital map data).

6.3.53 Following cleaning, the archaeological remains will be mapped (electronic survey-grade equipment) and planned to enable the selection of areas and features for investigation and to compare the position of the identified archaeological remains with any available previous geophysical, aerial photographic, trial trench data, as applicable.

6.3.54 A full written, drawn and photographic record will be made of the archaeological remains, in accordance with the Archaeological Contractor's recording system and standard archaeological methodologies (Appendix B).

- 6.3.55 Hand-drawn plans and sections of features will be produced. The minimum acceptable scale will be 1:50 or 1:20 for plans and 1:10 for sections. Human burials and other special deposits, such as animal bone groups will normally be drawn at a scale of 1:10 or 1:5. All plans and sections will be accurately located against the site grid using electronic survey equipment and will include spot heights relative to Ordnance Datum in metres, and will be expressed to a minimum of two decimal places. The Archaeological Contractor will include in their SSWSI a statement that describes their recording system and the accuracy of their site mapping.
- 6.3.56 Site photography will be used to record all archaeological remains that are under investigation. In addition, photographs will be taken to assist in interpretation and publication, and to give an overview of the site, the progress of the investigations and site activities. Overhead (drone) photography will also be used to record progress, relationships between structures and to put the investigations within a wider landscape context. Particular attention will be paid to obtaining photographs suitable for displays, exhibitions and other publicity material.
- 6.3.57 The Archaeological Contractor will use Structure from Motion (SfM) mapping to produce 3D models of in situ complex remains (such as human burials, bone groups and stone structures), from which measurements and details can be recorded (Green et al., 2014).
- 6.3.58 The Archaeological Contractor will contact Salisbury Museum when preparing the SSWSIs to confirm their requirements regarding the type and format of photography and to ensure that it conforms with their collection procedures and standards. It is anticipated that industry minimum and good practice standard for digital photography will apply (see Appendix B).

Environmental Sampling Strategy

- 6.3.59 The APT Environmental Archaeology Co-ordinator will develop the detailed environmental sampling strategy in consultation with all relevant specialists, and will oversee the work at the fieldwork stage. The Environmental Archaeology Co-ordinator will liaise with the variety of specialists who may be involved, to develop fully the strategy and tactics for environmental research and to ensure the smooth running of this aspect of the investigations. The nominated Co-ordinator may be a member of the Archaeological Contractor's specialist team responsible for a particular aspect of the proposed work (such as geo-archaeologist), with suitable experience and training and the ability to convey accurate information about a site and the deposits to specialists. The APT Environmental Archaeology Co-ordinator will be present at site visits and meetings with the heritage statutory consultees (Wiltshire Council and Historic England), and advisory bodies (HMAG and the Scientific Committee), as necessary (section 8.1).
- 6.3.60 In addition to the APT Environmental Archaeology Co-ordinator, an Environmental Archaeology Supervisor will be nominated to take charge of the routine processing of samples and the supervision of routine sampling in connection with the investigations.
- 6.3.61 The detailed environmental sampling strategy for each SSWSI will be based upon the results of previous assessment work and the potential of the materials to address key research questions (Leivers and Powell, 2016). APT specialists (such as a zooarchaeologist for animal bones, archaeobotanist for charred plant remains,

archaeomalacologist for molluscs), Wiltshire Council and Historic England and, for sites within the WHS, HMAG will be consulted regarding site specific requirements.

- 6.3.62 Environmental sampling will be carried out in accordance with current national guidelines including Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation (English Heritage, 2011a), Geoarchaeology, Using earth sciences to understand the archaeological record (Historic England, 2015c; see Appendix B), and the current ClfA Standard and guidance for the collection, documentation, conservation and research of archaeological materials (ClfA, 2014e). Other relevant guidance is contained within Appendix B.
- 6.3.63 The processing of samples and their assessment will feed back into the sampling strategy that is employed in the field. The processing and initial assessment of all samples (with the exception of specialist samples) would be undertaken at a site compound to facilitate the rapid feedback to the field team (refer to section 6.3.6). Processing will be supervised by the Archaeological Contractor's finds co-ordinator/processing specialist.
- 6.3.64 All flotation samples and coarse sieved samples should be processed and assessed in order to inform the sampling strategy within a timescale agreed between the Archaeological Contractor and the TPA, but not greater than two weeks, with the exception of specialist samples which will need a specific approach. Finds, ecofacts and biological artefacts from sample residues should be recorded to sample fraction.
- 6.3.65 The aims of the environmental strategy will be to address the ARA. Site based studies that could aid the investigations will include the following (this list is not exhaustive and other studies may be relevant):
- Pedological (including micromorphology) study of soils (or other suitable deposits) deeply buried beneath or within colluvium would provide information relating to the status of the soil at the time of burial, and should be able to detect and characterise aspects of previous land use, and will provide information on erosion and on the contribution of colluvium and wind borne material to the soil.
 - Pollen and diatom/phytolith analysis.
 - Detailed wet sieving/flotation of buried ground surfaces and other selected contexts and features for the recovery of charcoal/wood, plant macrofossils, small animal bones, molluscs, coleoptera, small artefacts etc. The retrieval of a reliable sample will be achieved by the routine sampling of a set proportion of each selected context/deposit excavated. Sampling will also be systematic and extensive.
- 6.3.66 It is not envisaged that any off-site (comparative) studies will be required, but the results from the investigations will need to be assessed in relation to discoveries from the wider landscape where this is relevant to an understanding of the site(s).
- 6.3.67 All samples taken will come from suitably cleaned surfaces and will be collected with clean tools and placed in clean containers, in consultation with relevant APT specialists. They will be recorded and labelled in accordance with national guidelines and the requirements of Salisbury Museum, and a register of all samples will be kept. Once the samples have been obtained, the Environmental Archaeology Co-ordinator and the

Finds Co-ordinator will ensure that they are placed in safe storage under suitable conditions to prevent deterioration prior to them being sent to the appropriate specialist.

- 6.3.68 If organic rich archaeological remains are encountered during the investigations, the APT Environmental Archaeology Co-ordinator will be contacted for advice and to devise an appropriate strategy for excavation and sampling. In addition, the Archaeological Contractor will inform the TPA immediately, who will then notify the Employer and the PW or MW Contractor (as relevant).
- 6.3.69 Environmental assessment at the reporting stage will include consideration of scientific methodologies alongside traditional recording. For example, zooarchaeological assessment will include the potential of biomolecular methodologies where there is a clear research question which could be addressed through biomolecular analysis, determined through the assessment of animal bones. The Archaeological Contractor will consult with Wiltshire Council and Historic England and, for sites within the WHS, HMAG for further advice prior to analysis being undertaken. The TPA will approve the proposals for scientific study at the assessment and analysis stages, in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG. Samples for radiocarbon dating will be identified from material sampled for environmental analyses.

Strategy for Scientific Dating

- 6.3.70 Statistical modelling will be combined with a comprehensive scientific dating programme and the archaeological evidence to address the ARA and the aims and objectives identified in the SSWSIs. The APT Scientific Dating Specialist will develop the detailed strategy for scientific dating in consultation with all relevant specialists and the Historic England Science Advisor (South West), Wiltshire Council and, for sites within the WHS, HMAG will be consulted regarding site specific requirements. The APT Scientific Dating Specialist will devise a strategy (prior to the commencement of the works to which the dating strategy will apply) so that it can be incorporated into the SSWSIs to ensure that the right contexts are excavated and to ensure a comprehensive programme of scientific dating is possible, with specific research objectives (refer to 6.3.73).. Although scientific dating will be undertaken at post-excavation it will also be prioritised at the fieldwork stage to inform decision making and develop the strategies used on site.
- 6.3.71 Samples for radiocarbon dating will be identified from materials sampled for environmental analyses (see Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (English Heritage, 2011a); Geoarchaeology. Using earth sciences to understand the archaeological record (Historic England, 2015c); and Animal Bones and Archaeology – Recovery to archive (Baker and Worley, 2019) or from recovered artefacts (refer to sections 6.3.31). The requirements for the recovery, processing, and retention of these materials may be affected by the proposed dating programme (e.g. packaging typologically diagnostic refitting groups of ceramic sherds so that their potential for absorbed lipid analysis and dating is not compromised).
- 6.3.72 Scientific dating will also be utilised to provide spot dates to inform the excavation strategy, contribute to understanding of stratigraphic sequences, or to provide precision/resolution for statistical modelling. The APT Scientific Dating Specialist will provide advice and guidance throughout the life-cycle of the project (preparation of the

SSWSIs, site investigations, and at the post-excavation assessment and analysis stages). Wiltshire Council and the Historic England Scientific Advisor (South West) and, for sites within or affecting the WHS, HMAG will be consulted during preparation of the SSWSI and during the course of the project.

6.3.73 Scientific dating techniques will include the following:

- Radiocarbon (¹⁴C) dating which can be used to date any carbon-based organic materials, such as wood, bone, plant remains. If remnant peat is found in the Avon valley (refer to section 3.3.92), reliable and high-resolution dating will be essential and multiple methods will be employed unless otherwise justified;
- Luminescence dating (optically stimulated luminescence or OSL) for suitable features (e.g. lynchets, linear ditches);
- Archaeomagnetic dating for highly fired structures such as kilns or ovens and burnt soil;
- A range of other absolute techniques, such as amino acid racemization, tephrochronology (dating volcanic ash from deposits);
- If preserved wood is present, for example, in waterlogged deposits then dendrochronology may be able to provide precise and accurate dates.

6.3.74 Scientific dating will be undertaken on the recovered samples in accordance with an explicit sampling strategy designed, in consultation with a chronological modelling specialist, to address the research questions set out in the ARA and the SSWSI, using simulation of the results that could be obtained from the available samples and Bayesian chronological modelling to combine these with the other available information (see 6.3.70). A sequential sampling strategy will be adopted (Bayliss, 2009: Figure 9). Multiple laboratories/techniques will be employed to ensure that robust chronologies are produced. Different strands of evidence will be combined using formal statistical modelling to produce quantitative estimates for chronologies that address the project objectives. Reporting will follow Historic England guidelines. The strategy will be devised in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG, and will be approved by the TPA.

Human Remains

DCO Provisions

6.3.75 If any human remains are encountered that need to be removed, this will be done in accordance with Article 16 of the DCO, which sets out provisions to be followed for the removal of human remains. The work will be undertaken by archaeological specialists, with the respect due to the treatment of human remains, in accordance with current good practice and archaeological standards and guidance. At the end of the project the intention is that human remains that are not required to be re-interred under the provisions of the DCO (and which have therefore been subject to a direction from the Secretary of State), will be integrated into the project archive and deposited at Salisbury Museum with the rest of the project archive (refer to section 10 of this DAMS and the indicative timeline at Appendix A.9). The Archaeological Contractor shall be responsible for liaising with Salisbury Museum at the initial project set-up stage to identify any

specific requirements or policies of the Museum in respect of human remains, and will adhere to those requirements. In the interim, the Archaeological Contractor shall ensure that all human remains are stored safely, privately and decently by the Archaeological Contractor under the control of the APT human remains specialist.

Strategy for the Recovery of Human Remains

- 6.3.76 Human remains will be excavated within the Scheme footprint, within and outside the WHS. In situations where preservation of archaeological remains is desirable then a preservation strategy will be agreed on a case by case basis as part of the iterative process (see paragraph 6.1.24 and section 8.1) in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG.
- 6.3.77 Burials have been found at several locations at the evaluation stage (see Appendix D). It is anticipated that they will be present during investigations (Phase 1 and Phase 2) at Site 4 (Iron Age inhumations in pits) (UID 2027), Site 11 (urned cremations, potentially ploughed damaged) (Highways England, 2019d [REP1-049, 050]), Site 19 (Early Bronze Age urned cremation burial in pits) (Highways England, 2019h [REP1-042, 043]) and Site 24 (inhumation and cremation burials of Late Neolithic/Early Bronze Age date) (Highways England, 2019f [REP1-045, 046]). Remains may also be discovered at other locations along the Scheme as they are generally undetected by traditional reconnaissance methods. Both undisturbed burials and disturbed remains may be found within the investigation areas in shallow or deep features, or in a dispersed condition. They may be present within subsoil or colluvial deposits, or within features cut into the underlying natural surface. Burials may be associated with other funerary structures or monuments. No modern burial grounds are known within the Scheme area and no modern burials are expected (dated from >1919). Should these remains be encountered then specific reference should be made to their treatment under specified paragraphs within Article 16.
- 6.3.78 The SSWSIs will describe a detailed strategy for the investigation, treatment, recovery, and assessment/analysis of human remains (neonate/young infants, inhumations, cremations, disarticulated/charnel remains) which will be developed by the APT human remains specialist, including consideration of the use of SfM mapping to produce 3D models (see paragraph 6.3.57 above). The investigation of human remains will be undertaken in accordance with national guidelines (Historic England, 2018a; APABE, 2017; Historic England, 2013; and McKinley and Roberts, 1993), under the guidance of the APT Human Remains specialist. If scattered cremated remains are present, for example in subsoil or colluvium, it may be necessary to use a combination of methodologies and techniques (including sample sieving) to identify the source of the deposit. At the post-fieldwork stage (assessment and analysis) the Archaeological Contractor will consider the application of modern scientific studies, such as DNA work and isotope analysis.
- 6.3.79 In the event of the discovery of human remains the Archaeological Contractor will notify the TPA immediately. The TPA will immediately notify Wiltshire Council, Historic England and, for sites within the WHS, HMAG. The procedure for removal will be implemented as set out in Article 16 of the DCO. All human remains will be treated with dignity and respect. Remains will be covered and protected and left in situ in the first instance, in accordance with current good practice.

- 6.3.80 In general, excavation of human remains will not extend beyond the limits of the investigation work area; however, it may be followed under the baulk so that it may be lifted in its entirety, provided this will not result in disturbance of further burials, or extend beyond the DCO boundary.
- 6.3.81 The APT human remains specialist will be available to visit a site where human remains have been found in order to provide specialist advice and to ensure that the work is being carried out in accordance with procedures set out in the SSWSIs.
- 6.3.82 Where inhumation burials are encountered, it is good practice to take samples from the entire lens of soil remaining at the bottom of the grave and divide it into three sections, head, torso and feet.
- 6.3.83 If grave goods are identified and are not subject to block lifting, additional specialist samples should be taken from the areas around the grave goods.
- 6.3.84 Cremation deposits should be subject to sampling and assessment for charcoal, charred plant remains, artefacts and the recovery of human bone.
- 6.3.85 Where un-urned cremations are suspected or identified, these will be subject to 100% sampling. Where large deposits of pyre debris are identified the APT human remains specialist will be contacted to devise an appropriate strategy for excavation and sampling. The strategy will be developed as an iterative process at site consultation meeting(s) between the Archaeological Contractor, Wiltshire Council (in consultation with Historic England) the TPA and, for sites within the WHS, HMAG (see paragraph 6.1.24 above and section 8.1 below). It may be beneficial to consider half sectioning the excavation of un-urned cremations to aid an understanding of the vertical distribution of the deposit, the deposit may then be excavated in spits.
- 6.3.86 Larger fragments of charcoal (>2cm diameter) will be individually sampled (hand recovered) as specialist samples and the location of these samples recorded on the resulting plan and section drawing; the location of specialist samples will be surveyed in.
- 6.3.87 It is good practice to block lift cremation urns to allow for X-radiography and excavation under laboratory conditions. The APT conservator or field staff experienced in lifting cremation urns will be present when lifting takes place. In the first instance, the APT conservator will be contacted for advice.
- 6.3.88 In addition to traditional osteological recording, post-excavation osteological assessment will include consideration of recently developed microscopic, biomolecular, imaging and other methods for the study of human remains and the potential of these techniques to meet the research questions relevant to the project. Where research questions of the project (see section 4) and the aims and objectives identified in the SSWSIs can be addressed through recently developed microscopic, biomolecular, imaging and other methods for the study of human remains, the Archaeological Contractor will consult with Wiltshire Council and Historic England and, for sites within the WHS, HMAG for further advice prior to analysis being undertaken. The TPA will approve the proposals for scientific study at the assessment and analysis stages.

Treasure

- 6.3.89 Any artefacts which are recovered that fall within the scope of the Treasure Act 1996 and Treasure (Designation) Order 2002 will be reported to the TPA. The TPA will contact Her Majesty's Coroner and will ensure that the Treasure regulations are enforced and that all the relevant parties are kept informed. The Wiltshire Finds Liaison Officer for the Portable Antiquities Scheme, Wiltshire Council and Historic England will also be notified immediately. A list of finds that have been collected that fall under the Treasure Act and related legislation will be included in the fieldwork report.

6.4 Strip, Map and Record

General Approach

- 6.4.1 Strip, Map and Record (SMR) is defined in paragraph 5.3.25 above and Table 11-3 (see section 11 below). The following general approach will apply for SMR. Sites that require investigation by SMR will be those that are identified in Appendix D, but may also include new areas that arise as a result of emerging results, detailed design and unexpected discoveries. SMR is not proposed for sites within the WHS.
- 6.4.2 Sites designated for SMR will be stripped with mechanical plant as set out in the SSWSIs. Topsoil, subsoil or other overburden that does not contain datasets relevant to the research objectives will be removed by the archaeological contractor to the correct archaeological horizon under archaeological supervision. The relevant horizon will be informed by the evaluation results, the ARA and the research aims and objectives identified in the SSWSIs. The sequencing of stripping, location of soil storage areas and arrangements for backfilling, together with other relevant logistical considerations, will be set out in a Method Statement (see section 6.1 above).
- 6.4.3 Following stripping, the exposed archaeological remains will be surveyed using electronic survey-grade equipment to create a detailed digital pre-excavation plan. In accordance with the ARA and the research objectives to be identified in the SSWSIs, a strategy based on this plan will be implemented for hand excavation of key features to recover artefactual and scientific dating evidence. At the same time selected feature complexes would be subject to further hand excavation designed to resolve stratigraphic relationships.
- 6.4.4 The proportion of features excavated will be determined by the significance of the remains, the ARA and the site specific research objectives to be developed in the SSWSIs on consultation with relevant APT specialists. This iterative process (see paragraph 6.1.24 and section 8.1) is intended to allow the approach to excavation sampling to be both flexible and closely targeted to address specific questions, rather than being tied to a pre-determined excavation strategy.

Machine Excavation

- 6.4.5 SMR will be carried out at the location(s) identified in the SSWSIs. Each site for SMR will be positioned using electronic survey equipment. The initial stage of excavation will be undertaken using an appropriate 360° mechanical excavator or other similar back-acting plant fitted with a toothless bucket, used in such a manner as to expose cleanly the archaeological surface. The SSWSIs will include proposals for the stockpiling, handling and replacement of topsoil with reference to the Soils Management Strategy (SMS).

- 6.4.6 Machine excavation will proceed under the direct supervision of the Archaeological Contractor in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered (the decision to employ spits will be set-out in each SSWSI). During this process, particular attention will be paid to achieving a clean and well-defined horizon with the machine. Under no circumstances will the machine be used to cut arbitrary trenches down to natural deposits. The surface achieved will be inspected for archaeological remains.
- 6.4.7 If appropriate to the research objectives, the SMR area will be subject to a rapid metal detector scan in advance of excavation to identify and recover metal artefacts within the topsoil/subsoil (see 6.3.25 above). Stripped surfaces and archaeological features will be subject to a rapid metal-detector scan. Hand-excavated spoil will also be scanned. This will be undertaken by an appropriately qualified or experienced metal-detectorist. The requirement for metal-detection will be set-out in the SSWSI.

Hand Excavation

- 6.4.8 Archaeological remains will be surveyed using electronic survey-grade equipment to create a detailed pre-excavation drawing (extent of SMR areas to be recorded even if no remains present). The archaeological remains will be cleaned by hand and hand excavated in an archaeologically controlled and stratigraphic manner that meets the aims and objectives of the SSWSIs. Machine assisted excavation may be permissible if large deposits are encountered, in consultation with Wiltshire Council and Historic England. Deposits/features will be investigated through sample excavation in each SMR area to record the horizontal and vertical extent of the stratigraphic sequence to the level of undisturbed natural deposits. The amount of excavation will be determined as part of the iterative process on-site in consultation with Wiltshire Council and Historic England (taking account of the significance of the remains and the results of spot-dating of finds and the assessment of samples to achieve the aims and objectives of the SSWSIs) (see paragraph 6.1.24 and section 8.1). Sample excavation will also target the inter-relationships between features and major feature intersections to understand and record their relationships, where these are revealed/identified. The same methodologies for mechanical excavation, hand excavation, sampling and recording for AER (see section 6.3 above) will apply to each SMR area, as modified by the relevant SSWSI.

6.5 Archaeological Monitoring and Recording (AMR)

General Approach

- 6.5.1 The following general approach will apply for Archaeological Monitoring and Recording (AMR) at the PW and MW stages.
- 6.5.2 Sites that require monitoring during construction activities and investigation will be those that are identified in Appendix D, but may also include new areas that arise as a result of emerging results, detailed design and unexpected discoveries.
- 6.5.3 Sites designated for AMR will be stripped with mechanical plant as set out in the SSWSIs. The PW or MW Contractor's preferred method of working will be subject to archaeological supervision and control. Topsoil, subsoil or other overburden that does not contain datasets relevant to the research objectives (as set out for each site, refer to Appendix D) will be stripped by a mechanical excavator fitted with a toothless bucket to the correct archaeological horizon, under the supervision of the Archaeological

Contractor. The relevant horizon will be informed by the evaluation results, the ARA and the research aims and objectives identified in the SSWSIs. The sequencing of stripping, together with other relevant logistical considerations will be set out in a Method Statement (see section 6.1).

- 6.5.4 Following stripping, if archaeological remains are identified they will be surveyed using electronic survey-grade equipment to create a detailed digital pre-excitation plan. In accordance with the ARA and the aims and objectives that will be identified in each SSWSI, a strategy based on this plan will be implemented for hand excavation of key features to recover artefactual and scientific dating evidence. At the same time selected feature complexes would be subject to further hand excavation designed to resolve stratigraphic relationships.
- 6.5.5 The proportion of features excavated will be determined (as part of the iterative process) by the significance of the remains, the ARA and the research aims and objectives set out in the SSWSIs (see paragraph 6.1.24 and section 8.1). This iterative process is intended to allow the approach to excavation sampling to be both flexible and closely targeted to address specific questions, rather than being tied to a pre-determined excavation strategy. The Archaeological Contractor may need to deploy additional resources in order to record the remains to a proper standard.
- 6.5.6 The MW Contractor will allow sufficient time for the investigation of the archaeological remains. The TPA and the ACoW in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG), will determine the scope of work and timetable for the completion of the investigation at each site. Vehicles and other plant will not be permitted to track over areas that contain remains until archaeological investigations are complete, or until the ACoW has given permission. The TPA in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG will determine access parameters for plant. However, once the parameters have been established, access for plant will be controlled pro-actively by the Archaeological Contractor. In the event of genuinely different circumstances further consultation (as part of normal or additional site meetings) would be anticipated.
- 6.5.7 Modification of the works specification may be required during the investigations to enable detailed recording to take place, and to allow adequate time within the construction programme in the event of important discoveries. In this situation a revised SSWSI will be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG and approved by Wiltshire Council (in consultation with Historic England), prior to works commencing in the area to which the SSWSI applies (see section 6.1 above).
- 6.5.8 In the event of an unexpected discovery requiring further investigation (that is, a significant find that was not predicted as a result of the evaluation), the provisions set out at 6.1.19 above will apply. The area will be fenced off, cleaned archaeologically and recording works completed, in line with a revised SSWSI prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG and approved by Wiltshire Council (in consultation with Historic England).

Machine Excavation

- 6.5.9 The AMR will be carried out at the location identified in each SSWSI. Each site for AMR will be positioned/located using electronic survey equipment. Where the Contractor's preferred method of working is to be controlled, the initial stage of excavation will be undertaken using an appropriate 360° mechanical excavator or other similar back-acting plant fitted with a toothless bucket, used in such a manner as to expose cleanly the archaeological surface.
- 6.5.10 Where the Contractor's preferred method of working is to be controlled, machine excavation will proceed under the direct supervision of the Archaeological Contractor (see 6.3.21 above) in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered (the decision to employ spits will be set-out in each SSWSI). During this process, particular attention will be paid to achieving a clean and well-defined horizon with the machine. Under no circumstances will the machine be used to cut arbitrary trenches down to natural deposits. The surface achieved will be inspected for archaeological remains.
- 6.5.11 If archaeological remains are identified, the supervising archaeologist will notify the ACoW and the TPA immediately. Modification of the works specification may be required to enable detailed recording to take place, and to allow adequate time within the construction programme.
- 6.5.12 If appropriate to the ARA and the research aims and objectives identified in the SSWSIs, the AMR area will be subject to a rapid metal detector scan in advance of excavation. The requirement for metal-detection will be set-out in the SSWSI which will also describe the research aims and objectives of the investigation. The Archaeological Contractor will prepare the SSWSI, taking account of the significance of the remains and the results of spot-dating of finds and the assessment of samples, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG and approved by Wiltshire Council (in consultation with Historic England).

Hand Excavation

- 6.5.13 Archaeological remains will be surveyed using electronic survey-grade equipment to create a detailed digital pre-excavation plan (extent of AMR areas will be recorded even if no remains are present). The archaeological remains will be cleaned by hand and hand excavated in an archaeologically controlled and stratigraphic manner that meets the research aims and objectives of the SSWSIs. Machine assisted excavation may be permissible if large deposits are encountered, in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. Deposits/features will be investigated through sample excavation in each AMR area to record the horizontal and vertical extent of the stratigraphic sequence to the level of undisturbed natural deposits. Sample excavation will also target the inter-relationships between features and major feature intersections to understand and record their relationships, where these are revealed/identified. The proportion of features excavated will be determined by the significance of the remains, the ARA and the research aims and objectives set out in the SSWSIs. The amount of excavation will be determined on-site in consultation with the TPA, Wiltshire Council and Historic England and, for sites within the WHS, HMAG, as part of the iterative process (taking account of the significance of the remains and the results of spot-dating of finds and the assessment of samples to achieve the aims and objectives of the SSWSI) (see paragraph 6.1.24 and section 8.1).

- 6.5.14 The same sampling and recording methodologies for AER will apply to each AMR area (see section 6.3 above).

6.6 Trial Trenching

- 6.6.1 At the PW stage additional trial trenching will be carried out in areas along the Scheme where, although all evaluation necessary for the purposes of the ES was completed, detailed evaluation was not completed due to access issues, or where a more limited amount of survey work was undertaken. The purpose of the trenching will be to determine the presence/absence, extent, character, condition and significance of the remains in order to inform the detailed mitigation requirements at these locations should it be required (see section 5.3.38, Table 11-4 and Appendix D).
- 6.6.2 The approach to be employed during this stage of additional trial trenching will be identical to that used during the archaeological evaluation stage (used to inform and confirm the ES findings), and as set out in section 4.3 of the Archaeological Evaluation Strategy (Highways England, 2018a), and section 4.4 of the Overarching Written Scheme of Investigation for Archaeological Evaluation (Highways England, 2018b). However, the approach shall take into account specific provisions of the DAMS in respect of archaeological excavation, where relevant (see sections 6.3 and 6.4 above).
- 6.6.3 The scope and location of additional trial trenching will be described in a SSWSI that will be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England).

6.7 Strategy for Geo-archaeological Investigation

General Approach

- 6.7.1 Geo-archaeological investigation is a programme of sample recovery and analysis undertaken to investigate the formation of the palaeoenvironmental conditions and soil sediment development that may be relevant to the research of archaeological remains recovered within a site or within its vicinity. This approach may involve hand excavated holes (trial trenches/test pits) or mechanically excavated holes and/or other geotechnical soil sample retrieval methods (such as auger or borehole) and will be undertaken at specific locations identified within the SSWSIs.
- 6.7.2 The APT Geo-archaeologist will be on site during all geo-archaeological investigations. They will also be available during archaeological excavation and recording (AER), strip, map and record (SMR), archaeological monitoring and recording (AMR), and during the reporting stages to provide advice and guidance to the rest of the fieldwork team, and to ensure that the scientific sampling/recovery is being carried out in accordance with the requirements and procedures set out in the SSWSI.
- 6.7.3 The following approach will apply for geo-archaeological investigations at the PW and MW stages.

Generic Methodology

- 6.7.4 Geo-archaeological investigations will be carried out in accordance with a specific Scheme-wide strategy which will be devised with clear overarching research questions. The APT Geo-archaeologist will develop the strategy in consultation with all relevant

specialists and the Historic England Science Advisor (South West), and will oversee the work at the fieldwork stage. The APT Geo-archaeologist will liaise with the variety of specialists who may be involved, to develop fully the strategy for environmental research and to ensure the smooth running of this aspect of the investigations. The Scheme-wide strategy will be developed by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG at the outset of the PW stage. The SSWSI for the strategy will be approved by Wiltshire Council (in consultation with Historic England).

- 6.7.5 The same strategies for environmental sampling and scientific dating as set out in section 6.3(above) will apply to geo-archaeological investigations.

Location and Excavation of Geo-archaeological Interventions

- 6.7.6 The geo-archaeology methods used will be employed as part of the overall site mitigation strategy where high potential for remains requires such an approach. Sites that require geo-archaeological investigation will be those that are identified in Appendix D, but may also include new areas that arise as a result of emerging results, detailed design and unexpected discoveries.
- 6.7.7 The following sites have been identified for geo-archaeological investigation (refer to Table 11-4 and Appendix D):
- Site 3.4 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations).
 - Site 10.3 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations).
 - Site 11 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations and in association with Early Bronze Age burial activity).
 - Sites 13.1 and 13.2 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe and valley floodplain locations; alluvial deposits are likely to be present within the River Till floodplain).
 - Sites 15.2 to 15.5 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations).
 - Site 28 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations).
 - Site 29 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe and river floodplain locations).
 - Site 44 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations), and
 - Site 59 (colluvial deposits were found during trial trench evaluation preserved in dry valley/coombe locations).

- 6.7.8 Geo-archaeological interventions (trenches, test pits, borehole/auger holes or areas of archaeological excavation and recording (AER)) of specified types/size (large enough to provide a safe working environment for investigative works) will be excavated at the location(s) identified in the SSWSI that will be prepared by the Archaeological Contractor in association with their geo-archaeology specialist. The SSWSI will include a detailed environmental sampling strategy, in consultation with Wiltshire Council and the Historic England Science Advisor (South West) and, for sites within or affecting the WHS, HMAG.
- 6.7.9 The interventions will be of specified types/size (large enough to provide a safe working environment for the investigative works). Geo-archaeological interventions may be excavated in level spits, to undisturbed natural deposits. Larger interventions may be stepped to ensure stability and safety. Natural deposits will be exposed to a sufficient depth in order to prove their geological origin. Particular attention will be paid to ensure that areas of alluvium, colluvium, river gravels and aeolian sand deposits, where they are encountered, are sufficiently tested to ensure that buried peat horizons and palaeoenvironmentally rich palaeochannels are located where/if present. Augering may be used to investigate buried deposits. If significant archaeological remains are encountered during the investigations, the APT Geoarchaeologist will liaise with the Archaeological Project Manager / Archaeologist to devise an appropriate strategy for excavation and sampling as part of the iterative process (see paragraph 6.1.24 and section 8.1). . The Archaeological Contractor will inform the TPA immediately, who will then notify the Employer and the PW or MW Contractor (as relevant), .
- 6.7.10 Sections will be cleaned by hand in order to fully reveal the full stratigraphic sequence and to prepare sections for environmental sampling, such as soil columns. The full geo-archaeological sequence will be investigated to identify and understand the formation processes to address the ARA and the site specific research objectives to be developed in the SSWSIs in consultation with relevant APT specialists.
- 6.7.11 Palaeoenvironmental sequences will be sampled for the broad range of evidence that they may contain including micro-morphology, charred plant remains, plant macrofossils, pollen, wood, invertebrates and molluscs. Particular samples will also be directed at identifying key components for scientific dating (see paragraph 6.3.70, Strategy for Scientific Dating).
- 6.7.12 If column samples are taken, their location will be accurately surveyed using electronic surveying equipment and their location drawn on the accompanying section drawing.

Recording

- 6.7.13 The location and extent of each geo-archaeological investigation will be accurately recorded using metric survey-grade equipment and fixed in relation to existing survey markers. The data will be overlaid onto the Ordnance Survey national grid (using digital map data).
- 6.7.14 Prior to the drafting of each SSWSI, the APT Geo-archaeologist will review the geology and soil descriptions and the results of previous ground investigations and archaeological evaluation. The Geo-archaeology specialist will also prepare a site specific deposit model if in their opinion it would result in a better understanding of the sequence and to inform the decision making process (Carey et al., 2018).

- 6.7.15 A full written, drawn and photographic record will be made of each geo-archaeological intervention even where no archaeological deposits are identified. Cores may be recorded on pro-forma logs. Hand drawn sections (and plans where relevant) of the deposit sequence will be produced at an appropriate scale (normally 1:20 for plans and 1:10 for sections). All plans and sections will include spot heights relative to Ordnance Datum in metres, correct to two decimal places.
- 6.7.16 Photographs will be taken during the course of the geo-archaeological investigations to record site activities, the deposit sequence and sample locations.
- 6.7.17 The same methodologies for archaeological excavation and recording (AER) will apply (artefact recovery, human remains, treasure etc) to geo-archaeological investigations.

6.8 Archaeological Topographic Survey

General Approach

- 6.8.1 Topographic survey is a technique used to record, in detail, the precise surface topography, form, character, nature, layout, detail and complexity of individual and groups of earthwork features that are present in the existing landscape. The survey will be carried out to record the topography, where specified, prior to its alteration by construction or related activities. The record will include production of feature profiles, contour and/or hachure plans and a photographic record, where appropriate.

Generic Methodology

- 6.8.2 The archaeological topographic survey will be carried out in accordance with SSWSIs to be prepared by the APT Archaeological Surveyor which will describe the research aims and objectives, and will be developed in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG prior to works commencing in the area to which each SSWSI applies. Each SSWSI will be written in accordance with DMRB (Volumes 10 and 11), and Historic England guidance including Understanding the Archaeology of Landscapes (Historic England, 2017b), Traversing the Past (Historic England, 2016b), Metric Survey Specification for Cultural Heritage (Historic England, 2015b), Using Airborne Lidar in Archaeological Survey (Historic England, 2018c), and will also adhere to all current and relevant best practice and standards and guidelines (see Appendix B). The SSWSIs will set out the requirements for both digital and paper outputs.
- 6.8.3 Depending upon ground conditions and survey methodology it may be necessary to remove vegetation before a survey. This would be done under archaeological supervision in accordance with a Method Statement to ensure the clearance is done in a controlled manner and does not impact on the remains.
- 6.8.4 The following sites have been identified for topographic survey (refer to Table 11-4 and Appendix D):
- Site 21 (a linear boundary that runs from south-east of Winterbourne Stoke crossroads to south-west of The Diamond on Wilsford Down, scheduled monument NHLE 1010837).
 - Sites 13.2, 13.3 and 47 (earthwork remains of post-medieval water meadows).

- 6.8.5 The survey output will comprise a digital terrain model and contour and hachure plans to map the form and extent of the earthworks. Survey will be undertaken utilising a Total Station Theodolite (TST) or similar electronic survey-grade equipment. Use of laser scanning or LiDAR equipment (ground based or airborne, as applicable) may also be considered. For ground based survey a control network or traverse will be used so that survey stations are in reasonable proximity to the perimeter of the survey area and to enable the appropriate level of detail to be mapped. Measurements/readings will be taken at a standard interval (Historic England, 2015b) to be set out in the SSWSIs, supplemented by additional readings in order to map local features and topography and will be determined in the field; however, they will be taken at sufficient intervals to ensure that the earthworks are recorded in detail in order to achieve the surveys aims and objectives as set out in the SSWSIs.
- 6.8.6 The survey will be tied into and fixed in relation to any existing survey markers. The data will be overlaid and presented at a suitable scale (determined on a site by site basis) onto the Ordnance Survey national grid (using digital map data).
- 6.8.7 The survey data will be used in the field as a platform from which to undertake a hachure plan survey. Spot heights and levels will be represented on the hachure plan. All spot heights and levels will refer to Ordnance Datum. The precision of detail measurements will be in accordance with Historic England guidance (Historic England, 2015b: table 2.1.2).
- 6.8.8 The survey would be plotted as contours at appropriate intervals onto a suitable base map and checked in relation to existing ground conditions. Additional points may then be taken to supplement and augment the survey. Contour intervals will be determined on a site-by-site basis, in order to meet the research aims and objectives of the topographic survey. Additional landscape features will be represented (such as hedges, fences and manholes) in accordance with the aims and objectives of the topographic survey.
- 6.8.9 At Parsonage Down (East) airborne LiDAR survey will be carried out within the DCO boundary, during the PW stage. This area incorporates various mitigation sites and working and non-working areas extending over c.99.59ha. The LiDAR survey will be used to map the surface topography, which may contain the evidence of former extensive field systems/lynchets of possible later prehistoric to post-medieval date, previously identified from aerial photography (UID 1004.01).
- 6.8.10 The LiDAR point cloud data will be used to create a digital elevation model (DEM) of the ground surface. A SSWSI covering the proposed survey area will set out the survey requirements, including the proposed level of accuracy, resolution and proposals for filtering, visualising and presenting the data (such as hillshading of the surface model). The APT archaeological surveyor or a LiDAR specialist experienced in interpreting aerial imagery will interpret the results of the survey, which will be fed through to the site team. The mapped results will complement the existing aerial photographic and geophysical survey evidence and contribute to the record of the palimpsest of archaeological evidence, including field systems, lynchets, enclosures and other features, prior to the archaeological investigations proposed in this DAMS and the subsequent placing of fill material; the results may also be used to assist with designing the trenching layout at Site 40.

6.9 Strategy for Digital Data

General Approach

- 6.9.1 The Archaeological Contractor will preserve and make accessible to future generations digital material produced during the course of the project, regardless of the media on which the information is stored. Examples of digital material that will be generated include complex datasets from the fieldwork, assessment and analysis stages, which will be curated into a digital archive (e.g. reconnaissance surveys, topographic survey, trench evaluation, mitigation investigations, GIS, CAD and relational databases, photography, illustrations, specialist studies).
- 6.9.2 The Archaeological Contractor will appoint a digital data co-ordinator/manager, who will be responsible for the creation of the digital archive and who will ensure that data collection conforms to the requirements of the digital archive. They will be available throughout the life cycle of the project to provide advice to other members of the team on the format, structure and content of the digital archive, and at the end of the project they will ensure that the digital archive is transferred to the digital repository.
- 6.9.3 Existing and new digital data will be safeguarded and deposited in a digital archive, such as the Archaeology Data Service, that conforms to current national standards and guidelines on how data will be structured, preserved and accessed (including Brown, 2011b; English Heritage, 2012; ADS, 2011; and ClfA, 2014d) (Appendix B) and emerging Historic England guidance on Digital Archiving, 'Work Digital / Think Archive: A guide to managing digital data generated from archaeological investigations'.
- 6.9.4 The Archaeological Contractor will arrange for the digital archive to be stored in a suitable facility or collections repository where it can be properly accessed, curated and maintained. The Archaeological Contractor will consult with Wiltshire Council, Historic England and the TPA if the digital archive will be held in a location separate to the paper records that comprise the traditional project archive and which will be archived at Salisbury Museum. The Archaeological Contractor will ensure thorough documentation of the digital datasets, including details on how it was collected, what standards were used to describe them and how they are being managed. Some data may be confidential and a means of separating this data from non-confidential data will be developed for reports, analytical datasets, and for displaying site locations on maps. It is important that this process is documented and deposited as part of the digital archive.
- 6.9.5 Interim versions of final digital files will not generally be preserved except where data or text is subsequently discarded or lost before it is finalised. Data held safely on paper records will be digitised where there is specific value in doing so, and/or to provide a digital security copy or online access to the data. Paper originals will be retained within the traditional project archive.
- 6.9.6 Irrespective of whether the paper and digital archive is stored in separate places, the overall integrity of the complete archive will be ensured by the cross-referencing between the physical collections and digital records.
- 6.9.7 As a minimum the digital archive will contain an index to the archaeological interventions, finds, and the paper archive and provide access to digital records of data, material documentation, interpretation and analyses.

Planning for the Digital Archive

6.9.8 The Archaeological Contractor shall plan for the digital archive at the start of the investigations and throughout the project lifecycle, in accordance with the Archaeology Data Service/Digital Antiquity Guides to Good Practice (ADS, 2011; see Appendix B.2). The following aspects shall be considered (not an exclusive list):

A. Project Lifecycle (planning of the digital material that will be created throughout the project lifecycle):

- Planning for the Creation of Digital Data;
- Project Documentation;
- Project Metadata;
- Data Selection, Preserving Intervention Points;
- The Project Archive, Storage and Dissemination; and
- Copyright and Intellectual Property Rights.

B. Basic Components of a Digital Archive (different datasets that will be collected/incorporated into the digital archive):

- Documents and Texts;
- Databases and Spreadsheets;
- Raster Images;
- Vector Images;
- Digital images;
- Digital Video; and
- Digital Audio.

C. Data Collection and Fieldwork (digital data collected as a result of remote sensing surveys, archaeological mitigation, scientific studies and dating):

- Aerial survey/UAV survey;
- Digital photography/close range photogrammetry/structure from motion mapping;
- Geophysics/remote sensing;
- Laser survey and point cloud datasets;

- Digital site drawings (e.g. plans, maps, sections, profiles);
- Digital site records (e.g. context/feature/structure records, site indices);
- Scientific studies (digital x-ray/computed radiography); and
- Scientific dating (radiocarbon dating results, dendrochronology).

D. Data Analysis and Visualisation

- GIS;
- CAD; and
- 3D Models (deposit modelling).
- E. Preparation and Depositing of the Project Archive.
- Archive planning and preparation.

Digital Data Management Plan

6.9.9 The Archaeological Contractor shall prepare a Digital Data Management Plan (DDMP) based on the above considerations, with reference to the Digital Curation Centre's Checklist for a Data Management Plan (DCC, 2013, see Appendix B.2) setting out proposals for the creation, collection, processing and preservation of digital data sets⁵.

6.9.10 The DDMP will include, as a minimum, the following information:

- Data Collection: scope and procedures
- Documentation and Metadata
- Ethics and Legal Compliance
- Storage and Backup
- Selection and Preservation
- Data sharing
- Responsibilities and Resources

6.9.11 The DDMP will include a timetable for the transfer of digital data to the Wiltshire and Swindon Historic Environment Record (WSHER) to enable the results of the fieldwork to be rapidly and accurately imported into the WSHER and the public record. A process enabling the reports and digital datasets to be readily transcribed onto the WSHER will

⁵ Certain industry standard files may not be accepted by the collections repository and therefore file types may need to be converted into alternative acceptable formats. For example, ADS do not accept the industry standard Digital Imaging and Communication in Non-destructive Evaluation files 'Scientific studies (digital X-ray/ Computed Radiography)' (DICONDEs can be converted to Raster files).

be agreed with the WSHER as part of the DDMP. The role of the digital archive is distinct from that of OASIS (see section 10 below).

7 Programme

7.1 Introduction

- 7.1.1 Archaeological mitigation will commence as part of the PW stage and will be scheduled to be completed before the start of the MW stage, except specific works that will necessarily only take place under the MW contract. Site works will take place over three phases spanning the PW and MW stages, as set out in 7.2 and 7.3 below.
- 7.1.2 The Public Archaeology and Community Engagement Programme will be implemented throughout the site works stages.

7.2 Phasing – Preliminary Works

Phase 1

- 7.2.1 The mitigation programme is dependent upon land access requirements, prevailing ground conditions and related utility diversions. Archaeological works will be generally programmed as follows at Phase 1:
- a) Topographic surveys (see section 6.86.7 above);
 - b) Fieldwalking and archaeological evaluation trenching and sample sieving, where it was not possible to complete this before the commencement of Examination (see section 6.6 above);
 - c) Small-scale investigation of historic landscape features and small archaeological sites;
 - d) Archaeological monitoring and recording (AMR) of advanced works during the PW stage, such as installation of highway boundary fencing, construction of temporary utility connections, road diversions, ecology works and woodland clearance at certain locations, as required by the Scheme design (see section 6.5 above);
 - e) Protective fencing will be installed around selected sites to prevent damage (see section 6.2 above and Appendix D);
 - f) Archaeological mitigation at selected sites to facilitate the installation of protective fencing will be carried out, including boundary fencing (see section 6.2 above and Appendix D);
- 7.2.2 Archaeological works compounds, including on-site archaeological processing and other post-excavation facilities will be established during the course of Phase 1 and will be fully operational by the commencement of Phase 2.

Phase 2

- 7.2.3 At Phase 2 the following investigations will be carried out:
- a) Any heritage assets that may require relocation (subject to detailed design) will be moved (see section 6.2 above).
 - b) Geo-archaeological investigations (see section 6.3 above and Appendix D).

Existing models from evaluation and new data collected during fieldwork will be used to model deposit sequences as part of the on-site iterative process, during the PW stage.

- c) Archaeological excavation and recording (AER) and strip, map and record (SMR) will be undertaken during the PW stage (prior to construction) at archaeological sites requiring preservation by record (see sections 6.3 and 6.4 above and Appendix D).
- d) Additional sites that require preservation of archaeological remains will be identified and measures implemented (see section 6.2 above).

7.3 Phasing – Main Works

Phase 3

- 7.3.1 Regular monitoring visits will be undertaken during Phase 3 by the ACoW to ensure that archaeological sites protected at the start of Phase 1 will not be impacted during construction (OEMP, MW-CH-5 [as certified under the DCO]). This will include sites to be protected beneath fill (excavated material deposition areas and landscape fill areas, and areas to be protected by no-dig solutions such as haul roads, temporary roads required for traffic management, NMU and PMA routes and compound areas).
- 7.3.2 Archaeological mitigation will be designed and implemented during the MW stage, in compound areas where it is unfeasible to achieve a no-dig solution (for example in areas required for concrete batching plants or tunnel spoil processing plants), following archaeological evaluation at Phase 1, where specified in this DAMS. This mitigation may take the form of preservation of archaeological remains, AER, SMR or AMR, and would be set out by the Archaeological Contractor in SSWSIs, in consultation with Wiltshire Council, Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England).
- 7.3.3 Installation of tunnel movement monitoring stations above the tunnel section of the Scheme will adopt a zero-ground disturbance, fully reversible surface mounted solution (see 5.2.9 above). Heritage assets that are at risk from ground vibration from the tunnel or from ground surface movement caused by settlement will be monitored by the MW Contractor during tunnelling operations with actions taken where necessary to control/mitigate impacts (see OEMP, MW-CH1 [as certified under the DCO]).

7.4 Artefact Assessment and Geo-archaeological Assessment

Phases 1 to 3

- 7.4.1 Artefactual, geo-archaeological and palaeoenvironmental assessment will be undertaken concurrent with the on-site archaeological works as part of an integrated, iterative strategy to ensure adherence to archaeological good practice in decision making during the fieldwork stages.
- 7.4.2 This will include rapid spot-dating of archaeological remains and assessment of their artefactual and palaeoenvironmental potential, so that archaeological features and deposits can be suitably targeted during the archaeological works. This will also ensure that these studies do not cause a delay for the post-excavation assessment, analysis

and publication phases. Immediately after completion of fieldwork the processing of the remaining finds and environmental assemblages will be completed.

- 7.4.3 Regular reviews of the datasets will be undertaken during the archaeological works so that resources can be targeted appropriately for the post-excavation assessment, analysis and publication of the finds and environmental assemblages.

8 Communications, Monitoring, Sign-off of Archaeological Works and Approval of Documents by Wiltshire Council

8.1 Communications Strategy

Phases 1 to 3

Reporting lines

- 8.1.1 The relationships and reporting lines for implementation of the DAMS are illustrated in the flowcharts at Appendices A.4 (Phases 1 and 2) and A.7 (Phase 3).
- 8.1.2 The Archaeological Contractor will report to the PW or MW Contractor (as relevant) for the purposes of programming and co-ordination to ensure effective delivery of the archaeological works in accordance with the DAMS and the OEMP.
- 8.1.3 The archaeological work will be overseen on behalf of the Employer (Highways England) by the Technical Partner's Archaeologist (TPA) (Employers Agent). The Archaeological Clerk of Works (ACoW) will be based on site as the TPA's representative.

Monitoring

- 8.1.4 The ACoW will liaise with the Archaeological Contractor and the PW or MW Contractor (as relevant) to monitor progress and compliance with the requirements of the DAMS, HMPs, MSs and SSWSIs. This will include (but not be limited to):
- Monitoring of all aspects of archaeological fieldwork, at both PW and MW stages.
 - Monitoring of the installation and removal of protective measures, such as temporary fencing, at sites where preservation of archaeological remains is required.
 - Monitoring of the installation and removal of temporary roads and compounds where archaeological remains are proposed to be preserved beneath retained topsoil.
 - Monitoring of deposition of landscape fill and tunnel arisings where archaeological remains are required to be preserved.
- 8.1.5 The ACoW will act as coordinator in respect of access and monitoring arrangements with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. This will include oversight of engagement between the Archaeological Contractor and APT specialists, the TPA and the relevant heritage stakeholders, including the Regional Science Advisor (South West), to ensure the timely provision of on-site advice to the fieldwork team.
- 8.1.6 The archaeological mitigation works will be subject to ongoing monitoring by the ACoW/TPA, who will have unrestricted access to the sites, site records or any other information as may be required. The work will be inspected to ensure that it is being

carried out to the required standard and that it will achieve the desired aims and objectives.

- 8.1.7 Site meetings will be held as necessary throughout the archaeological programme to allow implementation of the works to be monitored to ensure adherence to approved SSWSIs and Method Statements, effective decision making where required and to support timely 'sign-off' of archaeological completion. Wiltshire Council, Historic England, and, for sites within or affecting the WHS, HMAG will be invited to attend site meetings in accordance with their roles, and land ownership.
- 8.1.8 Wiltshire Council and Historic England (including the Historic England Regional Science Advisor (South West)) and, for sites within or affecting the WHS, HMAG will be afforded access to the sites through regular site meetings (see below); specific visits to access site records and any other information will be arranged as necessary and required by these Consultees through the TPA.

Progress and consultation meetings

- 8.1.9 During the PW and MW stages, regular progress meetings and consultation will be held. Attendees will normally include, but not be limited to the following, as required:
- Technical Partner's Archaeologist.
 - Archaeological Clerk of Works.
 - Designer's Engineers and Project Management Team.
 - Representative(s) from the PW/MW (as relevant) Contractor's Project Management Team and Sub-contractors.
 - PW/MW Archaeological Contractor (as relevant): Project Manager, Environmental Archaeology Co-ordinator and key members of the APT.
 - Wiltshire Council Archaeology Service.
 - Historic England.
 - National Trust (for matters within or affecting the WHS, and where their land interests are affected, at their option).
 - English Heritage (for matters within or affecting the WHS, and where their land interests are affected, at their option).
- 8.1.10 The National Trust and English Heritage may attend the above meetings and other site monitoring, progress and consultation meetings in relation to works within or affecting the WHS, and/or where their land interests are affected.
- 8.1.11 The A303 project Community Relations Manager may also be invited to attend progress meetings where necessary.

- 8.1.12 It is anticipated that progress and consultation meetings will be held weekly during fieldwork; the schedule for future and/or additional meetings would be confirmed at each meeting. This will ensure that programming details and changes are communicated rapidly and efficiently and will ensure that appropriate resources are available and can be deployed where they are required prior to the start of advance works such as temporary utility diversions and structures, or during construction itself. Regular communication (via email and telephone) will also be maintained between the project team (as listed at 8.1.9 above) throughout the archaeological mitigation programme to ensure the smooth running of the archaeological works.
- 8.1.13 The progress and consultation meetings will review implementation of the DAMS and the suitability and effectiveness of the sampling strategies adopted on the basis of specialist advice.
- 8.1.14 The ACoW and/or the Archaeological Contractor will give Tool Box Talks, to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the DAMS and OEMP and generally to ensure that these are put in place and complied with. The Tool Box Talks will identify sensitive areas that must not be disturbed until investigation is completed and the site signed-off to construction, or where long-term protection is required.
- 8.1.15 Monitoring of the public archaeology and community engagement programme will be included in the weekly progress meetings. A separate programme of monitoring meetings may be established if necessary.

HMAG and Scientific Committee

- 8.1.16 HMAG will continue to provide formal advice to Highways England throughout the archaeological mitigation programme, through regular, minuted meetings with the TPA, to be held on- or off- site, as required. Site visits will be arranged at regular intervals to allow members of HMAG to view and advise Highways England on the fieldwork in progress within the WHS. HMAG site visits will be co-ordinated by the ACoW/TPA.
- 8.1.17 The Scientific Committee will be kept informed of the progress of the archaeological mitigation works within the WHS through an ongoing programme of regular meetings during the course of the on-site and post-excavation stages (to be held in accordance with the Committee's terms of reference). Site visits will be arranged at suitable opportunities to allow members of the Scientific Committee to view the fieldwork in progress. Suitable opportunities will be identified in consultation with HMAG. Invitations will be issued to the whole Committee.

8.2 Progress Reporting

Monitoring and progress meetings

- 8.2.1 Monitoring and progress meetings will be held on site during the course of the investigations (see 8.1 above) to review the progress and results of the investigations, review the site strategies, and to 'sign off' sites to construction (see 8.4.2 below). These meetings will be arranged by the TPA. The Archaeological Contractor will only accept instruction from the PW or MW Contractor and the TPA.

Weekly progress reports

8.2.2 The Archaeological Contractor will prepare weekly illustrated progress reports which will be sent to the ACoW and TPA during all phases of the archaeological fieldwork (i.e. Phases 1 to 3). The TPA will circulate progress reports to Wiltshire Council and Historic England and, for sites within the WHS, HMAG, for information.

8.2.3 The progress reports will include, as a minimum:

- General progress and current programme;
- Programme lookahead;
- Contractor issues/performance;
- Access/site constraints;
- Health, Safety & Environment;
- AOB.

8.3 Monitoring of Post-Excavation Works

8.3.1 Following the completion of the fieldwork, the Archaeological Contractor will provide a programme of work and schedule for the completion of the Post-Excavation Assessment Report (PEAR; see section 9 below) and will send it to the TPA for approval.

8.3.2 Regular meetings will be held throughout the post excavation works to monitor progress and guide the assessment process on the basis of specialist advice. These meetings will normally be attended by the following, as required:

- Technical Partner's Archaeologist.
- Archaeological Contractor's Project Manager.
- Relevant Archaeological Project Team specialists (as required).
- HMAG members (for sites within the WHS).
- Historic England Regional Science Advisor (South West)

8.3.3 The schedule for these meetings will be determined by the TPA prior to the commencement of the post-excavation programme, in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG.

Post-excavation progress reports

8.3.4 The Archaeological Contractor will submit regular post-excavation progress reports to the TPA (minimum of one every six weeks). The TPA will circulate progress reports to Wiltshire Council and Historic England and, for sites within the WHS, HMAG, for information. The progress reports will include, as a minimum:

- General progress and current programme.

- Work completed.
- Issues/delays and proposed measures to rectify or mitigate these.
- Updated schedule of work.
- AOB.

8.4 Sign-off of Archaeological Works

- 8.4.1 The TPA will inform the PW or MW Contractor (as relevant) upon completion of fieldwork at each site where investigations have been undertaken, or where sites have been protected.
- 8.4.2 Sites that have been completed (approved by the TPA in consultation with Wiltshire Council and Historic England and, for sites within the WHS HMAG) will be subject to a formal signing off procedure. The Archaeological Contractor will submit a completion statement to the TPA, the PW or MW Contractor (as relevant). The TPA will submit the accepted completion statement to Wiltshire Council for confirmation (in consultation with Historic England) that the relevant works have been completed in compliance with the relevant SSWSIs. For matters within or affecting the WHS, at the same time as submitting the completion statement to Wiltshire Council, the TPA will submit the completion confirmation statement to HMAG for information and, upon receipt of Wiltshire Council's confirmation, the TPA will inform HMAG of the confirmation.

8.5 Consultation on SSWSIs, HMPs and MSs

- 8.5.1 Where consultation with Wiltshire Council, Historic England, HMAG or any other parties is explicitly stated to be required by this DAMS in connection with the preparation of a SSWSI, HMP or MS, the relevant person responsible for facilitating such consultation pursuant to this DAMS (being Highways England, or a person acting on behalf of Highways England including the Archaeological Contractor, the TPA, the PW or MW Contractor, and whom, for the purposes of this section 8.5, shall be referred to as the "Applicant") shall undertake the consultation as set out in this section, unless otherwise agreed in writing between Highways England and the Consultees (as that term is defined in paragraph 8.5.3 below).
- 8.5.2 The Applicant must submit the relevant document on which consultation is required pursuant to this DAMS (referred to in this section 8.5 as "Consultation Material") to Highways England (if not the Applicant).
- 8.5.3 Highways England must provide the Consultation Material to the consultees specified in the DAMS as being required to be consulted in relation to the relevant document ("Consultee(s)") for comment in respect of matters relevant to each consultee's function, together with a named contact at Highways England and the Applicant with whom the Consultee may discuss the Consultation Material. Highways England shall provide the Consultation Material to the single point of contact specified for that purpose by each Consultee. The Applicant must provide prior notification of its intention to issue Consultation Material to Consultees at least 7 business days before doing so.

- 8.5.4 Each consultee must provide to Highways England one consolidated marked-up version of the Consultation Material and / or one document containing a table of comments within 15 business days from receipt of the Consultation Material.
- 8.5.5 If any Consultee fails to provide Highways England with comments (pursuant to paragraph 8.5.4) before the end of the period of 15 business days from receipt of the Consultation Material, that Consultee is deemed to have no comments.
- 8.5.6 Where Consultees' comments are received by Highways England within the time period pursuant to paragraph 8.5.5, Highways England will provide them to the Applicant and the Applicant must have regard to the comments. Where the Applicant considers it appropriate to do so, it shall address the comments within an amended document.
- 8.5.7 The Applicant must submit the amended document to Highways England ("Revised Consultation Material"), alongside a summary report setting out the consultation undertaken and the Applicant's response to the Consultees' comments (including an explanation for why any comments have not resulted in an amendment to the Consultation Material). At the same time, the Applicant must provide a copy of the Revised Consultation Material and summary report to the Consultees, unless that Consultee has indicated in its response to the Consultation Material that its comments are sufficiently minor that it does not need to see the Revised Consultation Material.
- 8.5.8 The Consultees may comment on the Revised Consultation Material only in respect of how their previous comments have been addressed and any changes made to the draft previously commented upon by them.
- 8.5.9 Each Consultee must provide to Highways England one consolidated marked-up version of the Revised Consultation Material and / or one document containing a table of comments within 10 business days from receipt of the Revised Consultation Material.
- 8.5.10 If any Consultee fails to provide Highways England with comments pursuant to paragraph 8.5.9 before the end of the period of 10 business days from receipt of the Revised Consultation Material, that Consultee is deemed to have no further comments.
- 8.5.11 The Applicant must submit any further amended document to Wiltshire Council in accordance with the provisions in section 8.6, alongside an update of the summary consultation report referred to above in respect of any further comments on the Revised Consultation Material. At the same time the Applicant must provide copies of the Final Document and the updated summary consultation report to the other Consultees for their information.
- 8.5.12 If a document is not approved by Wiltshire Council such that it requires update by the Applicant, and no appeal is submitted pursuant to section 8.7, the process set out in paragraphs 8.5.7 to 8.5.11 shall be repeated. This shall apply each time a document is not approved by Wiltshire Council.
- 8.5.13 Nothing in this section shall interfere with the appeals procedures set out at section 8.7. Should an appeal of the type set out at section 8.7 be lodged, the Applicant shall notify the Consultees for information, outlining the nature of the appeal, and keeping them informed of progress, and the requirements of paragraph 8.5.12 shall cease to apply.

8.6 Approval of Documents by Wiltshire Council

- 8.6.1 Where the prior written approval of Wiltshire Council is explicitly stated to be required by this DAMS for a SSWSI, HMP, MS or other document, or Wiltshire Council's confirmation of compliance with a SSWSI is required, the relevant person seeking such approval pursuant to this DAMS (being Highways England, or a person acting on behalf of Highways England including the Archaeological Contractor, the TPA, the PW or MW Contractor, and whom, for the purposes of this section 8.6, shall be referred to as the "Applicant") shall apply for the approval of Wiltshire Council prior to commencing with that element of the works or the works covered by the relevant document (except in the case of confirmation of compliance with a SSWSI, where the confirmation will be sought from Wiltshire Council following completion of works on site). At the same time, the Applicant shall provide a copy of the application to Historic England.
- 8.6.2 When Wiltshire Council receives an application it must, within 5 business days, send to the Applicant an acknowledgement of receipt of the application and as part of that acknowledgement advise whether it considers that the application is sufficient for a determination to be made.
- 8.6.3 If Wiltshire Council:
- a) fails to provide such an acknowledgement pursuant to paragraph 8.6.2, then the application will be deemed to be validated as at the date that the acknowledgement was required to be sent;
 - b) sends an acknowledgement, in accordance with paragraph 8.6.2, confirming the sufficiency of the information for determination then the application is validated on the date of the acknowledgement; and
 - c) considers the application contains insufficient information to enable it to be determined, it shall provide to the Applicant details of what further information is needed to be supplied by the Applicant to allow the application to be validated and require the Applicant to supply that information within a further 5 business days. If the Applicant supplies the further information then the application is validated on the date of receipt by Wiltshire Council of that further information.
- 8.6.4 Should the Applicant dispute the need for further information, the Applicant and Wiltshire Council shall, within 5 business days of the Applicant giving notice of such dispute, meet to resolve the issue and if agreement cannot be reached the application shall be deemed to be validated at the end of that 5 business day period but without prejudice to Wiltshire Council's right to make a determination declining to consent, agree or approve the application due to insufficiency of information which would be subject to clause 8.6.5.
- 8.6.5 Where Wiltshire Council has received an application of the type mentioned in paragraph 8.6.1:
- a) the consent, confirmation, agreement or approval concerned must, if given, be given in writing and is not to be unreasonably withheld; and
 - b) the application must be determined in good faith without unreasonable delay, and in any event before the end of the period of 20 business days (except where

confirmation of compliance with a SSWSI is sought, in which case, before the end of the period of 5 business days) beginning with the date on which the application was validated unless such other period is agreed with the Applicant (this period will be referred to in this section 8.6 as “the Time Period”).

- 8.6.6 If Wiltshire Council has received an application of the type mentioned in paragraph 8.6.1 which has been validated in accordance with clause 8.6.2, 8.6.3 or 8.6.4 and fails to notify the Applicant of its decision before the end of the Time Period, Wiltshire Council is deemed to have given its approval without condition or qualification at the end of that Time Period.
- 8.6.7 Following approval by Wiltshire Council pursuant to paragraph 8.6.5 or following consent being deemed to have been given by Wiltshire Council pursuant to paragraph 8.6.6, the Applicant will provide confirmation of Wiltshire Council’s decision, with a copy of the final approved document, to those bodies who were Consultees pursuant to section 8.5.
- 8.6.8 For the purposes of determining an application under this DAMS, “written approval” shall include electronic communication such as e-mail.

8.7 Appeals

- 8.7.1 In the event that the Applicant (or Highways England on behalf of the Applicant, and “Applicant” is to be construed in this context for the purposes of this section 8.7 of the DAMS) disagrees with a decision of Wiltshire Council made pursuant to this DAMS to refuse to grant an approval required by the DAMS, to grant such approval subject to conditions, or to refuse to give its confirmation of compliance with a SSWSI:
- a) Either party may within 5 business days of the decision escalate the matter within their parent organisations to Chief Executive or equivalent level, and in the case of Highways England, to its Chief Engineer, with a view to resolving the disagreement.
 - b) If the matter in dispute is not resolved within 10 business days of being escalated to each party’s Chief Executive (or equivalent or Chief Engineer), or no such escalation is made, the Applicant may appeal the decision to the Secretary of State.
 - c) Any appeal to the Secretary of State must be made within 10 business days of the expiry of the relevant time period in (b), and must be made in writing to the Secretary of State, with a copy of the appeal documentation (including documents submitted to Wiltshire Council pursuant to paragraph 8.5.11, where appropriate) provided to Wiltshire Council (and any party consulted by Wiltshire Council as part of the decision).
 - d) The Secretary of State (or a person appointed by the Secretary of State for this purpose) must appoint a person as soon as is practicable after receiving the appeal documentation, and must at the same time notify the Applicant and Wiltshire Council (and any other party, if involved as a consultee to the decision) of the identity of the appointed person.
 - e) The appointed person may or may not be a member of the Planning Inspectorate

but must be a suitably competent person of at least 10 years' experience in the matter that is the subject of the appeal.

- f) Wiltshire Council (and any other party, if a consultee to the decision) must submit any written representations to the appointed person within 5 business days of notification of their appointment, and at the same time must provide copies to other parties involved in the appeal.
- g) The parties must submit any counter-representations (or notification that no counter-representations will be submitted) to the appointed person within 5 business days of receipt of the written representations pursuant to (f), and at the same time must provide copies to other parties involved in the appeal.
- h) The appointed person must make their decision and notify the parties involved as soon as reasonably practicable and in any event within 20 business days of receipt of counter-representations (or notification) received pursuant to (g).
- i) If the appointed person, having regard to the scheme objectives (as defined in Schedule 2 of the DCO) and all other relevant matters, considers additional information is required, they may request this in writing as soon as reasonably practicable and in any event within 5 business days of their appointment, and the relevant parties will provide any information in response to the request within 5 business days of the receipt of the request (or such longer period notified by the appointed person) and at the same time must provide copies to other parties involved in the appeal. The appointed person must notify the appeal parties of any revised timetable for the appeal on or before the date the additional information is due to be provided. The revised timetable for the appeal may require submission of representations pursuant to sub-paragraph (f) within 5 business days of a specified date, but must otherwise be in accordance with the process and time limits set out in sub-paragraphs (g) and (h).
- j) In considering the appeal the appointed person may:
 - i. take into account representations received outside the above timescales;
 - ii. proceed to a decision even though no written representations have been made within the relevant timescales, if they consider they have sufficient material; and
 - iii. allow or dismiss the appeal; reverse or vary any part of the decision of Wiltshire Council; and may deal with the application as if it had been made to them in the first instance.
- k) The decision of the appointed person on an appeal is to be final and binding on the parties.
- l) An approval given by the appointed person is deemed to be an approval for the purpose of this DAMS (and in the case of an approval of a SSSI, HMP or MS, requirement 4 of the DCO) as if it had been given by Wiltshire Council.
- m) On application by Wiltshire Council or the Applicant, the appointed person may

give directions as to the costs of the parties and as to which parties will pay such costs. In considering whether to make any such direction and the terms on which it is to be made, the appointed person must have regard to Planning Practice Guidance: Appeals (March 2014) or any circular or guidance which may from time to time replace it. Unless a direction is given pursuant to this paragraph, the reasonable costs of the appointed person must be met by Highways England.

- 8.7.2 Any application, acknowledgement, further information, notice or document submitted under sections 8.5, 8.6 or 8.7 is deemed to be received:
- a) at the time of delivery if delivered by hand or by electronic communication such as email; and
 - b) 48 hours after the date of posting if sent by recorded delivery post.

9 Reporting, Publication and Dissemination

9.1 Introduction

- 9.1.1 As described in section 5.1 above, the PW Archaeological Contractor will be responsible for the delivery of the archaeological mitigation programme, as set out in this DAMS, at the PW stage. Following completion of the PW stage, responsibility for completion of the related off site works and reporting, will remain with the PW Contractor. The MW Archaeological Contractor will undertake any archaeological mitigation site works required at MW stage, together with the related off site works and reporting.
- 9.1.2 The same outline methodology will apply to reporting, publication and dissemination of archaeological investigations at the PW and MW stages; for the avoidance of doubt, references in this section to 'the Archaeological Contractor' shall be taken to mean the PW or MW Archaeological Contractor, as relevant to the stage of works.

9.2 Outline Methodology for Reporting of Archaeological Investigations

- 9.2.1 Following the completion of the fieldwork, all finds and samples will be processed (cleaned and marked). Each category of find or environmental/industrial material will be examined by a suitably qualified specialist so that the results can be included in the Post-Excavation Assessment Report (PEAR) to be produced at the end of the investigations.

Interim Statements

- 9.2.2 Interim statements will be prepared and submitted to the TPA. The purpose of each interim statement is to provide a basic account of the results of the investigations at each site to inform the progress meetings. Interim statements will be prepared within a set time frame following completion of fieldwork at the relevant site. This time frame will be decided by the TPA prior to the commencement of the post-excavation work. The interim statement will include:

- A brief summary of the results;
- A draft or sketch plan of each archaeological area or site;
- A quantification of the primary archive including finds and samples;
- Identify any issues that have arisen during the course of the fieldwork to ensure that there is integration across the Scheme between sites and phases; and
- A programme of work and schedule for the completion of the PEAR.

Post-Excavation Assessment Report (PEAR)

- 9.2.3 The Archaeological Contractor will meet the set time frames in order that the post-excavation assessment, analysis and publication phases can be programmed and resourced properly, and so that the completion date for all construction and post-excavation works can be met.

- 9.2.4 The results from several fieldwork interventions may be combined and treated as one site for the purposes of the post-excavation assessment and analysis stages. The results from earlier investigations (evaluation surveys and excavations) will also be assessed/reviewed by the Archaeological Contractor where it contributes to an understanding of the site and addresses the ARA and aims and objectives of the SSWSIs. Following the completion of the post-excavation assessment, the original project objectives will be reviewed to determine the scope of any analysis and publication.
- 9.2.5 The preparation of the project archive, post-excavation assessment and subsequent analysis and publication phases will be undertaken in accordance with DMRB (Volume 10), the SSWSIs and Historic England guidelines (Historic England, 2015a), and other relevant archaeological standards and national guidelines (see Appendix B). The different phases will be completed within a set time frame following completion of fieldwork, as agreed between the Archaeological Contractor and the TPA in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG.
- 9.2.6 The precise format of the reports is dependent upon the findings of the investigations, but the PEAR will contain the following:
- A non-technical summary;
 - Site location;
 - Brief archaeological, historical and project background;
 - Methodology;
 - Aims and objectives;
 - Results – factual data statements (stratigraphic, artefactual, environmental, initial scientific dating results);
 - Statements of potential (stratigraphic, artefactual, environmental);
 - Statements regarding immediate and long-term storage and curation;
 - Review of original aims and objectives;
 - Statement of the significance of the results in their local, regional, national and international context according to the SAARF (Leivers and Powell, 2016);
 - Archaeological Research Design (ARD) that sets out how the ARA and research aims and objectives of the SSWSIs can be addressed at the analysis stage;
 - Post-excavation analysis method statements;
 - Recommendations for analysis, reporting and publication (including a synopsis of the proposed contents);
 - Proposed resources and programming (task list linked to key personnel, time

required, cost and key research questions that the task will answer or facilitate and programme cascade chart);

- General and detailed plans showing the location of the investigation areas accurately positioned on an OS base with grid co-ordinates and a plan of the identified archaeological remains (to a known scale);
- Detailed plans and sections/profiles, deposit models etc., to support the narrative;
- Detailed stratigraphic matrix for each area excavated and how the areas interlink;
- Photographs and illustrations, including 3D models produced by SfM mapping;
- Bibliography;
- A cross-referenced index to the project archive and summary of contexts; and
- Appendices containing specialist reports.

9.2.7 The PEAR and Archaeological Research Design (ARD) will be submitted to the TPA for review and comment. The Archaeological Contractor will address any comments that the TPA may have. The TPA will issue the revised draft report to Wiltshire Council and Historic England and, for sites within the WHS, HMAG, for comment. In finalising the report, the Archaeological Contractor will take account of the comments of Wiltshire Council and Historic England and, for sites within the WHS, HMAG, as informed by the advice of the Scientific Committee.

9.2.8 The scope of the analysis and publication report will be dependent upon the assessment and future discussions to be held with the TPA, Wiltshire Council and Historic England and, for sites within the WHS, HMAG. The analysis stage will be undertaken in accordance with the ARD and will lead to the compilation of a research archive and the production of integrated report texts and illustrations for publication.

9.3 Outline Publication and Dissemination Proposals

9.3.1 A comprehensive publication and dissemination programme that also considers the international context of the investigations will be developed in parallel with the strategy for Public Archaeology and Community Engagement (see Appendix E). Due to the extended timeline for completion of the MW stage archaeological fieldwork, it is anticipated that reporting and publication of the PW and MW stages will follow separate paths, linked through the PACE (see indicative timeline at Appendix A.9). The completion of reporting and publication of the results of the PW archaeological programme would be followed by reporting of the MW stage, and publication as a supplementary report.

9.3.2 The format and structure of the publication (headings, word counts, figures and photographs) will be informed by the post-excavation assessment and will be decided by the TPA in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG. It is envisaged that interim reporting related to archaeological evaluation and mitigation will be published on the Archaeology Data Service archive.

- 9.3.3 Fieldwork updates would be published annually in fieldwork roundups in appropriate local and period journals. Fieldwork data would be fed into the Wiltshire and Swindon Historic Environment Record.
- 9.3.4 It is anticipated that academic publications would take the form of either a multi-period monograph, a series of thematic or chronological monographs, and/or topic-, theme-, period-, or object-specific articles in appropriate journals. Popular booklets for children and adults may be produced by the Archaeological Contractor in tandem with formal assessment and analytical reporting.
- 9.3.5 The final scope and publication outlet/format for the popular and academic publications associated with the Scheme have not yet been decided. However, it is anticipated that these would be print publications also accessible online as open-access publications. Digital publication, dissemination and stable online archiving via the Archaeology Data Service archive would be prepared/arranged by the Archaeological Contractor.
- 9.3.6 To help promote and launch these publications, a day conference may be organised to include presentations from project contributors and specialists. This would serve to promote the publication of the monographs and would also provide a further opportunity to share the results of the project and highlight the potential presented by the archive for future academic research independent of the Scheme.

10 Archive Preparation and Deposition

10.1 Archive Security and Storage

- 10.1.1 The finds and records generated by the fieldwork will be removed from site at the end of each working day and will be kept secure at all stages of the project (Brown, 2011a; and Appendix B). The Archaeological Contractor will be responsible for the care of the site archive (records and finds) in their possession and should ensure that adequate resources are in place prior to the start of the fieldwork, including the materials necessary for long-term storage and access to an archaeological conservator. Arrangements should be made for the proper cataloguing and storage of the archive during the project life-cycle (it may be appropriate to liaise with an archive specialist).
- 10.1.2 Agreement in principle has been obtained from Salisbury Museum to accept the documentary, digital and photographic archive for long-term storage. The Archaeological Contractor shall be responsible for liaising with Salisbury Museum at the initial project set-up stage to identify any specific requirements or policies of the Museum in respect of the archive (for example, the discard policy for retained finds), and for adhering to those requirements. The Archaeological Contractor shall adhere to current national standards for the creation, compilation, transfer and curation of the archive (Brown, 2011b; ClfA, 2014d) and will inform the TPA of the policies adopted.
- 10.1.3 On request, the Archaeological Contractor will provide the TPA with copies of communications with Salisbury Museum and, ultimately, written confirmation of the deposition of the archive. The TPA will deal with the transfer of ownership and copyright issues. Any charges levied by the Museum for the long-term storage of the archive will be met by the project.
- 10.1.4 If viable pollen assemblages are recovered, the raw pollen counts will be deposited in the European Pollen Database (<http://www.europeanpollendatabase.net/index.php>). Archaeobotanical data should be considered for inclusion into the ArboDat recording and database system (the UK ArboDat user group is administered by Historic England: see <https://historicengland.org.uk/research/methods/archaeology/archaeobotany/>).
- 10.1.5 The SSWSIs will require that all specialist data shall be supplied in data format (tables, csv etc): all specialist data should be incorporated into the Digital Archive in raw and processed data format (tables, csv etc).
- 10.1.6 Specialist data and reports will clearly state the research potential of the collections, highlighting these for the accessioning museum, as this will ensure that the potential of the collections can be promoted to researchers following deposition.

10.2 Archive Consolidation

- 10.2.1 The site records and assemblages (list of fieldwork interventions, notebooks/diaries, context records, feature records, structure records, site geometry (drawings), photographs and films, finds records and associated datafiles) and the results of reconnaissance surveys will constitute the primary site archive. This is the key archive of the fieldwork project and the raw data upon which all subsequent assessment and analysis and future interpretation will be based. The archive will therefore not be altered or compromised. It will remain the original record of the fieldwork. The archive will be

quantified, ordered, indexed and made internally consistent in line with current good practice. All finds and coarse-sieved and flotation samples will have been processed and stored under appropriate conditions.

- 10.2.2 The archives from the PW and MW stage archaeological works will be consolidated and prepared for deposition separately. The MW archive would be integrated with the PW archive subsequent to deposition; the MW Archaeological Contractor will make provision to undertake this work in conjunction with the receiving museum.
- 10.2.3 The archive from earlier phases of investigation will be combined to form a single consolidated project archive. The deposition of the complete archive will form the final stage of the project.

10.3 Digital Archive

- 10.3.1 Requirements for the management and preservation of digital data created during the course of the project are outlined in the Strategy for Digital Data at section 6.9 above. These requirements shall apply to both the PW and MW Archaeological Contractors.
- 10.3.2 Digital data and digital finds information will be archived to national standards (Appendix B) and will be transferred at the end of the project onto to a suitable facility or collections repository where it can be properly accessed, curated and maintained (such as Archaeology Data Service (University of York), or other cloud based service).

PART THREE – TABLES, FIGURES AND REFERENCES

11 Tables

11.1 Table 11-1: Reconnaissance and evaluation surveys

11.1.1 The table below summarises the areas investigated by reconnaissance and evaluation surveys prior to the Examination. Proposals for detailed survey and evaluation where access was not possible prior to Examination can be found in Table 11-4 and Appendix D.

	Winterbourne Stoke Bypass west (ch 0 to 3550 m)	Winterbourne Stoke Bypass east (ch 3550 to 5200 m)	Longbarrow Junction (ch 5000 to 6240 m)	Western tunnel approaches & portal (ch 6240 to 7400 m)	Eastern tunnel approaches & portal (ch 10,400 to 11,600 m)	Countess East, Amesbury Road diversion	Rollestone Corner
Ploughzone artefact sampling (field walking)	N	N	N	N	Y	N	Y
Ploughzone Artefact Sampling (test pitting)	N	N	N	Y	Y	N	Y
Geophysical surveys	Y	Y	Y	Y	Y	Y	Y
Trial trenching (including topsoil sieving)	Y	Y	Y	Y	Y	N	Y

•

11.2 Table 11-2: Summary of proposed mitigation areas and ARA research objectives

Research objective	Site/Action Area	Total number of Action Areas
Overarching Themes		
<p>R.1 Transitions</p> <p>The identification of, for instance, chronologically-distinctive ceramic types, styles of architecture, or lithic technologies - while essential for providing broad periodisation of human activity - tends to concentrate attention within specific and bounded periods (Early Neolithic, Middle Bronze Age, Late Iron Age, etc) and away from dynamic processes of continuity and/or change through time. Although enshrined in many of the research questions in the SAARF (and consequently within the DAMS), the question of the identification of 'transition' on the one hand or continuity on the other (or of varying simultaneous trajectories of transformation or the maintenance of tradition) will be adopted as an over-arching research theme. This theme is relevant to Darvill 2005 Issue 26: the hidden landscapes, and Issue 27: the missing slices of time; and Objective 15: filling the data gap.</p>	Scheme-wide	n/a
<p>R.2 Changing Populations</p> <p>The physical remains of individuals were not often encountered during evaluation, but the potential for further human remains to be found during mitigation exists, particularly of Beaker association. Any such remains (along with those few already recovered) would have the potential to be sampled for analysis of, for instance, stable isotopes or DNA, contributing to recent and on-going investigations into the movements of ancient people and the rates and trajectories of population change in the British Neolithic and Bronze Age.</p>	Scheme-wide	n/a
<p>R.3 Landscape Zones</p> <p>Although there is no indication within the artefactual material recovered during the evaluation to support the contention that a 'zoned' landscape existed around</p>	Scheme-wide	n/a

Research objective	Site/Action Area	Total number of Action Areas
Stonehenge during the Neolithic (as has been suggested on the basis of, for instance, the distribution of Earthen Long Barrows in earlier parts of the period), further material from any future mitigation would have the potential to shed further light on this hypothesis		
<p>R.4 Connected Landscapes [SAARF]</p> <p>To gain a better understanding of the complex monumental and mortuary landscapes: how and why they developed and changed; which elements of the landscapes were connected and how they were connected; how far those connections extended, and for how long they persisted. This theme encompasses aspects of Darvill 2005 Issue 13: Rivers, valleys and water, and Issue 22: contemporaneity and the relationships between monuments at the landscape, regional and world scale.</p>	Scheme-wide	n/a
<p>R.5 Ceremonial Monuments [SAARF]</p> <p>To gain a better understanding of the social, symbolic and (in some cases) technological contexts of the communal and ceremonial monuments, individually and in groups – why they were built and altered; why they took the forms they did, and what they meant; what they were for, and what activities took place at them; why they were abandoned. This theme incorporates questions relating to social relations, identities and interactions, and religion (SWARF Research Theme and Research Aims 49 and 54). and Darvill 2005 Issue 11: Sacred shapes, forms and intervisibility.</p>	Scheme-wide	n/a
<p>R.6 Burials and Barrows [SAARF]</p> <p>To gain a better understanding of how the Early Bronze Age mortuary landscape, dominated by round barrows, developed from the Neolithic monumental landscape – the factors that determined the locations of barrows, and how cemeteries developed; their chronology and dating; the significance of their variations in form, scale, elaboration, contents and burial practices; their secondary burials. This theme incorporates questions relating to social relations and mortuary practice (SWARF Research Theme and Research Aims 57) and Darvill 2005 Issue 9: Barrow cemetery evolution, structure, and meaning.</p>	Sites 3.1 to 3.4; Site 4; Sites 10.1 to 10.3; Site 11; Site 19; Site 24; Sites 32.1 to 32.3; Site 33.1 to 33.3; Site 41; Site 42; Site 43; Site 44; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	45

Research objective	Site/Action Area	Total number of Action Areas
<p>R.7 Landscape History and Memory [SAARF]</p> <p>To gain a better understanding of the changing, long-term histories of the landscape, and particular locations within it – how places came to be seen as significant; how their meanings changed over time, and how they came to be viewed and treated after their periods of primary use had ended. This theme incorporates questions relating to transitions both between different parts of the landscape (close to/further from Stonehenge, for instance) and between archaeologically-defined periods, as well as within them (SWARF Research Theme and Research Aim 10). This theme is also relevant to Darvill 2005 Issues 10: Monumentality, materiality, memory, identity and the changing landscape, 15: astronomy, attitudes, the sacred spaces, and cosmology, and 17: landscape evolution and design.</p>	<p>Sites 2.1 and 2.2; Sites 3.1 to 3.4; Site 4; Site 5; Site 11; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 19; Site 24; Site 28; Site 29; Sites 30.1 and 30.2; Sites 32.1 to 32.3; Site 33.1 to 33.3; Site 35; Site 40; Site 41; Site 42; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Site 50; Site 51; Sites 52.1, 52.2, 52.3 and 52.4; Sites 54.1 and 54.2; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.</p>	79
<p>R.8 Human Generations [SAARF]</p> <p>To gain a better understanding, from the analysis of human remains, of the generations of people who have populated the area – their origins, diversity, movements, demography, health, diet, and conflicts. This theme incorporates questions relating to conflict (SWARF Research Theme and Research Aims 61 – 64) and Darvill 2005 Issue 24: populating the record for post-Roman studies.</p>	<p>Sites 2.1 and 2.2; Sites 3.1 to 3.4; Site 4; Site 5; Sites 10.1 to 10.3; Site 11; Sites 16.1 to 16.4; Site 24; Site 28; Sites 32.1 to 32.3; Site 33.1 to 33.3; Site 40; Site 43; Site 44; Sites 46.1 and 46.2; Sites 48.1 and 48.2; Site 49; Site 51; Sites 52.1 to 52.4; Sites 54.1 and 54.2; Sites 56.1 to 56.6</p>	45
<p>R.9 Daily Life [SAARF]</p> <p>To gain a better understanding of the changing, day-to-day lives of those living within, or passing through, the landscape, both as they related to the construction and use of its prehistoric monuments and separate from any involvement with them. This theme incorporates questions relating to past environments (SWARF Research Theme and Research Aims 17 – 27), settlement (SWARF Research Theme and Research Aims 28 – 33), and food production (SWARF Theme and Research Aims 39 – 43), as well as to human changes within the landscape, such as the changing extent, uses and nature of</p>	<p>Sites 2.1 and 2.2; Sites 3.1 to 3.4; Site 4; Site 5; Sites 10.1 to 10.3; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 19; Site 24; Site 28; Site 29; Sites 30.1 and 30.2; Sites 32.1 to 32.3; Site 33.1 to 33.3; Site 35; Site 41; Site 42; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49;</p>	63

Research objective	Site/Action Area	Total number of Action Areas
woodland. This theme is relevant to Darvill 2005 Issue 4: Where did the builders and users of Stonehenge live?; Issue 16: field systems and the early agricultural landscape; Issue 23: filling the gaps and understanding distributions; Issue 25: environment and change to the physical landscape; as well as Objectives 3: modelling environment and landscape change, 4: understanding occupation, and 12: characterise and investigate the main field systems.	Site 50; Site 51; Sites 55.1 to 55.3; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	
Palaeolithic (1,000,000 to 10,000 BC)		
P.1 – SAARF A.2. Establishing the nature of the palaeo-environment	Site 19, Site 44	2
P.2 – SAARF A.3. Determining the effects of climate on the formation of the landscape, geological deposits and periglacial features, including those which may have influenced later activity, such as solution hollows... and periglacial striations...	Site 19, Site 44	2
P.3 – RCFBP Primary Research Theme 1. Hominin Environments and Climate Drivers (especially but not limited to): <ul style="list-style-type: none"> • P.3.1 What effect did Pleistocene climate change have upon British environments and faunal communities? • P.3.2 How much of Pleistocene time saw the presence of hominins in Britain or on the adjacent continental shelf? • P.3.3 What were the specific environmental and climatic tolerances of hominins in Britain? Were there regional cultural differences in this or changes over time? • P.3.4 How did hominin subsistence, technical and social strategies respond to climate change over the long-term? 	Site 44	1
P.4 – RCFBP Primary Research Theme 2. Hominin Demographies: the Palaeoecology of Hominin Colonisation and Settlement Processes [RCFBP] (especially but not limited to): <ul style="list-style-type: none"> • P.4.1 How did Pleistocene faunal communities change over time, and what was the pattern of human interaction with and impact on these? 	Site 44	1

Research objective	Site/Action Area	Total number of Action Areas
<p>P. 5 – RCFBP Primary Research Theme 4. Sharing Human Origins: Developing New Audiences:</p> <ul style="list-style-type: none"> • P.5.1 What is the public perception of the Pleistocene? • P.5.2 How can Palaeolithic archaeology contribute towards an understanding of the long-term evolution of human societies and what it is to be human? • P.5.3 How can we engage the public with remote periods without any obvious surviving ‘monuments’? What should be our strategic marketing approach? • P.5.4 How can our understanding of Pleistocene environmental change inform the current climate change debate? 	Site 19, Site 44	2
P.6 – RCFBP SRCT 2. Understanding the record: The use of geomorphological and sedimentological modelling to understand the taphonomic processes that determine the significance of many Palaeolithic remains	Site 19, Site 44	2
P.7 – RCFBP SRCT 1. Dating frameworks	Site 19, Site 44	2
P.8 – RCFBP SRCT 4. Curation and Conservation	Site 19, Site 44	2
P.9 – RCFBP SRCT 5. Dealing with Development	Site 19, Site 44	2
P.10 – RCFBP SRCT 7. Education	Site 19, Site 44	2
Mesolithic (10,000 BC to 4,000 BC)		
M.1 – SAARF B .1. Living in a changing world: what was the impact of the human presence upon the environment, vegetation, and animal population? To what extent did environmental change impact upon Mesolithic technology and tool kits?	Site 29; Sites 30.1 and 30.2	3
M.2 – SAARF B.2. Mesolithic lifeways: settlement and mobility: what is the range and nature of structural remains, how were they built and what did they represent?	Site 29; Sites 30.1 and 30.2	3
M.3 – SAARF B. 3. Investigating change and diversity: understanding the transition from the later Mesolithic to the earlier Neolithic: how can we investigate the character of final Mesolithic archaeology.	Site 28; Site 29; Sites 30.1 and 30.2	4

Research objective	Site/Action Area	Total number of Action Areas
M.4 – SAARF B.4. A clear understanding of the climate, environment, vegetation and animal populations in and around the WHS, and in particular the hydrology of the Rivers Kennet and Avon...	Site 29; Sites 30.1 and 30.2	3
M.5 – SAARF B.5. A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.	Site 29; Sites 30.1 and 30.2; Site 50; Site 51	5
M.6 – SAARF B.6. Further refining the chronology of sites, lithic industries and change.	Site 29; Sites 30.1 and 30.2	3
M.7 – MRCF Theme 1: Living in a changing world	Sites 16.1 to 16.4; Site 24; Site 28; Site 29	7
M.8 – MRCF Theme 2: Mesolithic lifeways <ul style="list-style-type: none"> • M.8.1 MRCF T2.1: What can Mesolithic technology (e.g. stone, antler, bone and wood working), its production, use and deposition, tell us about Mesolithic lifeways? • M.8.2 – MRCF T2.3: How can we better understand spatial and temporal variation in lithic technology, use and deposition? • M.8.3 – MRCF T2.5: To what extent can the composition, size and geographical characteristics of lithic scatters be used to define different types of site in the Mesolithic? 	Sites 16.1 to 16.4; Site 24; Site 28; Site 29	7
M.9 – MRCF Theme 3: Investigating change and diversity <ul style="list-style-type: none"> • M.9.1 – MRCF T3.9: How variable was site use and landscape use through this period? • M.9.2 – MRCF T3.13: Can we further refine the dating of final Mesolithic sites and how do these relate to the Early Neolithic? 	Sites 16.1 to 16.4; Site 24; Site 28; Site 29	7
Neolithic (4,000 to 2,200 BC)		
N.1 – SAARF C.1. Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes,	Site 19; Site 28; Site 29; Sites 30.1 and 30.2; Site 42; Site 50	7

Research objective	Site/Action Area	Total number of Action Areas
or does it represent a process of infill following a hiatus at the very end of the Mesolithic?		
N.2 – SAARF C.2. While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?	Sites 15.1 to 15.11; Site 19; Site 24; Site 28; Site 35; Site 42; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 50; Site 51; Sites 52.1 to 52.4; Sites 54.1 and 54.2	30
N.3 – SAARF C.3. What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?	Sites 15.1 to 15.11; Site 19; Site 24; Site 42; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Sites 52.1 to 52.4; Sites 54.1 and 54.2; Sites 56.1 to 56.6	32
N.4 – SAARF C.6. A key aim is to better understand the chronologies of key artefact types.... Specifically, what is the currency... of Peterborough Ware and its sub-styles...?	Sites 10.1 to 10.3; Sites 46.1 and 46.2	5
N.5 – SAARF C.20. What impact did monument construction have on the physical landscape?	Sites 56.1 to 56.6	6
N.6 – SAARF C. 22. What potential exists to better understand diet, health and mortality among later Neolithic/Early Bronze Age populations within the WHS?	Site 24	1
N.7- SSRQ.1 Recent research elsewhere in the Stonehenge landscape has suggested that Woodlands Grooved Ware appears in the area very soon after 3000 BC. Can the evidence recovered from the Scheme corroborate this?	Sites 19, 49, 52.1, 54.2	4
N.8 – SSRQ.2 Research questions have tended to focus on changes in readily-identifiable artefact types (ceramics, lithics) other forms of evidence should not be overlooked. What can the evidence from the Scheme contribute?	Sites 19, 49, 52.1, 54.2	4

Research objective	Site/Action Area	Total number of Action Areas
Early Bronze Age and Beaker 2,600 to 1,600 BC		
EBA.1 – SAARF J. 1. Establish the chronology of individual barrows, and the phasing of their structures.	Site 33.1 to 33.3	1
EBA.2 – SAARF J. 2. Establish the dates and development of barrow cemeteries.	Site 33.1 to 33.3; Sites 56.1 to 56.6	9
EBA.3 – SAARF J.3. What patterns are evident in the spatial relationships between the locations of barrows and the existing monuments in the Stonehenge and Avebury landscapes, and how did these change over time?	Site 33.1 to 33.3; Sites 56.1 to 56.6	9
EBA.4 – SAARF J.4. What was the nature of the local environment, contemporary land-uses and other activity in the landscape?	Sites 3.1 to 3.4; Sites 10.1 to 10.3; Site 11; Site 12; Sites 16.1 to 16.4; Site 19; Site 24; Sites 32.1 to 32.3; Site 40; Site 41; Site 42; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Site 50; Sites 52.1 to 52.4; Sites 54.1 and 54.2; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	55
EBA.5 – SAARF J.7. [dating of] Cremation burials...	Site 11; Site 19; Site 42; Site 43; Site 44, Sites 46.1 and 46.2	7
EBA.6 – SSRQ.3 Does lithic material within the ploughzone at Western Portal indicates that this was a preferred location for activity towards the end of the Neolithic period and/or at the start of the Early Bronze Age?	Site 24	1
EBA.7 – SSRQ.4 What are the distribution and date of individual inhumations in flat graves and how do these compare to the distribution and date of the placing of human remains in perhaps less formal contexts (for instance tree hollows), and to the distribution and date of burials beneath round barrows and in their mounds?	Site 24	1
EBA.8 – SSRQ.5 What is the nature of the relationship between undecorated Beaker	Site 24	1

Research objective	Site/Action Area	Total number of Action Areas
ceramics and infant burial?		
Middle to Late Bronze Age (1,600 BC to 700 BC)		
MBA.1 – SAARF K.1. What was happening within, and immediately around the Neolithic monuments at Stonehenge and Avebury during the Middle and Late Bronze Ages?	Sites 54.1 and 54.2; Sites 56.1 to 56.6	8
MBA.2 – SAARF K.4. What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?	Sites 2.1 and 2.2; Sites 3.1 to 3.4; Site 4; Sites 10.1 to 10.3; Site 11; Site 12; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 19; Site 24; Site 28; Sites 32.1 to 32.3; Site 33.1 to 33.3; Site 40; Site 41; Site 42; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Sites 54.1 and 54.2; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	67
MBA.3 – SAARF K.5. What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?	Sites 2.1 and 2.2; Sites 3.1 to 3.4; Site 4; Site 5; Sites 10.1 to 10.3; Site 11; Site 12; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 19; Site 24; Site 28; Site 33.1 to 33.3; Site 40; Site 41; Site 42; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Sites 52.1 to 52.4; Sites 54.1 and 54.2; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	70

Research objective	Site/Action Area	Total number of Action Areas
MBA.4 – SAARF K.6. How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?	Sites 2.1 and 2.2; Site 4; Site 5; Sites 10.1 to 10.3; Site 11; Site 12; Sites 16.1 to 16.4; Site 40; Site 41; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 48.1 and 48.2; Site 49; Sites 52.1, 52.2, 52.3 and 52.4; Sites 54.1 and 54.2; Sites 55.1, 55.2 and 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	46
MBA.5 – SAARF K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?	Sites 3.1 to 3.4; Sites 10.1, 10.2 and 10.3; Site 11; Site 12; Sites 13.1, 13.2 and 13.3; Sites 15.1 to 15.11; Site 24; Site 28; Site 29; Sites 30.1 and 30.2; Site 40; Site 41; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Site 50; Sites 52.1 to 52.4; Sites 56.1 to 56.6; Sites 59.1 to 59.3	51
Iron Age (800 BC to 43 AD)		
IA.1 – SAARF K.13. What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?	Site 5; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 33.1 to 33.3; Site 40; Site 43; Site 44; Site 45; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Sites 52.1, to 52.4; Sites 54.1 and 54.2	37
IA.2 – SAARF K.14. How was the landscape reorganised over this transition, and how did society change?	Site 5; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 33.1 to 33.3; Site 40; Site 43; Site 44; Site 45; Sites 47.1 and 47.2; Sites 48.1	35

Research objective	Site/Action Area	Total number of Action Areas
	and 48.2; Sites 52.1 to 52.4	
IA.3 – SAARF L.1. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.	Site 4; Site 5; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 40; Site 41; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 59.1 to 59.3	33
IA.4 – SAARF L.4. What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?	Site 4; Site 5; Site 12; Sites 15.1 to 15.11; Site 40; Site 41; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 59.1 to 59.3	26
IA.5 –SSRQ.6 Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape?	Site 5, Site 12, Sites 13.1 to 13.3, Site 43, Site 44, Site 45, Site 46.1 and 46.2, Site 47, Site 59.1 to 59.3	14
IA.6 –SSRQ.7 Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas?	Site 5, Site 12, Sites 13.1 to 13.3, Site 43, Site 44, Site 45, Site 46.1 and 46.2, Site 47, Site 59.1 to 59.3	14
IA.7 –SSRQ.8 Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception?	Site 5, Site 12, Sites 13.1 to 13.3, Site 24, Site 33, Site 43, Site 44, Site 45, Site 46.1 and 46.2, Site 47, Site 59.1 to 59.3	16
IA.8 –SSRQ.9 Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments?	Site 5, Site 12, Sites 13.1 to 13.3, Site 16.3, Site 24, Site 33, Site 43, Site 44, Site 45, Site 46.1 and 46.2, Site 47, Site 59.1 to 59.3	17
Roman		
RB.1 – SAARF M.1. How can we decide whether the later activity around these	Site 5; Site 12; Sites 15.1 to 15.11	13

Research objective	Site/Action Area	Total number of Action Areas
exceptional monuments was a particular response to them?		
RB.2 – SAARF M.2. Are there recognisable patterns of activity, including ritual/religious activity, at the existing ‘ancient’ monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?	Site 5; Site 12; Site 40; Site 43; Site 44; Site 45	6
RB.3 – SAARF M.5. Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries? ... Is there evidence that prehistoric monuments were seen as a useful source of stone for the construction of Roman villas (or other buildings)? If so, did this affect settlement location?	Site 5; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 19; Site 28; Site 33.1 to 33.3; Site 41; Site 42; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 50; Sites 52.1 to 52.4; Sites 55.1 to 55.3; Site 57; Sites 59.1 to 59.3; Sites 64.1 and 64.2; Site 65.	48
RB.4 – The production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy. [SWARF/Rural Settlement of Roman Britain project]	Site 5; Site 12; Sites 15.1 to 15.11; Sites 47.1 and 47.2; Site 50	16
RB.5 – SSRQ.10 How do Romano-British communities respect previous field systems and at what point do the field systems extend across the Wessex Linears?	Sites 3, 4, 5, 12, 15, 16, 20, 24, 28, 33, 49, 52, 54.2	13
RB.6 – SSRQ.11 Is there evidence for reuse of existing features (e.g. monuments, tree-hollows etc.) within the landscape? In particular, is there evidence for reuse of features for burials during the Roman or early medieval periods?	Sites 3, 4, 5, 12, 15, 16, 20, 24, 28, 31, 33, 49, 52, 54.2	14
Early Medieval 410 to 1066		
EM.1 – SAARF N.3. What role did the Avon Valley have as a communication route for Saxon migrants moving into Wiltshire from the south coast, and how did this impact on the existing communities?	Site 50	1
EM.2 – SAARF N.4. Is there evidence that the patterns of Saxon settlement and land use were affected by the presence within the landscape of the ‘ancient’ monuments?	Sites 15.1 to 15.11	11

Research objective	Site/Action Area	Total number of Action Areas
EM.3 – SAARF N.5. What determined the locations of the early Saxon settlements, and any subsequent shifts? What evidence is there for continuity in settlement and land use from the Romano-British period?	Sites 15.1 to 15.11; Site 50	12
EM.4 – SAARF N.8. To what extent were prehistoric monuments, Roman settlements and other landscape features used in defining Saxon estates and other boundaries, and are they referred to in late Saxon charters?	Site 50	1
EM.5 – SAARF N.18. What role did prehistoric monuments play in the lives of Anglo-Saxon communities and to what extent were they 'Christianised' in the later 1st millennium AD, replacing earlier, and potentially very deep-rooted beliefs?	Site 50	1
EM.6 – SAARF O.2. Where, when and how did mid-late Saxon and medieval settlements develop? How were they internally organised, e.g., with tenement boundaries? Is there evidence for settlement shift?	Site 50	1
EM.7 – SAARF O.8. What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?	Site 4; Site 5; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 24; Site 28; Site 40; Site 41; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Site 50; Sites 52.1 to 52.4; Sites 54.1 and 54.2; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65.	58
EM.8 – SWARF Research Aim 27: Investigate the origins of free-threshing wheat.	Scheme-wide	n/a
EM.9 – SWARF Research Aim 33: Widen our understanding of the origins of villages.	Scheme-wide	n/a
EM.10 – SWARF Research Aim 44: Develop an understanding and identification of Early Medieval Technologies.	Scheme-wide	n/a
Medieval 1066 to 1540		

Research objective	Site/Action Area	Total number of Action Areas
LM.1 – SAARF O.5. What role (if any) did prehistoric monuments have in the delineating of land boundaries and communication routes, and to what extent were they impacted upon by them?		
LM.2 – SAARF O.8. What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?	Site 4; Site 5; Site 12; Sites 13.1 to 13.3; Sites 15.1 to 15.11; Sites 16.1 to 16.4; Site 24; Site 28; Site 40; Site 41; Site 43; Site 44; Site 45; Sites 46.1 and 46.2; Sites 47.1 and 47.2; Sites 48.1 and 48.2; Site 49; Site 50; Sites 52.1 to 52.4; Sites 54.1 and 54.2; Sites 55.1 to 55.3; Sites 56.1 to 56.6; Site 57; Sites 59.1 to 59.3; Site 62; Sites 64.1 and 64.2; Site 65	58
LM.3 – SWARF Research Aim 42: Improve our understanding of medieval farming. The majority of the evidence revealed during the evaluation works related to agricultural land use. SWARF identifies direct environmental evidence for the use of grassland, pasture and meadow as key objective. There is potential for environmental evidence to survive in the Till valley especially.	Sites 13.1 to 13.3	3
LM.4 – SWARF Research Aim 47: Assess the archaeological potential for studying medieval economy, trade, technology and production. Although predominantly agricultural in nature (negative features such as field systems, enclosure ditches, etc), there is the potential for other classes of evidence to survive, and to be different in different parts of the landscape (downland versus valley bottom, for instance). The utilisation of the floodplains at this time is of particular interest, and should be the focus of geo-archaeological investigation.	Sites 13.1 to 13.3	3
Post-medieval 1540 to 1901		
PM.1 – SAARF P.1. The layout and use of roads and tracks has been little explored, to	Sites 56.1 to 56.6	6

Research objective	Site/Action Area	Total number of Action Areas
the extent that it is not clear in detail how travellers passing through would have viewed the stones at different times in history.		
PM.2 – SAARF P.3. The history and development of the farms within the WHS and their associated built heritage is largely uninvestigated, the Victoria County History study remaining in large part the most recent.	Various	n/a
PM.3 – SAARF P.5. Water meadows (i.e., in the strict sense of constructed systems to create water flow over grass) were in the past highly visible features of the landscape around the monuments, particularly at Avebury. The surviving traces of these are not well recorded and their history has been very little investigated within the WHS.	Sites 13.1 to 13.3	3
PM.4 – SAARF P.8. How has the military presence in both parts of the WHS developed?	Site 24; Site 35; Site 49; Site 51; Sites 52.1 to 52.4; Sites 56.1 to 56.6;	14
PM.5 – SAARF P. 9. What physical and social impacts has the military had on the monuments and landscape of the WHS?	Site 24; Site 35; Site 49; Site 51; Sites 52.1 to 52.4	8
PM.6 – SAARF P.14. What archaeological remains survive from the removal of buildings (such as the First World War aerodrome and the late 1920s café at Stonehenge) and other features...	Site 49; Site 51; Sites 52.1 to 52.4; Sites 56.1 to 56.6	12

11.3 Table 11-3: Archaeological mitigation measures

Recording Method/ Works stage	Description
Archaeological Excavation and Recording (AER) (PW stage)	A programme of controlled, intrusive fieldwork with defined objectives, which maps, examines, records and interprets archaeological remains at a site or within a specified area. The records made, and the objects and samples gathered during the fieldwork are combined and studied (assessed and if appropriate analysed) and the results published in detail appropriate to the project design. Archaeological excavation and recording (AER), which may incorporate hand excavated trenching and hand excavated test pits (combined with ploughzone artefact collection and geo-archaeology where potential has been recognised will be undertaken where significant archaeological remains are either known from assessment or evaluation works (significant remains are those which have potential to the ARA). At each location where AER is required SSWSIs will be prepared outlining specific excavation measures and scientific sampling strategies applicable to the proposed fieldwork that forms part of the programme of archaeological mitigation. These SSWSIs will be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG, and will be approved by Wiltshire Council (in consultation with Historic England), prior to works commencing in the area to which each SSWSI applies. During the investigation metal-detection may also be deployed, for example, across exposed surfaces following soil stripping, during hand excavation, and/or over hand-excavated spoil.
Strip, Map and Record (SMR) (PW stage)	A programme of controlled, intrusive fieldwork with defined objectives, which maps, examines, records and interprets archaeological remains within a specified area. Compared to AER, SMR is typically employed to provide a more flexible approach to the sample excavation of areas of more extensive archaeological remains with few or no apparent focus of activity, or areas where the assessed significance of the remains is lower as recognised by the ARA. The technique may also be applicable to particular construction impacts and may be combined with geo-archaeology where potential has been recognised. At each location where SMR is required, SSWSIs will be prepared in accordance with the procedure described for AER (above). During the investigation metal-detection may also be deployed, for example, across exposed surfaces following soil stripping, during hand excavation, and/or over hand-excavated spoil.

Recording Method/ Works stage	Description
Ploughzone artefact collection (fieldwalking) and sample sieving of the topsoil (PW stage)	A non-intrusive archaeological survey technique used to record the position and distribution of artefacts recovered from the ploughsoil zone. It could involve a rapid survey of the ploughed surface of a field(s), or a targeted survey involving sampling and soil sieving. It may be combined with metal-detection in accordance with a scalable strategy. To be undertaken in areas within the DCO Boundary where access has not been possible previously, and/or in order to gain a better understanding of an existing finds distribution.
Trial Trench Evaluation (PW stage)	In the few small areas where access has been denied prior to public examination – a targeted or sample-based mechanical or hand excavated trench-based investigation to record the extent of archaeological remains identified through non-intrusive survey and to inform decision making on further mitigation recording that may be appropriate. During the investigation metal-detection may also be deployed.
Archaeological Monitoring and Recording (AMR) (PW and MW stages)	A programme of observation, investigation and recording of archaeological remains undertaken in specific areas where the presence of, or moderate potential for, archaeological remains has been demonstrated or can be predicted, but where detailed investigation prior to the main construction programme is unfeasible due to safety or logistical considerations, or undesirable due to environmental or engineering constraints. The contractors preferred method of working will be controlled as necessary to allow archaeological recording to take place. It also provides the monitoring archaeologist, if needed, the opportunity to identify that an archaeological find has been made which will require additional resources in order to record to a proper standard. During the investigation metal-detection may also be deployed.
Geo-archaeological investigation (PW and MW stages)	A programme of sample recovery and assessment/analysis undertaken to investigate palaeoenvironmental conditions and soil sediment development that may be relevant to the research of archaeological sites or remains found within the vicinity. Achieved through trial pit excavations or other soil sample retrieval methods (such as augering or boreholes).
Archaeological Topographic Survey (PW and MW stages)	An archaeological site survey undertaken to record the shape and topography of the ground surface and any relevant components. It would include both a drawn and written record, and depending upon the level of detail that is required it could also include a photographic record. Typically, it would be applied to both archaeological remains and features that contribute to the historic landscape character. Depending upon ground conditions it may be necessary to remove vegetation before the survey, this would be done under archaeological supervision in accordance with a MS to ensure the clearance is done in a controlled manner and does not impact on the remains.

Recording Method/ Works stage	Description
Archaeological Photographic Recording (PW stage)	A photographic record combined with a written description of a heritage asset that records its current condition, character and type. Depending upon the level of detail required the photographs may also record views to and from the asset so that there is a record of elements of its setting constituting specific views.
Preservation of archaeological remains	An area of development that has been excluded to conserve archaeological remains, thereby preserving it for later generations. Measures for preservation would include protective fencing, burying/sealing remains beneath fill material to ensure that they are not disturbed (including use of a protective barrier membrane between the existing ground surface and the fill, and control measures for plant movements at construction).
Publication and dissemination	Interim reports and fieldwork updates would be published during the investigations and a final academic report(s) and popular booklets would be prepared at the end of the fieldwork. The project archive will be held for long-term storage at Salisbury Museum.

11.4 Table 11-4: Summary of proposed mitigation areas and actions

Abbreviations – PAR (preservation of archaeological remains); AFMA (archaeological fieldwork mitigation area); PW (preliminary works); MW (main works)

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
1	<u>Winterbourne Stoke Bypass (west)</u> Milestone on track, south of A303, close to Yarnbury Camp	1	12.1A	PAR: photography, protective fencing	PW
2	<u>Winterbourne Stoke Bypass (west)</u> Field systems east of Yarnbury Camp (north and south of the A303), and an undated oval enclosure	2.1	12.1A	PAR: targeted protective fencing PAR: retain topsoil, protective membrane and fill	PW MW
		2.2	12.1A	PAR: targeted protective fencing PAR: retain topsoil, protective membrane and fill	PW MW
3	<u>Winterbourne Stoke Bypass (west)</u> Possible ring ditch on mainline, and low-density pits and linear features	3.1	12.1A	AFMA: archaeological excavation and recording	PW
		3.2	12.1A	AFMA: strip, map and record	PW
		3.3	12.1A	AFMA: strip, map and record	PW
		3.4	12.1A	AFMA: geo-archaeological investigation, strip, map and record	PW
4	<u>Winterbourne Stoke Bypass (west)</u> Enclosures, field systems and isolated burials (Iron Age) north-west and north of Scotland Lodge.	4	12.1A	AFMA: strip, map and record	PW
5	<u>Winterbourne Stoke Bypass (west)</u> Northern edge of Iron Age settlement at Scotland Lodge	5	12.1A	AFMA: archaeological excavation and recording	PW
6	<u>Parsonage Down East excavated material deposition area</u> deposition area (less than 1m fill depth)	6	12.1A	PAR: retain topsoil, protective membrane and fill	MW
7	<u>Winterbourne Stoke Bypass (west)</u> Non-designated barrows and pits west of Scotland Lodge	7.1	12.1A	PAR: protective fencing	PW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
		7.2	12.1A	PAR: retain topsoil, protective membrane and fill	MW
8	<u>Parsonage Down East excavated material deposition area</u> Non-designated barrows dispersed across a hilltop (8.1	12.1A	PAR: protective fencing	PW
		8.2	12.1A	PAR: retain topsoil, protective membrane and fill	MW
9	<u>Parsonage Down East excavated material deposition area</u> Possible settlement associated with an Iron Age/Romano-British enclosure north of Winterbourne Stoke	9	12.1A, 12.2A	PAR: protective fencing	PW
10	<u>Parsonage Down East excavated material deposition area and Winterbourne Stoke bypass embankment</u> Dispersed unenclosed settlement of possible Bronze Age date ()	10.1	12.1A, 12.2A	AFMA: archaeological excavation and recording	PW
		10.2	12.1A, 12.2A	AFMA: archaeological excavation and recording	PW
		10.3	12.1A, 12.2A	AFMA: geo-archaeological investigation, archaeological excavation and recording	PW
11	<u>Parsonage Down East excavated material deposition area</u> Site of Early Bronze Age cremation burial	11	12.1A	AFMA: geo-archaeological investigation, archaeological excavation and recording	PW
12	<u>Winterbourne Stoke Bypass (west).</u> Rectilinear enclosures, undated lynchets field systems and dispersed features north and north-west of Scotland Lodge	12	12.1A	AFMA: archaeological excavation and recording	PW
13	<u>River Till crossing</u> Iron Age/ Romano-British pits and ditches (west bank), water meadows of possible post-medieval date and Geo-archaeological deposits on the west and east banks	13.1	12.1B	AFMA: geo-archaeological investigation, archaeological excavation and recording	PW
		13.2	12.1B	AFMA: archaeological topographic survey AFMA: geo-archaeological investigation, archaeological excavation and recording	PW PW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
		13.3	12.1B	AFMA: archaeological topographic survey AFMA: archaeological excavation and recording	PW PW
14	Winterbourne Stoke Bypass (east). Non-designated barrow cemetery on Winterbourne Stoke Hill	14	12.1B	PAR: protective fencing	PW
15	<u>Winterbourne Stoke Bypass (east)</u> Extensive prehistoric activity: pits of possible Late Neolithic date, field systems and enclosures, including possible Iron Age lynchets, and a buried soil horizon and colluvium within a dry valley	15.1	12.1B	AFMA: strip, map and record	PW
		15.2	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
		15.3	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
		15.4	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
		15.5	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
		15.6	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		15.7	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		15.8	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		15.9	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		15.10	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		15.11	12.1A, 12.1B	PAR: retain topsoil, protective membrane and fill	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
16	<u>Longbarrow Junction (southern dumbbell), A303 mainline and realigned A360 south</u> Possible Bronze Age settlement activity: C-shaped enclosure, scattered pits, Wessex linear boundary and two sides of a possible enclosure.	16.1	12.1B	AFMA: archaeological excavation and recording	PW
		16.2	12.1B	AFMA: ploughzone artefact collection AFMA: archaeological excavation and recording	PW PW
		16.3	12.1B	AFMA: archaeological excavation and recording	PW
		16.4	12.1B	PAR: retain topsoil, protective membrane and fill	PW
17	<u>Main Civils Compound</u> Non-designated barrow and a pair of solution hollows just east of the A360 north link road	17.1	12.1B	PAR: protective fencing	PW
		17.2	12.1B	PAR: protective fencing	PW
		17.3	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		17.4	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		17.5	12.1B	PAR: retain topsoil, protective membrane and fill	MW
18	Bronze Age enclosure and bowl barrow 100m west of Longbarrow roundabout (Site 18.1); and Bowl barrow 250m south-west of Longbarrow roundabout (Site 18.2)	18.1	12.1B	PAR: photography, protective fencing	PW
		18.2	12.1B	PAR: photography, protective fencing	PW
19	<u>Realigned A360 north</u> Neolithic and Bronze Age activity – isolated burials, flint scatter, scattered pits, ditches and post holes, later prehistoric Wessex linears, geological sinkhole	19	12.1B, 12.1C	AFMA: ploughzone artefact collection: archaeological excavation and recording	PW
20	<u>Main Civils Compound</u> Bronze Age land boundary (Wessex Linear)	20	12.1B	PAR: retain topsoil, protective membrane and fill	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
21	<u>Western Portal Approach</u> Bronze Age land boundary (Wessex Linear)	21	12.1B	PAR: archaeological topographic survey, photography, protective fencing	PW
22	<u>Downgraded A360</u> Milestone on A360	22	12.1B	PAR: photography, protective fencing	PW
23	<u>Tunnel Section</u> Scheduled monuments along or close to the line of the tunnel	23.1	12.1D	PAR: photography, protective fencing	PW
		23.2	12.1D	PAR: photography, protective fencing	PW
		23.3	12.1D	PAR: photography	PW
		23.4	12.1D, 12.1E	PAR: no measures required at PW stage	n/a
		23.5	12.1E	PAR: photography, protective fencing	PW
		23.6	12.1D	PAR: no measures required at PW stage	n/a
		23.7	12.1D, 12.1E	PAR: no measures required at PW stage	n/a
		23.8	12.1D, 12.1E	PAR: photography, protective fencing	PW
24	<u>Western Portal Approach</u> Main line A360 to Western Portal – Late Neolithic – Early Bronze Age flint scatters, occasional scattered pits and post holes, isolated burials, and a dry valley	24	12.1B, 12.1C	AFMA: additional ploughzone artefact collection AFMA: archaeological excavation and recording	PW PW
25	<u>All-weather haul road on Winterbourne Stoke Bypass (west)</u> Possible Neolithic, Bronze Age, Iron Age and Saxon archaeological remains along or close to an all-weather temporary haul road at Green Bridge No.1 and temporary Till crossing	25.1	12.1A,	PAR: retain topsoil, protective membrane and fill	MW
		25.2	12.1B	PAR: retain topsoil, protective membrane and fill	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
26	Ground movement monitor points along the ground surface above the tunnel section. [Note: the number and location of these is subject to detailed design]	-	-	PAR: retain topsoil, protective membrane and fill	PW, MW
27	Barrows and milestones along sections of the A303, A360 and Stonehenge Road which will be converted into green lanes. Non-designated 1918 military stone marker (military 1918 stone RFC/RAF Stonehenge Airfield Marker "A.M. No.1")	27.1	12.1B	PAR: no measures required at PW stage	n/a
		27.2	12.1B	PAR: no measures required at PW stage	n/a
		27.3	12.1B	PAR: no measures required at PW stage	n/a
		27.4	12.1D	PAR: no measures required at PW stage	n/a
		27.5	12.1E	PAR: photography, protective fencing	PW
		27.6	12.1E	PAR: photography, protective fencing	PW
		27.7	12.1B	PAR: no measures required at PW stage	n/a
		27.8	12.1D	PAR: photography, protective fencing	PW
		27.9	12.1D	PAR: photography, protective fencing	PW
		27.10	12.1E	PAR: photography, protective fencing	PW
		27.11	12.1D	PAR: photography, protective fencing	PW
		27.12	12.1D	PAR: photography, protective fencing	PW
		27.13	12.1D	PAR: photography, protective fencing	PW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage	
28	<u>Eastern Portal Approach:</u> Buried soil horizon and double ditch, undated ditch, flint scatters, in situ flint knapping in stony hollow	28	12.1E	AFMA: additional ploughzone artefact collection	PW	
				AFMA: geo-archaeological investigation and archaeological excavation and recording	PW	
29	<u>Order limits north of A303:</u> Mesolithic site at Countess Farm West – Mesolithic material located within a buried soil horizon and colluvial deposits. Potential for Late Neolithic/Early Bronze Age flint knapping activity	28	12.1E	AFMA: additional ploughzone artefact collection	PW	
				AFMA: geo-archaeological investigation and archaeological excavation and recording (including hand excavated test pits and hand excavated trenches)	PW	
30	<u>Order limits south of A303:</u> Channel cleaning of existing highway drainage ditches and construction of new attenuation features, vegetation clearance along existing drainage channels east of Blick Mead	30.1	12.1E	AFMA: archaeological monitoring and recording	MW	
			30.2	12.1E	AFMA: archaeological monitoring and recording	MW
31	<u>Countess East compound area:</u> Multi-period occupation (Neolithic, Iron Age, Roman and Saxon)	31.1	12.1E	PAR: photography, protective fencing	PW	
			31.2	12.1E	PAR: photography, protective fencing	PW
			31.3	12.1E	PAR: photography, protective fencing	PW
			31.4	12.1E	PAR: photography, protective fencing	PW
			31.5	12.1E	PAR: photography, protective fencing	PW
			31.6	12.1E	PAR: photography, protective fencing	PW
			31.7	12.1E	PAR: photography, protective fencing	PW
			31.8	12.1E	PAR: retain topsoil, protective membrane and fill	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
32	Barrows east of Solstice Park	32.1	12.1F	PAR: no measures required at PW stage	n/a
		32.2	12.1F	PAR: no measures required at PW stage AFMA: strip, map and record	n/a; MW
		32.3	12.1F	PAR: no measures required at PW stage AFMA: strip, map and record	n/a; MW
33	Byway AMES1 diversion east of Solstice Park (west of a group of scheduled barrows)	33.1	12.1F	AFMA: strip, map and record	PW
		33.2	12.1F	AFMA: archaeological monitoring and recording	MW
		33.3	12.1F	AFMA: archaeological monitoring and recording	MW
		33.4	12.1F	AFMA: archaeological monitoring and recording	
34	Listed milestone at Rollestone Corner	34	12.1C	PAR: photography, protective fencing	PW
35	Rollestone Corner: Occasional tree throws containing material that could broadly be of Neolithic date	35.1	12.1C	AFMA: Archaeological excavation and recording	PW
		35.2	12.1C	AFMA: Archaeological monitoring and recording	PW
36	<u>NMU route north from A360 North Link Road towards Stonehenge Visitor Centre:</u> Area of archaeological interest within WHS boundary	36	12.1C	PAR: protective fencing PAR: retain topsoil, protective membrane and fill	PW MW
37	<u>NMU route south from A360 South Link Road to Druids Lodge:</u> Area of archaeological interest within WHS boundary	37	12.1B	PAR: protective fencing PAR: retain topsoil, protective membrane and fill	PW MW
38	Milestone along A360	38	12.1B	PAR: photography, protective fencing	PW
39	A360 to Western Portal, land within DCO boundary excluding Site 24 (north and south of western approach cutting)	39	12.1B, 12.1D	PAR: retain topsoil, protective membrane and fill	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
40	<u>Winterbourne Stoke Bypass (west)</u> Evaluation area north of Winterbourne Stoke, northeast of Scotland Lodge Farm (landscape fill area)	40	12.1A, 12.1B	AFMA: ploughzone artefact collection, trial trench evaluation (results to inform further mitigation measures)	PW
41	<u>Winterbourne Stoke Bypass (east)</u> Evaluation area north of Winterbourne Stoke, northwest of Manor Farm (landscape fill area)	41	12.1B	AFMA: ploughzone artefact collection, trial trench evaluation (results to inform further mitigation measures)	PW
42	Main Civils Compound Evaluation area west of Longbarrow Roundabout (tunnel production area)	42	12.1B	AFMA: ploughzone artefact collection, trial trench evaluation (results to inform further mitigation measures)	PW
43	<u>Main Civils Compound</u> Evaluation area northwest of Longbarrow Roundabout (electric substation)	43	12.1B	AFMA: ploughzone artefact collection, trial trench evaluation (results to inform further mitigation measures)	PW
44	<u>Parsonage Down East excavated material deposition area</u> (fill depth over 1m) Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium	44	12.1A	AFMA: geo-archaeological investigation, strip, map and record	PW
45	<u>Parsonage Down East excavated material deposition area</u> (fill depth over 1m) Undated field systems and lynchets, possible small enclosures	45	12.1A	AFMA: strip, map and record	PW
46	Parsonage Down East excavated material deposition area: Utility Diversion – Realigned Esso Pipeline Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium	46.1	12.1A, 12.1B	AFMA: archaeological monitoring and recording (new alignment)	PW
		46.2	12.1A, 12.1B	AFMA: archaeological monitoring and recording (removal of existing pipe)	PW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
47	<u>Winterbourne Stoke Bypass (east):</u> Utility Corridor – Wessex Water Pipeline (Part 1) Extensive prehistoric activity: Pit digging activity, linear boundaries, field systems and enclosures, including possible Iron Age lynchets, relict water meadow features and Geo-archaeological/deposits	47.1	12.1B	AFMA: strip, map and record	PW
		47.2	12.1B	AFMA: strip, map and record	PW
		47.3	12.1B	AFMA: archaeological topographic survey, archaeological monitoring and recording	
48	<u>Temporary diversion of the A360 Utility Corridor (SSEN Southern Power Cable) and temporary diversion of the A360</u> Potential for Neolithic and Bronze Age activity associated with the Diamond barrow group; Bronze Age settlement and Wessex linear boundary SW of Winterbourne Stoke crossroads	48.1	12.1B	AFMA: strip, map and record	PW
		48.2	12.1B	AFMA: strip, map and record	PW
49	<u>Utility Corridor – Main Civils Compound to western tunnel portal</u> Wessex Water Pipeline (Part 2) and SSEN Western Power Cable Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement and Wessex linear boundary NW of Winterbourne Stoke crossroads	49	12.1B	AFMA: strip, map and record	PW
50	<u>Utility Corridor – Countess East</u> Wessex Water Pipeline (Part 3). Neolithic pits and flintwork, Roman and Saxon activity including structures	50.1	12.1E	AFMA: strip, map and record	PW
		50.2	12.1E	AFMA: archaeological monitoring and recording	PW
51	Utility Corridor – Ratfyn SSEN Eastern Power Cable. Line of former military light railway. Potential for prehistoric activity.	51	12.1E	AFMA: archaeological monitoring and recording	PW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
52	<u>Longbarrow Junction, parts of re-aligned A360, and Winterbourne Stoke Link</u> Extensive later prehistoric activity: scattered pits, linear boundary, trackway. Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement NW of Winterbourne Stoke Crossroads	52.1	12.1B	AFMA: strip, map and record	PW
		52.2	12.1B	AFMA: strip, map and record	PW
		52.3	12.1B	AFMA: strip, map and record	PW
		52.4	12.1B	AFMA: strip, map and record	PW
53	<u>Satellite compound area B3083</u> Extensive prehistoric activity including scattered pits; Iron Age/Romano-British settlement to north.	53	12.1B	PAR: retain topsoil, protective membrane and fill	MW
54	Longbarrow Junction: Temporary road between northern dumb-bell roundabout and Winterbourne Stoke crossroads Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement, enclosure and ring ditch W of Winterbourne Stoke crossroads	54.1	12.1B	PAR: retain topsoil, protective membrane and fill	MW
		54.2	12.1B	AFMA: Archaeological monitoring and recording	PW
55	<u>Existing A303 between Winterbourne Stoke link road and the WHS boundary on the A360</u> Removal of existing road: extensive prehistoric activity associated with Bronze Age settlement, enclosure and ring ditch W of Winterbourne Stoke crossroads	55.1	12.1B	AFMA: archaeological monitoring and recording	MW
		55.2	12.1B	AFMA: archaeological monitoring and recording	MW
		55.3	12.1B	AFMA: archaeological monitoring and recording	MW
56	<u>Existing A303 and A360 within and along the boundary of the WHS</u> Downgrading of existing road: extensive prehistoric activity potential for remains relating to scheduled barrow groups.	56.1	12.1B	AFMA: archaeological monitoring and recording	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
		56.2	12.1B, 12.1D	AFMA: archaeological monitoring and recording	MW
		56.3	12.1D	AFMA: archaeological monitoring and recording	MW
		56.4	12.1D, 12.1E	AFMA: archaeological monitoring and recording	MW
		56.5	12.1E	AFMA: archaeological excavation and recording	MW
		56.6	12.1D	AFMA: archaeological monitoring and recording	MW
		56.7	12.1D	AFMA: archaeological monitoring and recording	MW
		56.8	12.D, 12.1E	AFMA: archaeological monitoring and recording	MW
57	<u>Improvement to Double Hedges/A303 on slip</u> Scheduled trackway complex adjacent	57.1	12.1F	PAR: no measures required at PW stage	MW
		57.2	12.1F	AFMA: archaeological monitoring and recording	MW
58	<u>Stockpile area at Parsonage Down, chainage 2000 to 2500</u> Enclosures, field systems and isolated burials (Iron Age)	58	12.1A	PAR: retain topsoil, protective membrane and fill	MW
59	<u>Winterbourne Stoke Bypass (east)</u> Drainage pond part of mainline and landscape fill area west of River Till, parts of mainline and landscape fill area east of River Till. Extensive prehistoric activity: Pit digging activity, field systems and enclosures, colluvial deposits.	59.1	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
		59.2	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
		59.3	12.1B	AFMA: geo-archaeological investigation, strip, map and record	PW
60	<u>Longbarrow Junction</u> - Stockpile area west of southern dumbbell roundabout Extensive later prehistoric activity: scattered pits, linear boundary, trackway	60	12.1B	PAR: retain topsoil, protective membrane and fill	MW

Site	Name	Action area	Figure Ref.	Proposed mitigation measures	Stage
61	<u>Longbarrow Junction</u> - Stockpile area east of Main Civils Compound Area Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement and Wessex linear boundary NW of Winterbourne Stoke crossroads	61	12.1B	PAR: retain topsoil, protective membrane and fill	MW
62	<u>Longbarrow Junction</u> - Stockpile and woodland area west of southern dumbbell roundabout Extensive later prehistoric activity: scattered pits, linear boundary, trackway	62	12.1B	AFMA: strip, map and record	PW
63	<u>Longbarrow Junction</u> - Stockpile area southeast of Main Civils Compound Area Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement and Wessex linear boundary NW of Winterbourne Stoke crossroads	63	12.1B	PAR: retain topsoil, protective membrane and fill	MW
64	<u>Realigned B3083</u> south and west of Satellite Compound Area Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium	64.1	12.1B	AFMA: strip, map and record AFMA: archaeological monitoring and recording	PW MW
		64.2	12.1B	AFMA: strip, map and record AFMA: archaeological monitoring and recording	PW MW
65	<u>Parsonage Down East excavated material deposition area</u> Watermain diversion B3083 realignment Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium	65	12.1B	AFMA: strip, map and record	PW

11.5 Table 11-5: Areas excluded from archaeological mitigation

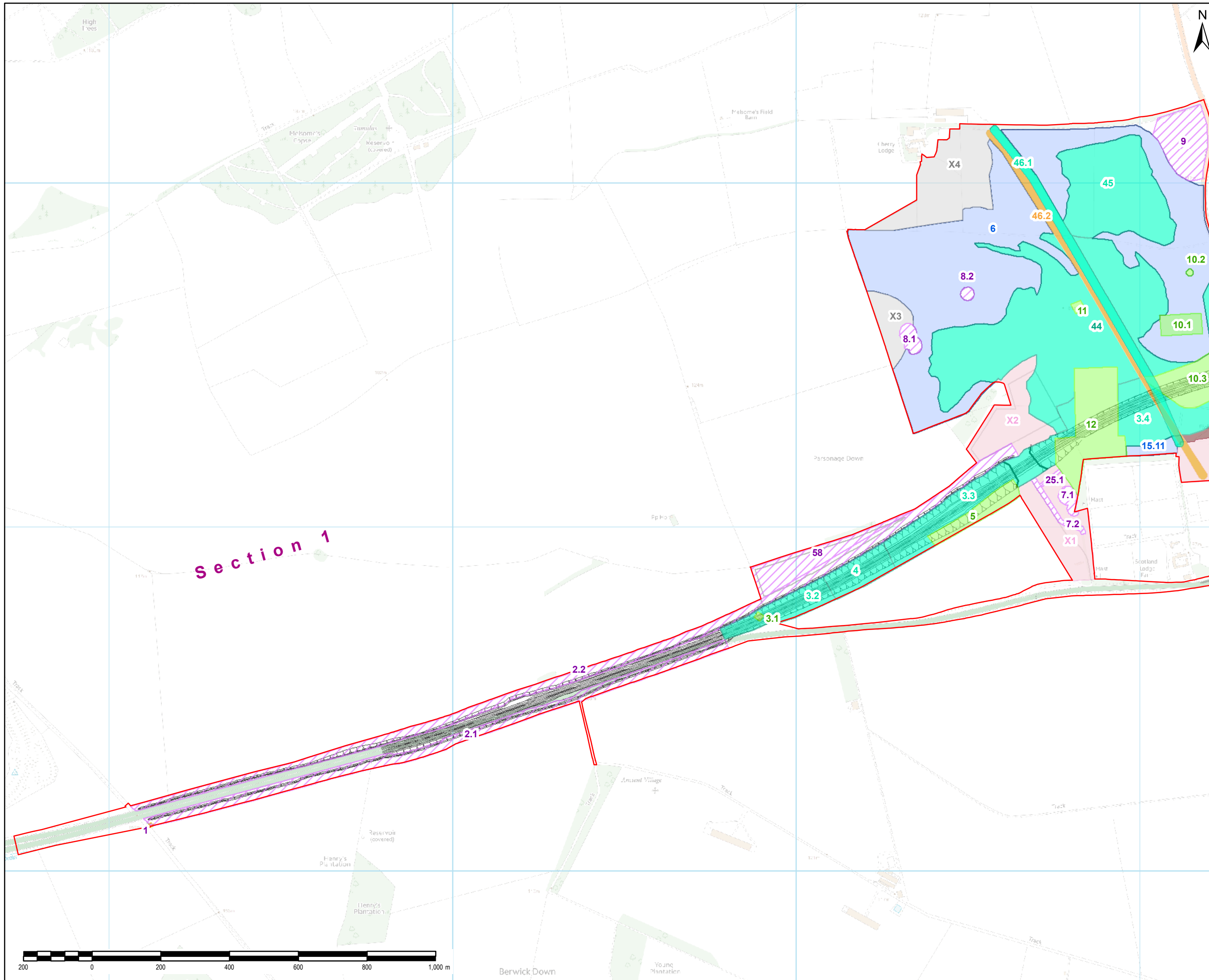
Area	Scheme design
X1	Proposed working area. Land south of Green Bridge No.1, land to be returned to agricultural use.
X2	Proposed working area. Landscape area: species rich chalk grassland but with two 1m high bunds.
X3	Outside construction working area - no scheme impact. Landscape area: species rich chalk grassland.
X4	Outside construction working area - no scheme impact. Land to be returned to agricultural use.
X5	Proposed working area. Land to be returned to agricultural use.
X6	Proposed working area. Land to be returned to agricultural use.
X7	Proposed working area. Land to be returned to agricultural use.
X8	Proposed working area. Landscape area next to highway: species rich chalk grassland.
X9	Proposed working area. Landscape area next to highway: species rich chalk grassland.
X10	Proposed working area. Land to be returned to agricultural use.
X11	Proposed working area. Land to be returned to agricultural use.
X12	Proposed working area. Species rich chalk grassland next to link road.
X13	Proposed working area. Land to be returned to agricultural use.
X14	Outside construction working area - no scheme impact. Land to be returned to agricultural use.
X15	Proposed working area. Species rich chalk grassland next to link road.
X16	Outside construction working area - no scheme impact. Land to be returned to agricultural use.
X17	Outside construction working area - no scheme impact. Land to be returned to agricultural use.
X18	Outside construction working area - no scheme impact. Land to be returned to agricultural use.
X19	Outside construction working area, apart from access for installation and decommissioning of tunnel

	<p>movement monitor points (Site 26) - no scheme impact. Land to be returned to agricultural use (western and eastern sides Open Access Land).</p>
X20	<p>Proposed working area. Species rich chalk grassland next to cut and cover</p>
X21	<p>Proposed working area. Land to be returned to agricultural use.</p>
X22	<p>Outside construction working area - no scheme impact. Retained woodland trees and hedges alongside highway boundary.</p>
X23	<p>Outside construction working area - no scheme impact. Retained woodland trees and hedges alongside highway boundary.</p>
X24	<p>Outside construction working area - no scheme impact.</p>
X25	<p>Proposed working area at Countess East. Land to be returned to agricultural use.</p>

12 Figures

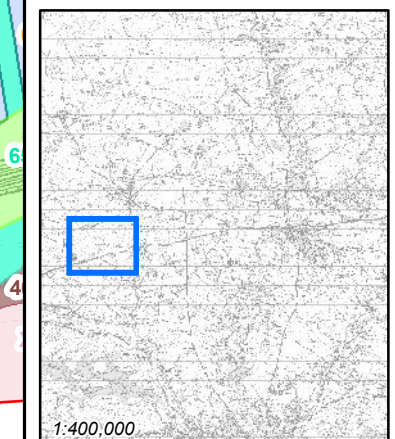
12.1 Figure 12.1A – 12.1F: Archaeological Mitigation Areas

- 12.1.1 Figures 12.1A-F show indicative areas for archaeological mitigation: these are subject to further definition as part of the development and approval of SSWSIs in accordance with sections 8.5 and 8.6 of this DAMS.



- NOTES / LEGEND**
- Proposed scheme boundary
 - Site Preparation and Compound Area
 - Proposed route alignment
 - Proposed preservation of archaeological remains within fill areas 0-1m
 - Proposed extent of site protection areas
 - No scheme impact
 - Proposed preservation of archaeological remains
 - Proposed construction working areas
 - Archaeological excavation and recording
 - Archaeological monitoring and recording
 - Strip, map and record
 - Trial Trenching

Note: Site 26, currently no mitigation shown (to be determined at detailed design stage)



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Purpose of issue
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Client: Highways England
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Project Title:
A303 AMESBURY TO BERWICK DOWN

Drawing Title:
**FIGURE 12.1A
ARCHAEOLOGICAL
MITIGATION AREAS**

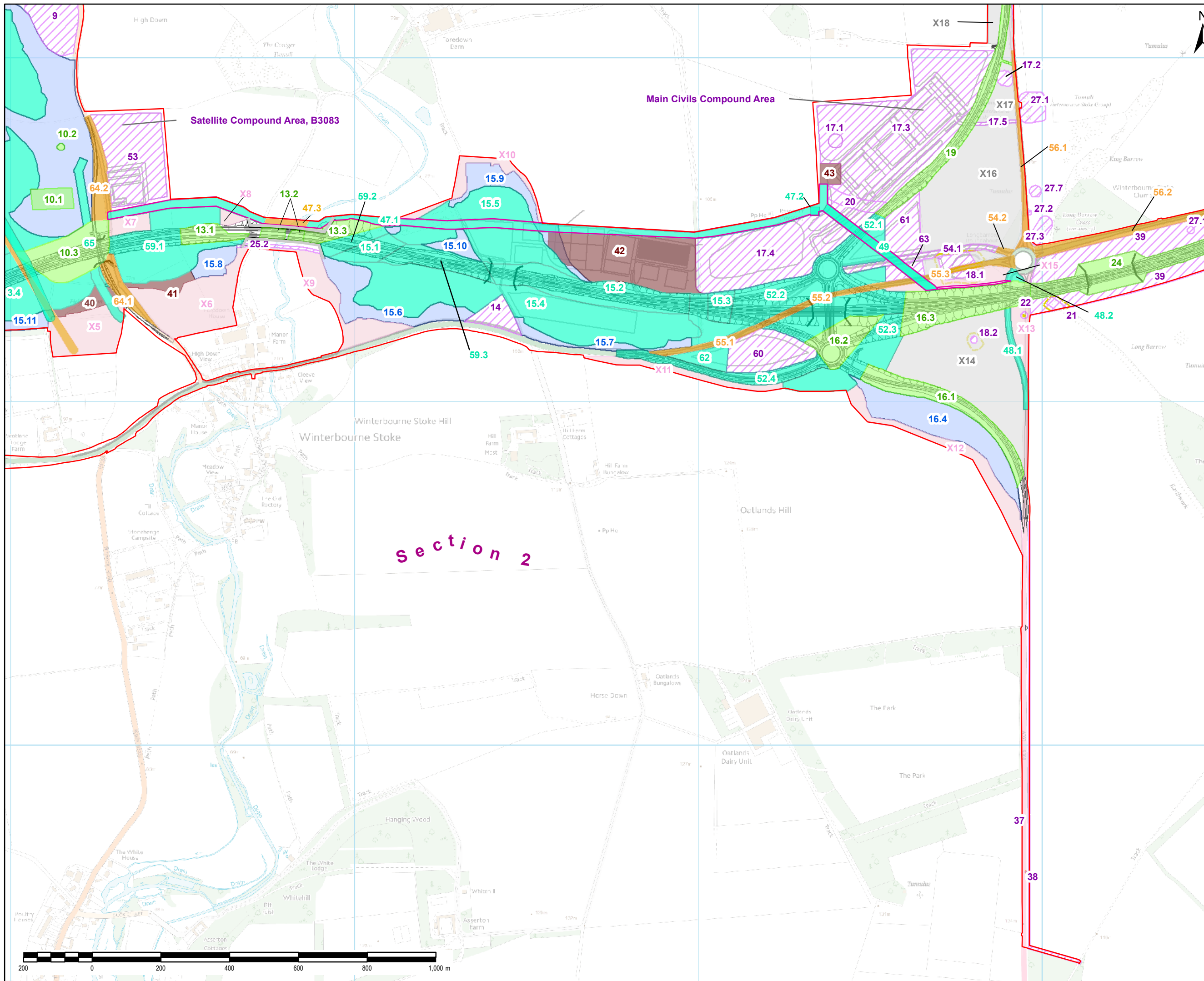
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Internal Project No. 60541200				
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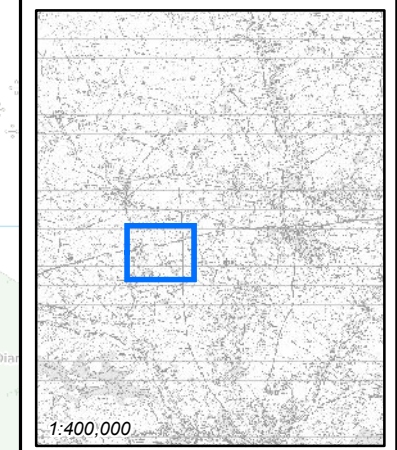
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Location		Type		Role
SCHEME WIDE		DR		GI 005571





- NOTES / LEGEND**
- Proposed scheme boundary
 - Site Preparation and Compound Area
 - Proposed route alignment
 - Proposed preservation of archaeological remains within fill areas 0-1m
 - Proposed utilities mitigation area
 - Proposed extent of site protection areas
 - No scheme impact
 - Proposed preservation of archaeological remains
 - Proposed construction working areas
 - Archaeological excavation and recording
 - Archaeological monitoring and recording
 - Strip, map and record
 - Trial Trenching
- Note: Site 26, currently no mitigation shown (to be determined at detailed design stage)



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A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 12.1B
ARCHAEOLOGICAL
MITIGATION AREAS**

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Internal Project No.		60541200		
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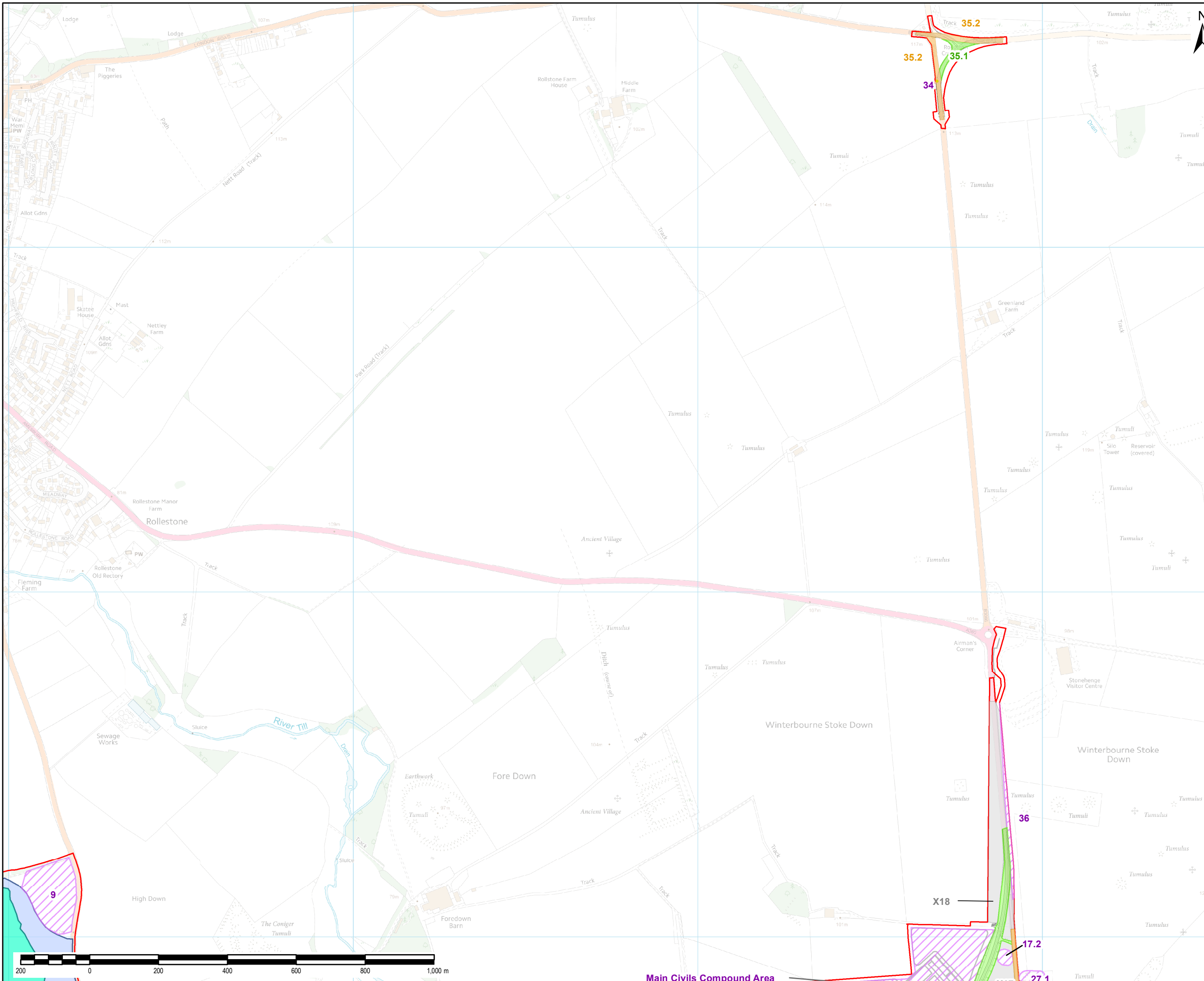
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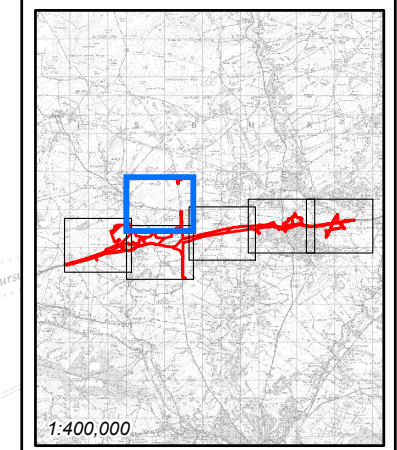
Section 2





- NOTES / LEGEND**
- Proposed scheme boundary
 - Site Preparation and Compound Area
 - Proposed route alignment
 - Proposed preservation of archaeological remains within fill areas 0-2m
 - Proposed extent of site protection areas
 - No scheme impact
 - Proposed preservation of archaeological remains
 - Proposed construction working areas
 - Archaeological excavation and recording
 - Archaeological monitoring and recording
 - Strip, map and record
 - Trial Trenching

Note: Site 26, currently no mitigation shown (to be determined at detailed design stage)



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**FIGURE 12.1C
 ARCHAEOLOGICAL
 MITIGATION AREAS**

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Internal Project No.
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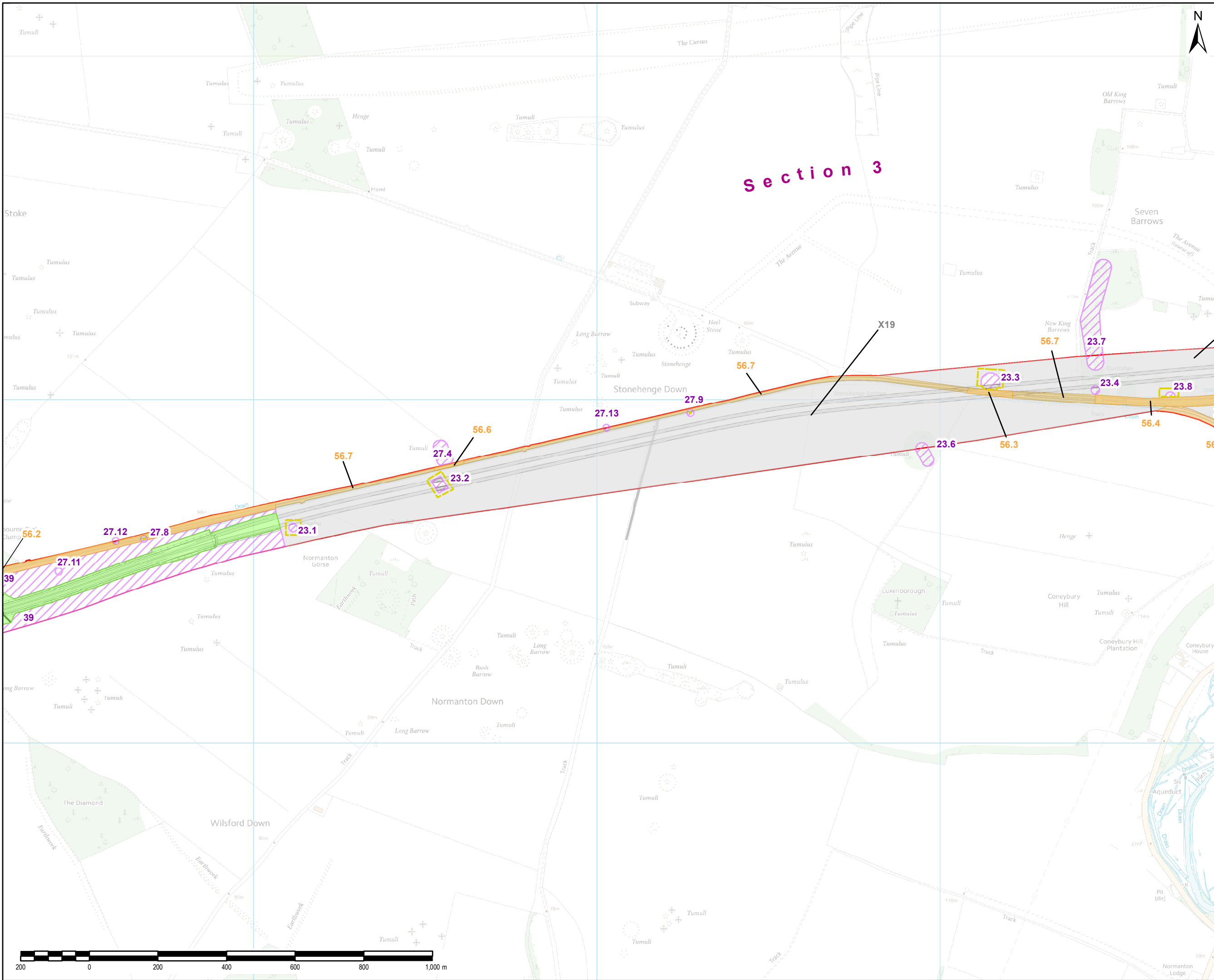
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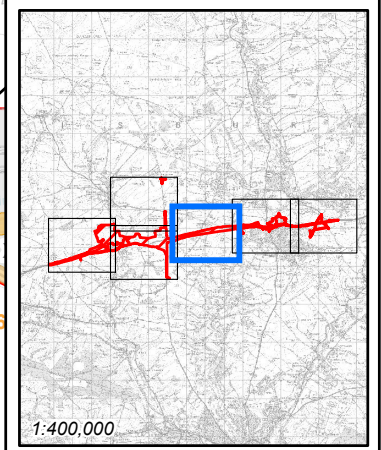
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Location	Type	Role	Number	



- NOTES / LEGEND**
- Proposed scheme boundary
 - Site Preparation and Compound Area
 - Proposed route alignment
 - Proposed extent of site protection areas
 - No scheme impact
 - Proposed preservation of archaeological remains
 - Proposed construction working areas
 - Archaeological excavation and recording
 - Archaeological monitoring and recording
 - Strip, map and record
 - Trial Trenching

Note: Site 26, currently no mitigation shown (to be determined at detailed design stage)



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**FIGURE 12.1D
 ARCHAEOLOGICAL
 MITIGATION AREAS**

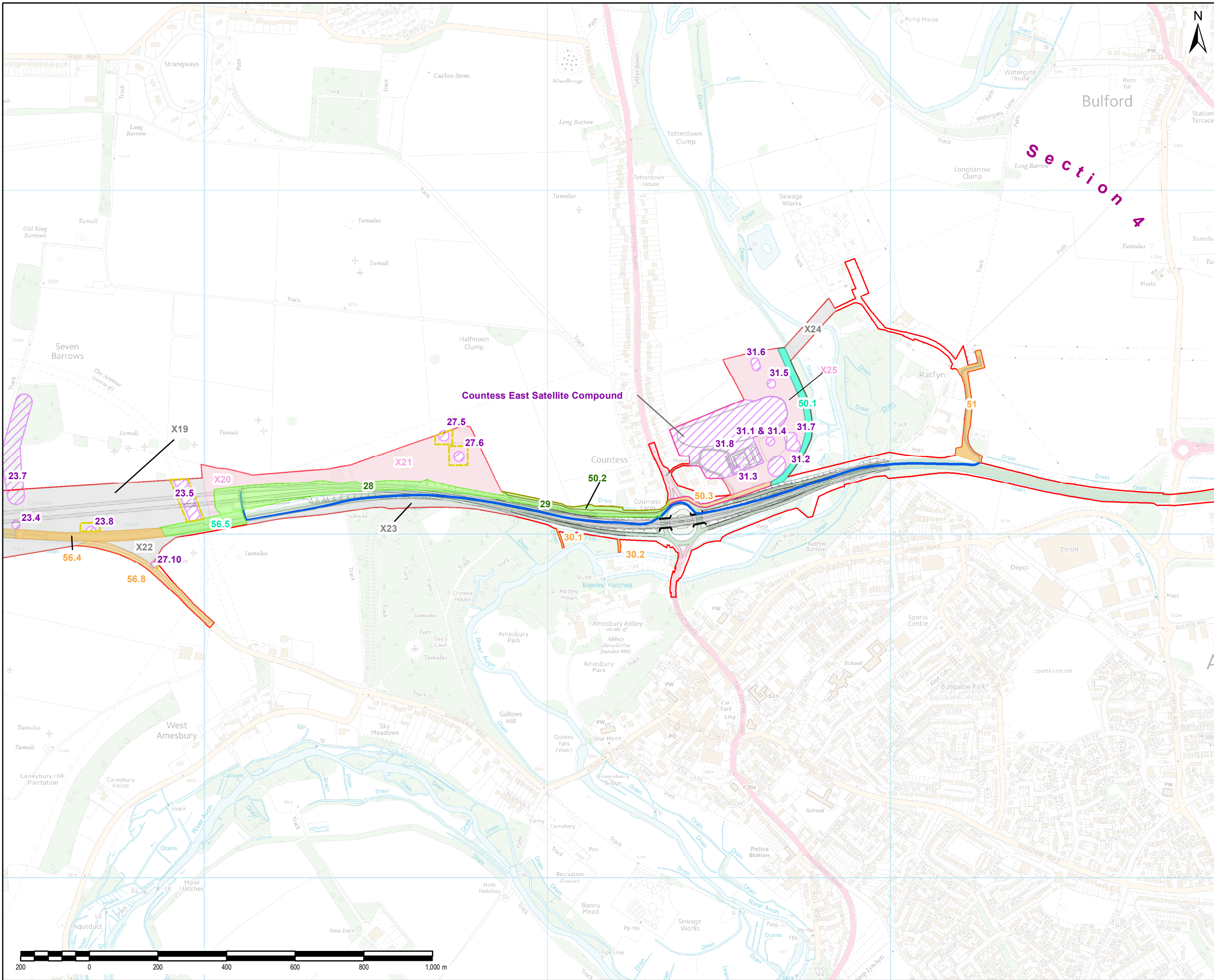
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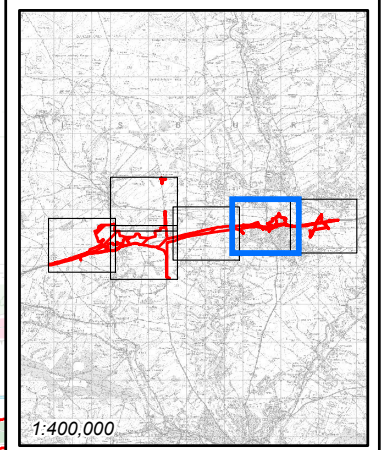
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Location	Type	Role	Number



- NOTES / LEGEND**
- Proposed scheme boundary
 - Site Preparation and Compound Area
 - Proposed route alignment
 - Proposed Electrical Cable - underground
 - Proposed utilities mitigation area
 - Proposed extent of site protection areas
 - No scheme impact
 - Proposed preservation of archaeological remains
 - Proposed construction working areas
 - Archaeological excavation and recording
 - Archaeological monitoring and recording
 - Strip, map and record
 - Trial Trenching
- Note: Site 26, currently no mitigation shown (to be determined at detailed design stage)



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**FIGURE 12.1E
ARCHAEOLOGICAL MITIGATION AREAS**

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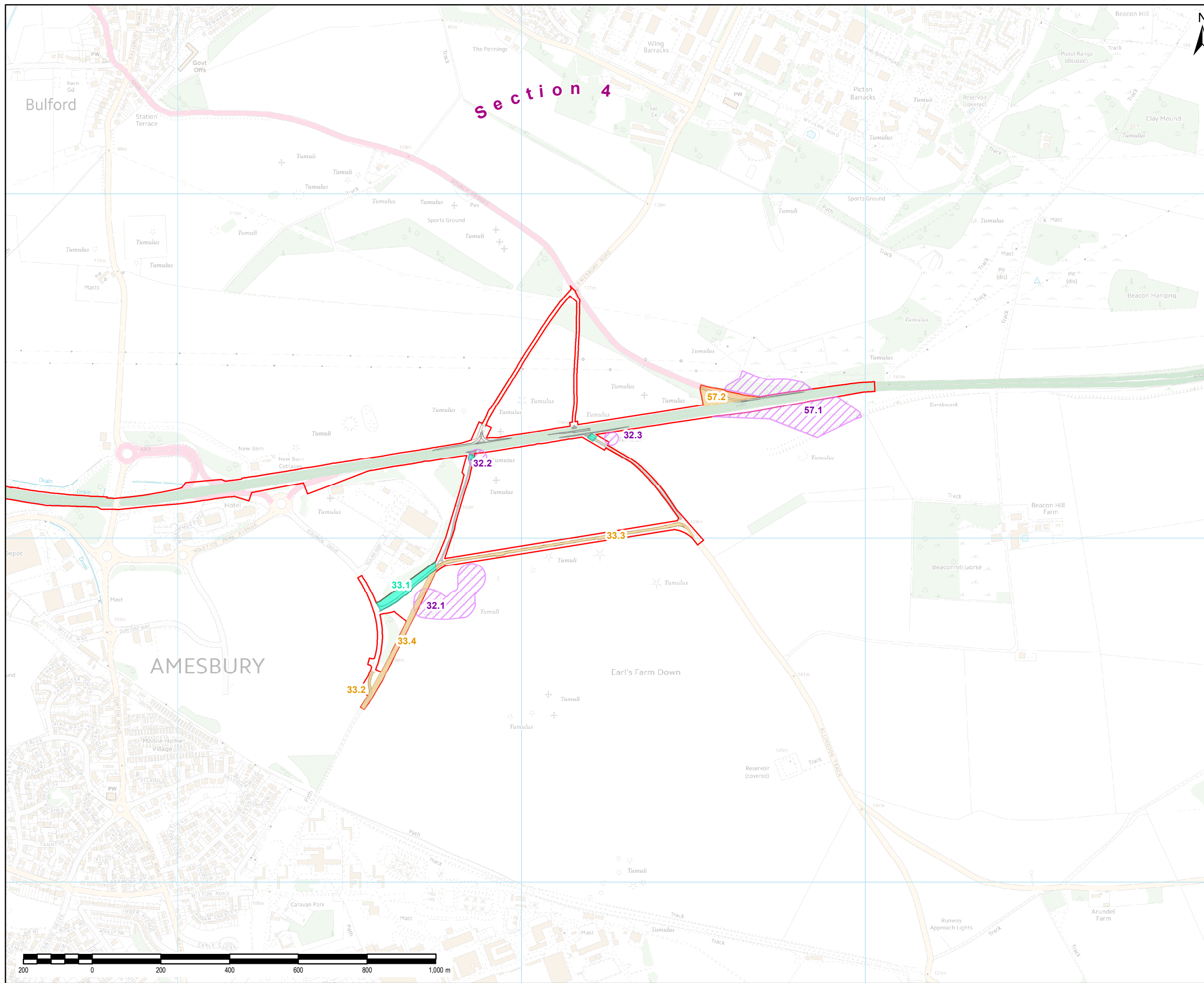
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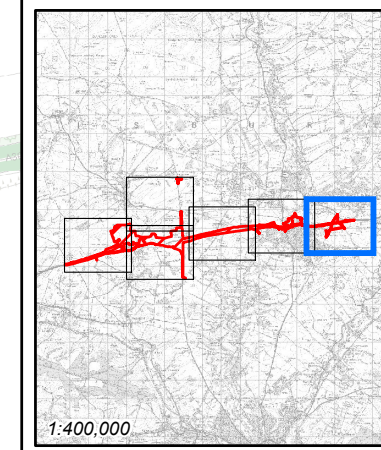
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HE551506	AMW	GEN	02

Location: SCHEME WIDE | Type: DR | Role: GI | Number: 005571



- NOTES / LEGEND**
- Proposed scheme boundary
 - Site Preparation and Compound Area
 - Proposed route alignment
 - Proposed extent of site protection areas
 - No scheme impact
 - Proposed preservation of archaeological remains
 - Proposed construction working areas
 - Archaeological excavation and recording
 - Archaeological monitoring and recording
 - Strip, map and record
 - Trial Trenching

Note: Site 26, currently no mitigation shown (to be determined at detailed design stage)



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**FIGURE 12.1F
ARCHAEOLOGICAL
MITIGATION AREAS**

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Location	Type	Role	Number

Abbreviations List

AAW	Advanced Archaeological Works
ACoW	Archaeological Clerk of Works
AER	Archaeological Excavation and Recording
AFMA	Archaeological Fieldwork Mitigation Area
AMS	Archaeological Mitigation Strategy
AMR	Archaeological Monitoring and Recording
AmW	AECOM, Mace and WSP Joint Venture
AOB	Any Other Business
APT	Archaeological Project Team
ARA	Archaeological Research Agenda
BOAT	Byways Open to All Traffic
CSR	Client Scheme Requirements
CEMP	Construction Environmental Management Plan
CHAMP	Cultural Heritage Asset Management Plan
CifA	Chartered Institute for Archaeologists
DAMS	Detailed Archaeological Mitigation Strategy
DCO	Development Consent Order
DDMP	Digital Data Management Plan
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
ERT	Electrical Resistance Tomography
ES	Environmental Statement
FAD	Further Archaeological Design
GPR	Ground Penetrating Radar
GNSS	Global Navigation Satellite System

HE	Highways England
HEMP	Handover Environmental Management Plan
HMAG	Heritage Monitoring and Advisory Group
HMP	Heritage Management Plan
ICOMOS	International Council for Monuments and Sites
LiDAR	Light Detection And Ranging
MHGLC	Ministry of Housing, Communities & Local Government
MS	Method Statement
MW	Main Works
NHLE	National Heritage List England
NMU	Non-Motorised User
NPPF	National Planning Policy Framework
NPSNN	National Policy Statement for National Networks
OAMS	Outline Archaeological Mitigation Strategy
OASIS	Online Access to the Index of Archaeological Investigations
OEMP	Outline Environmental Management Plan
OSL	Optically Stimulated Luminescence
OUV	Outstanding Universal Value
OWSI	Overarching Written Scheme of Investigation
PACE	Public Archaeology and Community Engagement
PAR	Preservation of Archaeological Remains
PEAR	Post-Excavation Assessment Report
PMA	Private Means of Access
PR	Public Relations
PW	Preliminary Works
PWP1	Preliminary Works, Phase 1
PWP2	Preliminary Works, Phase 2

RAMS	Risk Assessment and Method Statement
RSPB	Royal Society for the Protection of Birds
RTK	Real Time Kinematic
SAARF	Stonehenge and Avebury Archaeological Research Framework
SFB	Sunken Featured Building
SfM	Structure from Motion
SMR	Strip, Map and Record
SMS	Soils Management Strategy
SoOUV	Statement of Outstanding Universal Value
SSWSI	Site Specific Written Scheme(s) of Investigation
SWARF	South West Archaeological Regional Framework
TBM	Tunnel Boring Machine
TPA	Technical Partner's Archaeologist
TST	Total Station Theodolite
UID	Unique Identifier
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WCAS	Wiltshire County Archaeological Service
WSHER	Wiltshire and Swindon Historic Environment Record
WHS	World Heritage Site

Glossary

Archaeological archive	An archaeological archive comprises all records and materials recovered during an archaeological project and identified for long-term preservation, including artefacts, ecofacts and other environmental remains, waste products, scientific samples and also written and visual documentation in paper, film and digital form.
Archaeological baseline	A programme of assessment of the known or potential archaeological resource within a specified area or site. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate.
Archaeological dissemination	The presentation of an archaeological study to the wider public. This may take the form of popular publications, events, exhibitions, open days, online material or websites.
Archaeological excavations	A programme of controlled, intrusive fieldwork with defined research objectives that records archaeological remains within an area or site
Archaeological field evaluation	A limited programme of non-intrusive and/or intrusive fieldwork designed to determine the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their significance in a local, regional, national or international context as appropriate.
Archaeological geophysical survey	A non-intrusive archaeological prospecting technique, used to identify sub-surface features. The term covers a range of electrical, magnetic and radar-based survey techniques.
Archaeological Mitigation	Action(s) taken to reduce or ameliorate the potential of impact/damage to a heritage asset through avoiding development, a design solution, or recording in advance of any impacts.
Archaeological publication	Following study of the records made and objects gathered during fieldwork, the results of that study are published in detail appropriate to the project design and in the light of findings. Archaeological publication will normally take place in specialist interest journals, or in the form of a specialist interest monograph (limited-run book), and will normally be in print form, but may also be available online.
Archaeological recording	The initial studies and fieldwork carried out to preserve by record any important archaeological remains which may be damaged or destroyed by a development.
Archaeological reporting	The process of reviewing and assessing the material which results from archaeological recording. This results in the production of a report containing all the evidence, analysis and synthesis necessary to inform the project design.
Archaeological surface artefact collection	The systematic recovery and recording of artefacts found within an area of ground. The land may have been ploughed prior to survey and the artefacts collected from the ground surface (fieldwalking). Often used at the reconnaissance stage to contribute toward the determination of the archaeological potential of an area or to map the extent of a known or suspected site.
Archaeological Surveys	Assessing a site or linear route to collect data regarding surface conditions, topography, land-use, presence and extent of known archaeological sites, and the potential for further discoveries of unknown archaeological sites. Usually through a

	programme that may entail all or some of the following approaches: desk-based assessment, walkover survey, geophysical survey, field walking, field evaluation and excavation.
Employer	The organisation responsible for a scheme i.e. Highways England.
English Heritage	Charitable trust that conserves and manages the National Heritage Collection of historic sites and buildings, including Stonehenge on behalf of the nation.
Essential archaeological mitigation	Action(s) taken to reduce the potential for impact/damage to a heritage asset. It may involve a design solution, or recording in advance of any impacts
Geo-archaeology	Geo-archaeology is the application of earth science principles and techniques to the understanding of the archaeological record.
Historic England	Publicly funded body that champions and protects England's historic places, including Stonehenge and Avebury; also known as the Historic Buildings and Monuments Commission for England.
Method Statement	A statement that describes or details the way a task is to be completed.
Mitigation strategy	A structured programme of work intended to reduce the impact of a project, agreed with Highways England following the evaluation phase. Mitigation may involve, amongst others, avoiding or screening important heritage assets or their preservation or further investigative and recording works if as a result of a project the heritage assets would be diminished.
National Trust	Charity that cares for historic houses, gardens, ancient monuments, countryside and other sites across England, Wales and Northern Ireland, including parts of the Stonehenge landscape.
OASIS Record	The online archaeological event recording system and for uploading grey literature into its associated Library of Unpublished Fieldwork Reports. Local Authority Historic Environment Records request that OASIS record are completed and updated at key stages of a project.
Outstanding Universal Value	Outstanding Universal Value means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of humanity. To be deemed of Outstanding Universal Value, a property must also meet the conditions of integrity and/or authenticity and must have an adequate protection and management system to ensure its safeguarding.
Ploughzone Artefact Collection	A non-intrusive archaeological survey technique used to record the position and distribution of artefacts within the plough soil
Preservation in situ	A colloquial term for a process to ensure the significance of archaeological remains can be sustained and managed through retention within (or below) a development.
Preservation by record	A term used as a shorthand for all forms of archaeological recording where the remains will be lost. May comprise a range of techniques at a given site.
Research Framework	Identifies what is important or significant and provides research questions and objectives to help co-ordinate and focus research effort
Significant archaeological remains	The term generally used to describe the material, including deposits such as soils and associated artefacts and ecofacts, found on archaeological sites considered to be of significance with reference to the research objectives. There is often an

	overlap with built heritage where archaeological sites and monuments contain architectural elements although sometimes the term is used to distinguish between buried soft deposits and built heritage that has architectural elements and/or upstanding above-ground archaeology.
Technical Partner	The expert archaeological subconsultant employed by the Design Organisation to: provide advice on archaeological evaluation and the need for mitigation; produce a Project Brief for archaeological recording projects where necessary; and monitor and report progress on all phases of such projects, including post-excavation analysis and the production of a report. The work entails seeking the best solution for the Design Organisation through negotiation with the planning authorities.
Tool Box Talks	A short presentation to the site workforce providing continuing training in relevant aspects safety, health and environmental protection. Tool Box Talks are a principal means of informing all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the DAMS and OEMP and generally to ensure that these are put in place and complied with.
World Heritage Site	A site inscribed by UNESCO because of its Outstanding Universal Value under the terms of the UNESCO World Heritage Convention.
Written Scheme(s) of Investigation	A written design for archaeological investigation(s) that is often required in the planning process.

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PART FOUR – APPENDICES

Appendix A Flowcharts

A.1 DAMS development and implementation process

A.2 Archaeological Mitigation: phases and roles

Process of Development and Approval of SSWSIs, HMPs and Method Statements

A.4 Reporting Lines for Implementation and Monitoring of DAMS fieldwork (Preliminary Works stage: Phases 1 and 2)

A.5 Reporting Lines for Confirmation of Archaeological Action Area Completion (Preliminary Works stage)

A.6 Reporting Lines for Implementation and Monitoring of DAMS fieldwork (Main Works stage: Phase 3)

A.7 Reporting Lines for Confirmation of Archaeological Action Area Completion (Main Works stage: Phase 3)

A.8 Reporting Lines for Sign-off of Post Excavation Assessment Report and Updated Archaeological Research Strategy

A.9 Indicative time line for implementation of PW and MW stage archaeological works

Appendix B Archaeological Standards and Guidance

B.1 Historic England Standards and Guidance

B.2 Other Standards and Guidance

Appendix C OEMP requirements: ACoW and HMPs

C.1 Archaeological Clerk of Works: Responsibilities

C.2 Heritage Management Plans

Appendix D Archaeological Mitigation Action Areas

D.1 Proposed archaeological fieldwork areas and preservation of archaeological remains

D.2 Areas excluded from archaeological mitigation

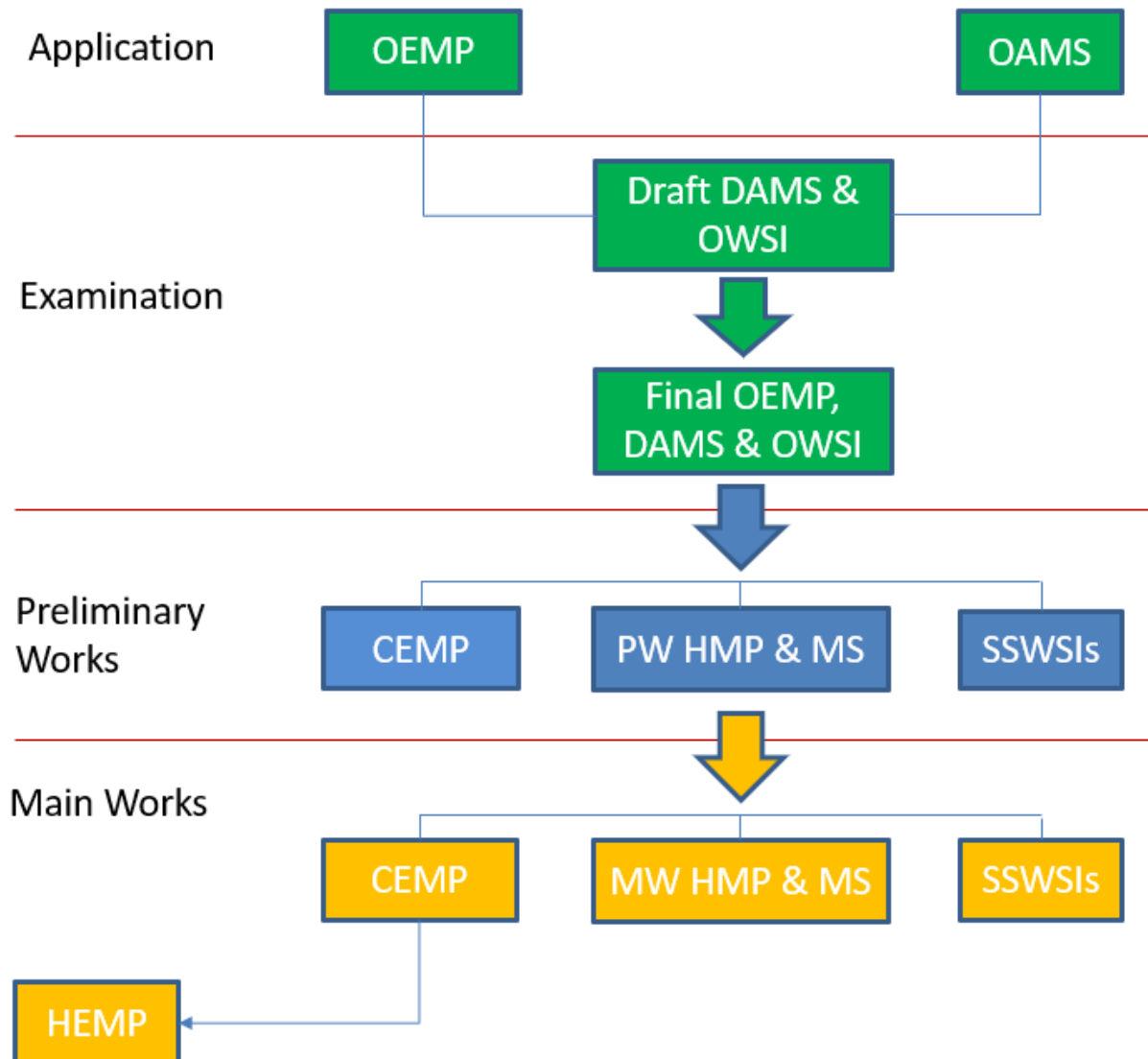
Appendix E Public Archaeology and Community Engagement (PACE) Strategy

E.1 Outline PACE Strategy

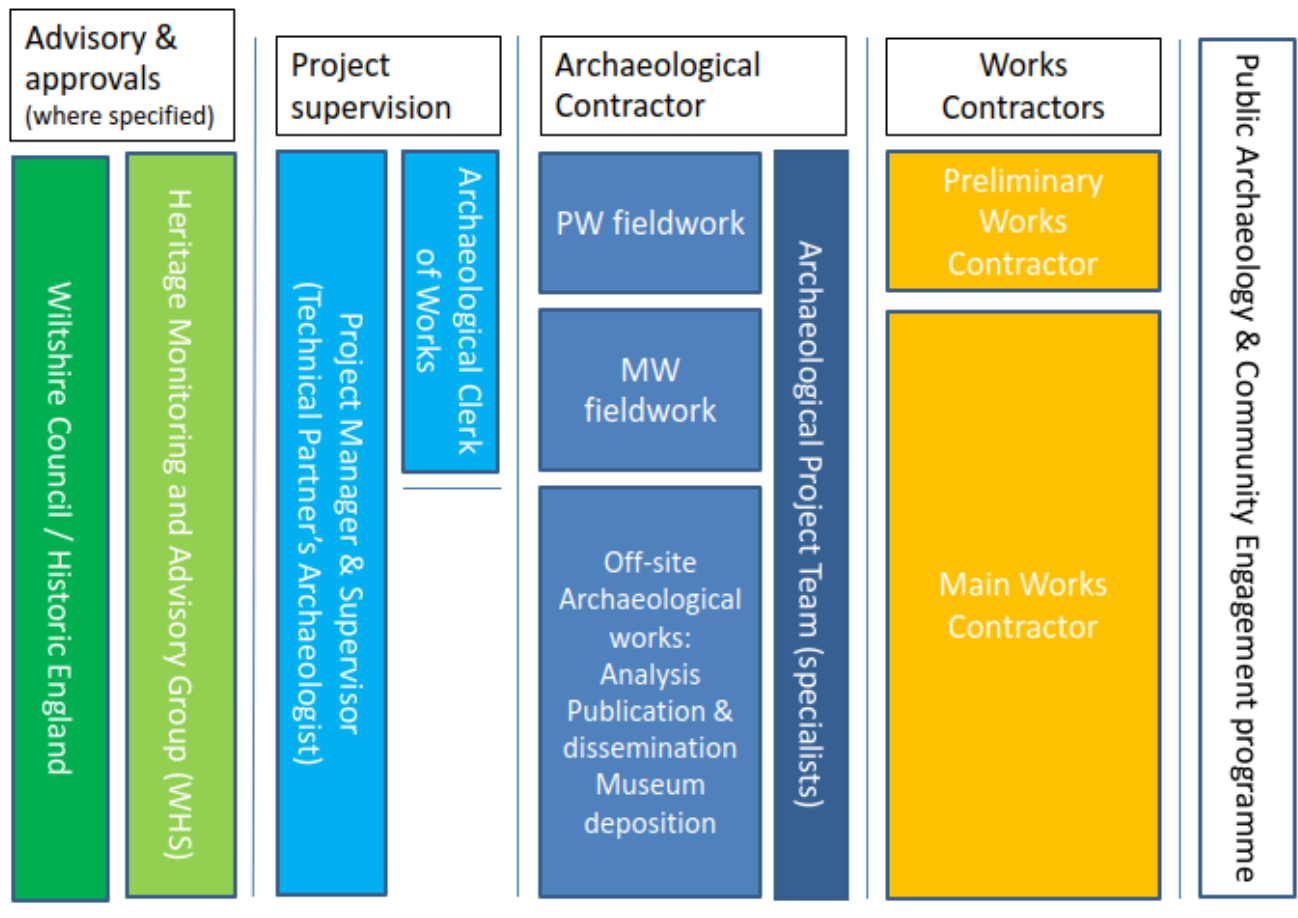
E.2 Action Plan

Appendix A Flowcharts

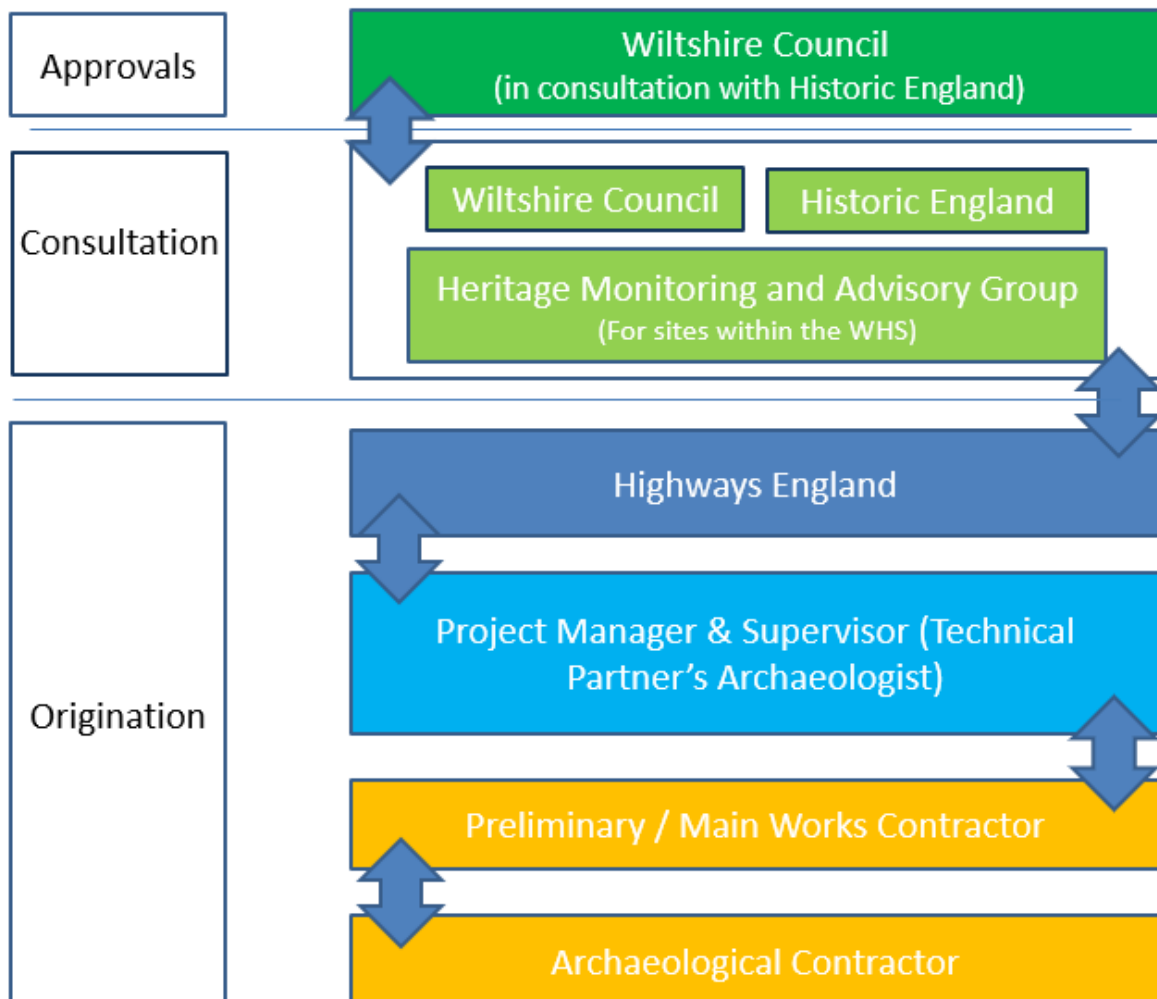
A.1 DAMS development and implementation process



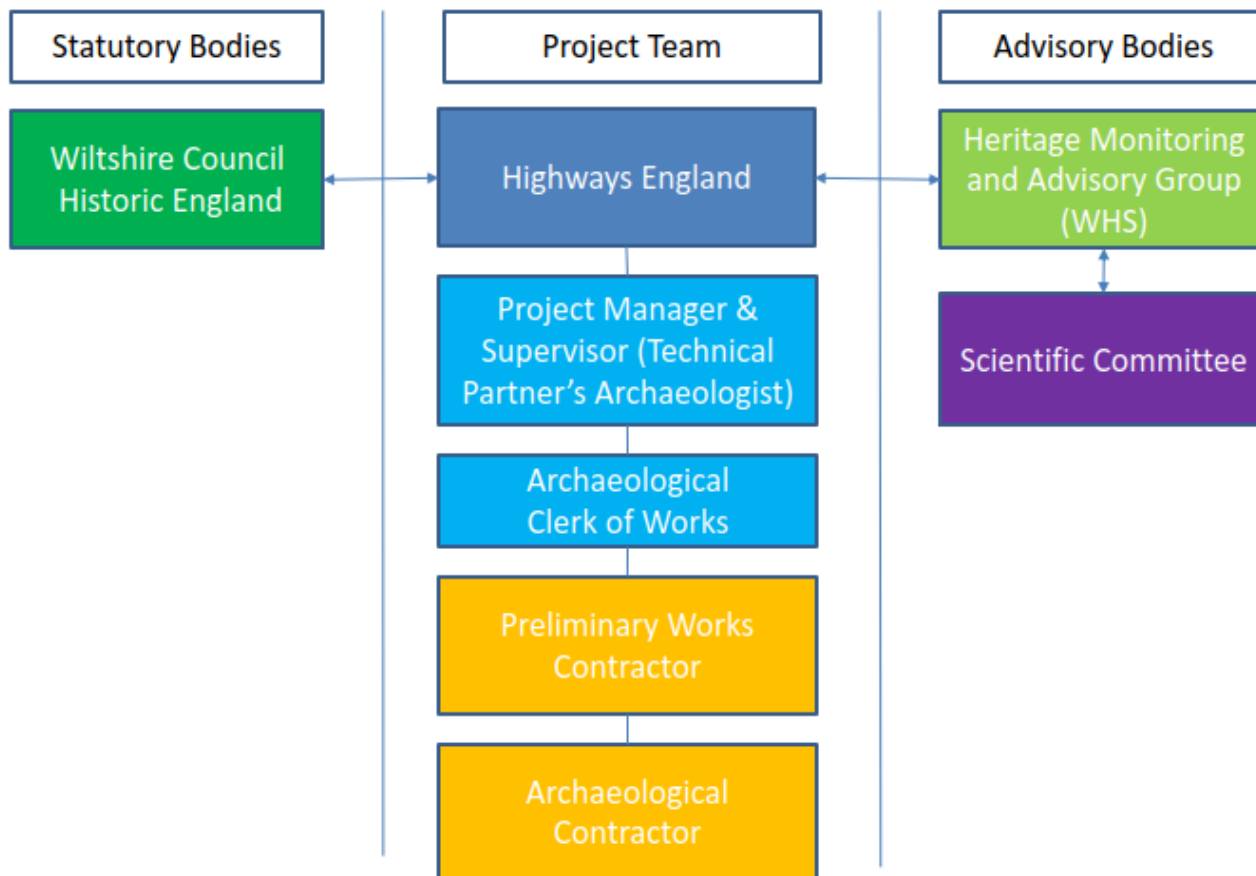
A.2 Archaeological Mitigation: phases and roles



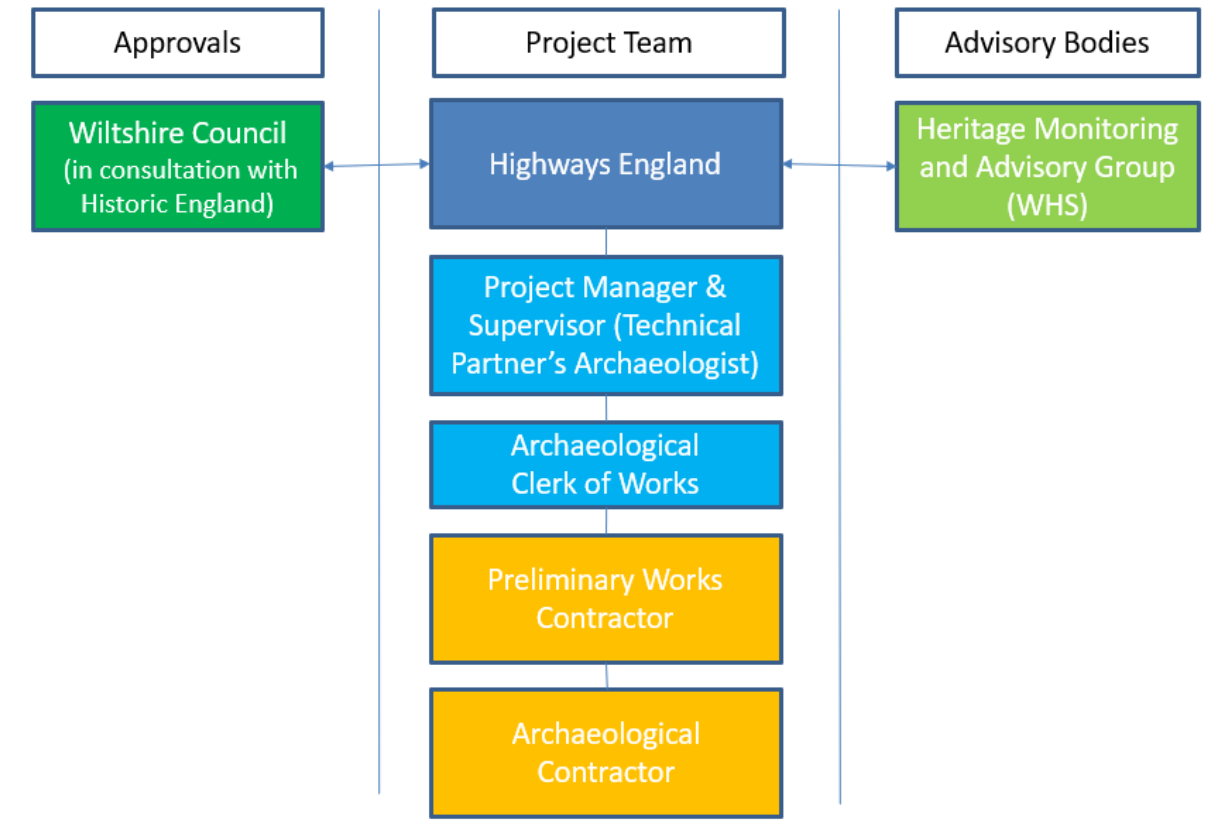
A.3 Process of Development and Approval of SSWSIs, HMPs and Method Statements



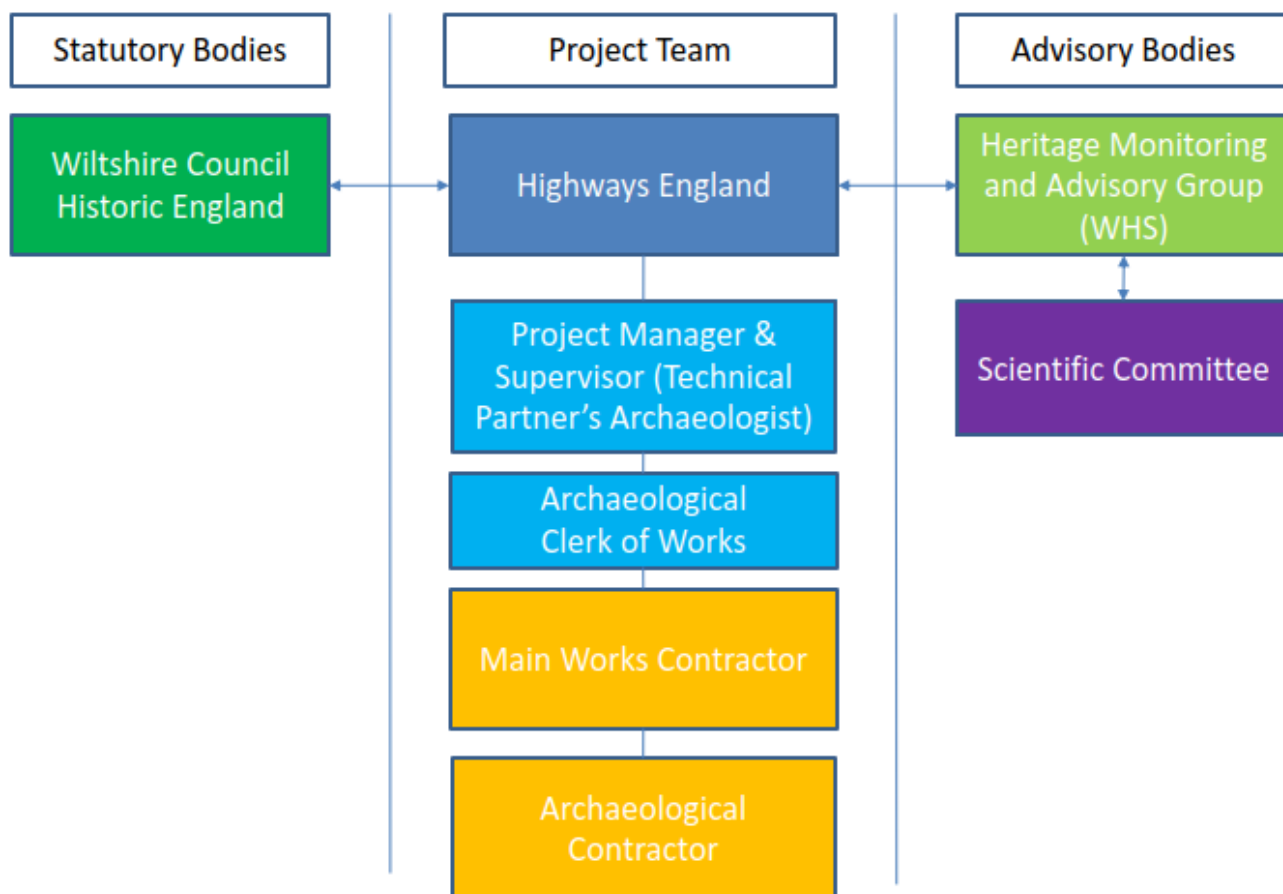
A.4 Reporting Lines for Implementation and Monitoring of DAMS fieldwork (Preliminary Works stage: Phases 1 and 2)



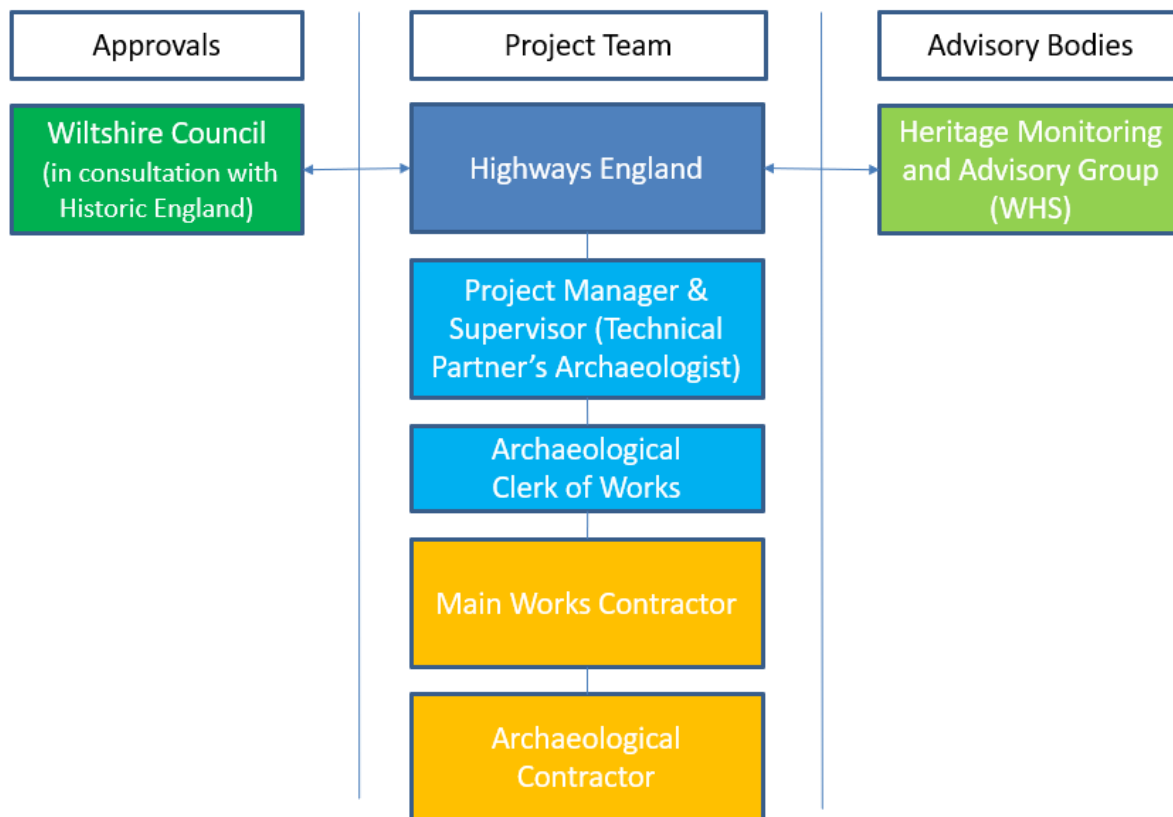
A.5 Reporting Lines for Confirmation of Archaeological Action Area Completion (Preliminary Works stage)



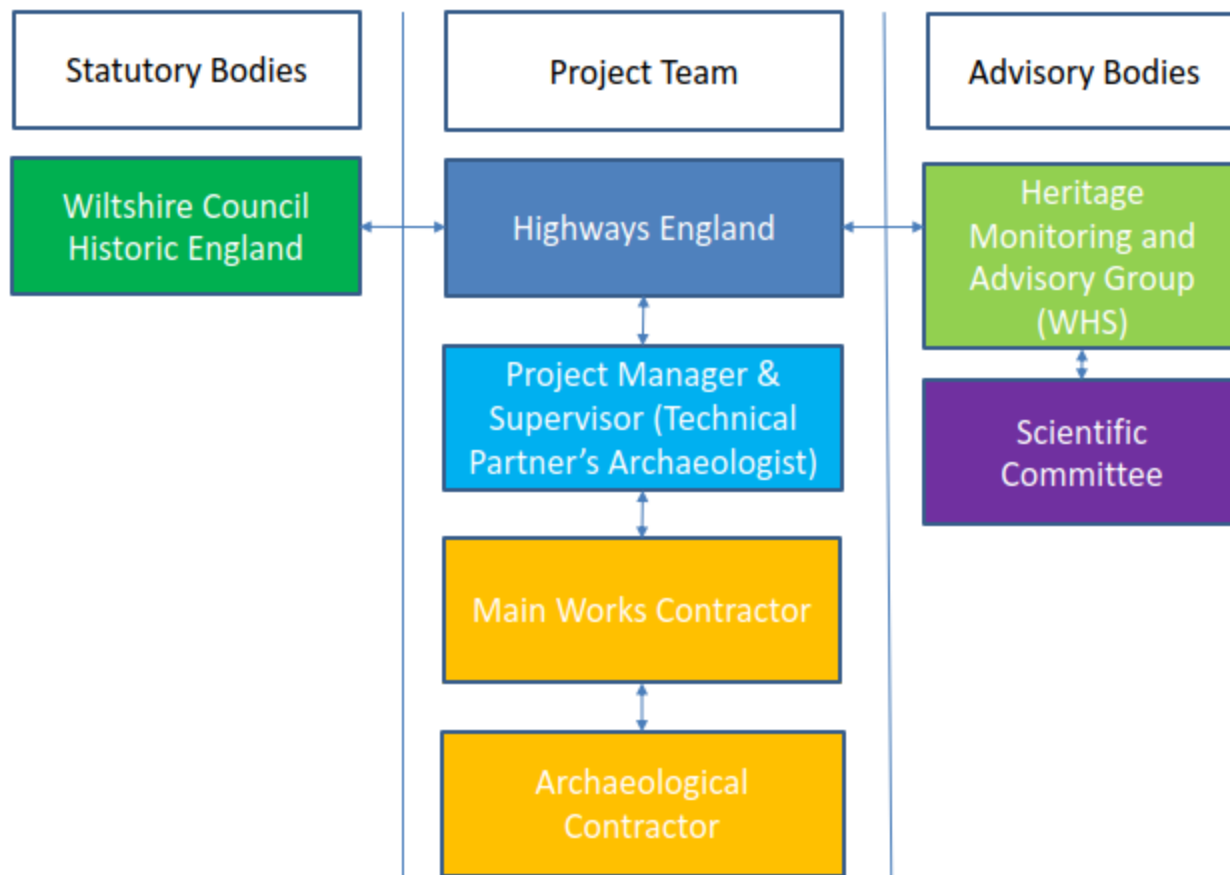
A.6 Reporting Lines for Implementation and Monitoring of DAMS fieldwork (Main Works stage: Phase 3)



A.7 Reporting Lines for Confirmation of Archaeological Action Area Completion (Main Works stage: Phase 3)



A.8 Reporting Lines for Sign-off of Post Excavation Assessment Report and Updated Archaeological Research Strategy



A.9 Indicative time line for implementation of PW and MW stage archaeological works

	2020		2021		2022		2023		2024		2025		2026		2027		2028	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Works																		
PW Archaeological Contractor																		
Archaeological Fieldwork	■	■	■	■														
Post-ex Assessment					■	■	■	■										
Post-ex Analysis								■	■	■	■	■	■	■				
Publication											■	■	■	■				
Archive deposition														■				
Main Works stage																		
MW Archaeological Contractor																		
Archaeological Fieldwork					■	■	■	■	■	■	■	■	■	■	■	■	■	■
Post-ex Assessment																	■	■
Post-ex Analysis																		■
Publication																		■
Archive deposition																		■

Appendix B Archaeological Standards and Guidance

B.1 Historic England Standards and Guidance

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Appendix C OEMP requirements: ACoW and HMPs

C.1 Archaeological Clerk of Works: Responsibilities

C.1.1.1 The responsibilities of the proposed Archaeological Clerk of works position as set out in the OEMP (as approved by the DCO) are as follows:

<p>Archaeological Clerk of Works (ACoW): (Highways England)</p>	<p>CEMP responsibilities:</p> <ul style="list-style-type: none"> • Review of relevant sections of the CEMP prepared by the contractor's Environmental Manager. • Responsible for monitoring all archaeological elements of the CEMP during construction. • Reviews the contractor's Heritage Management Plans (HMP). • Reviews the contractor's Soils Management Strategy. • Liaise with and provide guidance for contractors in relation to the requirements of the DAMS. <p>Overall responsibilities:</p> <p>Monitoring the relevant contractor/s compliance with their contractual obligation to ensure that the Scheme complies with all archaeological and historic environment legislation and consents, including the DCO and the DAMS and those arising from the OEMP and CEMP throughout the relevant project phase.</p> <p>The ACoW will:</p> <ul style="list-style-type: none"> • Coordinate archaeological site works. • Facilitate access and monitoring arrangements with members of HMAG, as set out in the DAMS. • Monitor compliance by the contractor/s with their HMPs. • Give Tool Box Talks, where required, to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under this OEMP and generally to ensure that these are put in place and complied with. • Monitor the contractor's compliance with their obligations to ensure that the CEMP, the contractor's HMPs and any requirements of the DAMS are carried out. • Monitor fieldwork at all stages to ensure consistency of approach between archaeological contractors. • Monitor the contractor/s' compliance with their obligations to ensure that protection measures are in place and maintained appropriately throughout the construction period in compliance with the contractor's HMPs, the DAMS and relevant SSWSIs. • Provide monitoring feedback to heritage stakeholders during site meetings, including compliance/non-compliance issues and how these are being resolved with respect to the DAMS.
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C.2 Heritage Management Plans

C.2.1.1 The requirements for Heritage Management Plans as set in PW-CH1 and MW-CH1 of the OEMP (as certified by the DCO) are as follows:

PW-CH1 – Heritage Management Plan (HMP):

The preliminary works contractor (archaeology) shall produce a HMP based on the DAMS, indicating how the historic environment (relevant to the scope of works) is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The HMP shall address:

- a) all temporary and permanent works, which may include, as relevant, boundary fencing, vegetation clearance, ground investigations, demolition, utility diversions, reinstatement works, access routes and works compounds.
 - b) potential impacts on heritage assets both inside and outside the World Heritage Site (WHS) from activities which may include, as relevant, ground vibration, light pollution, dust, ground movement / subsidence, dewatering, and the impact on buried archaeological remains of construction activities (rutting, compaction of soft ground etc.)
 - c) issues of security for vulnerable sites / areas of archaeological interest outside the normal working hours, and at weekends.
 - d) procedures for the protection of unexpected archaeological discoveries.
 - e) sites for preservation in-situ (including protective fencing) and sites for preservation by record
- The preliminary works contractor (ecology, utilities, roads and ground investigation) shall identify within their CEMP how works are to be carried out in accordance with the Heritage Management Plan.

MW-CH1 – Heritage Management Plan:

The main works contractor shall develop a Scheme-wide Heritage Management Plan (HMP), based upon the DAMS, in accordance with DCO Requirement 5, indicating how the historic environment is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The HMP shall address:

- a) all temporary and permanent works, including boundary and protective fencing, vegetation clearance, ground investigations, demolition, utility diversions, reinstatement works, access routes / haul roads and works compounds.
- b) potential impacts on heritage assets both inside and outside the WHS from activities such as ground vibration, light pollution, dust, ground movement / subsidence, dewatering, and the impact on buried archaeological remains of construction activities (rutting, compaction of soft ground etc.)
- c) archaeological mitigation measures to be deployed for the installation of the proposed Tunnel Movement Monitoring Stations (Site 26 - refer to the DAMS).
- d) issues of security for vulnerable sites / areas of archaeological interest outside the normal working hours, and at weekends.
- e) measures to avoid light spillage outside of the main compound area.
- f) procedures for the protection of unexpected archaeological discoveries.
- g) sites for preservation in-situ (including protective fencing) and sites for preservation by record.

The main works contractor shall identify within its CEMPs how works are to be carried out in accordance with the Heritage Management Plan.

C.2.1.2 HMPs will be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) (see 5.1.23 above). The consultation process is set out in section 8.5 above.

Appendix D Archaeological Mitigation Action Areas

D.1 Proposed archaeological fieldwork areas and preservation of archaeological remains

D.1.1.1 Figures included in this Appendix D show indicative areas for archaeological mitigation: these are subject to further definition as part of the development and approval of SSWSIs in accordance with sections 8.5 and 8.6 of this DAMS.

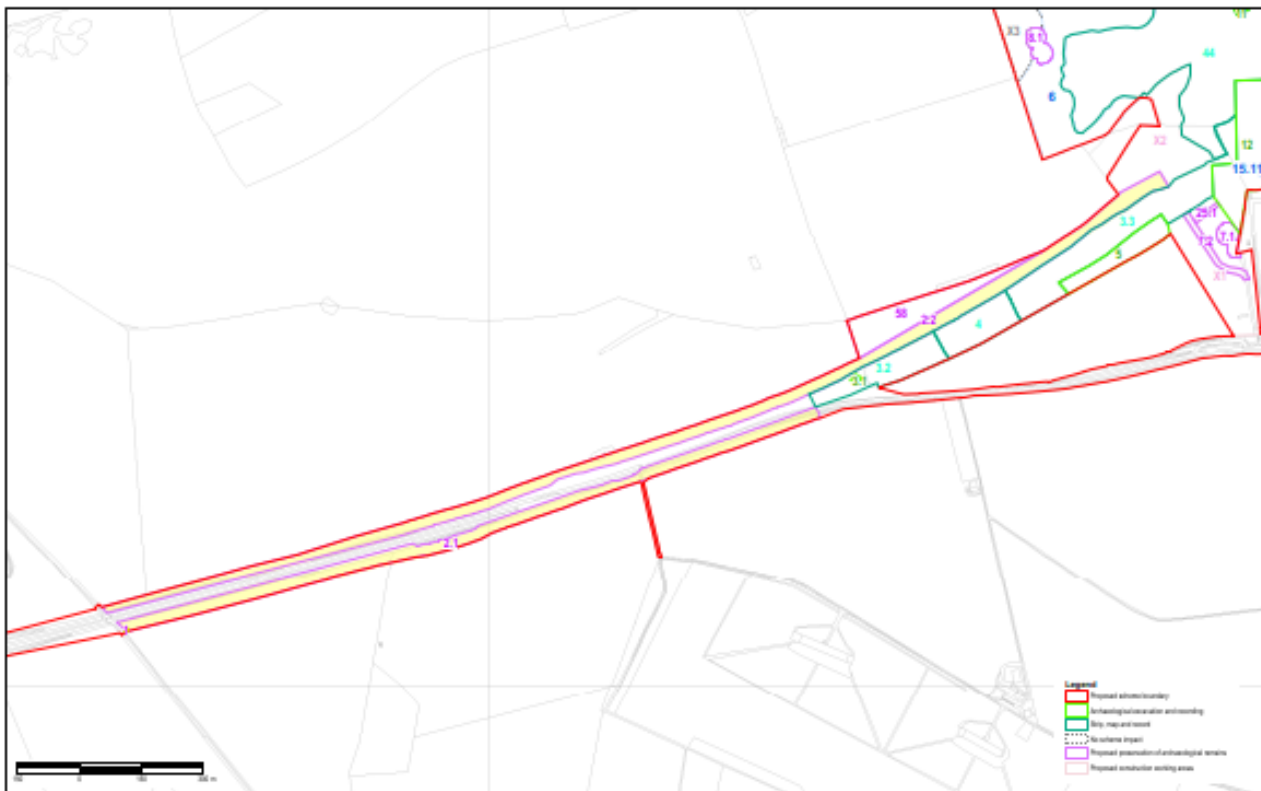
At the PW stage a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts (PW and MW stages) as identified in the Method Statement, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS, for approval by Wiltshire Council in consultation with Historic England.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed, leaving the milestone in situ.

Sites 2.1 and 2.2: Field systems east of Yarnbury Camp, and an undated oval enclosure.	
Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6250, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267, MWI7223, MWI7261
Location (NGR):	Site 2.1: 405271, 140473 (south of existing A303) Site 2.2: 405750, 140706 (north of existing A303)
Site area (approximate):	Site 2.1: 4.95ha Site 2.2: 7.51ha



Description

Site 2 comprises a private means of access (PMA) on the south side of the A303 (Site 2.1) and a restricted byway on the north side (Site 2.2).

UID 1004.01: Extensive field systems known largely from aerial photographs lie partly within the DCO boundary between chainages 00-1800m, north and south of the existing A303. These are likely to date from the Later Prehistoric and Roman period, and may be associated with activity at the hillfort.

Traces of possible enclosures have been identified amongst the field systems.

Possible linear features have been identified by geophysical survey within this area (GSB Prospection Ltd, 2001a; GSB Prospection Ltd, 2001b), although subsequent trial trenching did not identify any remains (Wessex Archaeology, 2002c). On the south side of the A303 an undated enclosure (UID 1006) is recorded. Recent geophysical survey of Site 2.2 north of the A303 (Highways England, 2019a [REP1-041], Area NW11) detected anomalies that correspond to the remains of an extensive later prehistoric-Romano-British field system which has previously been recorded from aerial photographs. The positive elements are most likely associated with ditch-like features, with the negative response being attributable to banks (a slight discrepancy is noted between the position of the cropmarks and that of the anomalies identified by this survey). The anomalies are also less extensive than has been indicated by the cropmarks, possibly suggesting that these features are not quite as widespread or that they have been heavily ploughed down. It also identified the remains of a post-medieval pond associated with a small double-ditched enclosure, and a possible ring-ditch feature that may represent a possible truncated Bronze Age round barrow (recorded in the WSHER as a possible round barrow, MWI74873 – see Site 3). Small pit-like features prevalent at the eastern end of the survey are could represent tree throws.

Trial trench evaluation at Site 4 to the south of Site 2.2 has revealed limited evidence of prehistoric occupation, including a pit, rectilinear enclosures and ditches (Highways England, 2019d [REP1-049, 050]).

Scheme impact

The construction of the Private Means of Access (PMA) on the south side of the A303 (Site 2.1) and the restricted byway on the north side of the A303 (Site 2.2) will impact the buried remains of field systems of uncertain date (possibly later prehistoric period and Roman period, and which were re-used in the medieval/post-medieval period). Both the PMA and the restricted byway are proposed to be constructed above existing levels, subject to detailed design.

Mitigation

The eastern end of Site 2.2 is part of the Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.

Preservation of archaeological remains is proposed for the construction of the Private Means of Access (PMA) on the south side of the A303 (Site 2.1) and the restricted byway on the north side of the A303 (Site 2.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. Protective fencing will be installed alongside the PMA route to ensure that construction traffic does not stray outside of the PMA and byway areas. If preliminary archaeological investigations are required to install the fence posts as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out their scope and nature, in accordance with the DAMS.

Sites 3.1 to 3.4: Possible ring ditch on mainline, and low-density pits and linear features	
Designation:	Non-designated
Reference IDs:	UID 2025/MWI74873 UID 1004.01/MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001 UID 1008/MWI6917, MWI6931, MWI6993, MWI6995, MWI74870, MWI74872 UID 2038/MWI74875
Location (NGR):	Site 3.1: 405864, 140719 Site 3.2: 406039, 140801 Site 3.3: 406698, 141208 Site 3.4: 407001, 141358
Site area (approximate):	Site 3.1: 0.04ha Site 3.2: 1.94ha Site 3.3: 4.61ha Site 3.4: 3.80ha
Description	

Site 3 consists of sections of the Winterbourne Stoke Bypass (west).

Site 3.1 comprises a possible ring ditch (ploughed-out barrow) identified from aerial photographs and geophysical survey (GSB Prospection Ltd, 2001b). The feature does not appear to have been located during a subsequent trial trench evaluation (Wessex Archaeology, 2002b) (Trench 6). However, it is uncertain if the feature detected by the geophysical survey was accurately located, or if the trench was accurately positioned over the feature.


Geophysical survey completed in 2018 identified a linear anomaly within Site 3, interpreted as a probable lynchet (15012) corresponding to the alignment of the field system identified from cropmarks across Parsonage Down. Abundant circular and sub-circular pit-like features (<3m diameter) were also detected, but these could be of natural origin, possibly tree throws (Highways England, 2019a [REP1-041]). The previously-identified ring ditch cropmark was not clearly replicated in the 2018 geophysical survey results, although a weak curvilinear trend was noted which could be associated with the remains of a (likely poorly preserved) ring-ditch feature.

Subsequent trial trenching across the linear feature (Trench 663) was unable to confirm the presence of the lynchet (Highways England, 2019d [REP1-049, 050]). Trenches 663, 664 and 665 contained no archaeological features although natural features were present in Trench 663 (tree throw and tree rooting holes).

Sites 3.2 to 3.4: extensive field systems east of Yarnbury Camp north and south of the existing A303 are known largely from aerial photographs (1004.01). These incorporate co-axial field systems, where there is a series of regular fields on a common axis and some areas of more irregular, possibly later, aggregate field systems and are likely to date from the Later Prehistoric and Roman period, possibly associated with activity at the hillfort. A particularly well-preserved part of the field system to the north-east of Yarnbury Camp is scheduled, along with an oval enclosure (NHLE 1009646). Extending across Site 3.2 are possible pits which were identified by geophysical survey, and suspected to be of Bronze Age date (UID 1008), although trial trenching (Highways England, 2019d, Trenches 663-672) did not identify extensive surviving remains. Sites 3.3 and 3.4 are close to a cluster of pit-like features that are distributed across the eastern parts of Parsonage Down (UID 2038).

At Site 3.4 the soil sequence revealed in the trial trenches was generally an active ploughsoil (0.20–0.30 m thick), a mid greyish-brown silty loam, directly over the natural Chalk bedrock. However, in the central part of the evaluated area where a coombe is present in Trenches 709 and 710 variable depths of colluvium was recorded dependant on topographic location within this dry valley. In Trench 709 the layer of colluvium covered the middle of the trench and the excavators concluded that it was likely washed down from hills in the Early to Late Bronze Age (Wessex Archaeology, 2003b: p.94).

Scheme impact
<p>Site 3.1 lies in an area of cutting east of where the new A303 diverges from the existing road. Construction of the new A303 here will remove the site of a possible ring ditch recorded from aerial photographs and historic geophysical survey.</p> <p>Sites 3.2 to 3.4 will impact extensive low-density remains that may include occasional pits and linear features relating to field systems or possible enclosures.</p>
Mitigation
<p>Site 3.4 and the eastern end of Site 3.3 are part of Parsonage Down LiDAR survey area. airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey in these site areas will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.</p> <p>Archaeological excavation and recording (AER) of an area 20m x 20m at Site 3.1 is proposed in order to identify and record any surviving traces of the possible ring ditch feature, cropmark lynchet and possible pits or tree throws.</p> <p>Sites 3.2 to 3.4 are located along the Scheme mainline within the earthworks cutting between Sites 3.1 and 10.3 and will be investigated by strip, map and record. At Site 3.4 strip, map and record will be combined with the geo-archaeological investigation of colluvial sequences that have been found during trial trench evaluation preserved in dry valley/coombe locations, as part of the scheme-wide geo-archaeological strategy.</p>
Research objectives identified in the Archaeological Research Agenda
<p>Archaeological excavation and recording (AER) of the possible ring ditch feature, if present, can provide insights into the Early Bronze Age mortuary landscape. The cropmark lynchet is testimony to past agricultural practices in the area. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:</p> <ul style="list-style-type: none"> • R.6: Burials and barrows • R.7: Landscape history and memory • R.8: Human Generations • R.9: Daily Life • EBA.4; What was the nature of the local environment, contemporary land-uses and other activity in the landscape? • MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them? • MBA.3: What is the chronology of the various elements of the field systems? When did they originate? Over what time-scale were they laid out? • MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Site 4: Enclosures, field systems and isolated burials (Iron Age) north-west and north of Scotland Lodge.	
Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 (field systems) UID 2027/MWI6935 (burial) UID 2029/MWI6948, MWI7133 (field systems – enclosures)
Location (NGR):	406186, 140875
Site area (approximate):	1.61ha
	
Description	
<p>Extensive field systems east of Yarnbury Camp north and south of the existing A303 are known largely from aerial photographs (UID 1004.01). These incorporate co-axial field systems, where there is a series of regular fields on a common axis and some areas of more irregular, possibly later, aggregate field systems and are likely to date from the Later Prehistoric and Roman period, possibly associated with activity at the hillfort. A particularly well-preserved part of the field system to the north-east of Yarnbury Camp is scheduled, along with an oval enclosure (NHLE 1009646).</p>	

The system comprises rectangular fields of varying sizes, and on steeper slopes, strip lynchets. The field system was re-used in the medieval/post-medieval period with traces of ridge and furrow being visible within some of the embanked field units in the centre of the field system. Traces of possible enclosures are identifiable amongst the field systems.

Inhumation (probably Iron Age) found in a pit associated with pottery fragments. Close by was another pit which contained burnt flint and pottery fragments (UID 2027).

Two possible rectilinear enclosures of unknown date were mapped from aerial photographs and confirmed by geophysical survey (UID 2029) (GSB Prospection Ltd, 2001b). The features appear as one incomplete, ditch defined rectangular enclosure with a width of 33m and a possible length of 110m, and a second possible enclosure to the north-west. These features may be associated with the later prehistoric settlement to the east (UID 2033). Archaeological evaluation (Wessex Archaeology, 2003b) has confirmed the presence of the north ditch of the eastern enclosure as a steep sided, V-shaped ditch (Trench 508). The fills suggest that a bank may have existed on the northern side, external to the enclosure. A small quantity of cattle bone may represent secondary deposition of midden material. A linear ditch to the east was notably smaller in dimensions but nevertheless appears to represent an extension of the enclosure ditch. Late Bronze Age – Early Iron Age pottery, cattle bone and burnt flint was recovered. The position of the ditch and the presence of a possible northern bank were also confirmed during the excavation of a geotechnical trial pit (Wessex Archaeology, 2003a). An assemblage of mostly Bronze Age worked flint and Roman pottery was recovered in the area during fieldwalking (Wessex Archaeology, 1994).

Trial trench evaluation in 2018 (Highways England, 2019d [REP1-049, 050]) identified rectilinear enclosures of uncertain date (Trench 673) that correlate with two sides of a partial rectilinear enclosure previously identified in aerial photographs/NMP data and geophysical data. The east–west aligned ditch (67303) was the more substantial of the two, measuring 2.5m wide and 1.3m deep; a secondary fill might be evidence of bank material eroding in from the south: animal bone and worked flint were the only recovered artefacts. The other north–south aligned ditch (67321) had a similar V-shaped profile, 1.4m wide and 0.64m deep, but contained no finds. Although no datable finds were recovered, these ditches could tentatively be of later prehistoric date, given the finding of a small pit within the enclosures (67319). Two undated linear features (67704 and 67708) aligned perpendicular to each other were revealed in Trench 677. One was a well-defined ditch (67704) approximately corresponding to a north–south orientated geophysical linear anomaly. The other (67708) was a shallow (0.06m deep) 3m wide feature, tentatively interpreted as a trackway or a poorly preserved lynchet or headland deposit. A small assemblage of prehistoric pottery came from Pit 67319 and from topsoil in Trench 676. Possible late Bronze Age or Early Iron Age flintwork was recovered from Trench 677 and four groups of burnt flint from Trenches 676 and 677 that are likely to be of general prehistoric date.

Scheme impact

Site 4 lies on the main line of the new A303 in an area of cutting. Construction of the cutting will remove the remains of rectilinear enclosures of possible later prehistoric date identified during archaeological evaluation and mapped from aerial photographs, and other features that might be related to the enclosure including elements of an extensive field system.

Mitigation

Strip, map and record is proposed over an area of 200m x 80m across the full width of the new cutting, to identify and record the series of undated possible later prehistoric rectilinear enclosures/parts of the field system.

Research objectives identified in the Archaeological Research Agenda

SMR of Site 4 will allow investigation of the field systems (including presence of ridge and furrow) and the enclosures, aiding an appraisal of landscape and settlement development. The probable Iron Age burial illustrates changing mortuary practices over time. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.8: Human Generations

- R.9: Daily life
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 5: Northern edge of Iron Age settlement at Scotland Lodge.

Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6943 UID 2033/MWI6959
Location (NGR):	406503, 141017
Site area (approximate):	1.25ha


Description
Background

An extensive series of 'Celtic field systems' to the east of Yarnbury Camp, known largely from aerial photographs (UID 1004.01). Incorporates co-axial field systems, where there is a series of regular fields on a common axis and some areas of more irregular, possible later aggregate field systems. Likely to date from the Later Prehistoric and Roman period, and may be associated with activity at the hillfort. Traces of possible enclosures have been identified amongst the field systems.

The system comprises rectangular bank defined fields of varying sizes, and, on steeper slopes, strip lynchets. The field system was re-used in the medieval/post-medieval period with traces of ridge and furrow being visible within some of the embanked field units in the centre of the field system. Also noted was a polygonal medieval sheep penning seen overlying the earlier banks.

Possible linear features and trends have been identified by geophysical survey within this area (GSB Prospection Ltd, 2001a; GSB Prospection Ltd, 2001b) although a later evaluation suggests many of the anomalies from the earlier survey are not anthropogenic in nature (Wessex Archaeology, 2002d), or do not survive as below ground features. Though most of these ditches were undated, some Prehistoric worked flint was recovered from one of the features and Early Bronze pottery from another (Wessex Archaeology, 2002b). A sherd of Roman pottery reused as a spindle

whorl was also recovered residually within a more recent ditch.

Iron Age – Romano-British settlement enclosures

A potential Roman settlement and traces of an Iron Age oval enclosure west of Scotland Lodge, Winterbourne Stoke was initially observed as soil marks and mapped from aerial photographs (UID 2033). The settlement comprised numerous rectilinear and sub-rectangular ditch defined enclosures, numerous small pits and larger patches of dark soil thought to be associated with the settlement. A concentration of Late Roman pottery and burnt flint was recovered during fieldwalking in this area (Wessex Archaeology, 1992), Geophysical surveys (GSB Prospection Ltd, 2001b) confirmed that an oval ditch contains dense concentrations of pits, and that further enclosures extend eastwards and westwards, also with concentrations of pits. The results suggest that the extent of the main settlement has been defined. Targeted evaluation in 2002 confirmed occupation on this site from the Early Iron Age through to the Roman period (Wessex Archaeology, 2002a; Wessex Archaeology, 2002b). Artefactual evidence suggests a possible unenclosed Bronze Age precursor.

Site 5 intersects the mapped northern extent of the Iron Age oval enclosure (UID 2033), and parts of the extensive field system (UID 1004.01). Archaeological evaluation in 2003 found no archaeological remains of the settlement or field system within the Scheme boundary (Trenches 10, 11, 12, 15, 16 and 17, Wessex Archaeology, 2003b).

Trial trenching in 2018 within and/or close to Site 5 (Trenches 683, 686 and 687) also found no archaeological remains, although a small amount of Roman pottery came from the ploughsoil in Trenches 686 and 687 (Highways England, 2019d [REP1-049, 050]).

Scheme impact

The alignment of the new A303 has been designed to avoid the northernmost edge of the settlement enclosures. However, construction of the Scheme mainline in cutting through Site 5 may impact potential archaeological remains associated with the periphery of the Iron Age – Romano-British settlement and components of an extensive possible later prehistoric and Roman period and medieval/post-medieval field system.

Mitigation

Strip, map and record at Site 5 of an area 300m x 25m within the southern DCO boundary is proposed, to identify and to preserve by record any remains related to the Iron Age enclosed settlement and any surviving traces of the late prehistoric field system.

Research objectives identified in the Archaeological Research Agenda

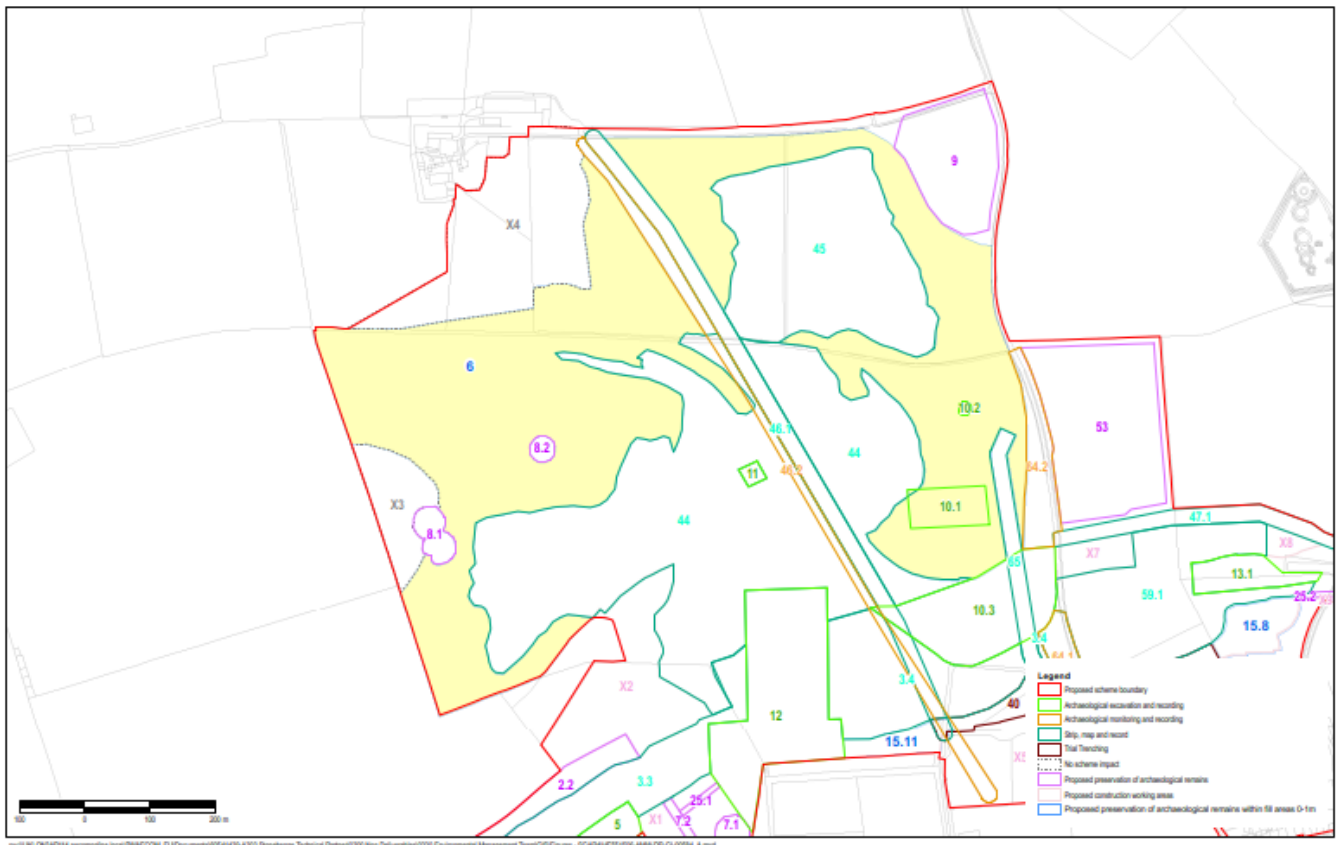
SMR at Site 5 may contribute further evidence for the extent of the settlement and its situation within the surrounding field systems, which may include elements of later prehistoric through to medieval date. The study of settlement sites and field-systems from the later prehistoric and Iron Age has the potential to inform on changing concepts of landscape use. The situation and proximity of the settlement site in relation to the Iron Age hillfort at Yarnbury Castle to the west and the Neolithic/Early Bronze Age ring ditches to the east (Site 7) is also of interest.

The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

- R.7: Landscape History and Memory
- R.8: Human Generations
- R.9 Daily Life
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?

- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape? (SSRQ.6)
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas? (SSRQ.7)
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (SSRQ.8)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (SSRQ.9)
- RB.1: How can we decide whether the later activity around these exceptional monuments was a particular response to them?
- RB.2: Are there recognisable patterns of activity, including ritual/religious activity, at the existing 'ancient' monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries? ... Is there evidence that prehistoric monuments were seen as a useful source of stone for the construction of Roman villas (or other buildings)? If so did this affect settlement location?
- RB.4: Rural Settlement of Roman Britain project: the production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy.
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?
-

Site 6: Parsonage Down East excavated material deposition area (less than 1m fill depth)	
Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 (field systems) UID 1005/MWI7159, MWI7245, MWI7262 (linear boundary) 2030.01/MWI7134 2030.02/MWI7200 2030.03/MWI7160 UID 2036/MWI74874 UID 2038/MWI74875 UID 2039
Location (NGR):	406890, 141798
Site area (approximate):	46.68ha



Description

Site 6 is a large irregular area at Parsonage Down (approx. 47ha. in size) that contains within it two areas for detailed evaluation and a number of known sites, identified as a result of archaeological survey that will be protected from construction activities. It is bisected by the existing and realigned Esso pipeline routes (Sites 46.1 and 46.2)

The extensive remains of field systems known largely from aerial photographs which lie partly within the DCO boundary between chainages 00-1800m north and south of the existing A303. These are likely to date from the later prehistoric and Roman periods and may be associated with activity at the hillfort (Yarnbury Camp). Traces of

possible enclosures have been identified amongst the field systems. The field system was re-used in the medieval/post-medieval period (UID 1004.01). A boundary feature, visible on aerial photographs as a soil/cropmark (UID 1005) follows a broad south-west – north-east alignment with an additional north-west section. It is on a similar alignment/respected by another field system in this area (UID 1004) and it may also be associated with activity at Yarnbury Camp (UID 1000). Extensive geophysical survey has detected a series of linear anomalies in the area representing field boundaries some of which form part of an orthogonal pattern (Highways England, 2019a [REP1-041]). Trial trenching has also identified numerous lynchets of likely medieval and post-medieval date (some may have earlier later prehistoric origins) and ditches that form part of a larger sub-rectangular enclosure (Highways England, 2019d [REP1-049, 050]); and has identified colluvium within a coombe that is present in the central part of the area and an Early Bronze Age urned cremation in a Food Vessel (damaged by plough) (trench 985) (Site 11).

A sub-oval enclosure (UID 2039) approximately 185m across at the east of the site (Site 9) has been identified from cropmark evidence. It is likely to be part of the Iron Age/Romano-British settlement on High Down, from which it is divided by the B3083. Geophysical survey indicates that it survives as a continuous ditch-like feature with some evidence for bank material on either side of the ditch and with some internal pit-like anomalies that may relate to associated activity, with at least two clusters (geophysical anomalies 12003 and 12005) (Highways England, 2019a [REP1-041]).

Archaeological investigations in 2018 within the southeast of the area (Site 10.1) detected a field system of east–west orientated lynchets at regular intervals (55–65m apart) with some short north–south divisions is apparent (Area NW9) and lynchets (Trenches 1052, 1057, 1220 and 1229) (Highways England, 2019d [REP1-049, 050]). Also the eastern side of a penannular ring ditch or oval enclosure measuring approximately 21m (north–south axis) by 2m (east –west axis) (recorded in Trench 1057). Within the east side of the area a Middle Neolithic pit was found in Trench 1219 which was rich in finds (prehistoric pottery, struck flint, burnt flint and animal bone (Site 10.2).

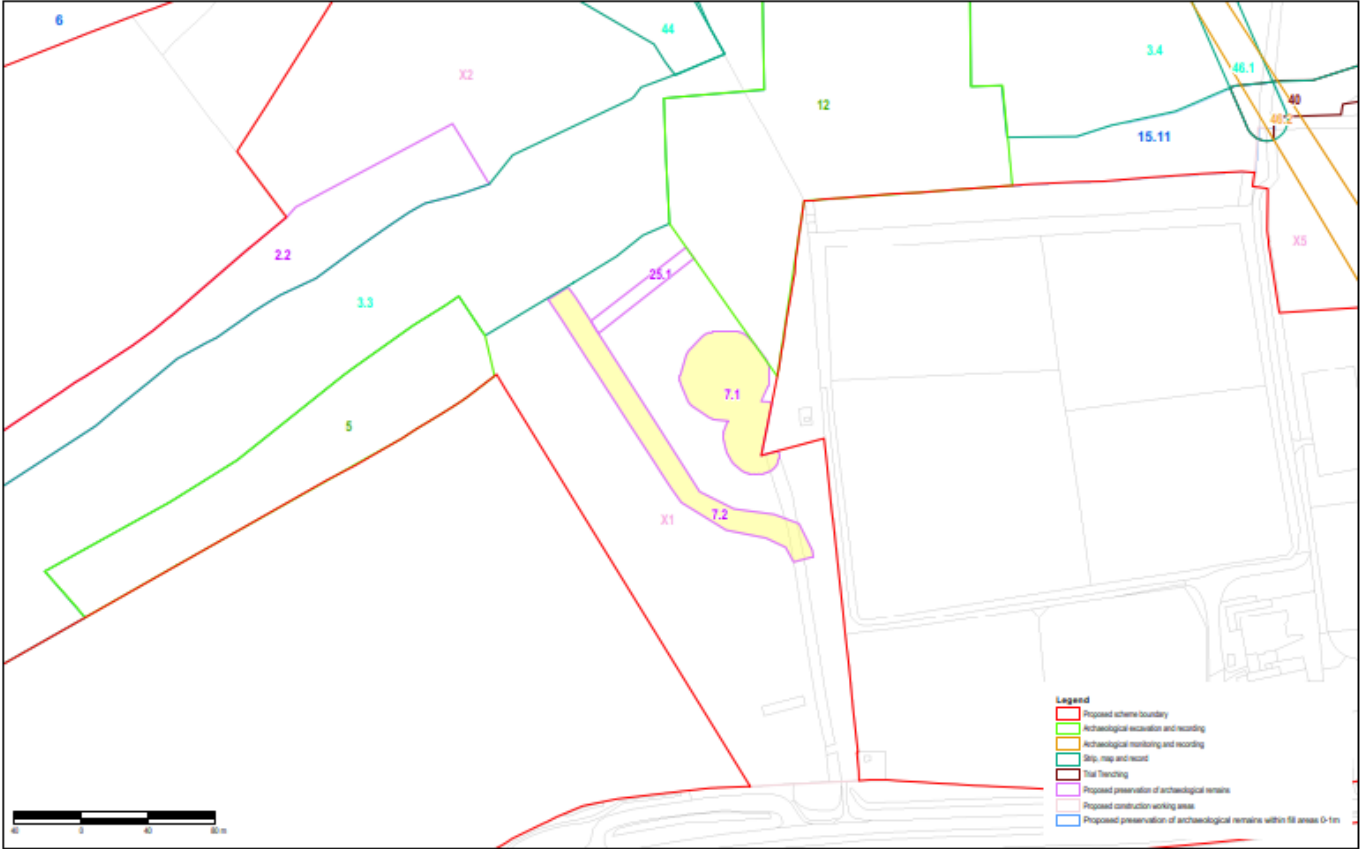
Within the western side of the area three non-designated barrows recorded as ring ditches and visible as cropmarks on aerial photographs were detected by geophysical survey (Highways England, 2019a [REP1-041]) (Sites 8.1 and 8.2).

Scheme impact

The site lies north of the new A303 main line in an area proposed for the deposition of excavated material (deposition of chalk tunnel arisings) and landscaping. The deposited material is likely to be between 0-1m deep. Without protection the deposition of excavated material within the site will impact multi-period remains, including field systems, enclosures and lynchets and features associated with the Iron Age/Romano-British settlement, an undated penannular ring ditch, ploughed-out Bronze Age barrows, and Middle Neolithic pit digging activity.

Mitigation

Preservation of archaeological remains is proposed throughout this area of shallow (<1m deep) fill (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS and the imported fill material comprising chalk tunnel arisings will be placed onto the membrane to ensure that archaeological remains are protected. The existing landform character will be maintained within the permanent deposition area to create a chalk grassland and the site will be returned to agricultural use.

Sites 7.1 and 7.2: Non-designated barrows and pits west of Scotland Lodge.	
Designation:	Non-designated
Reference IDs:	UID 2035.01 UID 2035.02
Location (NGR):	Site 7.1: 406790, 141086 Site 7.2: 406767, 141063
Site area (approximate):	Site 7.1: 0.34ha Site 7.2: 0.39ha
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Description	
<p>Site 7 lies west of Scotland Lodge Farm. The line of the NMU/PMA route to Green Bridge No. 1 (Site 7.2) has been designed to avoid Site 7.1.</p> <p>Neolithic and Early Bronze Age activity has been found west of Scotland Lodge Farm where two non-designated ring ditches (UID 2035.01, UID 2035.02) and a number of Neolithic pits have been identified, situated on a spur of high ground overlooking the River Till valley (Site 7.1). The remains were detected by geophysical survey (GSB Prospection Ltd., 1994) and recent trial trenching (Trench 1068) (Highways England, 2019d [REP1-049, 050]). The larger of the two ring ditches (MWI6396) has a diameter of c.33 to 34m with a possible external bank and a central sub-rectangular grave feature. The form and scale of this ring ditch suggests that it is a hengiform monument of likely Neolithic date, rather than a ploughed-down Bronze Age barrow. The smaller ring ditch (MWI7206) is c.20m diameter, and also may have once been enclosed by an external bank. Two closely spaced sub-circular pits west of the ring ditches contained red deer antlers and Middle Neolithic Peterborough Ware.</p>	
Scheme impact	


The buried remains of the Neolithic pits and the late Neolithic/Early Bronze Age hengiform ring ditch and associated features are within the Scheme DCO boundary, but outside the mainline and will require protection for the duration of the construction (including enabling works) to ensure that they are not disturbed or damaged (Site 7.1).

Construction of a new restricted byway to the south of Green Bridge No. 1 is proposed to be built above existing levels, subject to detailed design (Site 7.2).

Mitigation

Site 7.1 will be protected during construction by protective fencing incorporating a 10m buffer beyond the extent of the remains mapped by the evaluation surveys, apart from the southeast side where it will follow the DCO boundary. Following construction, the protective fencing will be removed and the ground prepared for chalk grassland reversion under archaeological supervision.

Preservation of archaeological remains is proposed at **Site 7.2**. Topsoil will be retained at the site and covered with a geotextile membrane as identified in the MS, fill material will be placed on the membrane to ensure that buried archaeological remains are protected at construction (see section 6.2). A new hedge required along the western side of the protected area will be planted into a new hedge bank (approx. 2-3m wide and 0.50m high) constructed above the existing ground level (existing topsoil to be retained).

Site 8: Parsonage Down East excavated material deposition area: Non-designated barrows dispersed across a hilltop	
Designation:	Non-designated
Reference IDs:	2030.01/MWI7134 (Site 8.1) 2030.02/MWI7200 (Site 8.1) 2030.03/MWI7160 (Site 8.2)
Location (NGR):	Site 8.1: 406333, 141538 Site 8.2: 406499, 141676
Site area (approximate):	Site 8.1: 0.36ha Site 8.2: 0.12ha
	
Description	
<p>Three non-designated barrows recorded as ring ditches and visible as cropmarks on aerial photographs, they were also detected by geophysical survey (Highways England, 2019a [REP1-041]). The barrows are dispersed across a hill slope on the fringes of an area that is required for the deposition of excavated material from the tunnel.</p> <p>Site 8.1 comprises two ring ditches (UID 2030.01, 2030.02) located on a higher spur overlooking a series of interconnected coombes (geophysical anomalies 13000 and 13001).</p> <p>Site 8.2 was investigated by the recent trial trenching programme (Trench 992) (Highways England, 2019d [REP1-049, 050]). The ring ditch (UID 2030.03) detected by geophysical survey (anomaly 13002) and confirmed in Trench 992 did not contain any datable artefacts; however, a Late Neolithic/Early Bronze Age date is inferred from its shape and profile.</p>	
Scheme impact	

Site 8 is situated an area that is required for the deposition and storage of material to be excavated from the tunnel. At Sites 8.1 and 8.2 the fill contours will be designed to exclude these features from the proposed fill area.

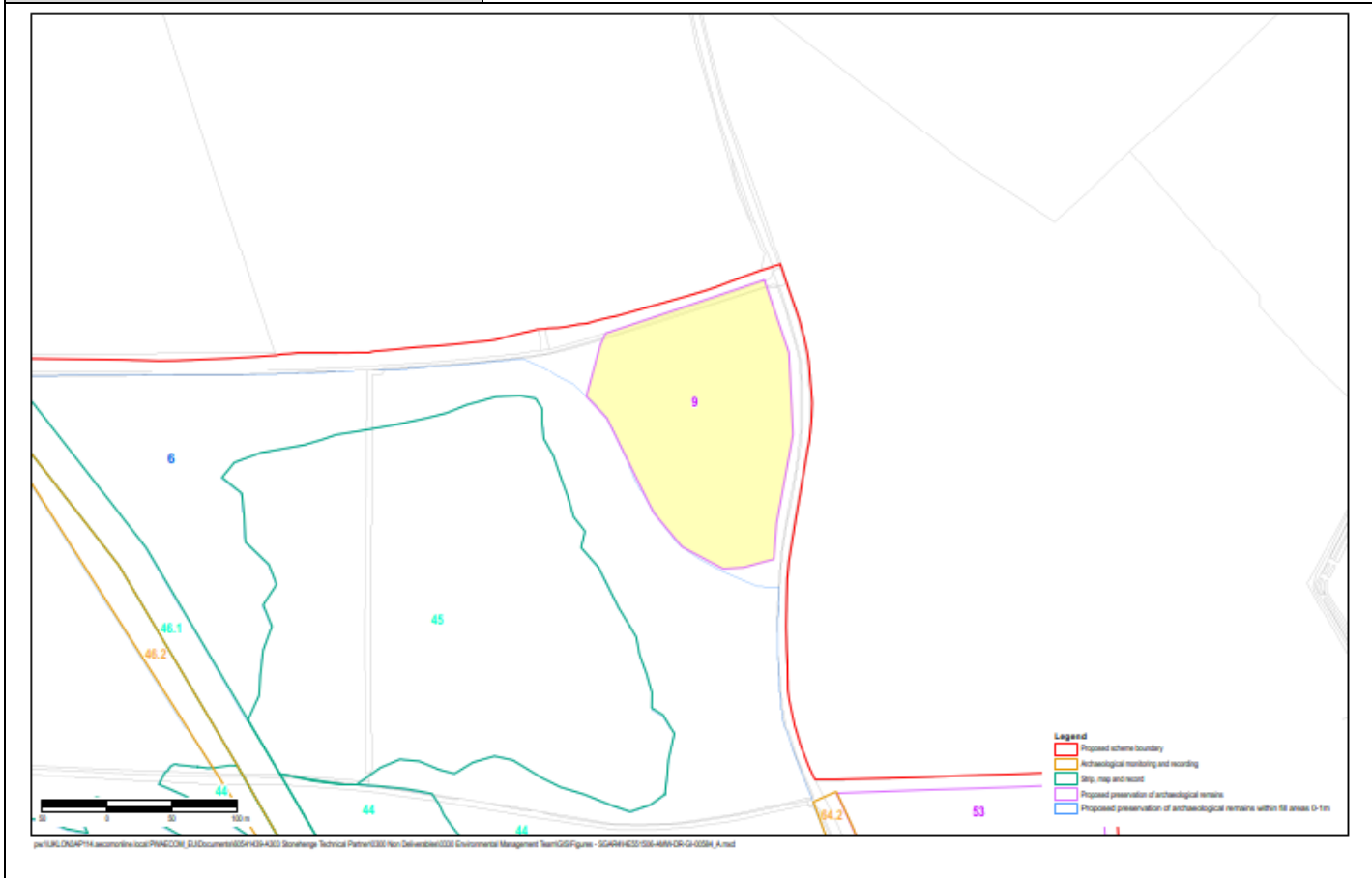
Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.

Site 8.1: To be protected during construction by protective fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the 2018 geophysical survey. Following construction, the protective fencing will be removed and the ground prepared for chalk grassland reversion, under archaeological supervision.

Site 8.2: The topsoil will be retained at the site and covered with a geotextile membrane as identified in the MS. Fill material will be placed on the membrane to ensure that the ring ditch and any buried archaeological remains associated with it are protected at construction.

Site 9: Parsonage Down East excavated material deposition area: possible settlement associated with an Iron Age/Romano-British enclosure north of Winterbourne Stoke.	
Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI7130 UID 2039/MWI7098
Location (NGR):	407122, 142126
Site area (approximate):	2.91ha



Description

A sub-oval enclosure approximately 185m across in the north-eastern corner of the Parsonage Down excavated material deposition area that has been identified from cropmark evidence. It is likely to be part of the Iron Age/Romano-British settlement on High Down, from which it is divided by the B3083. Geophysical survey indicates that it survives as a continuous ditch-like feature approximately 2.5m wide, with some evidence for bank material on either side of the ditch and with some internal pit-like anomalies that may relate to associated activity, with at least two clusters (geophysical anomalies 12003 and 12005) (Highways England, 2019a [REP1-041]).

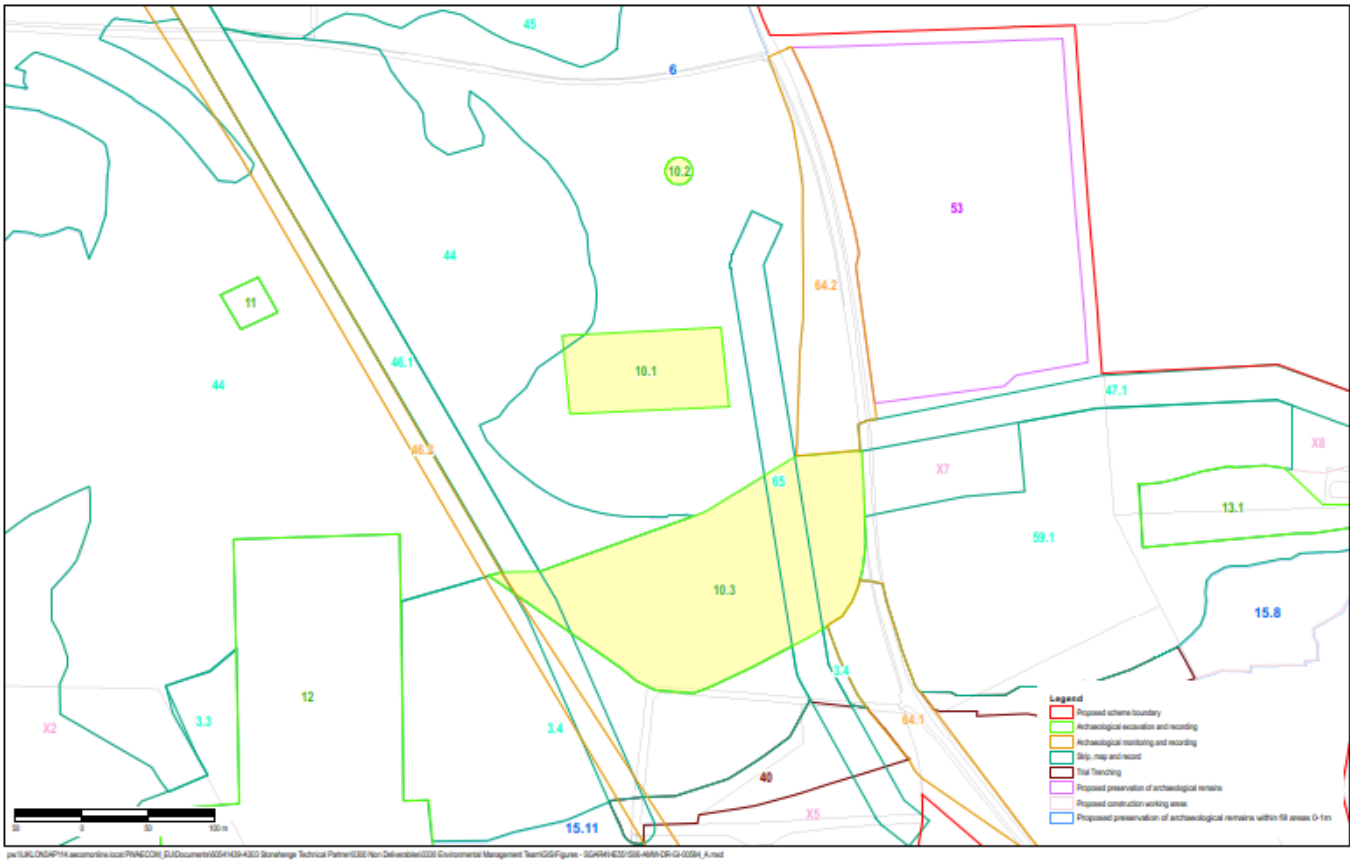
Scheme impact

The proposed fill contours have been designed to exclude the enclosure from the proposed fill area, which is proposed for chalk grassland reversion as part of ecological mitigation requirements. The enclosure area has been identified as a potential receptor area for chalk grassland translocation from a proposed replacement Stone Curlew nesting site within the NNR to the west. The established chalk grassland turf and subsoil will be removed at the nest site to create a bare chalk 'scrape'. Following fieldwalking of the enclosure site in advance of preparation for grassland reversion, the translocated material will be deposited under archaeological supervision within the area of the enclosure in a discrete area to be identified in consultation with Wiltshire Council and Natural England; the

location of the deposited material will be mapped using GPS and the locational data provided to the WSHER.
Mitigation
<p>The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.</p> <p>The enclosure of uncertain date (possibly related to nearby Iron Age/Romano-British settlement) will be protected during the dumping of fill by protective fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the 2018 geophysical survey. Following completion of the Main Works, the protective fencing will be removed, and the ground prepared for chalk grassland reversion, under archaeological supervision.</p>

Sites 10.1, 10.2 and 10.3: Parsonage Down East excavated material deposition area and Winterbourne Stoke bypass embankment: Dispersed unenclosed settlement of possible Bronze Age date

Designation:	Non-designated
Reference IDs:	UID 2036/MWI74874 (oval enclosure) UID 2038/MWI74875 (pits)
Location (NGR):	Site 10.1 – 407134, 141613 Site 10.2 – 407146, 141735 Site 10.3 – 407197, 141422
Site area (approximate):	Site 10.1: 0.72ha Site 10.2: 0.03ha Site 10.3: 2.97ha



Description

Site 10 comprises a series of areas within and close to the excavated material deposition fill area at Parsonage Down East.

Background

An extensive series of ‘Celtic field systems’ extend across Parsonage Down east of Yarnbury Camp, known largely from aerial photographs (UID 1004.01). These incorporate co-axial field systems, where there is a series of regular fields on a common axis and some areas of more irregular, possible later aggregate field systems and are likely to date from the Later Prehistoric and Roman period. Traces of possible enclosures have been identified amongst the field systems, which comprise rectangular bank defined fields of varying sizes, and, on steeper slopes, strip lynchets. The field system was re-used in the medieval/post-medieval period.

An oval enclosure of unknown date (UID 2036) and possible pits of an unknown date (UID 2038) were identified by

geophysical survey.

Archaeological evaluation results

Site 10.1: Geophysical survey in 2018 detected a field system of east–west orientated lynchets at regular intervals (55–65m apart) with some short north–south divisions is apparent (Area NW9). Features representing lynchets were found in Trenches 1052, 1057, 1220 and 1229 (Highways England, 2019d [REP1-049, 050]).

The eastern side of a penannular ring ditch or oval enclosure measuring approximately 21m (north–south axis) by 2 m (east –west axis) known from the geophysical survey was recorded in Trench 1057. On the south-east side, ditch 105707 measured 0.8m wide and 0.5m deep with a U-shaped profile. The opposing north-east ditch (105713) had a similar profile and size but terminated abruptly to the north-west within the trench, perhaps a segmented construction. No archaeological finds were recovered from either excavated ditch segment.

Within the interior of the penannular ditch, 105718 was interpreted as a tree hollow or natural feature, as was another feature located just to the north of ditch 105713. A well-defined posthole (105720) measuring 0.35m in diameter and 0.32m deep was revealed underlying deposits from a later lynchet (105704).

Site 10.2: Trench 1219 contained a Middle Neolithic pit, (0.75m x 0.80m and 0.4m deep), that had been deliberately backfilled with a dark humic deposit (121909), 0.20m thick, which was rich in finds (fragments of at least two Mortlake-type Peterborough Ware vessels, 500g of animal bone (pig, cattle and roe deer), 560g of burnt flint, 350g of worked flint (mainly flakes; one scraper), and two joining pieces of fired clay (43g)).

Site 10.3: Trench 717 contained two shallow circular pits (71716 and 71718), located 1.5m apart. Pit 71716 measured 0.72m in diameter and 0.21m deep and was infilled with a single dark deliberate backfill deposit (71717) which produced two sherds of Beaker pottery and a small quantity of burnt and worked flint. Pit 71718 was slightly wider and deeper (1.0m diameter and 0.47m deep). 18 sherds/220g of Beaker pottery were retrieved from the lower backfill (71719) along with small amounts of worked and burnt flint.

To the south a geophysical survey had identified the remains of a possible Bronze Age pond barrow or solution hole (feature 13003) next to Trench 715. The large depression or pit was further investigated using a combination of ERT and borehole survey (Transect 4) (Wessex Archaeology, 2018a). The results of the survey which crossed a section of dry river valley detected a thick topsoil/subsoil deposit (1m – 2m thick). An anomaly (4b) that is likely to be associated with an increased depth of silty-clay material corresponded to the location of the feature and overlies a chalk-sandy clay deposit (colluvium) to a depth of 3.6m below ground surface.

The soil sequence revealed in the trial trenches was generally an active ploughsoil (0.20–0.30 m thick), a mid greyish-brown silty loam, directly over the natural Chalk bedrock. However, in the central part of the evaluated area where a coombe is present in Trenches 712–717 variable depths of colluvium where recorded dependant on topographic location within this dry valley (Wessex Archaeology, 2003b).

Scheme impact

Sites 10.1 and 10.2 are required for the permanent deposition of material to be excavated from the tunnel (shallow fill <1m deep). These sites contain the remains of isolated structures/features, including an undated oval enclosure of uncertain date (possibly later prehistoric/Bronze Age) (Site 10.1) and evidence of Middle Neolithic and Early Bronze Age/Beaker pit digging activity (Site 10.2). There is potential for further remains to survive in these areas. The remains are considered vulnerable to damage during placement of fill.

Site 10.3 lies within an area that includes a deep cutting for the Scheme mainline and an adjacent embankment and the re-aligned B3083. It contains evidence of Beaker pit digging activity and a possible Bronze Age barrow or solution hole that contains archaeological remains.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.

Mitigation at Sites 10.1 to 10.3 will comprise archaeological excavation and recording (AER) to investigate and record remains discovered at evaluation. At Site 10.3 AER will be combined with the geo-archaeological investigation of

colluvial sequences that have been found at evaluation preserved in dry valley/coombe locations, as part of the scheme-wide geo-archaeological investigation strategy.

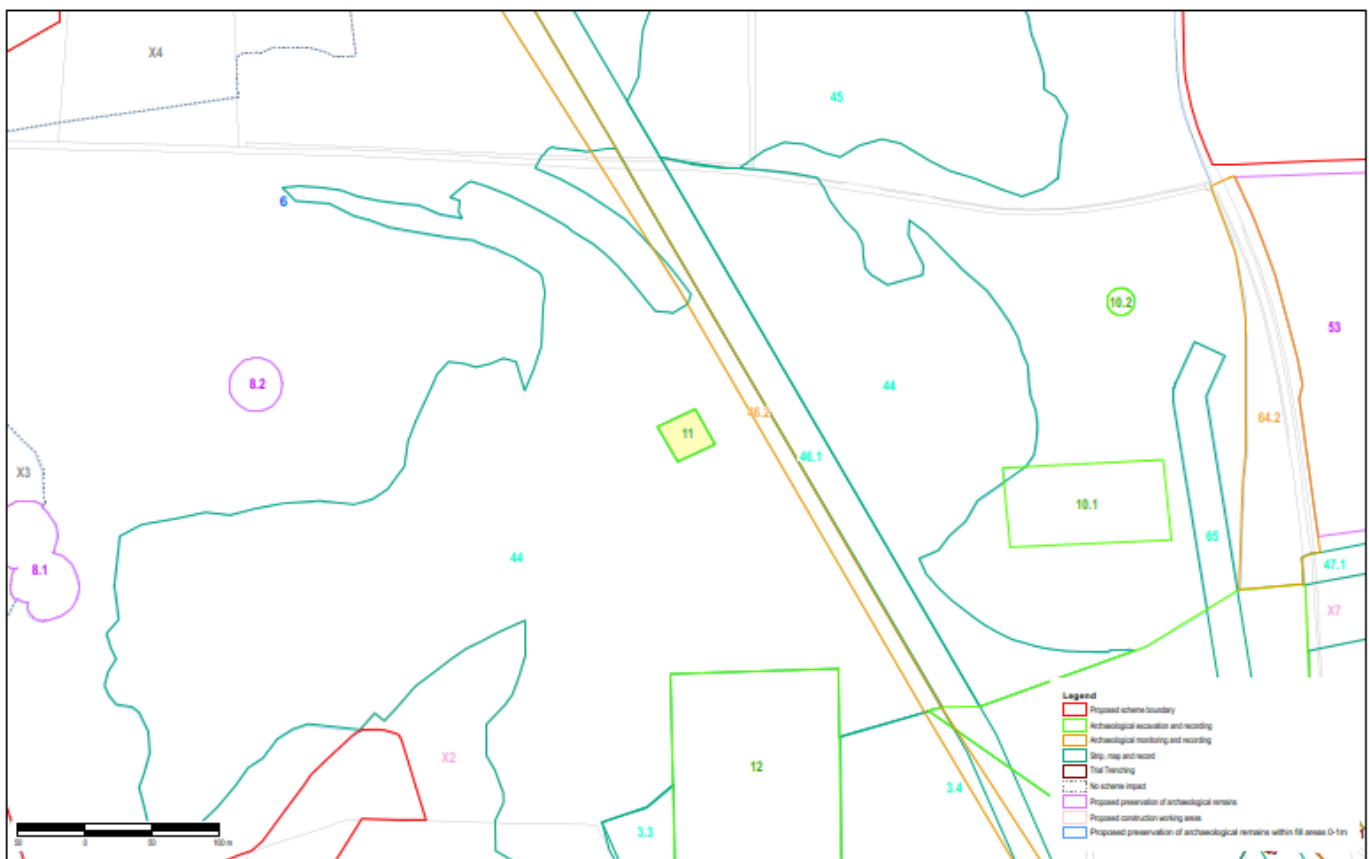
Research objectives identified in the Archaeological Research Agenda

The undated penannular ring ditch or enclosure and the features associated with it, along with a series of undated lynchets and possible pits, illustrate prehistoric settlement activity in the wider landscape west of the WHS. The following ARA research themes and period-specific research questions may be relevant:

- R.6: Burials and barrows
- N.4: A key aim is to better understand the chronologies of key artefact types... Specifically, what is the currency...of Peterborough Ware and its sub-styles...?
- R.8: Human generations
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape during the Early Bronze Age and Beaker period?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Site 11: Parsonage Down East excavated material deposition area: Site of Early Bronze Age cremation burial

Designation:	Non-designated
Reference IDs:	UID 1005/MWI7159, MWI7245, MWI7262 (linear boundary) UID 1004.01/MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 (field systems)
Location (NGR):	406772, 141468
Site area (approximate):	0.25ha



Description

Background

Extensive field systems known largely from aerial photographs lie partly within the DCO boundary between chainages 1800m and 3300m north of the existing A303 (UID 1004.01). These are likely to date from the Later Prehistoric and may be associated with activity at the hillfort (Yarnbury Camp).

A boundary feature is visible on aerial photographs as a soil/cropmark and as an extant feature, on a broad south-west – north-east alignment with additional north-west section (UID 1005).

Archaeological evaluation (geophysical survey and trial trenching) in 2018 across Parsonage Down East revealed evidence for Early Bronze Age burial and land division of uncertain date (Highways England, 2019a [REP1-041]; Highways England, 2019d [REP1-049, 050]).

Early Bronze Age urned cremation burial

Trench 985 contained an Early Bronze Age Food Vessel containing the cremated remains of a juvenile (727.1g) found inverted within a small circular pit (98509) measuring 0.46m by 0.38m and 0.11m deep. The urned cremation sits at the junction of a series of coombes, and it is likely that the location was chosen with care, and may have held significance belied by its lack of monumental elaboration. The pit did not equate with any discrete geophysical anomaly, though it was in an area of superficial geology and was found to be sealed by colluvium (98503). The base of the vessel was truncated, presumably by ploughing. The urned cremation contained a small assemblage of charred plant remains composed of tubers from false oat-grass, a small amount of wood charcoal and terrestrial molluscs.

Soil, colluvial sequences and natural features

The soil sequence revealed in Trench 985 comprised ploughsoil (0.0 – 0.23m) overlying a sandy clay subsoil (0.23 – 0.34m) and colluvium (0.34 – 0.54m), with heavily weathered chalk with frequent periglacial scarring encountered at 0.61m.

Scheme impact

Site 11 lies within the chalk coombe in what will be the deepest part of the excavated material deposition area. Archaeological remains in this area will either be rendered inaccessible due to the depth of the fill (where >1m deep), thereby precluding future archaeological investigation or may be exposed or damaged if topsoil is stripped prior to deposition of fill material. Although the cremation burial encountered in trench 985 has been removed, further such deposits may exist in the near vicinity at a location that may have had significance to the contemporary population.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.

Archaeological excavation and recording (AER) combined with geo-archaeological investigation of the colluvial sequence is the preferred method of archaeological mitigation at Site 11 where Early Bronze Age burial activity has been identified within a dry valley.

Research objectives identified in the Archaeological Research Agenda

Excavation of any further burials, if present, can provide insights into the Early Bronze Age mortuary landscape. Burials illustrate past mortuary practices, as well as a better understanding of prehistoric people's origins, demography, health, diet and conflict. The study of field systems, trackways and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

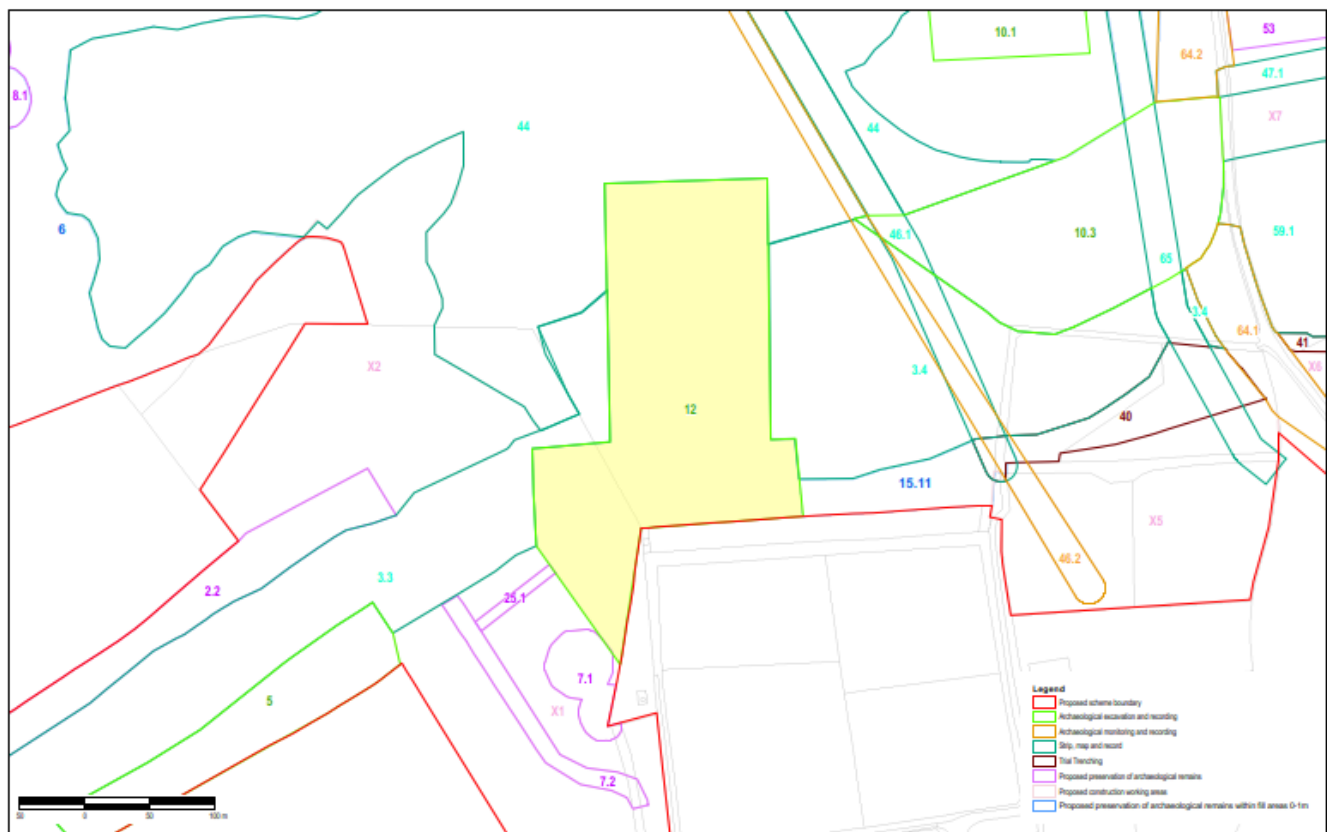
- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.8: Human generations
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- EBA.5: There is scope for further dating cremation burials now that cremated bone is directly datable (and from very small samples).
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-

existing barrows, or actively avoiding them?

- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Site 12: Winterbourne Stoke Bypass (west): Rectilinear enclosures, undated lynchets field systems and dispersed features north and north-west of Scotland Lodge

Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6930, WI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 (field systems)
Location (NGR):	406847, 141284
Site area (approximate):	4.24ha


Description

Extensive field systems known largely from aerial photographs lie partly within the DCO boundary between chainages 00-1800m north and south of the existing A303 (UID 1004.01). These are likely to date from the later Prehistoric and Roman periods, and may be associated with activity at the hillfort. Traces of possible enclosures have been identified amongst the field systems. The field system was re-used in the medieval/post-medieval period. An area of lynchets and dispersed features on a spur of higher ground north-west of Scotland Lodge overlook the River Till valley and lie adjacent to Neolithic and Early Bronze Age activity at Site 7.

Archaeological evaluation in 2018 (geophysical survey and trial trenching) revealed evidence of rectilinear enclosures of uncertain date and land boundaries north and north-west of Scotland Lodge (Highways England, 2019a [REP1-041]; Highways England, 2019d [REP1-049, 050]).

Rectilinear enclosures of uncertain date

Trench 701 contained a well-defined ditch (70114), aligned east–west and measured 1.35m wide and 0.75m deep. No datable artefacts were recovered, just very small quantities of animal bone and worked flint. The relationship between this ditch and a north–south aligned lynchet (70117) within this trench was not securely established. The ditch corresponds to a U-shaped linear geophysical anomaly that possibly indicates the southern side of a partial rectilinear enclosure measuring 35m wide that was also investigated in Trench 702 (Site 11). Within the south-eastern extent of Site 12, Trenches 699 and 1074 contained two ditches (69918 and 107417) that correlate with linear geophysical anomalies that appear to form the north-east corner of a rectilinear enclosure (possibly associated with the ditches recorded in Trenches 696 and 1235 at the south-western end of site 12). Trench 696 contained a north-south orientated ditch that also equates to a geophysical anomaly, possibly part of a rectilinear enclosure (other ditches recorded in Trenches 696 and 1235). The ditch (69603) appears to respect a possible hengiform ring ditch located in Trench 1068 (Site 7) and measured 2.0m wide and 0.35m deep infilled with primary, secondary and tertiary deposits, none of which contained artefacts.

Undated lynchets

Undated lynchets were present in four trenches (Trenches 697, 699, 701 and 705). The lynchet in Trench 705 (070504) represents the easternmost extent of other lynchets found in Trench 699 (also Trench 694 west of Site 12) that followed the contour of a slope and which corresponds with a linear geophysical anomaly and which have been mapped from aerial photography. The lynchets in Trench 701 (n-s and e-w) are part of an extensive field system detected by geophysics and investigated in other trenches beyond Site 12.

Soil, colluvial sequences and natural features

The soil sequence revealed in the trial trenches was generally an active ploughsoil (0.20–0.30m thick) that directly overlay the natural Chalk bedrock. A small amount of colluvium was recorded in Trench 699 (0.10m thick) and subsoil in Trenches 704 and 705 (0.30m and 0.50m thick respectively). Trench 700 contained three tree throws (very small quantities of worked and burnt flint were recovered from tree throws 70005 and 70008). Plough scars were present in Trenches 697 and 699. Two trenches were blank (no archaeological features or tree throws) – Trenches 695 and 698.

Features of uncertain date

A pair of sub-circular postholes were recorded in Trench 1067; a rim sherd of Late Bronze Age pottery was recovered from 106704. Two linear features were also recorded which correspond to a geophysical anomaly (not excavated). Apart from the Late Bronze Age and Roman pottery the trench also produced a sizeable Neolithic and Early Bronze Age assemblage of flintwork.

Scheme impact

Site 12 lies at the cut to fill change on the new A303 mainline. Construction of the cutting and embankment within Site 12 will impact ditches representing field systems/enclosures of uncertain but possibly later prehistoric date (possibly re-used in the medieval/post-medieval period) and a series of undated lynchets.

New woodland planting south of the main line of the new A303 is proposed to integrate Green Bridge No. 1 with the existing plantation at Scotland Lodge; this new planting will impact field system ditches and associated features that are likely to be later prehistoric and an undated possible rectilinear enclosure.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including measures for preservation of archaeological remains or intrusive archaeological investigations.

Archaeological excavation and recording of a polygonal area between approximate chainages 2950m and 3150m (approximately 365m north-south and 210m east west) is proposed to identify and record the undated enclosure, field system ditches and associated features at the south end of the site along the mainline. The southern boundary of Site 12 is to be formed by the Scotland Lodge boundary, the northern boundary is to be set clear of the existing buried oil pipeline and a safe working buffer area surrounding it.

Research objectives identified in the Archaeological Research Agenda

AER at Site 12 will allow investigation of the field systems and possible enclosures, aiding an appraisal of landscape and settlement development. Analysing the use and reuse of prehistoric field systems and possible enclosures provides insights into changes in landscape use and settlement patterns. The study of prehistoric ceramics and flintwork, as well as Roman ceramics, can illustrate past lifeways. The situation and proximity of the possible enclosure to the Iron Age – Romano-British settlement site to the west (Site 5) and the Neolithic/Early Bronze Age ring ditches to the south (Site 7) is also of interest.

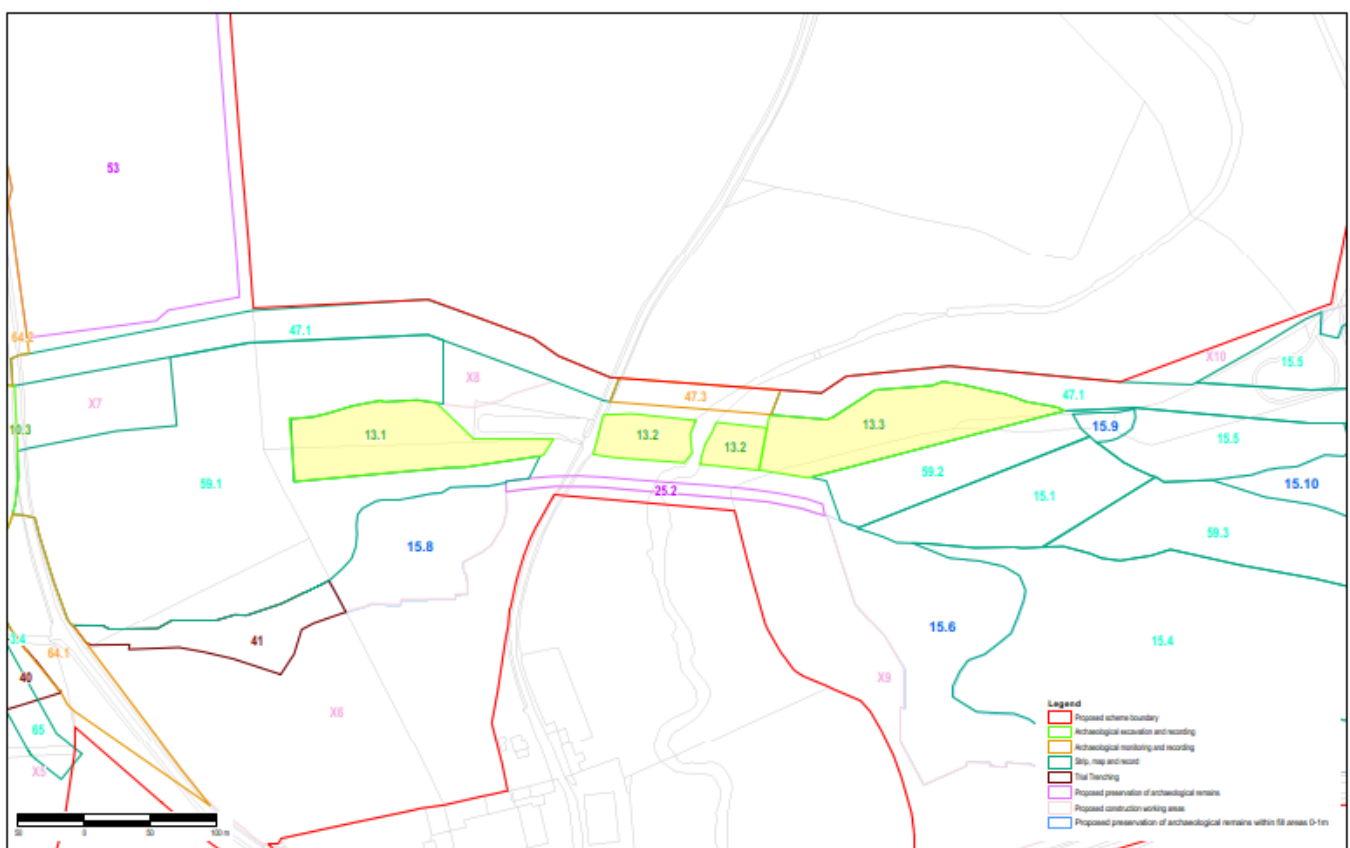
The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

- R.7: Landscape history and memory
- R.9: Daily Life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape?
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas?
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception?
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.1: How can we decide whether the later activity around these exceptional monuments was a particular response to them?
- RB.2: Are there recognisable patterns of activity, including ritual/religious activity, at the existing 'ancient' monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries? ... Is there evidence that prehistoric monuments were seen as a useful source of stone for the construction of Roman villas (or other buildings)?
- RB.4: Rural Settlement of Roman Britain project – the production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy.
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact

on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Sites 13.1, 13.2 and 13.3: River Till Crossing - Iron Age/Romano-British pits and ditches (west bank), water meadows of possible post-medieval date and Geo-archaeological/Palaeoenvironmental deposits on the west and east banks of the Till.

Designation:	Non-designated
Reference IDs:	UID 2050/MWI6987
Location (NGR):	Site 13.1: 407561, 141486 Site 13.2: 407761, 141482 Site 13.3: 407960, 141495
Site area (approximate):	Site 13.1: 0.84ha Site 13.2: 0.30ha Site 13.3: 0.80ha



Description

Site 13.1 comprises the footprint of the new A303 west of the Till valley, adjacent to a disused former quarry or borrow pit on the western edge of the Till floodplain.

Ditched boundaries and linear features of uncertain date

In 2003 Trenches 36 and 37 revealed a north to south aligned ditch (3604, 3705) predicted in a previous geophysical survey as a weak trend (Wessex Archaeology, 2003b: Area 4; GSB Propection Ltd, 2001a: Area 27). Worked flint flakes were recovered from ditch 3604 (0.65m wide and 0.30m deep). To the south, Trench 37 was further downslope and deposits here were much deeper (>1.2m). Ditch 3705 was considerably truncated and was sealed beneath a colluvial deposit.

Trench 38, situated on a relatively level area on a south-facing slope above the River Till valley, revealed a shallow pit (3803) and possible cart tracks (3808) aligned north-north-west to south-south-east; a small ditch (3816) was

probably a later disturbance along the line of the cart tracks, which were undated. The trackway was also located in Trench 1317 excavated in 2018 some 65m south of Trench 38. The trackway (131704/131706) was here approximately 1.75 m wide and 0.25 m deep and correlated with a linear geophysical anomaly. Two wheel ruts lay 1.4 m apart at the base of the feature. No finds were recovered to assist in the dating of this feature but given the wheel ruts it is perhaps most likely to date to the medieval period or later.

Possible Iron Age pits

A pit of possible Iron Age date was recorded Trench 38. The pit (3803) was large (2m in length) but relatively shallow (0.35m). Finds of worked and burnt, unworked flint, animal bone and pottery of Iron Age date were recovered from this feature.

Soil colluvium sequences and natural features

Trenches 36 and 37 revealed shallow (0.6-0.8m), non-calcareous brown rendzinas and non-calcareous colluvial brown earths over chalk, coombe deposits, and clay-with-flints (also observed in Trenches 28 to 35, outside Site 13.1).

Colluvium was recorded during the 2003 evaluation as relatively shallow deposits in the valley bottom, shallow coombes and footslope locations. A 'stony hillwash', which sometimes supports a buried soil (Trench 32) or seals a buried soil (Trench 37), was sealed by a 'stoneless hillwash'. All the colluvium was non-calcareous, indicating that erosion was derived from clay-with-flints and/or thicker soils upslope.

Tree throws/natural features were present in Trench 38 and also in Trench 724 during recent trial trenching (Highways England, 2019d [REP1-049, 050]).

Sites 13.2 and 13.3 comprise the floodplain and eastern slopes of the River Till valley at the new A303 crossing point. The channel of the River Till here is protected as a Special Area of Conservation. Investigations within the River Till valley in connection with various A303 improvement schemes have included auger survey and test pitting (1992, 2001); geotechnical investigations (archaeological watching brief) (2001, 2016-2017); and geophysical survey (2001, 2018). Trial trenching in 2003 did not include any trenches on the River Till floodplain itself. No additional trial trenching has been undertaken within Sites 13.2 and 13.3.

Water meadows and floodplain deposits

Earthwork remains of water meadows alongside the River Till are visible on aerial photographs covering a total area of c.14.5ha (UID 2050).

The River Till valley here has a very broad (c. 250m) wide flat meandering valley floor, in which the River Till flows over a bed of medium chalk and flint gravel in a small, but well-defined, steep-sided channel (Wessex Archaeology, 2002, p. 1). The River Till valley floor includes faint earthwork traces of a water management system or water meadows of probable post-medieval date; these are more discernible north of the proposed bypass crossing point. The WSHER does not identify any other recorded heritage features or archaeological remains on the valley floor.

Geophysical survey in 2018 (Highways England, 2019a [REP1-041]) identified a series of weakly positive linear anomalies on an approximate east-north-east to west-south-west orientation and two roughly north – south aligned examples. Several weak linear trends respecting this layout adjacent to the River Till are likely associated with part of the post-medieval water meadow system. An irregular linear area of increased magnetic response (14032) protruding from the western edge of the field towards the River Till is also likely associated with the remains of the water meadow system, corresponding with a former river course on historic OS mapping dating to 1844.

In 2001, two hand auger transects were sunk, Transect 1 on the present Scheme alignment and Transect 2 approximately 400m upstream (Wessex Archaeology, 2002j; p.5). Transect 1 revealed a shallow typical brown earth soil profile, incised by the steep-sided river channel, which cut into and exposed the underlying valley gravel (Wessex Archaeology, 2002j; p.5). Upstream of the Scheme crossing point, Transect 2 revealed typical brown earth and calcareous alluvial gley soils over calcareous, largely stonefree, alluvium; a possible buried former infilled channel was identified against the chalk 'river cliff' on the eastern edge of the floodplain (Wessex Archaeology, 2002j; p.5).

Geotechnical site investigations in 2001 included two locations (TP 40 and 42) on 2001 auger Transect 1. Situated on the floodplain, TP40 recorded 0.40m of topsoil over structureless chalk, while on the eastern edge of the

floodplain, TP42 encountered 0.30m of topsoil over structureless chalk; in both locations the 'structureless chalk' is recorded as comprising a silty, sandy gravel.

Lynchets of uncertain date

On the southern fringe of Site 13.3, Trench 40 (excavated in 2003) which had been positioned to investigate pit-type geophysical anomalies revealed an east to west aligned negative lynchet (4004) that follows the contours of the valley side. This feature is assumed to relate to another lynchet recorded in Trench 41 (4108).

Scheme impact

The new A303 will cross Site 13.1 in cutting on the ridgeline, moving to embankment over the site of the former quarry. The new River Till viaduct will comprise two separate parallel decks to mitigate the shading effect on the designated river fauna. A temporary river crossing will also be established as part of the works within the Scheme boundary here.

Construction of the temporary and permanent bridge heads either side of the River Till and bridge piers next to the river will have localised impacts on the earthwork remains of post-medieval water meadows, buried boundaries and linear features of uncertain date, pits of possible Iron Age date, and lynchets that form part of an extensive series of strip fields which are likely to be of medieval date.

Mitigation

Topographic survey of the remains of the post-medieval water meadows that are visible as earthwork features at Sites 13.2 and 13.3 prior to construction of the temporary river crossing. The topographic survey will extend to incorporate the footprint of the Wessex Water utility corridor (Site 47) that crosses the area between the Scheme mainline and the DCO Boundary.

Geo-archaeological assessment at Site 13.1 and Site 13.2. Colluvial deposits are known from evaluation at Site 13.1 where it is present in valley bottom, shallow coombes and footslope locations (possible Bronze Age to medieval date), and in Site 13.2 where colluvial and alluvial deposits are likely to be present next to the River Till.

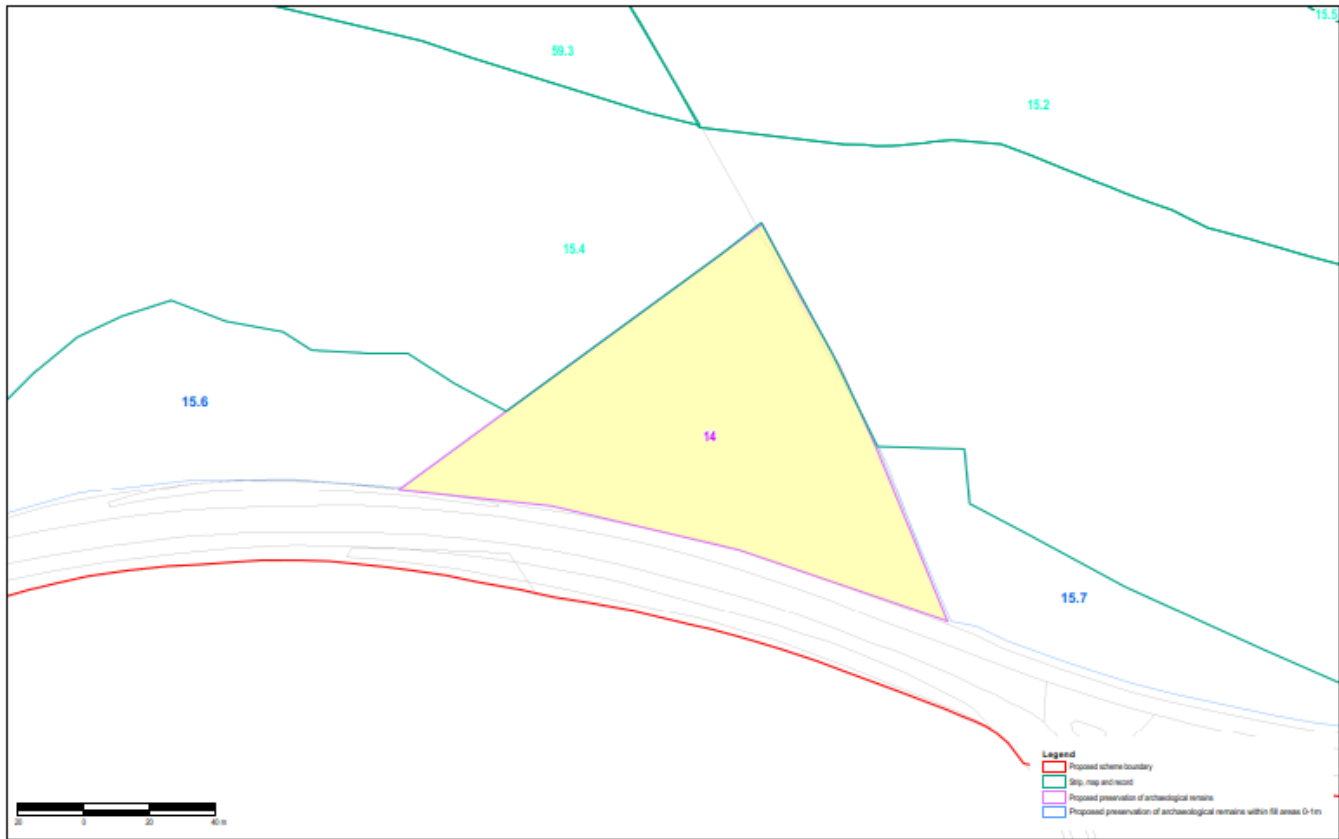
Archaeological excavation and recording (AER) of buried and earthwork features at Site 13, including trench mitigation of the bridge piers (pile cap footprint) at Site 13.2, and for the foundations of a temporary bridge structure that will be required to span the River Till at construction (Sites 13.1 and 13.3).

Research objectives identified in the Archaeological Research Agenda

Detailed excavation of the area of pits and ditches in Site 13.1 can contribute to study of the extent and range of Iron Age/Romano-British settlement in the area. The study of the water meadows in the River Till valley offers insights into medieval/post-medieval water management. The following ARA research themes and period-based research questions may be relevant, subject to the nature of the remains:

- R.7: Landscape history and memory
- R.9: Daily life
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape? (Scheme-specific)
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas? (Scheme-specific)

- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility?
- LM.3: SWARF Research Aim 42: Improve our understanding of Medieval farming. The majority of the evidence revealed during the evaluation works related to agricultural land use. SWARF identifies direct environmental evidence for the use of grassland, pasture and meadow as key objective. There is potential for environmental evidence to survive in the Till valley especially.
- LM.4: Assess the archaeological potential for studying Medieval economy, trade, technology and production. Although predominantly agricultural in nature (negative features such as field systems, enclosure ditches, etc), there is the potential for other classes of evidence to survive, and to be different in different parts of the landscape (downland versus valley bottom, for instance). The utilisation of the floodplains at this time is of particular interest, and should be the focus of geo-archaeological investigation.
- PM.3: Water meadows ... were in the past highly visible features of the landscape around the monuments, particularly at Avebury. The surviving traces of these are not well recorded and their history has been very little investigated within the WHS.

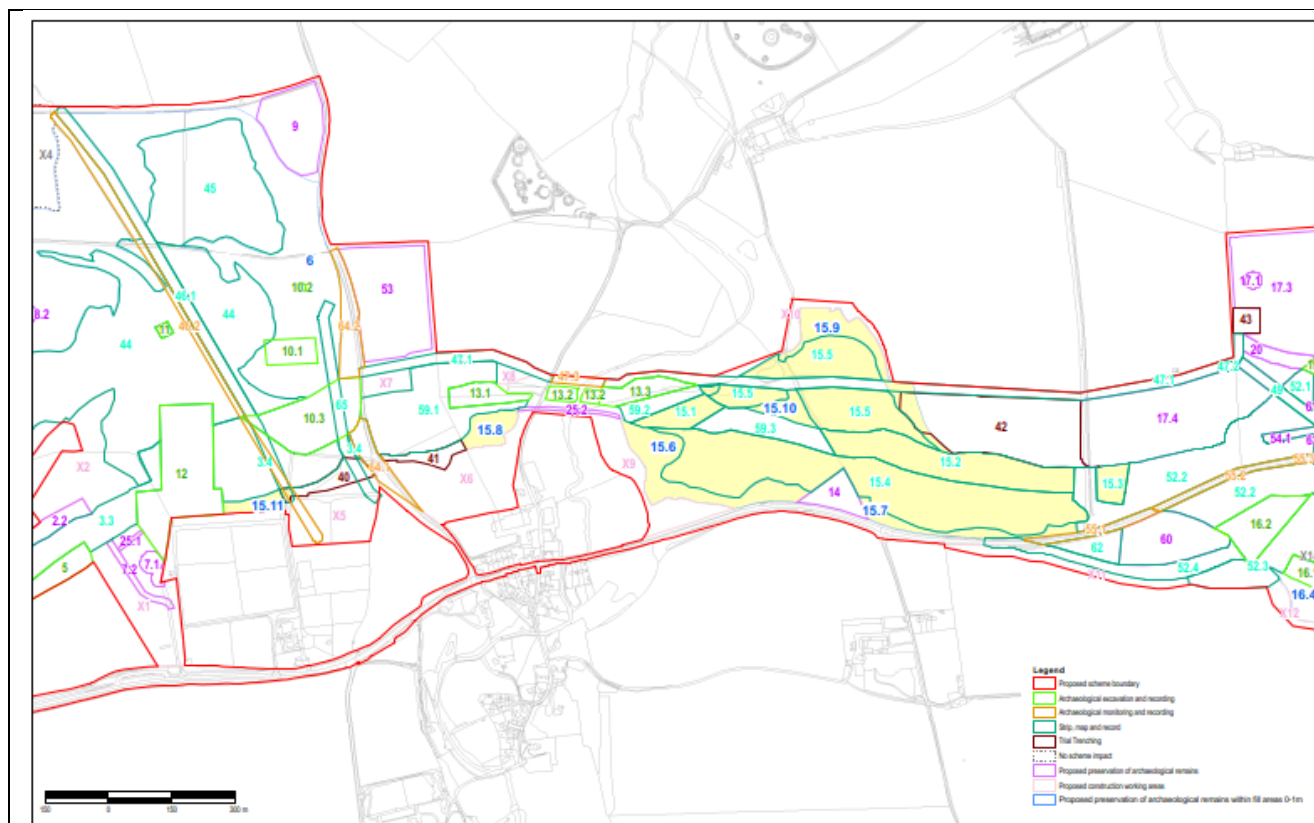
Site 14: Winterbourne Stoke Bypass (east) - Non-designated barrow cemetery on Winterbourne Stoke Hill.	
Designation:	Non-designated
Reference IDs:	UID 2054.01/MWI7208 UID 2054.02/MWI7209 UID 2054.03/MWI7207
Location (NGR):	408408, 141258
Site area (approximately):	0.82ha
 <p>The map displays a yellow-shaded area labeled '14' representing the site. It is bounded by a red line (proposed scheme boundary) and a green line (slip, map and record). Blue lines indicate proposed preservation of archaeological remains, and purple lines indicate proposed preservation of archaeological remains within fill areas 0-1m. The map also shows contour lines with elevations such as 15.3, 15.2, 15.4, 15.6, and 15.7. A scale bar is located in the bottom left corner, and a legend is in the bottom right corner.</p>	
Description	
<p>Site 14 contains the remains of a small ploughed-down round barrow cemetery within the southern side of the DCO boundary on Winterbourne Stoke Hill comprising five non-designated ring ditches. The components of the cemetery (three previously mapped from aerial photographs) were detected and mapped through geophysical survey (combination of detailed gradiometer, earth resistance and GPR surveys (Area NW10e, geophysical anomalies 14000-14004; 14100-14102; 14203-14207 respectively). Aerial photography and geophysics also shows the cemetery to be surrounded by a complex array of linear features, possibly representing an enclosure and field system (Highways England, 2019a [REP1-041]). The GPR survey indicates that the two southerly ring ditches which have been previously impacted by the A303 are covered by an increased overburden or may be more heavily truncated by subsequent ploughing. Subsequent trial trench evaluation in 2018 confirmed the survival of all five ring ditches as substantial buried features (identified in Trenches 1339 to 1341) (Highways England, 2019e [REP1-052, 053]).</p>	
Scheme impact	
<p>Site 14 contains an Early Bronze Age/Bronze Age round barrow cemetery c.40m south of the Scheme mainline. The site lies on the periphery of an area for proposed landscape fill, it will be excluded from landscape fill.</p>	

Mitigation

The site will be protected during construction by protective fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys and trenching. Following completion of the Main Works, the protective fencing will be removed prior to the land being returned to agriculture.

Sites 15.1 to 15.11: Winterbourne Stoke Bypass (east) - Extensive prehistoric activity: pits of possible Late Neolithic date, field systems and enclosures including possible Iron Age lynchets, and a buried soil horizon and colluvium within a dry valley.

Designation:	Non-designated
Reference IDs:	<p>UID 2045</p> <p>UID 2048/MWI7009, MWI73341, MWI73343 (land boundary)</p> <p>UID 2052/MWI74877 (ridge and furrow)</p> <p>UID 2053/MWI7009, MWI7111 (field system)</p> <p>UID 2054/MWI7208</p> <p>UID 2056/MWI73338 (field system)</p> <p>UID 2060/MWI70781</p> <p>UID 2068/MWI6407, MWI12690 (land boundary)</p>
Location (NGR):	<p>Site 15.1: 408055, 141441</p> <p>Site 15.2: 408727, 141306</p> <p>Site 15.3: 409060, 141273</p> <p>Site 15.4: 408633, 141269</p> <p>Site 15.5: 408401, 141530</p> <p>Site 15.6: 408207, 141273</p> <p>Site 15.7: 408722, 141172</p> <p>Site 15.8: 407579, 141413</p> <p>Site 15.9: 408365, 141659</p> <p>Site 15.10: 408299, 141450</p> <p>Site 15.11: 407024, 141227</p>
Site area (approximate):	<p>Site 15.1: 0.92ha</p> <p>Site 15.2: 3.99ha</p> <p>Site 15.3: 0.63ha</p> <p>Site 15.4: 10.57ha</p> <p>Site 15.5: 5.51ha</p> <p>Site 15.6: 2.78ha</p> <p>Site 15.7: 0.91ha</p> <p>Site 15.8: 0.85ha</p> <p>Site 15.9: 2.051ha</p> <p>Site 15.10: 0.59ha</p> <p>Site 15.11: 0.51ha</p>



Description

Background

Possible undated cart tracks were located during archaeological evaluation on a north-north-west to south-south-east alignment (UID 2045) (Wessex Archaeology, 2003b). Geophysical survey has identified a linear anomaly on a similar alignment suggesting a possible droveway (GSB Propection Ltd, 2001a).

An extensive north-west to south-east aligned ditch that crosses Site 15.1 is thought to be a probable later Prehistoric land division (UID 2048). Parts of the ditch are flanked on either side by a bank and it passes through the centre of a later prehistoric and/or Roman settlement/enclosure to the north of Site 13 (UID 2039). Evaluation just to the north of the A303 located a substantial ditch on this alignment; this could not be closely dated but contained Prehistoric worked flint (Wessex Archaeology, 2003b). Immediately to the south, three undated intercutting ditches were also located on the same alignment.

Ridge and furrow of a medieval/post-medieval date on a south-west to north-east alignment identified by a geophysical survey at the south side of Site 15.1 (UID 2052) (GSB Propection Ltd, 2001a).

An extensive complex of linear features identified from aerial photographs and geophysical surveys that crosses Site 15 (UID 2053) (GSB Propection Ltd, 1999; GSB Propection Ltd, 2001a). It was subsequently investigated during a watching brief and trial trenching (Wessex Archaeology, 2002a). Those concentrated to the north, which largely consist of parallel linear features, orientated north to south and north-east to south-west, appear to represent lynchets, whilst those to the south seem to define a fragmented rectilinear/co-axial field system. The form of these features and finds recovered during intrusive investigations suggest that they are predominantly of late Prehistoric to Roman date, although some elements could relate to post-medieval or Medieval land divisions, lynchets or strip fields (e.g. traces of ridge and furrow). Colluvial deposits attaining thicknesses in excess of 1m were also encountered in some locations during trial trenching in areas coinciding with these features. More recent geophysical survey in Area NW6 (Wessex Archaeology, 2017c) has detected traces of medieval/post-medieval ridge and furrow cultivation within the eastern part of the UID, to the north of the A303, which appear to approximately coincide with/follow the same alignment as several of

the features identified from aerial photographs.

A group of three probable ring ditches/barrows has been identified from aerial photography (UID 2054).

Several possible incomplete conjoined rectilinear enclosures and a number of other ditches are mapped to the west of Site 15.2 from aerial photographs as part of English Heritage's Stonehenge World Heritage Site Mapping Project (UID 2056). The enclosures may represent part of a later Prehistoric settlement, and it is possible that they may cross into the site.

Site of Grant's Barn, Winterbourne Stoke (UID 2060): Demolished 19th century outfarm of loose courtyard plan. The farmstead and all historic buildings have been lost.

A linear ditch or boundary of possible Bronze Age date visible as a cropmark on aerial photographs that crosses the east end of Site 15.2 and the south side of Site 15.3 (UID 2068) is aligned north-west to south-east and can be traced for 2.2 km. This ditch is one of a number of extensive Prehistoric ditches which divide up areas of Salisbury Plain. It has been mapped as part of the RCHME: Salisbury Plain Training Area NMP project, and the English Heritage Stonehenge WHS Mapping Project. The feature was investigated within two trial trenches during an evaluation in 2003. Struck flint was recovered from the lower fill of the ditch in one of the trenches (Wessex Archaeology, 2003b). The ditch has also been identified by recent geophysical surveys (Wessex Archaeology, 2017a; Wessex Archaeology, 2017c) and trial trenching Wessex Archaeology, 2017d).

Site 15.1

Ditched boundaries of uncertain date

Geophysics identified a linear ditch in the central part of the survey area which extended along the lower slope of the dry valley: at its northernmost extent it followed a north-east to south-east alignment before changing direction slightly to a more NNE–SSW orientation. The anomaly was recorded as a boundary ditch in Trench 740 (and south of Site 15.1 in Trenches 1327 and 1329). It was of slightly varying profile and size, being more V-shaped in Trench 740 (74016), measuring 2.0m wide and 0.66m deep, but more open to the south, presumably a result of truncation from later ploughing. No closely datable material was retrieved; finds include seven pieces of worked flint from the lower fill of 74018. The feature is of likely later prehistoric/Roman date, as its alignment is at odds to that of the probable medieval lynchets. Geophysics suggests it is part of a rectilinear enclosure with other parts of the enclosure defined by ditches recorded in Trenches 1335 and 1337.

In 2003 Trench 42 recorded a ditch (4206) that was on an east-west alignment, but just beyond the site boundary (Wessex Archaeology, 2003b).

Lynchets and hedged field boundaries of uncertain date

A lynchet (73904), orientated west-south-west to east-north-east correlates with linear geophysical anomalies recorded on sloping ground 220m east of the River Till in Trench 739 (another lynchet was recorded to the west of Site 15.1). It measured approximately 3.0–4.5 m wide and was 0.36m deep. No finds were recovered.

In 2003 Trench 42 recorded two lynchets (4204, 4208), E-W aligned, but these were also just outside the site boundary.

Natural features

Trenches 740 and 742 contained tree throws (Trench 742 produced three pieces of worked flint recovered from the secondary fill (74208) including a blade in fresh condition).

In Trench 735 areas of variable geology were investigated.

Trench 743 contained no remains, also Trenches 43 and 44 excavated in 2003.

Site 15.2

Lynchets and hedged field boundaries of uncertain date

Linear geophysical anomalies were targeted during the evaluation (Highways England, 2019e [REP1-052, 053]) and many were confirmed as lynchets. These features, which are most likely associated with medieval cultivation, regularly divide up the landscape on the east side of the River Till valley (east of Winterbourne Stoke), to the north of the A303. Finds were very rarely recovered from the plough-washed/colluvial fill of these features:

- Trench 759 (75914), NNE–SSW aligned, 1.2m wide and 0.12m deep;
- Trench 764 (76413 and 76415), N-S aligned, 1.2m wide and 0.30m deep;
- Trench 767 (76716), 1.7m wide and 0.08m deep;
- Trench 755 (75503), NNE–SSW aligned, 3.75m wide and 0.44m deep;
- Trench 762 (76203), NNE–SSW aligned, 1.2m wide and 0.05m deep.
- In 2003 the following trenches also contained lynchets:
 - Trench 54 (5412), NW-SE aligned;
 - Trench 55 (5503, 5505), E-W aligned (5505 probably a continuation of 5412), Ceramic building material, animal bone and burnt flint were recovered from 5503, but no datable finds; a flint scraper only broadly datable to the Late Neolithic or Bronze Age was recovered from 5505;
 - Trench 51 (5103, 5105), N-S aligned.

Ditched boundaries of uncertain date

A north-west to south-east orientated ditch (76713) in Trench 767 is a possible continuation of a slightly curving north-west to south-east aligned boundary ditch that also equated with a geophysical anomaly that followed the lower slopes of the dry valley north of the site (Trenches 1379, 1386 and 1385). It may also extend into Trench 771 (surveyed but not excavated). Ditch 76713 measured 1.6m wide and 0.67m deep and contained a primary and secondary fill, but no artefacts.

In 2003 Trench 59 contained a ditch (5904) NW-SE orientated that equated to an extensive linear cropmark, but is undated.

Soil, colluvial sequences and natural features

The soil sequence revealed in the majority of the trial trenches was generally an active ploughsoil (0.20–0.30m thick).

A mid reddish brown colluvial subsoil of variable depth above soliflucted Chalk/Coombe deposits was recorded in several trenches, most notably within those coinciding with a broad band of superficial geology identified from geophysical data in the northern part of the site within the pronounced dry valley (Trenches 759, 761, 763, 768) (and beyond Site 15.2 in Trenches 1352, 1377, 1379, 1390, 1391, 1392). These deposits formed a narrow band along the valley floor lying predominantly immediately beneath the steeper, northern slope, attained considerable depth in some trenches, including Trenches 761 and 768. The colluvium measured a maximum of 1.7m deep in Trench 761 above the soliflucted Chalk/Coombe deposits.

In 2003 colluvial deposits were recorded in Trenches 52 and 53 (deposits, increased in depth from 0.20m in Trench 52 to over 1.2m in Trench 53). The deeper sequence in Trench 53 contained a buried topsoil c.1.30m beneath the modern ground surface. In Trench 54 colluvial deposits exceeded 1m in depth and included a buried soil (0.25m thick). No finds were recovered. In Trench 55 colluvium 0.90m deep overlay a buried argillic brown earth (5511). Finds of Late Bronze Age/Early Iron Age pottery, a flint scraper and burnt flint were recovered from the buried soil. Trenches 56 and 57 contained colluvial deposits of about 1m in depth with buried soils. A sherd of Romano-British pottery was recovered from colluvium in Trench 57, and a struck flint from the buried soil.

The lowest deposits in the colluvial sequence likely represent periglacial weathering of the valley sides (prior to 10,000BP). Soils then formed during warmer climates and the Atlantic postglacial optimum (brown earths and brown forest soils). Subsequent woodland clearance exacerbated by tillage resulted in the erosion of

earths from the valley sides and their reduction in the valley floor and the accumulation of hillwash (Wessex Archaeology, 2003b). Few artefacts were recovered from the colluvium (Trenches 55 and 57 produced struck flint, Late Bronze Age/Early Iron Age pottery and Romano-British pottery).

Tree throws were recorded in 2018 Trenches 758, 764 and 771 (fill contained a small amount of worked and burnt flint), and in 2003 Trench 54 (x2) (2003).

No archaeological remains were present in 2018 Trenches 761, 768, 770, 763, and 2003 Trenches 56, 57 (2003).

Site 15.3

Later prehistoric boundaries

A boundary ditch, possibly one of a series of long-distance land divisions of presumed later prehistoric date present across the south Wiltshire downlands and known as 'Wessex Linears' was identified in geophysical survey as a linear anomaly and is also known from NMP data. On a general NW–SE alignment, it extends across the south of the area where trial trench evaluation was carried out in 2018. The feature is mapped for c.1km and was recorded in Site 15.3 Trench 403 (it is also recorded in Trenches 319 and 320, and is present in Trenches 328 (Site 16.2), 357, 358, 361, 380 (Site 16.1)). The NMP and geophysical data show that this ditch (the alignment of which is initially straight in the western part of the site) intersects with a north-east to south-west aligned potential trackway leading to the enclosed settlement on Oatlands Hill. To the south-east of this intersection the ditch curves further south-east before resuming its previous course. (The alignment of this ditch is similar to another boundary ditch recorded to the north which crosses the south end of Site 19 and in Trenches 426 and 429, where it is a known Wessex Linear that continues to both the north-west and south-east.) The NMP data suggests that these two Wessex Linears converge, and they may eventually intersect approximately 500m east of the A360.

Excavation of the potential Wessex Linear in Trench 403 produced a single piece of burnt flint, but no other datable artefacts. Generally, the boundary ditch had moderate to steep straight sides and a flat base, though its depth varied, perhaps a result of horizontal truncation related to later agricultural activity. In Trench 403, the boundary ditch (40303) was 1.57m wide and 0.60m deep with three fills.

Soil, colluvial sequences and natural features

Chalk geology is consistent across the site. The soils and sequences overlying the natural geology varied in presence and character. This is largely a result of ploughing (both ancient and modern) and topography. All the recorded variations were consistent with what can be considered normal for this landscape.

Colluvial deposits were encountered in Trenches 401 and 402 (0.85m and 0.96m thick respectively), (also present in Trenches 404, 406, and 407 to the east), and generally correlate with a geophysical anomaly interpreted as superficial geology and variations in the natural topography.

A tree throw was recorded in Trench 403.

An array of roughly parallel cart tracks or ruts (probably of post-medieval/modern date) were found during the 2003 evaluation in Trenches 61 and 62.

Trench 401 contained no archaeological remains.

Site 15.4

Ditched boundaries of uncertain date

A number of trenches contained undated ditches (found in Trenches 1329, 1335 and 1338). Some may belong to larger rectilinear field systems as indicated by geophysical survey, for example, ditches within Trenches 1329 and 1335 (ditch in Trench 1329 of possible later Prehistoric/Roman date as on a different alignment to probable medieval lynchets).

Other features of uncertain date

Trench 1334 contained a possible ditch.

Soil, colluvial sequences and natural features

Thick colluvium was recorded in several trenches, including in Trenches 763 (1.22m thick) and 768 (0.95m

thick) where it was found within a pronounced dry valley.

Tree throws and natural features were scattered across a number of the trial trenches (Trenches 1333, 1334, 1338, 1346, 1348 and 1349). Some of the tree throws also produced a small amount of material, including a tree throw in Trench 1333 (animal bone, burnt flint and a crumb of prehistoric pottery), Trench 1334 (struck flint, burnt flint and crumbs of Early Bronze Age pottery).

Saxon

A large oval/subrectangular shallow possible pit produced a small amount of Saxon pottery, animal bone and fired clay and may represent the remains of a Saxon sunken-featured building (Trench 1322).

Lynchets and hedged field boundaries of uncertain date

Linear geophysical anomalies were targeted during the evaluation (Highways England, 2019e) and many were confirmed as lynchets. These features, which are most likely associated with medieval cultivation, regularly divide up the landscape on the east side of the Till valley (east of Winterbourne Stoke), to the south of the A303. Lynchets were found in Trenches 1344, 1345 and 1346.

Artefact distributions and dates

Artefacts collected during the trial trenching (from the ploughzone and excavation) suggests a cluster of struck flint at Trenches 1335 and 1338.

Site 15.5

The area is situated on the eastern periphery of an extensive complex of linear features identified from aerial photographs and geophysical surveys representing lynchets and fragmented rectilinear/co-axial field systems (UID 2053). The form of these features and finds recovered during intrusive investigations suggest that they are predominantly of late Prehistoric to Roman date, although some elements could relate to post-medieval or medieval land divisions, lynchets or strip fields (e.g. traces of ridge and furrow) (Wessex Archaeology, 2002a; Highways England, 2019e). Colluvial deposits attaining thicknesses in excess of 1m were also encountered in some locations during trial trenching in areas coinciding with these features. Geophysical surveys (GSB Prospection, 2001: field 56; Wessex Archaeology, 2017d: area NW6; and Highways England, 2019a) have detected traces of medieval/post-medieval ridge and furrow cultivation and lynchets.

Soil and colluvial sequences and natural features were recorded in several trenches, most notably within those coinciding with a broad band of superficial geology identified from geophysical data in the northern part of the site within the pronounced dry valley (Trenches 759, 763, 768, 1352, 1377, 1379, 1390, 1391 and 1392). The deposits attained a considerable depth in some trenches, including Trenches 768 and 1392 (maximum of 1.65m deep above the soliflucted Chalk/Coombe deposits).

A ditched boundary of uncertain date (slightly curving north-west to south-east aligned boundary ditch equating with a geophysical anomaly following the lower slopes of the dry valley) was found in the north of the site (Trenches 1379, 1386, 1385) (possibly of later prehistoric/Roman date).

Two small prehistoric pits (possibly of Late Neolithic date) were found in Trench 754 together with a small finds assemblage.

Site 15.6

Ditched boundaries of uncertain date

A number of trenches contained undated ditches (Trenches 1327, 1329, 1335, 1337, 1338) which may belong to larger rectilinear field systems as indicated by geophysical survey (ditch in Trench 1329 of possible later prehistoric/Roman date as on a different alignment to probable medieval lynchets).

Other features of uncertain date

Trench 1334 contained a possible ditch.

Natural features

Tree throws and natural features were scattered across a number of the trial trenches (Trenches 1333, 1334 and 1338). Some of the tree throws also produced a small amount of material, including a tree throw in Trench 1333 (animal bone, burnt flint and a crumb of prehistoric pottery), and Trench 1334 (struck flint, burnt

flint and crumbs of Early Bronze Age pottery).

Saxon

A large oval/sub-rectangular shallow possible pit produced a small amount of Saxon pottery, animal bone and fired clay and may represent the remains of a Saxon sunken-featured building (Trench 1322).

Ploughsoil artefact sampling

Higher densities of struck flint were recorded in the ploughsoil close to the ploughed down round barrow cemetery (Site 14). Concentrations were recorded in and around trenches 1335, 1337, 1338 and 1340 and decreased to the northwest (Trenches 1332 to 1334). Concentrations continued below the topsoil in Trenches 1339 and 1340.

A small amount of prehistoric pottery was found in the ploughsoil (Trench 1333).

Roman pottery was found in Trenches 1337 and 1340. Trench 735 produced two pieces of possible Roman roof tile, an early Roman brooch, and two re-joining sherds of Saxon pottery.

Site 15.7

Recent trial trench evaluation (Highways England, 2019e) has produced evidence of undated lynchets on east-west and north-south alignments (Trenches 1345 and 1351). These are elements of a more extensive complex of linear features in this area that have been identified by aerial survey and geophysical survey which have been interpreted as representing lynchets/co-axial field system (UID 2053).

Trenches 1342, 1348 and 1351 also contained undated tree throws.

Site 15.8

A shallow trackway of uncertain date extended across Trench 1317 (Highways England, 2019e) which correlated with a linear geophysical anomaly (UID2045) (GSB Prospection Ltd, 2001a). Two wheel ruts lay 1.4 m apart at the base of the feature which were infilled by deposits similar to the subsoil which was deeper in this area of the trench (most likely to date to the medieval period or later).

In Trench 1315 a wide band of medium–large flint gravel in a mid reddish brown silty clay matrix was uncovered.

A natural feature or possible pit (131504) was cut into the variable geology in Trench 1315. It was poorly defined in plan but extended across the trench measuring approximately 1.5m by 1.4m. A quadrant excavated through this feature produced a large quantity of burnt flint (4.4kg) and 114 small pieces (18g) of struck flint. This infilled feature was sealed by 0.4 m thick layer of colluvium (131502). (Another similar feature (131804) was found in Trench 1318 to the east of 1315).

An area of variable geology was investigated in Trench 1316, but it did not contain archaeological material.

Site 15.9

The area is situated on the eastern periphery of an extensive complex of linear features identified from aerial photographs and geophysical surveys representing lynchets and fragmented rectilinear/co-axial field systems (UID 2053). The form of these features and finds recovered during intrusive investigations suggest that they are predominantly of late Prehistoric to Roman date, although some elements could relate to medieval or post-medieval land divisions, lynchets or strip fields (e.g. traces of ridge and furrow) (Wessex Archaeology, 2002a; Highways England, 2019e).

UID 2068: A linear ditch or boundary of possible Bronze Age date visible as a cropmark on aerial photographs that crosses and appears to terminate within Site 15.9. It is aligned north-west to south-east and can be traced for 2.2 km. This ditch is one of a number of extensive Prehistoric ditches which divide up areas of Salisbury Plain. It has been mapped as part of the RCHME: Salisbury Plain Training Area NMP project, and the English Heritage Stonehenge WHS Mapping Project. It has also been identified by recent geophysical surveys (Wessex Archaeology, 2017a; Wessex Archaeology, 2017c) and trial trenching outside of the site boundary (Wessex Archaeology, 2017d).

Site 15.10

The area is situated within an extensive area of linear features identified from aerial photographs and

geophysical surveys representing lynchets and fragmented rectilinear/co-axial field systems (UID 2053). The form of these features and finds recovered during intrusive investigations suggest that they are predominantly of late prehistoric to Roman date, although some elements could relate to medieval or post-medieval land divisions, lynchets or strip fields (e.g. traces of ridge and furrow) (Wessex Archaeology, 2002a; Highways England, 2019e).

Recent trial trench evaluation identified an undated NNW-SSE aligned ditch in Trench 750 which did not correlate to any geophysical anomaly (Highways England, 2019e).

A mid reddish brown colluvial subsoil, <0.20m deep, was recorded in Trench 1377, above soliflucted Chalk/Coombe deposits which coincided with a broad band of superficial geology identified from geophysical data within a pronounced dry valley (colluvium also observed in Trenches 759, 761, 763, 768, 1352, 1379, 1390, 1391 and 1392).

Scheme impact

From the viaduct over the River Till, the Scheme proceeds on embankment into the dry valley, through which it passes eastwards mostly in cutting. The cutting will remove archaeological features and deposits in Sites 15.1, 15.2 and 15.3. The affected archaeology comprises sections of extensive linear boundaries, field systems and lynchets that are characteristic of the downland in this part of Salisbury Plain. A colluvial sequence including a buried soil of likely later prehistoric date will also be impacted.

South of the main line of the bypass, Site 15.4 lies within an area of landscape fill of >1m deep. Archaeological remains in this area will either be rendered inaccessible due to the depth of the fill, or may be exposed or damaged if topsoil is stripped prior to deposition of fill material.

Landscape fill will be placed in the area of Site 15.5. The water connection route (Site 47) to the Main Civils Compound also passes through Site 15.5. Archaeological remains in this area will either be rendered inaccessible due to the depth of the fill (where >1m deep) or may be exposed or damaged if topsoil is stripped prior to deposition of fill material.

Within the fill areas (Sites 15.6 to 15.10) archaeological remains comprising a boundary ditch of possible Bronze Age date, other ditched boundaries of uncertain date, lynchets of possible late prehistoric to post-medieval date, a possible Saxon settlement, ploughzone artefact distributions (struck flint) and undated colluvial sequences will be impacted without protection measures.

Mitigation

A combination of geo-archaeological assessment followed by strip, map and record (SMR) is required at Site 15.1 to 15.5. Geo-archaeological assessment will target soil and colluvial deposits within the dry valley that crosses Sites 15.2, 15.3, 15.4 and 15.5. The association of tree throws with brown earths suggests the deposits are of some antiquity and probably represent a considerable time span, possibly Bronze Age to medieval.

SMR is required to investigate an extensive system of lynchets. The lynchets appear to form part of an extensive series of strip fields and are likely to be of medieval, rather than prehistoric, date, representing open-field arable cultivation to the north-east of Winterbourne Stoke. Land boundaries seen in Trenches 59 (and also in Trench 63), extend south-east from the River Till along the northern edge of the dry valley, and appear to form part of a co-axial system of land divisions orientated from north-west to south-east and north-east to south-west. They focus around the later Bronze Age settlement excavated at Longbarrow roundabout and could be of a similar date.

Preservation of archaeological remains is proposed at Site 15.6 to 15.10. At these five sites the existing topsoil will be retained and covered with a geotextile membrane as identified in the MS and the imported fill material (0-2m deep) will be placed onto the membrane to ensure that archaeological remains are protected (see section 6.2). The existing landform character of each site area will be maintained within the permanent deposition area and returned to agricultural use (Sites 15.6, 15.8 and 15.9). Site 15.10 will be converted to chalk grassland, and Site 15.7 will be mostly returned to agricultural use, apart from the east end which will be converted into chalk grassland.

At Site 15.6 the buried remains of non-designated barrows (Site 14) will be excluded from the fill area.

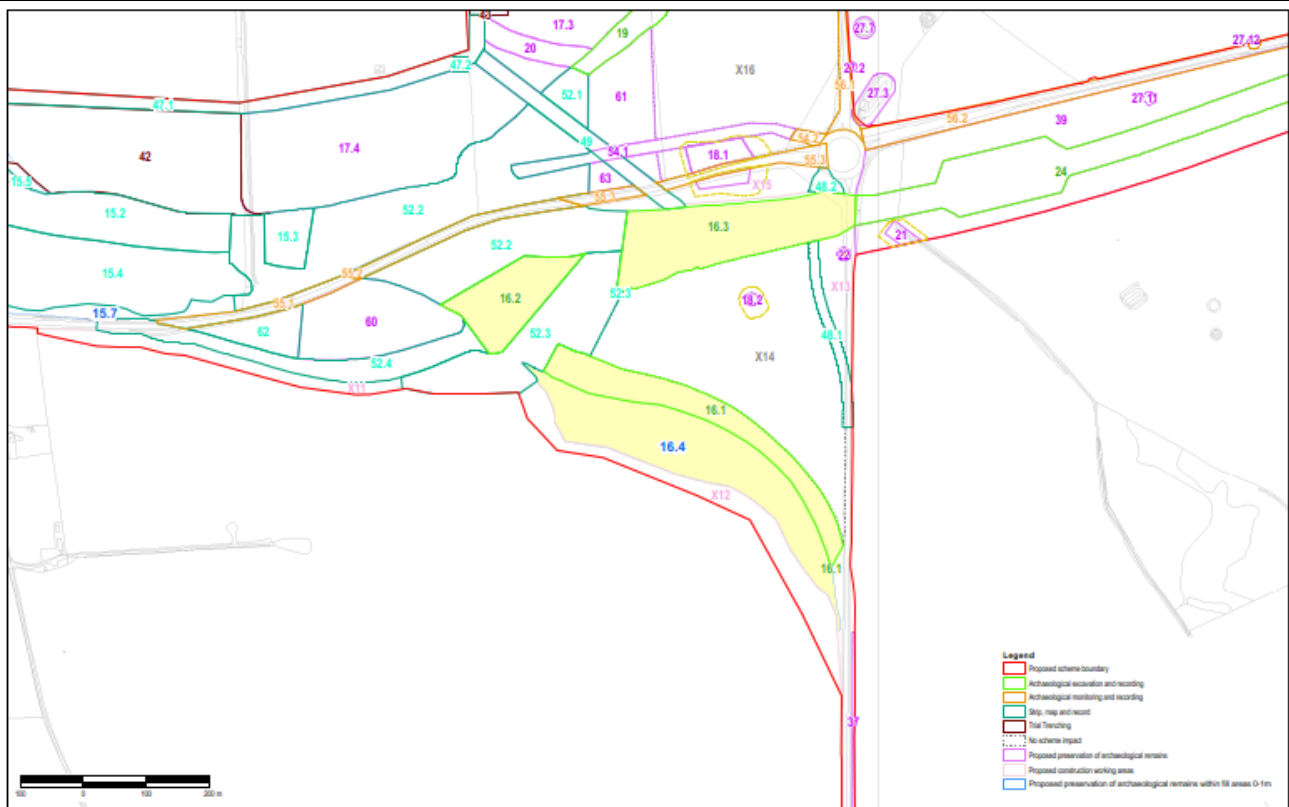
Research objectives identified in the Archaeological Research Agenda

The study of field systems, enclosures, and land divisions, including possible Iron Age lynchets, as well as buried soil horizons and colluvium within a dry valley, offers insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant;

- R.7: Landscape history and memory
- R.9: Daily life
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of the change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- RB.1: How can we decide whether the later activity around these exceptional monuments was a particular response to them?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- RB.4: Rural Settlement of Roman Britain project – the production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy.
- EM.2: Is there evidence that the patterns of Saxon settlement and land use were affected by the presence within the landscape of the ‘ancient’ monuments?
- EM.3: What determined the locations of the early Saxon settlements, and any subsequent shifts? What evidence is there for continuity in settlement and land use from the Romano-British period? This question also addresses issue raised in SWARF Research Aim 26, to investigate the changes in landscape and population at the end of the Roman period, using environmental studies as in “independent witness” to activities currently obscured by a lack of site-based evidence.
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Sites 16.1, 16.2, 6.3 and 16.4: Longbarrow Junction (southern dumbbell), new A303 mainline and realigned A360 south - Possible Bronze Age settlement activity: C-shaped enclosure, scattered pits, Wessex linear and two sides of a possible enclosure.

Designation:	Non-designated
Reference IDs:	UID 2067/MWI6984 UID 2068/MWI6407, MWI12690 (land boundaries) UID 2072/MWI720 (enclosure) UID 2073 & UID 2078/MWI7125 (land boundary) UID 2074/MWI6945 (field systems) UID 2075/MWI6946 (pits) UID 2081/MWI6991 (field systems) UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field systems) UID 2143/MWI6944
Location (NGR):	Site 16.1: 409765, 140984 Site 16.2: 409422, 141189 Site 16.3: 409760, 141287 Site 16.4: 409667, 140957
Site area (approximate):	Site 16.1: 2.33ha Site 16.2: 1.62ha Site 16.3: 3.46ha Site 16.4: 4.15ha



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Description

Site 16.1 comprises the realigned A360 southern link to the new Longbarrow Junction.

Site 16.2 captures an area of archaeological activity within the footprint of the southern dumb bell roundabout of the new junction and the A303 off-slip road.

Site 16.3 comprises the new A303 cutting.

Site 16.4 is an area of permanent soil storage to the south of the A360 southern link

Baseline

The area to the west and south of Winterbourne Stoke crossroads formed Oatlands Airfield (UID 2067). This was a grass airfield which opened in 1941 as a training unit for fighter reconnaissance squadrons. Use of the site from 1942 was only intermittent and the site was closed in 1946 (Wessex Archaeology, 1998).

A linear ditch or boundary of possible Bronze Age date visible as a cropmark on aerial photographs crosses Sites 16.1 and 16.2, aligned north-west to south-east and traceable for 2.2 km (UID 2068). This ditch is one of a number of extensive Prehistoric ditches which divide up areas of Salisbury Plain, mapped as part of the RCHME: Salisbury Plain Training Area NMP project, and the English Heritage Stonehenge WHS Mapping Project. Outside of the site areas the feature was investigated within two trial trenches during an evaluation in 2003 where struck flint was recovered from the lower fill of the ditch in one of the trenches (Wessex Archaeology, 2003b). The ditch has also been identified by geophysical survey (Wessex Archaeology, 2017a; Wessex Archaeology, 2017c) and trial trenching (Trench 6: feature 605) (Wessex Archaeology, 2017d).

An incomplete oval or elongated C-shaped enclosure or possible barrow identified from aerial photographs and geophysical survey has been identified at Site 16.2 (UID 2072). Geophysical survey (Wessex Archaeology, 2017a) indicates that the enclosure is orientated north-east to south-west and measures some 50m by 30m. Evaluation in 2018 has proven a multi-period site comprising a C-shaped enclosure, post-built structure, ditch and pit (Early Bronze Age to Middle Iron Age).

Crossing the western side of Site 16.3 is a north-north-east to south-south-west sinuous linear feature mapped as part of the RCHME Salisbury Plain Training Area NMP project, and the English Heritage Stonehenge WHS Mapping Project (UID 2073). The cropmark feature can be traced for c.1.5km and is variable in its width, measuring up to 20m across towards its southern end, but tapering to around 1m to 2m across towards the northern extent. It is recorded as a possible late Prehistoric linear boundary by the corresponding WSHER entry. South of Site 16.3 it appears to curve around a possible Bronze Age round barrow and terminates at its southern end at a large ring ditch on the northern edge of a probable late prehistoric/Roman settlement on Oatlands Hill. It is possible that the feature could be an incised trackway associated with the settlement, which has a central road way on the same alignment as the ditch. The feature extends north of the A303, possibly defining the western boundary of an enclosure assigned to UID 2078.

The feature has been investigated by trial trenching (Wessex Archaeology, 2002f) and geophysical survey (Wessex Archaeology, 2016a), the latter appearing to confirm that the feature is a probable trackway formed of two parallel ditches.

An approximately north-south aligned ditch was discovered during a trial trench evaluation along the north side of Site 16.2 (UID 2074) (Wessex Archaeology, 2002f). The ditch cut a small, shallow undated feature, and a sherd of Roman pottery was recovered from the fill of the ditch.

Four small discrete features, probably pits were identified in a trench excavated along the north side of Site 16.3 during an evaluation in 2001 (UID 2075) (Wessex Archaeology, 2002f). Two were dated by pottery to the Early/Middle Iron Age.

Crossing the north-west corner of Site 16.3 and the north-east corner of Site 16.2 are the remains of a possible rectangular enclosure and associated linear features, identified by aerial photographs and geophysical survey (UID 2078) (GSB Prospection Ltd, 1999). The remains may be associated with a south-south-west to north-north-east linear feature that runs from the north-west corner of Site 16.3 and crosses the western side of Site 16.1 (UID 2073).

An east to west orientated section of ditch was exposed during stripping for a compound just to the west of the

A360 and south of an existing farm access track. This shallow feature was undated but thought to be a former field boundary (Wessex Archaeology, 2014b). Several linear features that may form part of the enclosure were also detected by later geophysical survey in Area NW5 (Wessex Archaeology, 2017c).

A watching brief undertaken on test pits associated with a proposed 11kv supply located an undated ditch running in an east – west alignment between Site 16.1 and the A360 (UID 2081) (Wessex Archaeology, 2005).

An extensive area of co-axial field systems, enclosures and lynchets identified to the south of the A303 across Sites 16.1 to 16.3 is known from aerial photograph analysis as part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project, and several episodes of geophysical survey and trial trenching (UID 2089). In some, but not all, instances, trial trenching has confirmed the presence of archaeological features correlating with elements of the field systems identified via remote sensing techniques.

Although these may have been established during multiple phases and subject to periodic alteration and re-organisation, the field systems are likely to date broadly to the later Prehistoric to Roman period, following a pattern observed across large swathes of Salisbury Plain (it may also incorporate elements that are later, medieval or post-medieval).

Small scale excavations undertaken by Historic England investigated part of the field system, revealed a ditch incorporating a palisade (Roberts, D. et al., 2017; p.120–40). The remains of a neonatal human burial (assigned to UID 2173) were also discovered within the fill of the ditch. The investigation determined that at least part of the field system may date to the earlier part of the Middle Bronze Age.

Recently completed archaeological evaluation that incorporated Sites 16.1 to 16.3 has confirmed the results of earlier surveys (Highways England, 2019h).

UID 2143: A cluster of suspected prehistoric pits located on the south side of the proposed Longbarrow Roundabout junction and extending south beyond the Scheme boundary.

Site 16.1

Later Prehistoric Boundaries

Trenches 357, 358 and 361 contained a boundary ditch (a potential Wessex Linear) which extends across the south of the evaluation area on a general NW–SE alignment for approximately 1km (also located in Trenches 319, 320, 328, 380 (north of Site 16.1) and 403). It was identified in geophysical survey as a linear anomaly and is also known from NMP data, which shows that it intersects with a north-east to south-west aligned potential trackway leading to the enclosed settlement on Oatlands Hill. In Trench 357, cut 35707 was 1.44m wide and 0.45m deep, filled by a primary deposit (35708) with two episodes of natural silting above this (35709 and 35710). Ten worked flint flakes were recovered from upper fill 35710. The Wessex Linear was also found outside of the DCO boundary in Trenches 1366 and 1369 (Highways England, 2019e).

Field systems and agricultural features of uncertain date

At the northern end of Trench 357 a wide shallow feature (35704) orientated north-east to south-west was recorded which equates to a linear geophysical anomaly, originally interpreted as a potential trackway leading to the later prehistoric/Romano-British enclosed settlement on Oatlands Hill. There was no sign of parallel gullies that might define a trackway and the features were interpreted as possible lynchets or a potential hedgerow boundary. No datable artefacts were recovered.

Trench 379 produced a shallow gully (37903) (0.45 m wide and 0.18 m deep) and on its eastern side a bioturbated deposit (37906). The gully appears to correspond to a curving linear geophysical anomaly with a north-east to south-west orientation. Deposit 37906 appears to represent fill of a possible lynchet/late hedgerow (37905), and although no finds were recovered, it appears to define the western extent of a series of north-east to south-west plough furrows seen in NMP data and therefore could potentially be medieval in date.

Ploughsoil artefact sampling

The ploughsoil in Trench 370 produced three pieces of flintwork (37008) that are Mesolithic and/or Early Neolithic in date suggesting that knapping at this date was not occurring extensively at the evaluation area. Trench 374 (37403) produced one piece of Late Neolithic flintwork.

Site 16.2

Late Neolithic and Beaker pits

Trench 331 contained two pits (33106 and 33112). Pit 33106 produced pottery (22 sherds/118g representing three Beaker vessels), dated to the Beaker period, although the similarities between the two pits suggest they are likely to be contemporary. Both were sub-circular in plan with steep, straight, near vertical, sides and flat bases and both were deliberately backfilled, judging from the poorly sorted fills (33107 and 33113 respectively). Pit 33106 also contained an upper secondary fill (33108). As well as the pottery, 34 pieces of worked flint including flakes, blades and scrapers were also recovered from the backfill (33107) together with some burnt flint. A single flint flake and burnt flint were retrieved from the other pit (backfill 33113).

Late Bronze Age 'C-shaped' enclosure and associated features

A 'C-shaped' or discontinuous oval enclosure in the central southern part of the evaluation area is known from geophysical and NMP data and was investigated in 2018 Trenches 327, 331, 334, 338 (no remains), 387 and 388. The reconnaissance surveys indicated that its long axis is orientated north-east to south-west with the ditch on its south-eastern side extending further to the south-west (approximately 50m) than its north-western counterpart (roughly 34m). It has a probable north-east facing entrance (just under 4m wide) and the enclosure is also being 'open' to the south-west (approximately 27m wide). Another linear geophysical anomaly (42 m long) located 37–46m to the south-west may be associated with the 'C'-shaped enclosure, and was investigated in Trench 327.

A hand-excavated segment through the enclosure ditch in Trench 334, on the southern side (33403), showed a 'V'-shaped profile 1.2m wide and 0.5m deep. Another segment excavated through the northern side of the ditch (33410) showed a comparable profile and dimensions. Both excavated cuts appear to show that the ditch had silted up naturally: both contained a primary fill (33404 and 33411) with two episodes of secondary infilling (33405 and 33406 in cut 33403 and 33412 and 33413 in 33410). Finds recovered include 54 sherds/782g of Late Bronze Age pottery mostly from a single vessel (context 33406), 15 sherds/9g of pottery (of general prehistoric date from context 33405), worked flint (mostly flakes but also including a scraper: object 33407), burnt flint, a small quantity of animal bone, and an unworked echinoid fossil (object 33408).

Several definite and possible postholes were identified in Trench 331 and Trench 387 near the 'open' south-west side of the enclosure, but most did not contain datable finds (the exception being 33150 which contained probable Late Bronze Age pottery). Although the features could be associated with each other and may indicate a structure contemporary with the enclosure, no discernible plan is apparent from those present within the trial trenches. Additionally, the two pits assigned to the Beaker period (33106 and 33112, described above) indicate that activity of other periods occurred in this locality, and therefore it cannot be demonstrated that these postholes are all contemporary.

Trench 327 contained a north-west to south-east aligned linear feature that correlated with a geophysical anomaly. Excavation showed this ditch (32705) to be 2.3m wide and 0.45m deep and filled with a primary fill (32715). A second slot through the ditch (32716) found it to be 3.15m wide, and was excavated to 1.37m deep (not fully bottomed for health & safety reasons). Ditch 32705 was cut by a 0.25m wide circular pit (32712). This small pit was dug to contain the placed deposit of a complete but fragmentary Middle to Late Bronze Age pottery vessel (object 32710). The ditch subsequently appears to have silted up naturally (32706 and 32707) and contained very small quantities of worked and burnt flint and poorly preserved animal bone. The base of ditch 32716 contained a deposit predominantly comprising unworked flint nodules (32750) with other primary fills (32749, 32717 and 32718) above resulting from erosion of the ditch sides. A quantity of burnt flint, worked flint (including flakes, chips and a scraper), and small amounts of animal bone and some very small pottery sherds (prehistoric) were recovered from ditch 32716.

Later Prehistoric boundaries

Trench 328 contained a boundary ditch (a potential Wessex Linear) which extends across the south of the evaluation area on a general NW–SE alignment (also located in Site 16.1 in Trenches 357, 358 and 361). Ditch 32805 measured 1.86m wide and 0.73m deep and appeared to have a slightly deeper linear 'slot' extending along its base.

Worked and burnt flint

A large spread of burnt flint was noted at Trenches 328, 331, 333 and 334 (and elsewhere in Trenches 312 –

320, 326 – 327, 337 and 387) and appears to be associated with the 'C'-shaped enclosure located towards the eastern end of the area of high density burnt flint. The burnt flint concentrations (probably diffused by ploughing, somewhat blurring the pattern) may indicate either that waste materials from activities within the enclosure were disposed of to the west, or that some activity involving the heating of flint was taking place there.

Ploughsoil artefact sampling

The ploughsoil in Trenches 328 and 331 produced three pieces of flintwork (32816 and 33107 respectively) that are Mesolithic and/or Early Neolithic in date.

Site 16.3

Trial trench evaluation in 2002 recorded sporadic and extensive activity across a wide area (Area L) that corresponded to cropmark and geophysical anomalies (Wessex Archaeology, 2002f. A303 Stonehenge Archaeological Surveys Archaeological Evaluation Report: Areas L and O. Wessex Archaeology Report No. 50412.1a).

Trench 10 contained a gully (1002) was identified towards the centre of the trench (just beyond the western edge of Site 16.3 which correlates to a cropmark.

Trench 12 contained a small pit (1203) and a single sherd of Romano-British pottery was recovered from its fill (located north of and outside Site 16.3).

Trench 13 contained three small, discrete features, probably pits, were identified. Two of these (1305 and 1307) were dated by pottery to the Early/Middle Iron Age (1303 was undated). No features correlated with the location of the cropmarks or the geophysical anomaly.

Trench 14 (excavated to investigate an apparently blank area) contained three archaeological features, comprising two intercutting pits (1406 and 1408) and a possible ditch terminal (1403). No datable material was recovered from 1403 or from the earlier pit, but the later pit contained a single sherd of Early-Middle Iron Age pottery.

Trench 17 (excavated to investigate a linear geophysical anomaly), contained a possible undated ditch (1704), aligned approximately north-south that roughly corresponds to the geophysical anomaly.

Trench 20 (also excavated to investigate a geophysical survey, thought to be a continuation of a possible stockade trench associated with Late Bronze Age settlement that lies to the north) found an undated ditch (2002) which broadly correlates with the geophysical anomaly.

Field systems and agricultural features of uncertain date

Shallow gullies were recorded in Trench 356 and Trench 351 that correspond to geophysical and NMP linear anomalies indicating discontinuous rectilinear field boundaries. A north-south orientated ditch in Trench 356 (35606) corresponding to a continuation of a previously excavated 'stockade' ditch (Vatcher and Vatcher, 1968) had steep straight sides and a slightly sloping base and measured 0.90m wide and 0.49m deep. Very small quantities of worked and burnt flint were present. A shallower ditch (35603) aligned NNE-SSW, 0.9m wide and 0.30m is also shown in the geophysical survey where it extends for 15m and merges into the 'stockade' ditch. The 'stockade' ditch also appears to form the eastern boundary of a field measuring at least 115 by 115m, with another truncated ditch (35103) measuring approximately 0.2m wide and 0.4m deep in Trench 351 forms its western side. To the north (and outside Site 16.3) in Trench 355, gully 35505 may represent the continuation of ditch 35103 to the north (not realised in the geophysical data, but suggested by the NMP data). Although neither of the features contained artefacts, previous investigation has proved that the 'stockade' ditch post-dates the Wessex Linear boundary.

Discrete features of uncertain date

A shallow possible pit (35610) located in Trench 356 contained no finds.

Worked and burnt flint

A minor concentration of burnt flint found in the ploughsoil at Trench 356.

Ploughsoil sampling

The ploughsoil in Trenches 342 produced two pieces of flintwork (34211) that are Mesolithic and/or Early

Neolithic in date and indicative of contemporary activity. Also a small amount of undiagnostic prehistoric pottery from Trench 356.

Site 16.4

Later Prehistoric Boundaries

Parts of a later prehistoric Wessex Linear boundary ditch (NW-SE aligned) were investigated during the recent evaluation of Winterbourne Stoke East (Highways England, 2019e) (Trenches 1366 and 1369) and during the Longbarrow Junction evaluation (Highways England, 2019h) (Trenches 358 and 361).

A Bronze Age rectilinear enclosure was investigated at the southern end of the site. Trench 1373 identified the corner of the enclosure which corresponded to linear features excavated in Trench 383, and which was also detected by geophysical survey.

An undated probable trackway that leads to an Iron Age/Roman settlement on Oatlands Hill was recorded in Trench 1363 at the northern end of the site.

Field systems, agricultural features and discrete features of uncertain date

A small number of undated postholes were recorded during the evaluations in Trenches 366, 382 and 1367 (the square shape of the postholes in Trench 382 could suggest a modern origin). A shallow north-south aligned feature in Trench 1365 was interpreted as a possible wheel rut associated with modern agricultural activity.

Natural features

Tree throws were widely dispersed across the site and were recorded in Trenches 367, 371, 382 and 384 (Longbarrow Junction evaluation) and Trenches 1368, 1369 and 1370 (Winterbourne Stoke East evaluation). Trench 1368 produced 2 re-joining sherds of Roman pottery.

Ploughsoil artefact collection (test pitting and dry sieving)

During the Winterbourne Stoke East evaluation small amounts of Roman pottery were found in Trenches 1362, 1363, 1367, 1368, 1371 and 1373. A marked concentration of burnt flint, possibly associated with the disposal of domestic waste was found in Trenches 1362 and 1370 and also slightly to the west of Site 16.4 in Trench 1373. Isolated pieces of prehistoric pottery were found in Trenches 1366 and 1371. Trench 1368 produced a piece of struck flint of Mesolithic and/or Early Neolithic date.

Scheme impact

Construction of the re-aligned A360 (south) in shallow cutting will remove archaeological remains within Site 16.1. The construction of the southern dumbbell roundabout and the A303 off-slip road at the Longbarrow junction will remove the C-shaped enclosure and associated multi-period structural remains within Site 16.2. Excavation of the Scheme mainline cutting will remove archaeological remains within Site 16.3.

Without protection the remains of parts of a later prehistoric Wessex Linear boundary ditch, parts of a Bronze Age rectilinear enclosure and an undated trackway will be impacted by the fill area at Site 16.4.

Mitigation

Additional ploughzone artefact collection is proposed at Site 16.2. Archaeological excavation and recording (AER) at Sites 16.1 to 16.3 is required to record Early Bronze Age activity that may be on the periphery of a more densely occupied area; and evidence of Middle and Late Bronze Age occupation that is associated with the buried remains of a 'C'-shaped enclosure where the deposition of whole or substantial portions of pots and significant concentrations of burnt flint indicate the survival of significant remains (connections with the settlement excavated by the Vatchers (Vatcher and Vatcher, 1968) may also be evidenced).

Site 16.4: Preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS and the imported fill material (0-2m thick) will be placed onto the membrane to ensure that archaeological remains are protected. The existing landform character will be maintained within the permanent deposition area to create a chalk grassland and the site will be returned to agricultural use.

A short section of the SSEN Southern Power Cable (Site 48) at eastern end of Site 16 will be investigated as

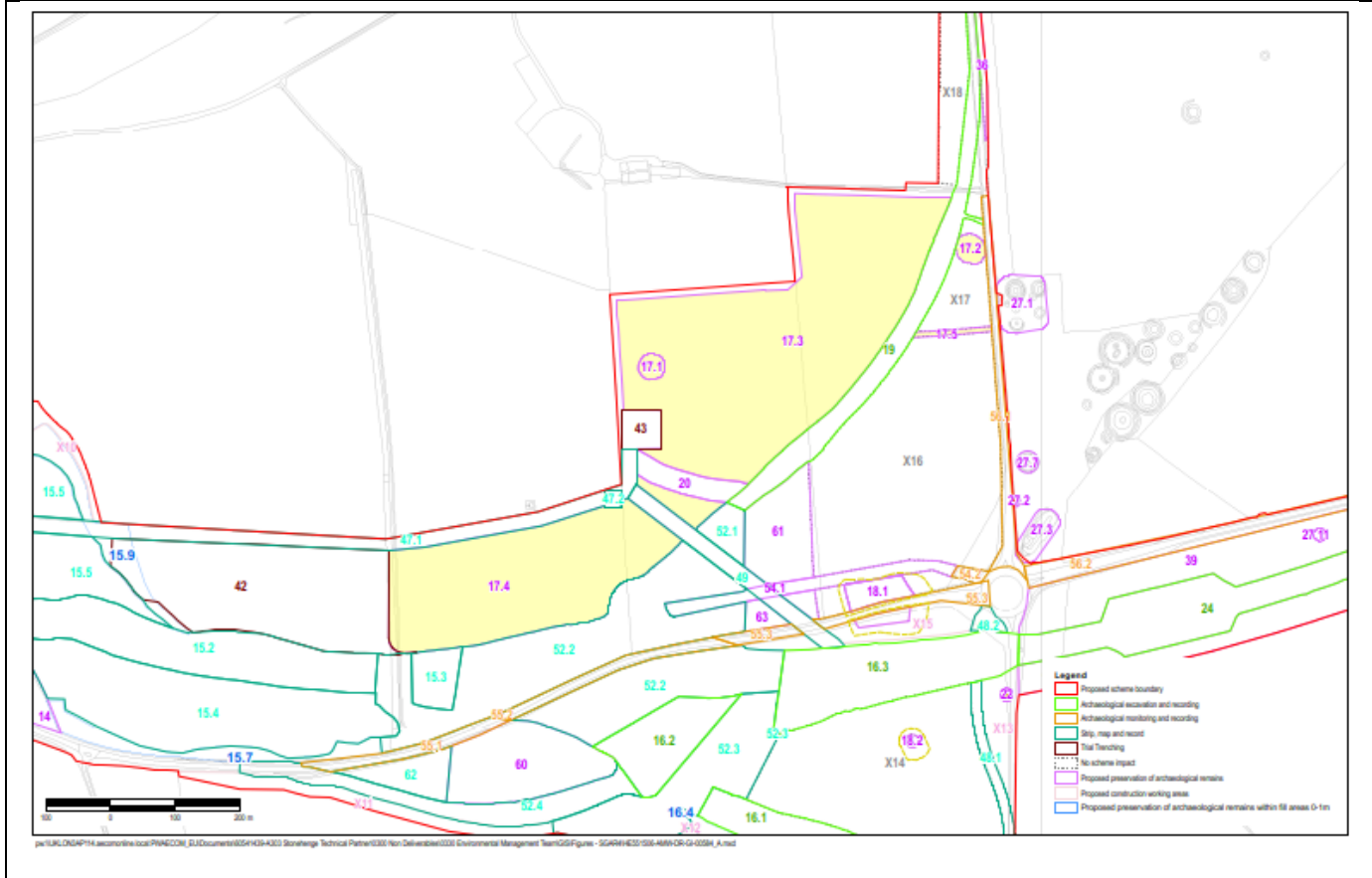
part of Site 16.3 (area for archaeological excavation and recording (AER)).

Research objectives identified in the Archaeological Research Agenda

The study of field systems, enclosures, and land divisions, as well as burial sites, offers insights into past landscape use and development.

- R.8: Human generations
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape?
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas?
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception?
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?
- M.8.1: What can Mesolithic technology (e.g. stone, antler, bone and wood working), its production, use and deposition, tell us about Mesolithic lifeways?
- M.8.2: How can we better understand spatial and temporal variation in lithic technology, use and deposition?
- M.8.3: To what extent can the composition, size and geographical characteristics of lithic scatters be used to define different types of site in the Mesolithic?
- M.9.1: How variable was site use and landscape use through this period?
- M.9.2: Can we further refine the dating of final Mesolithic sites and how do these relate to the Early Neolithic?

Sites 17.1, 17.2, 17.3, 17.4 and 17.5: Main Civils Compound - non-designated barrow and a pair of solution hollows just east of the A360 north link road.	
Designation:	Non-designated
Reference IDs:	UID 2076 (Site 17.3) UID 2077/MWI6402 (Site 17.2) UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field system), (Site 17.4) UID 2138/MWI7093, MWI73257 (Site 17.3) UID 2144/MWI74878 (Sites 17.3 and 17.4) UID 2148/MWI75991 (Site 17.1) UID 2151/MWI6403 (Site 17.2)
Location (NGR):	Site 17.1: 409400, 141765 Site 17.2: 409887, 141935 Site 17.3: 409577, 141750 Site 17.4: 409186, 141417 Site 17.5: 409864, 141812
Site area (approximately):	Site 17.1: 0.24ha Site 17.2: 0.18ha Site 17.3: 12.24ha Site 17.4: 6.56ha Site 17.5: 0.10ha



Description

Site 17.1 comprises a barrow (UID 2148) that was detected by gradiometer survey as a ploughed-down ring ditch within the Main Civils Compound (geophysical survey area NW5). The unrecorded Bronze Age round barrow was found during gradiometer survey (gradiometer feature – 8100) and was further investigated by GPR survey (Area 17) (Wessex Archaeology, 2017c). The ring ditch is evident as a curvilinear anomaly c.14m in diameter and forms a roughly penannular shape, with a single gap visible in the north-east (possibly the result of plough damage but may represent a genuine break in the ditch). The ditch itself is c.2m wide with no identifiable internal features.

Site 17.2 was initially identified as a levelled barrow (UIDs 2077 and 2151), possibly with an outer bank. A geophysical survey detected a large sub-circular anomaly (gradiometer feature – 8103), c.9m in diameter, which is representative of a large pit-like feature or pond barrow; probably with a remnant bank on the northern edge of the feature (alternatively the surveyors considered that it may suggest a geological solution hollow).

Subsequent trial trenching and geo-archaeological assessment (geo-archaeological test pit and borehole sampling) at Site 17.2 (Trench 448) could not confirm the presence of a pond barrow but did identify a number of natural solution features (Highways England, 2019h [REP1-042, 043]). Colluvial deposits were present in Trench 448 infilling the upper part of natural depressions or solution hollows (44807 and 44828). Approximately 50 worked flint flakes, small quantities of burnt flint and five sherds (12g) of Romano-British pottery were recovered from colluvial deposits within the hand-excavated intervention in the northern depression (44807), which is interpreted as an unremarkable solution feature infilled in the Pleistocene, with the upper part filled by Holocene colluvial activity.

A more complex and varied depositional sequence was found in the southern hollow (44828) where an extensive sequence of loessic and coombe deposits were found to infill the solution feature, including in the last phase Holocene colluvial deposits.

A single posthole (44804) was recorded (0.35m in diameter and 0.37m deep) filled with a single deposit with evidence of flint post-packing. Some worked flint, burnt flint and fired clay was also recovered suggesting a prehistoric in date.

Sites 17.3 to 17.5 include the Main Civils Compound (northwest of Longbarrow Roundabout) and the access road from the A360. The compound complex will also include a temporary electricity substation (Site 43) and a combined water and electricity supply connection corridor (Site 49).

A section of linear boundary (UID 2014.02), visible as a cropmark on aerial photographs bisects Site 17.3 at the southern end (Site 20). A trench excavated through the linear boundary in the early 2000s revealed a very large ditch aligned approximately north-west to south-east (Wessex Archaeology, 2002f). Numerous linear and curvilinear features have been detected by geophysical survey north-west of Winterbourne Stoke Crossroads (GSB Prospection Ltd, 1999, Site 38). More recently several linear features associated with/forming part of an enclosure were detected by geophysics (Area NW5) (UID 2078) (Wessex Archaeology, 2017c; University of Birmingham, 2018). Trial trenching in 2018 examined the line of the A360 northern link road c. 200m to the east of Site 43 identified a possible Late Neolithic pit (Highways England, 2019h [REP1-042, 043], Trench 431).

Extensive possible undated pits of archaeological or natural origin (natural pitting in the underlying chalk) (UID 2144) were identified by geophysical surveys in Sites 17.3 and 17.4, the latest and most extensive of which was carried out in 2017 (Wessex Archaeology, 2017c).

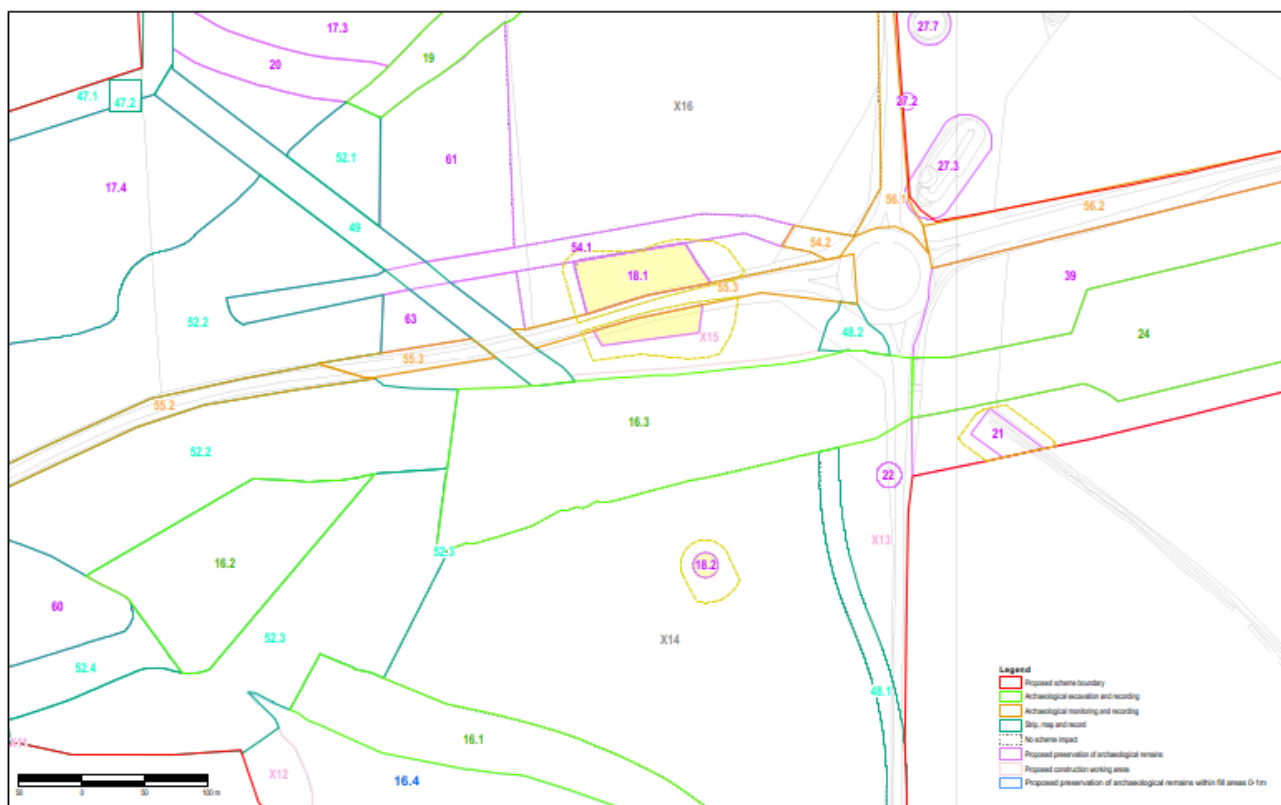
Numerous linear and curvilinear anomalies were detected by geophysical survey within Site 17.3 during several phases of work by GSB Prospection in the 1990s/early 2000s (UID 2076). An aerial photographic assessment in 2001 confirmed the presence of the features across the area.

An extensive area of co-axial field systems extends into the southern side of Site 17.4. Enclosures and lynchets are known from aerial photograph analysis (part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project), and from several episodes of geophysical survey and trial trenching (UID 2089). In some areas trial trenching has confirmed the presence of archaeological features correlating with elements of the field systems identified via remote sensing techniques. Although these may have been established during multiple phases and subject to episodic alteration and reorganisation, the field systems are likely to date broadly to the Later Prehistoric to Roman periods but may also incorporate medieval and post-

medieval elements.
Scheme impact
<p>Site 17.1 contains the remains of a buried Bronze Age burial mound is located within the Main Civils Compound. The construction compound is to be formed above the existing ground level using imported stone.</p> <p>Site 17.2 contains colluvial deposits that are associated with archaeological remains, and a possible pond barrow of possible Early Bronze Age date which will need protection will be located adjacent to the realigned A360 and will require to be protected at the construction stage.</p> <p>Without protection, construction of the Main Civils compound and the access road (Sites 17.3 to 17.5) will impact evidence of pit digging activity of possible Neolithic/Late Neolithic date and linear and curvilinear features, and enclosures of possible Later Prehistoric to Roman periods.</p>
Mitigation
<p>Site 17.1 will be excluded from the area of stone fill and will be protected by fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys. Following completion of the Main Works, the protective fencing will be removed prior to the land being returned to agriculture.</p> <p>Site 17.2 will be protected by fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys. Following completion of the Main Works, the protective fencing will be removed prior to the land being returned to agriculture.</p> <p>Sites 17.3 to 17.5: preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in a Method Statement and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. After construction the compound will be dismantled and the imported fill and protective membrane will be removed, and the site returned to agricultural use.</p>

Sites 18.1 and 18.2: Bronze Age enclosure and bowl barrow 100m west of Longbarrow roundabout (Site 18.1); and Bowl barrow 250m south-west of Longbarrow roundabout (Site 18.2).

Designation:	Scheduled
Reference IDs:	UID 2001/NHLE 1011048 (Site 18.1) UID 2002/NHLE 1011045 (Site 18.2)
Location (NGR):	Site 18.1: 409741, 141408 Site 18.2: 409806, 141170
Site area (approximately):	Site 18.1: 0.9ha Site 18.2: 0.22ha


Description

The scheduled enclosure and barrows west of Longbarrow roundabout (Winterbourne Stoke Crossroads) lie within the DCO boundary but are outside of the main works areas, including the Scheme mainline.

Site 18.1 comprises an enclosure that is no longer visible and a levelled bowl barrow which survives as a buried feature of 20m overall diameter in the north-west part of the enclosure (UID 2001, NHLE 1011048). The enclosure is visible on aerial photographs and was confirmed by geophysical survey (GSB Prospection Ltd, 1999; Wessex Archaeology, 2017a). (Note: there is a mismatch between the indicative mapped location of the designated area and the extent of the archaeological remains as mapped by the geophysics).

Site 18.2 comprises a ring ditch considered to be the remains of a levelled bowl barrow which is visible on aerial photographs and which has been detected by geophysical survey (GSB Prospection Ltd, 1992b; Wessex Archaeology, 2017a). The barrow is likely formed of six segments from which the overall diameter is calculated to be 22m (UID2002, HNLE 1011045).

Scheme impact

Construction of the temporary road between the northern dumb-bell roundabout and Winterbourne Stoke crossroads, the downgrading of the existing A303 and the close proximity of utility corridors to the west and south have the potential to impact the monument, which will be preserved (Site 18.1).

Site 18.2 is within the DCO boundary c.44m south of the Scheme mainline and will require protection to ensure that it is also preserved.

Mitigation

Site 18.1 (NHLE 1011048)

The scheduled monument is located in two areas either side of the A303 and approx. 120m west of Longbarrow Roundabout. It will be surrounded and protected by a combination of wooden post and rail fence that will be installed at the start of the PW stage and the existing mature hedgerows alongside the existing highway boundary that will be retained. Due to local constraints, the construction of the temporary road between the northern dumb-bell roundabout and Winterbourne Stoke crossroads, the downgrading of the existing A303, and the presence of utility corridors to the west and south, the fence will only be offset a short distance from the monument (estimated at approx. 5m) as mapped by Historic England and geophysical survey (note: there appears to be a noticeable difference between the scheduled area and results from geophysical survey).

At the PW stage a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts (PW and MW stages) as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed. The northern area of the monument will be returned to agriculture and the southern area converted to chalk grassland.

Site 18.2 (NHLE 1011045)

The scheduled monument is located in arable farmland, approx. 230m southwest of Longbarrow Roundabout. It will be surrounded and protected by a wooden post and rail fence that will be installed at the start of the PW stage. The fence will be offset approx. 10m from the monument as mapped by Historic England and geophysical survey.

At the PW stage a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed and the monument will be returned to agriculture.

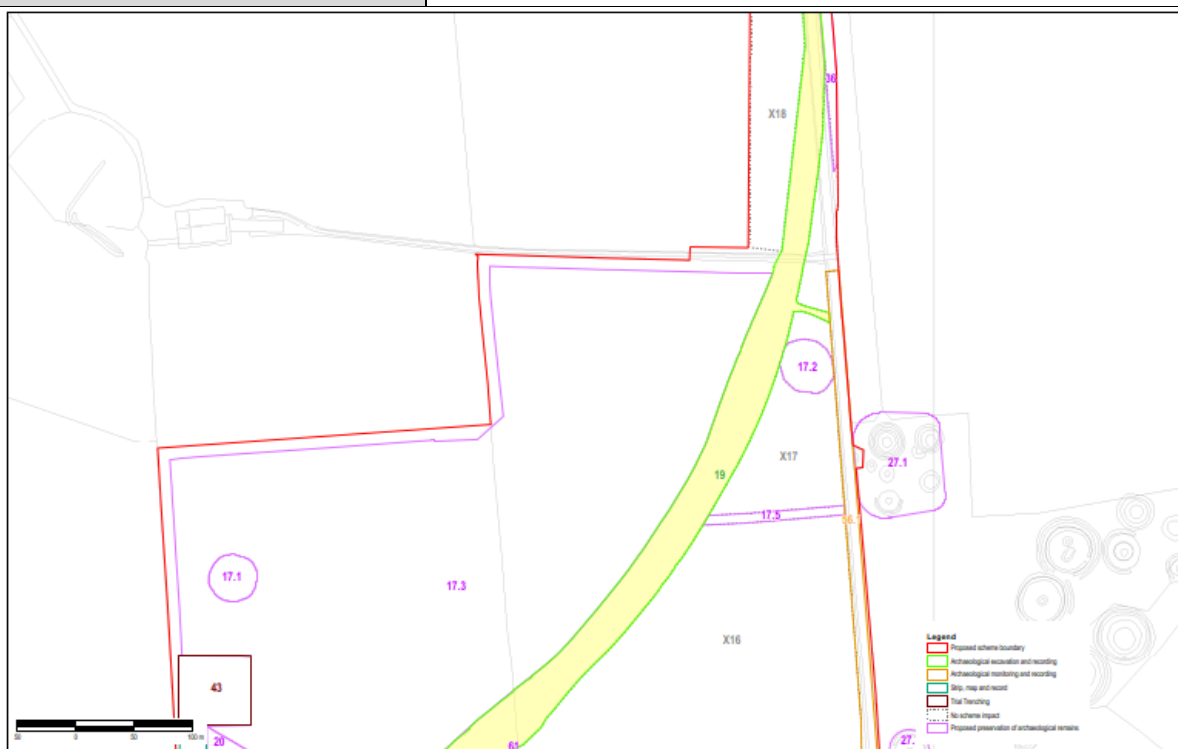
Site 19: Realigned A360 north - isolated burials, flint scatter, scattered pits, ditches and post holes, Wessex linears and geological sinkhole.

Designation: Non-designated

Reference IDs:
 UID 2014.02/ MWI6406 (land boundary)
 UID 2073/ MWI7125 (settlement evidence)
 UID 2076/ MWI7201 (settlement evidence)
 UID 2078/ MWI6405 (settlement evidence)

Location (NGR): 409739, 141746

Site area (approximate): 2.0ha


Description

Site 19 comprises the realigned A360 northern link to the new Longbarrow Junction.

Baseline

Part of a non-designated linear boundary visible as a cropmark on aerial photographs crosses the south end of Site 19 (UID 2014.02). A trench excavated through the feature in the early 2000s revealed a very large ditch aligned approximately north-west to south-east. The fills of the ditch produced animal bone, worked flint and burnt flint, and a sherd of Roman pottery from its upper fills (Wessex Archaeology, 2002f). Further excavation in 2013 immediately to the south-west of the Winterbourne Stoke Crossroads recorded a width of 4.6m and 1.5m deep. No artefacts were recovered (Wessex Archaeology, 2014).

A north-north-east to south-south-west sinuous linear feature (mapped as part of the RCHME Salisbury Plain Training Area NMP project, and the English Heritage Stonehenge WHS Mapping Project) can be traced for c.1.5km and is variable in its width, measuring up to 20m across towards its southern end, but tapering to around 1m to 2m across towards the northern extent (UID 2073). South of the A303 it appears to curve around a possible Bronze Age round barrow and terminates at its southern end at a large ring ditch on the northern edge of a probable late Prehistoric/ Roman settlement on Oatlands Hill. It is possible that the feature could be an incised trackway associated with the settlement, which has a central road way on the same alignment as the ditch. North of the A303 the feature appears to define the western boundary of an enclosure (UID 2078).

Numerous linear and curvilinear anomalies detected by geophysical survey to the north-west of Winterbourne Stoke Crossroads during several phases of work by GSB Prospection in the 1990s/early 2000s cover a large area south-east of Site 19, with elements extending into the site (UID 2076). An aerial photographic assessment in 2001 confirmed the presence of the features across the area, and part of a ditch was observed in this location during a watching brief in late 2012/ early 2013 (Wessex Archaeology, 2014).

A possible rectangular enclosure and associated linear features identified by aerial photographs and geophysical survey are present within the middle of Site 19 and at the north end (GSB 1999) (UID 2078), which could also be associated with a south-south-west to north-north-east linear feature to the south (UID 2073). An east to west orientated part of the ditch exposed during stripping for a compound just to the west of the A360 and south of a trackway was undated (Wessex Archaeology, 2014. Stonehenge Environmental Improvements Project, Longbarrow Crossroads, Winterbourne Stoke, Wiltshire. Archaeological Evaluation, Mitigation and Watching Brief. Wessex Archaeology Report 74252.01). Several of the linear features associated with/forming part of the possible enclosure were detected by geophysical survey in Area NW5 (Wessex Archaeology, 2017b. A303 Amesbury to Berwick Down. Geophysical Survey Report. Phase 2. Arup Atkins Joint Venture A303 (Wessex Archaeology Report 113223-05); University of Birmingham, 2018; ID 8080 and 8007).

Late Neolithic and Beaker pits

In the centre of Site 19 a cluster of pits (43904, 43907 and 43924) were found in Trench 439 that correlate with a discrete geophysical anomaly (Highways England, 2019h [REP1-042, 043]).

Two of the pits (43904 and 43924) were similar in size, 0.6–0.7m in diameter, whilst 43907 was slightly larger (possibly due to root action/animal burrowing to the sides); all had steep concave sides and were between 0.32 and 0.36m deep and appeared to have been deliberately backfilled. Abraded body sherds (7g) of Woodlands-type Grooved Ware pottery (Late Neolithic date) were recovered from the fill of pit 43904, along with an assemblage of worked flint (including 50 flakes, 34 chips and 2 microdenticulates) and rare animal bone fragments. Pits 43907 and 43924 did not contain any pottery but had a similar range of other finds (again including worked flint assemblages). Pit 43924 appeared to cut the upper fill (43909) of pit 43907, although this was not clear in section. Each pit was 100% excavated.

A pit found in Trench 437 (43706) located c.80m to the south (also beyond Site 19) also belongs to this phase on the basis of the worked flint it contained.

Field systems and agricultural features of uncertain date

Probable field divisions were uncovered in Trenches 443 (44304), 437 (43703) and 444 (4404) and in other trenches north of the A303 (Trenches 435, 441, 442 and 445). In trench 437 the ditch had steep straight sides and a concave base, and measured between 1.7m and 1.9m wide and 0.60m to 0.95m deep. Seven worked flint flakes and three blades were recovered from secondary fill 43705 (ditch 43703). This ditched boundary appears to form the western extent of a rectilinear field seen in geophysical and NMP data (the ESE-WNW orientated ditch in Trench 444 appears to mark the northern extent of the field). Their varying alignment suggests they are not all of one phase, but they may have their origins in the Middle Bronze Age (datable artefacts were few: only one sherd of Romano-British pottery was recovered from ditch 44105 which cut an infilled curving gully associated with a Late Bronze Age urned cremation burial).

An ESE–WNW aligned gully in Trench 443 (44304) (also 44204 in Trench 442) extends westwards from the northern end of ditch 44105. A shallow undated gully (43302) that can be traced for some 80m in the geophysical data may also be associated with this slightly curving boundary.

Ploughzone artefact sampling (fieldwalking, topsoil sieving and trial trench features)

Trench 439 appears to lie at the centre of Late Neolithic activity which appears to be relatively localised; it contained a significant group of material of this date, including 1084 pieces of flintwork from three pits (43904: 86 pieces, 43907: 341 pieces, and 43924: 446 pieces), two tree hollows (43929: two pieces, perhaps a result of natural processes, and 43930: 65 pieces) and the ploughsoil (144 pieces, all flake debitage with the exception of three blades). To the south Trench 436 contained 43 flakes; Trench 437 produced 83 flakes and the tip of a bifacially-thinned implement (flint dagger or possibly a sickle); and Trench 438 produced 76 flakes, one retouched. To the north Trench 443 produced 31 flakes and an unfinished transverse arrowhead.

Geo-archaeology

Just outside the Site 19 footprint, an extensive sequence of loessic and coombe deposits (>7.0m) were captured within a solution feature, possibly a unique sequence for the local area. The deposits consist of loessic material reworked as slope wash fans and may also contain phases of primary loess deposition, bracketed by chalky solifluction (coombe) debris deposited by periglacial (freeze-thaw) processes.

The Pleistocene loess deposits may reflect more than one phase of loess deposition and reworking of loessic material. Loess and loessic slope wash deposits would once have been extensive across Salisbury Plain, but have been largely removed by subsequent erosion. Their presence of within a solution feature demonstrates that these geological landform features act as important capture points preserving potentially significance sequences of Pleistocene deposits. Initial palaeoenvironmental assessment of samples taken from these deposits indicate that they preserve a range of palaeoenvironmental indicators, including ostracods, fish bones and large mammal bone fragments.

Scheme impact

Construction of the re-aligned A360 (north) in a shallow cutting will impact known and potential archaeological remains at Site 19 potentially relating to an area of Neolithic and Bronze Age activity, resulting in the loss of the archaeological resource.

Mitigation

Archaeological mitigation will comprise ploughzone artefact sampling (fieldwalking) combined with additional trial trenching and topsoil sample sieving to assess the archaeological potential at the southern end of Site 19 (due to a Scheme design change) where geophysical survey has detected linear anomalies of possible archaeological interest and to evaluate any apparently blank areas where no anomalies have been detected but which may contain burials (Early Bronze Age burial in Trench 441 was not recognised in geophysical survey). The potential for further deposits of geo-archaeological interest will be addressed as part of the Scheme-wide geo-archaeological strategy.

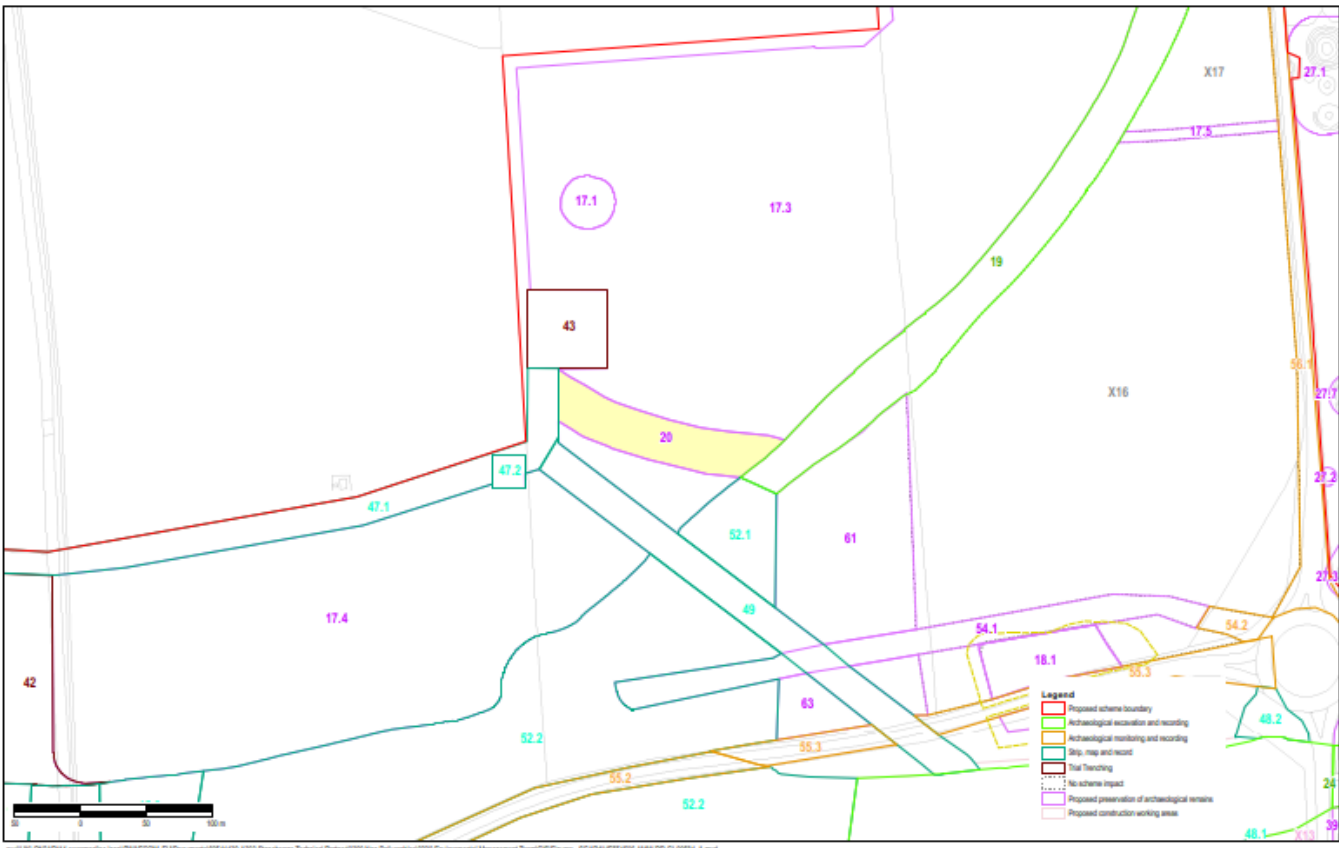
Evaluation will be followed by ploughzone artefact sampling (fieldwalking and targeted topsoil artefact sampling) and archaeological excavation and recording (AER) to record an area of Late Neolithic/Beaker activity (pits) identified close by from previous fieldwalking and evaluation trenching, west of the round barrows of the Winterbourne Stoke barrow cemetery; and linear features of uncertain date which are likely to belong to more than one phase of field systems within the site, including examining the stratigraphic relationships between these and the surrounding funerary monuments.

Research objectives identified in the Archaeological Research Agenda

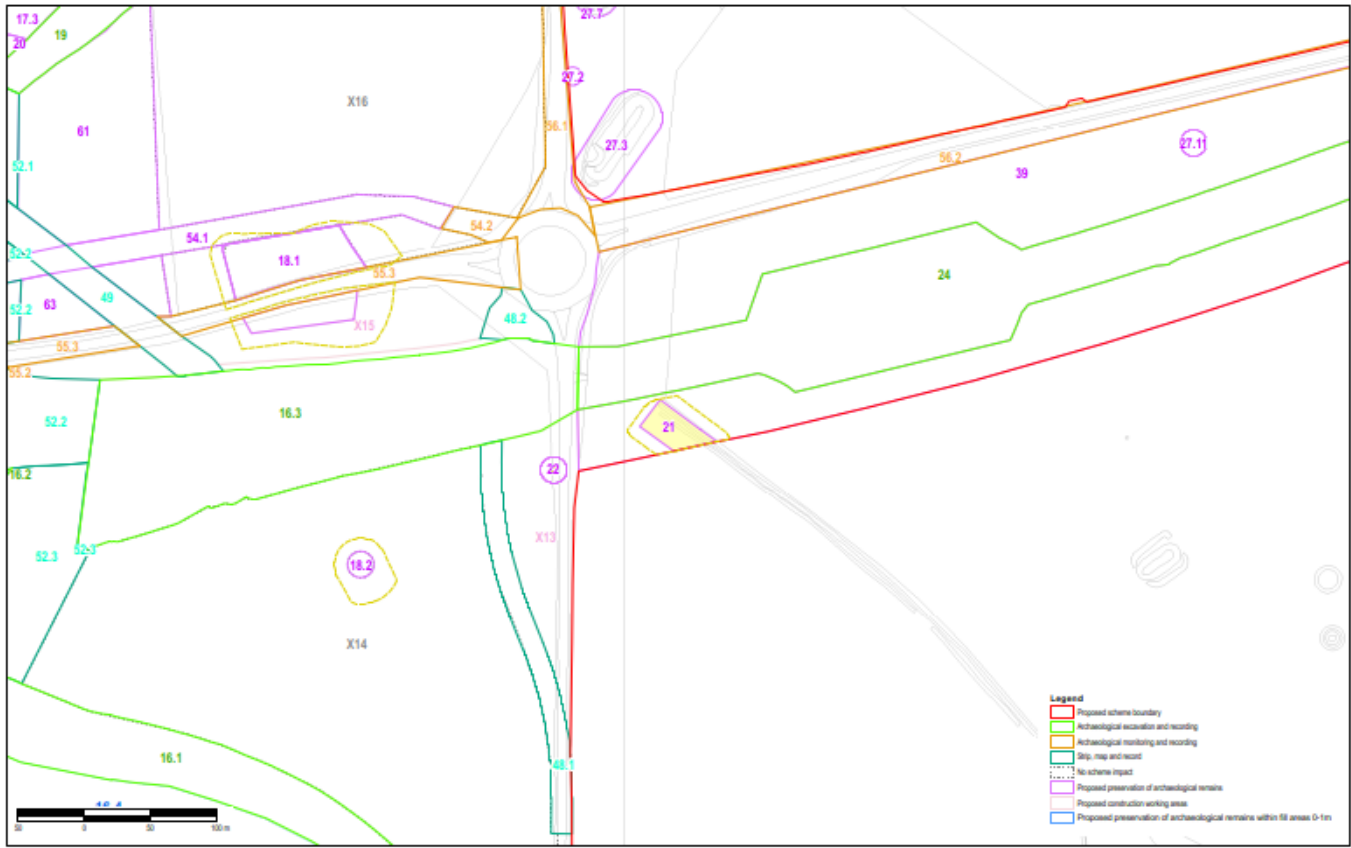
The potential survival of localised deposits of Pleistocene Loess offers potential to address a range of palaeoenvironmental questions. The study of settlement, field systems and land divisions can offer insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant:

- P.1 Establishing the nature of the palaeo-environment
- P.2: Determining the effects of climate on the formation of the landscape, geological deposits and periglacial features, including those which may have influenced later activity, such as solution hollows
- P.3.1: What effect did Pleistocene climate change have upon British environments and faunal communities?

- P.5.1: What is the public perception of the Pleistocene?
- P.5.3: How can we engage the public with remote periods without any obvious surviving 'monuments'? What should be our strategic marketing approach?
- P.5.4: How can our understanding of Pleistocene environmental change inform the current climate change debate?
- P.6: Understanding the record: The use of geomorphological and sedimentological modelling to understand the taphonomic processes that determine the significance of many Palaeolithic remains [SRCT]
- P.7: Dating frameworks [SRCT]
- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- N.1: Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at the very end of the Mesolithic?
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N3: What was the relationship between Neolithic and Beaker settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?
- N.7: Recent research elsewhere in the Stonehenge landscape has suggested that Woodlands Grooved Ware appears in the area very soon after 3000 BC. The occurrence of a possible Late Neolithic occupation site north of Long Barrow Junction has the potential to elaborate on the chronological span of the currency of Woodlands Grooved Ware, and on its contexts of use and deposition.
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- EBA.5: [dating of] Cremation burials...
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlements and land use, including burials and cemeteries?

Site 20: Main Civils Compound Bronze Age land boundary (Wessex Linear)	
Designation:	Non-designated
Reference IDs:	UID 2014.02/MWI6406 UID 2076 & 2078/MWI7201
Location (NGR):	409446, 141577
Site area (approximate):	0.55ha
	
Description	
<p>A section of linear boundary, visible as a cropmark on aerial photographs (UID 2014.02), and numerous linear and curvilinear features detected by geophysical survey north-west of Winterbourne Stoke Crossroads (GSB Prospection Ltd, 1999, Site 38). More recently several linear features associated with/ forming part of an enclosure were detected by geophysics (Area NW5) (UID 2078) (Wessex Archaeology, 2017c; University of Birmingham, 2018). A trench excavated through the linear boundary in the early 2000s revealed a very large ditch aligned approximately north-west to south-east (Wessex Archaeology, 2002f). The ditch was also investigated in 2013, south-west of the Winterbourne Stoke Crossroads and found to be 4.6m wide and 1.5m deep. No artefacts were recovered to confirm a suspected Late Bronze Age date (Wessex Archaeology, 2014).</p>	
Scheme impact	
<p>The linear boundary lies within the Main Civils Compound area. The compound will be laid out above existing levels with topsoil retained in situ and protected with imported stone to allow preservation of archaeological remains.</p>	
Mitigation	

The compound area, excluding the corridor required for Site 47 (easement for the combined Wessex Water SSEN electricity utilities) will be formed above existing levels using fill placed on the existing topsoil, separated by a barrier membrane. The section of boundary within the compound area will be buried beneath the fill which will protect it from damage. Following completion of construction, the compound will be removed and the land returned to agriculture.

Site 21: Western Portal Approach - Bronze Age land boundary (Wessex Linear)	
Designation:	Scheduled
Reference IDs:	UID 2014.01/NHLE 1010837
Location (NGR):	410036, 141280
Site area (approximate):	0.35ha
 <p>The plan shows a central road cutting (X13) running north-south. To the west, a series of ditches and pits (e.g., 52.1, 52.2, 52.3, 55.2, 55.3, 54.1, 54.2) form a boundary. To the east, a ditch (27.3) and a pit (27.1) are visible. Other features include pits 18.1, 18.2, 18.3, 16.1, 16.2, 16.3, 48.1, 48.2, 49, 61, 63, 24, 39, 21, and 22. A legend in the bottom right corner defines symbols for: Proposed scheme boundary (red line), Archaeological excavation and recording (yellow outline), Archaeological monitoring and recording (green outline), Strip, ramp and record (blue outline), No scheme impact (dotted line), Proposed preservation of archaeological remains (purple outline), Proposed construction working areas (pink outline), and Proposed preservation of archaeological remains within 50m areas 0-1m (blue outline). A scale bar at the bottom left shows 0 to 100m.</p>	
Description	
<p>A linear boundary that runs from south-east of Winterbourne Stoke crossroads to south-west of The Diamond on Wilsford Down (UID 2014.01, NHLE 1010837). Within the WHS the boundary feature survives as an upstanding earthwork bank and ditch. The scheduled area extends within the DCO boundary to the south of the western approach cutting. North of the scheduled section the monument is ploughed flat, this section was detected by geophysical survey (Wessex Archaeology, 2001. A303 Stonehenge Archaeological Appraisal) and was recorded in Trench 22 (ditch 2205) (Wessex Archaeology, 2002f).</p>	
Scheme impact	
<p>A restricted byway diverts eastwards between the A360 and Green Bridge No. 4, passing between the scheduled area and the top of the cutting. Land within the DCO boundary south of the cutting will form part of a chalk grassland reversion programme following construction.</p>	
Mitigation	
<p>The scheduled monument (NHLE 1010837) is located southwest of Longbarrow Roundabout. The DCO boundary crosses the north end of the monument which is only approx. 5m away from the Scheme (cutting for the mainline and a restricted byway and PMA). At the PW stage the vegetation cover within the DCO area next to the</p>	

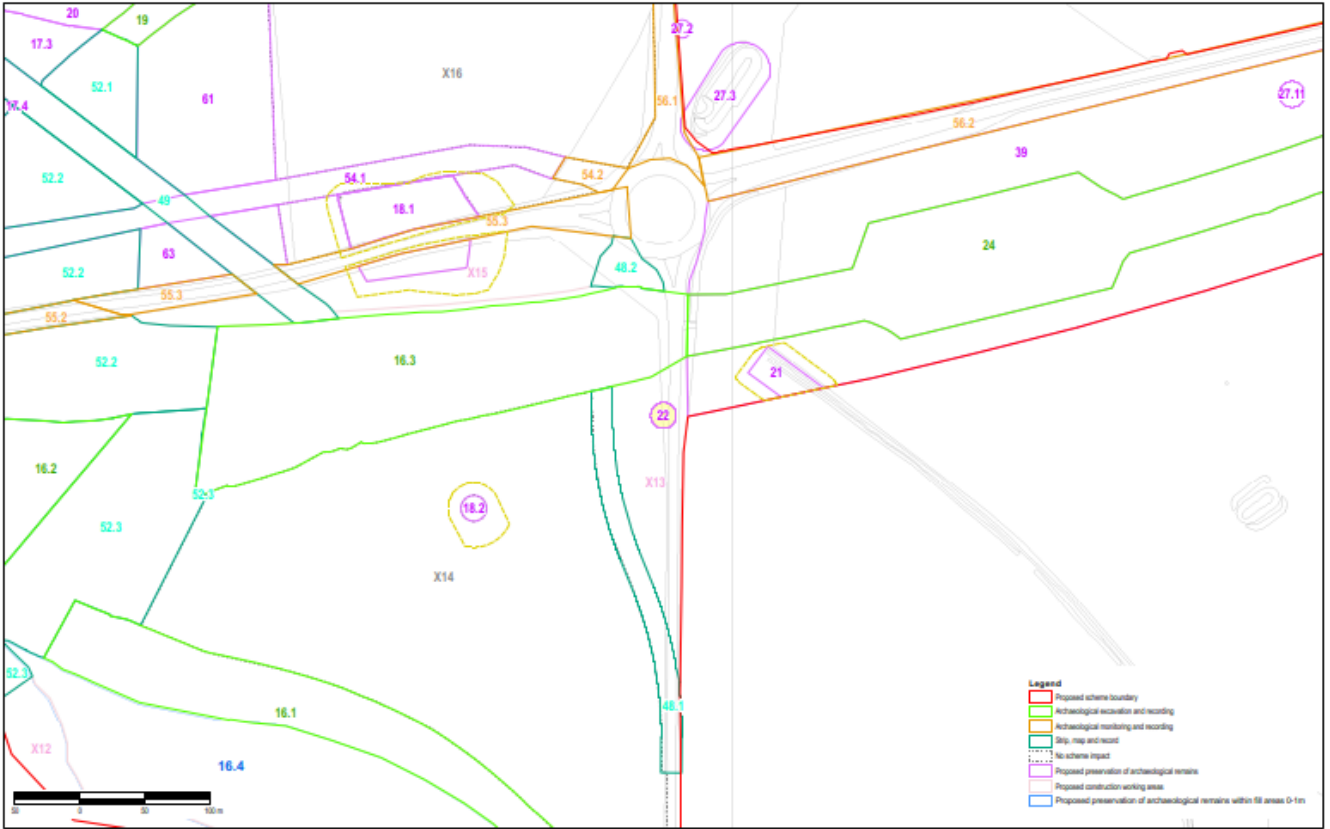
monument will be cleared to ground level under controlled conditions (archaeological supervision) in order to confirm the extent of the monument mapped by Historic England. The monument will then be surveyed using archaeological topographic survey to determine the extent of the monument so that it can be protected. At the PW stage the monument will be protected on all sides by a post and rail fence, offset approx. 5m to 10m around it which will include the DCO boundary. The layout of the fencing will be constrained by the edge of the Scheme mainline and by the restricted byway and PMA which will be constructed at the MW stage. DCO fencing which may be installed next to the monument at the later MW stage will either incorporate the existing section of protective fencing or will replace it. If it is replaced, then the MW contractor will consult with Wiltshire Council and Historic England and HMAG prior to the installation of the fencing.

At the PW stage a site specific Method Statement will describe specific protection measures.

Preliminary archaeological investigations will be required to install the fence posts, and the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations in accordance with the DAMS, in consultation with Wiltshire Council, Historic England and HMAG, for approval by Wiltshire Council (in consultation with Historic England).

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed, leaving the monument within managed grassland.

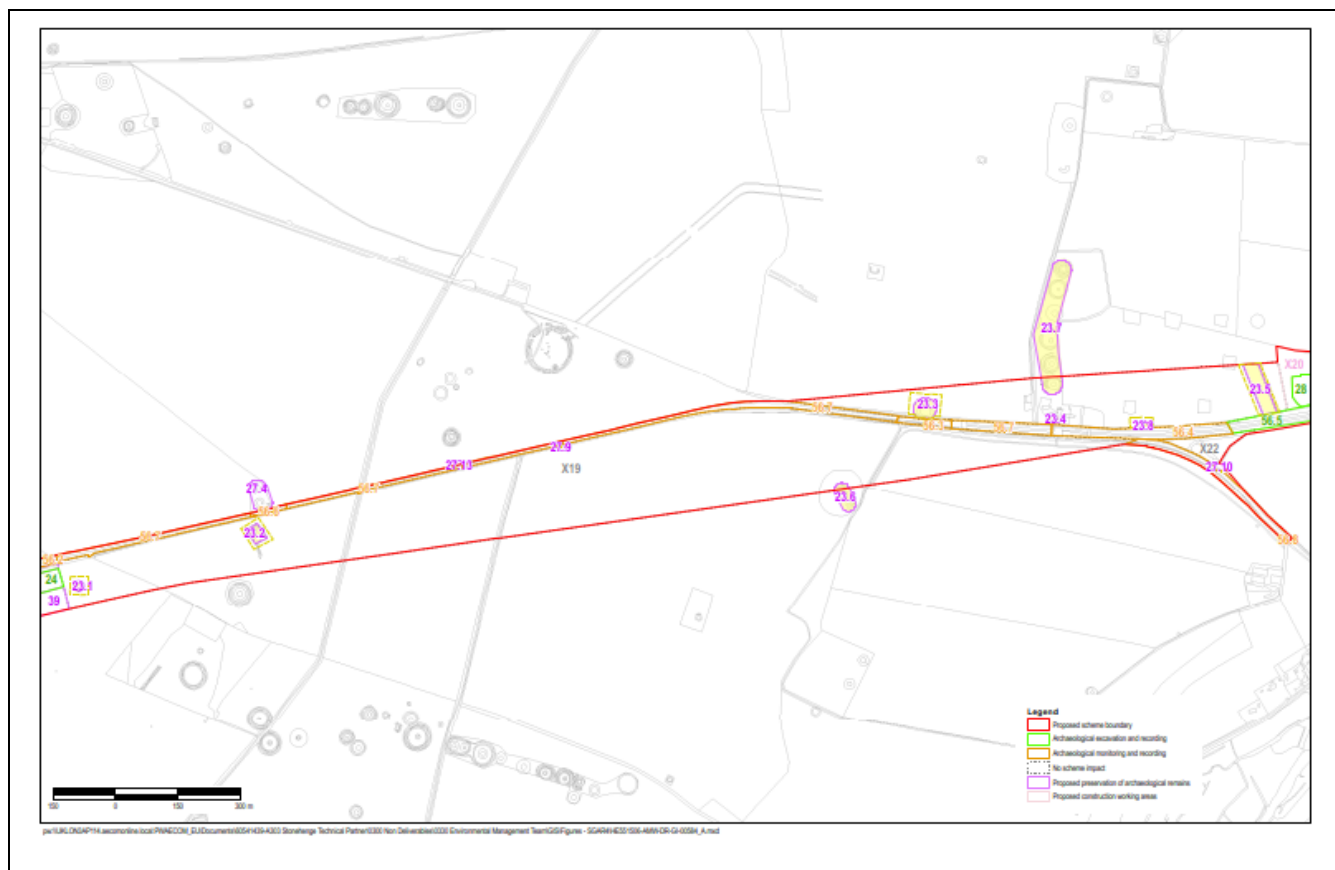
Site 22: Downgraded A360: Milestone on A360	
Designation:	Listed (Grade II)
Reference IDs:	UID 6027/NHLE 1130972
Location (NGR):	409947, 141252
Site area (approximate):	0.03ha
	
Description	
<p>An 18th-century oolitic limestone milestone by the side of the A360 south of Longbarrow roundabout. The limestone shaft is broken at the top and cut back to receive a later metal plate which is now missing. Incised lettering on the shaft reads '10' and there are two benchmarks (UID 6027; NHLE 1130972).</p>	
Scheme impact	
<p>The milestone lies within the DCO boundary south of the new A303 alignment and will be retained in situ in its historic location alongside the former turnpike road, which will be downgraded to a restricted byway.</p>	
Mitigation	
<p>The listed milestone is alongside the northbound carriageway of the A360. It will be surrounded and protected by a wooden post and rail fence that will be installed at the start of the PW stage. Due to local constraints, the close proximity of the A360 and the construction activities associated with the eventual downgrading and conversion of the road into a restricted byway and PMA (following construction of the temporary road diversion), the fence will only be offset a short distance from the monument (estimated at approx. 1m to 2m either side of the milestone). At the PW stage a site specific Method Statement will describe specific protection measures.</p> <p>If preliminary archaeological investigations are required to install the fence posts (PW and MW stages) as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the</p>	

preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed once works to prepare the restricted byway are complete, leaving the milestone in situ.

Sites 23.1 to 23.8: Tunnel Section: Scheduled monuments along or close to the line of the tunnel.	
Designation:	Scheduled
Reference IDs:	UID 2018/NHLE 1010832 (Site 23.1) UID 3001/NHLE 1008953 (Site 23.2) UID 3014/NHLE 1008947 (Site 23.3) UID 3018/NHLE 1012420 (Site 23.4) UID 3010.02/NHLE 1010140 (Site 23.5) UID 3012/NHLE 1012372 (Site 23.6) UID 3017/NHLE 1012381 (Site 23.7) UID 3020/NHLE 1012129 (Site 23.8)
Location (NGR):	Site 23.1 – 411115, 141627 Site 23.2 – 411542, 414753 Site 23.3 – 413146, 142054 Site 23.4 – 413452, 142028 Site 23.5 – from 413922, 142158 to 413973, 142042 Site 23.6 – 412944, 141866 Site 23.7 – 413448, 142103 Site 23.8 – 413670, 142015
Site area (approximate):	Site 23.1: 0.16ha Site 23.2: 0.34ha Site 23.3: 0.42ha Site 23.4: 0.19ha Site 23.5: 0.10ha Site 23.6: 0.23ha Site 23.7: 0.31ha Site 23.8: 0.14ha



Description

Site 23.1 NHLE 1010832: A bowl barrow south of the A303 and north west of Normanton Gorse (Wilsford G1) (UID 2018). It is located c.25m from the western tunnel boring face, offset to the south-east. The barrow was excavated by Cunnington and Colt Hoare in 1805. There are no records of the excavation, beyond a comment that a central grave contained an inhumation burial with a beaker and stag antlers. The barrow was revisited by Edwina Proudfoot in 1960, when rescue excavations were undertaken on behalf of the Ministry of Works (Anon. 1961. Excavation and Fieldwork in Wiltshire; Grinsell's Barrow no.1. Wiltshire Archaeological and Natural History Magazine, Volume 58, p.30) when the barrow was ploughed out. The barrow was fully excavated, revealing a further 11 burials on the northern side of the monument, several of which were accompanied by Beakers. Works undertaken between 1998 and 2003 recorded a further two inhumation burials on the northern side of the barrow. Geophysical surveys (detailed magnetometer and multi-channel GPR) undertaken for the Scheme have successfully mapped the extent of the fully excavated barrow. GPR survey anomaly 10001 (Wessex Archaeology, 2018a); and gradiometer survey anomaly 8000 (Wessex Archaeology, 2017c).

Site 23.2 NHLE 1008953: A long barrow 250m north of Normanton Gorse (Amesbury G14) (UID 3001). It lies within the DCO boundary directly above the bored tunnel, approximately 300m east of the bored tunnel face. The monument survives as an upstanding earthwork within an area of chalk grassland; the barrow mound is orientated north-north-west – south-south-east and is up to 1.8m high, 32m long and c.18m wide. Flanking the mound on the east and west sides are quarry ditches from which material was taken during the construction of the monument. The barrow was partially excavated by Sir Richard Colt Hoare and John Thurnam in the early and mid-19th century, respectively. The latter discovered three inhumations, interpreted as primary burials, and two later, crouched burials of possible Early Bronze Age (Beaker) date (Field and Pearson 2011). Two trenches were excavated in 1993 (Wessex Archaeology, 1993; Leivers and Moore, 2008) to establish the presence of a ditch at the northern end of the long barrow and attempt to define the extent of damage to the barrow. Evidence of modern disturbance and extensive damage caused by animal activity was recorded. Modern disturbance obscured the results of geophysical surveys carried out in this location as part of the

Stonehenge Hidden Landscapes Project (University of Birmingham, 2018).

Site 23.3 NHLE 1008947: A bowl barrow situated on the northern side of the A303 east of Stonehenge Bottom, 300m south-west of New King Barrows cemetery (Amesbury 39), (UID 3014). It occupies a prominent location on the same hilltop as New King Barrows. It is now 'D' shaped having been cut on its south side by the A303. The barrow is c.32m in diameter and c.1m in height and surrounded by an infilled ditch. It was partially excavated in the 19th century, and re-investigated in advance of road widening works in 1960 (Ashbee, P., 1980. Amesbury Barrow 39: excavations 1960. Wiltshire Archaeological Magazine, Volume 74, Issue 5, pp.3–34). The barrow has been included in recently completed geophysical surveys for the Hidden Landscapes Project (Gaffney et al., 2012; University of Birmingham, 2018) and has also been surveyed as part of the Stonehenge WHS Landscape Project (Field, Bowden and Soutar, 2012).

Site 23.4 NHLE 1012420: A bowl barrow forming part of a linear round barrow cemetery known as the New King Barrows, and situated at its southern end, immediately north of the A303 (Amesbury 26), (UID 3018). The monument comprises a roughly circular mound which stands c.1.9m high within the grounds of Stonehenge Cottages. There is no sign of any surrounding ditch or bank above ground. The base of the mound measures 20m in diameter and the summit is about 6m across. The barrow has also been surveyed as part of the Stonehenge WHS Landscape Project (Bishop, 2011).

Site 23.5 NHLE 1010140: A linear feature dating to the end of the Late Neolithic or the start of the Early Bronze Age, which appears to have provided a formal approach to Stonehenge, linking it with the River Avon at West Amesbury and the West Amesbury Henge (UID 3010.02) (part of the Stonehenge Avenue which is included in the same scheduling as Stonehenge itself and a round barrow cemetery on Countess Farm). It consists of parallel banks c.6m wide and 0.2m high enclosing a corridor c.12m wide. The banks are flanked by a partially infilled outer ditch c.3m wide. The Avenue varies slightly in overall width, with an average of c.30m. From King Barrow Ridge it curves gradually towards the south-east for a distance of 500m, crossing the exiting A303 and Stonehenge Road, it then runs in a straight line towards the River Avon. It is visible as a slight earthwork for the first 1km to the centre of Stonehenge Bottom, but from that point, it is difficult to identify above ground. The Avenue has been investigated archaeologically on several occasions, including as part of the Stonehenge Riverside Project (Parker Pearson et al., 2008), in association with the removal of part of the former A344 (Wessex Archaeology, 2016a), and during salvage excavations in 1968, 1979 and 1980 (Pitts, 1982). The Avenue has also been covered by several recent geophysical surveys (e.g. University of Birmingham, 2018; Wessex Archaeology, 2017a).

Site 23.6 NHLE 1012372: The northernmost of three bowl barrows 150m south of the A303, north of Luxenborough Plantation (UID 3012) that lies within the DCO boundary, south of the tunnel alignment (the other barrows are outside the DCO boundary which crosses the monument). The earthworks measure nearly 15m in diameter and comprise a roughly circular mound, 0.5m high: its north-eastern quadrant is flanked by a ditch. All three barrows were excavated for Sir Richard Colt Hoare in the early 19th century. The barrows were recorded during a survey in May 2011 as part of English Heritage's Stonehenge WHS Landscape Project (Bishop, 2011b).

Site 23.7 NHLE 1012381: The southernmost of a group of two bowl barrows and four bell barrows forming the greater part of a round barrow cemetery known as the New King Barrows (Amesbury 27-32), (UID 3017). It lies within the DCO boundary north of Stonehenge Cottages in an area of grassy woodland publicly accessible from Bridleway AMES 10. Following the recent clearance of many of the trees which had been planted on and around the barrow mounds, the barrows are now clearly visible from Stonehenge and many other monuments to the west of the ridge. The barrow mounds are all large, ranging in diameter from 20m to 40m and in height from 2.75m to 4m. The barrows have been subject to numerous antiquarian investigations. Partial excavations of all six of the barrows (following the uprooting of trees by storms in 1987 and 1990) has revealed the presence of pottery and worked flint of Neolithic and Bronze Age date, indicating the use of the area prior to and during the construction of the monuments (Cleal and Allen, 1994). The barrows have recently been surveyed and described in detail during the Stonehenge WHS Landscape Project (Bishop, 2011b).

Site 23.8 NHLE 1012129: A levelled bowl barrow located 150m east of Stonehenge Cottages, on the northern edge of the existing A303 (UID 3020). The southern section of the barrow was destroyed by the down-cutting of the A303. Partial excavation in advance of the installation of a water main in 1980 revealed a barrow ditch.

Ditches seen in the roadside ditch during mechanical cleaning in 2001 were identified as a re-cut of the barrow ditch. The remaining part of the barrow mound is now difficult to identify on the ground but is surrounded by an infilled ditch. The overall diameter of the barrow is calculated to have been c.34m. The surviving part of the monument has also been recorded during recent geophysical survey, which indicated that the ditch extends beyond the formal constraint area of the scheduled monument (Wessex Archaeology, 2017a; University of Birmingham, 2018).

Scheme impact

The following commentary is based on the illustrative design; with regards to tunnel depths, these are minima and construction of the tunnel within the vertical limits of deviation would increase rather than reduce these depths.

Site 23.1 NHLE 1010832 – The tunnel will pass below the barrow at a depth of approximately 7m or more. There will be no impact on the monument or associated remains as it lies outside the main works area, however, site traffic may pass between the monument and the top of the bored tunnel face.

Site 23.2 NHLE 1008953– The tunnel will pass below the barrow at a depth of approximately 18m. There will be no impact on the monument or associated remains as it lies outside the main works area, however, site traffic may access the land above the tunnel to install monitoring equipment or for other reasons.

Site 23.3 NHLE 1008947 – The tunnel will pass below the barrow at a depth of approximately 41m. There will be no impact on the monument or associated remains as it lies outside the main works area, however, the southern edge of the monument is formed by a stone retaining wall within the northern boundary of the existing A303 corridor. The existing A303 will be de-trunked and downgraded to a restricted byway and works to achieve this will take place adjacent to the scheduled area.

Site 23.4 NHLE 1012420 – The tunnel will pass below the barrow at a depth of approximately 37m. There will be no impact on the monument or associated remains as it lies outside the main works area, however, the existing A303 immediately south of the monument will be de-trunked and downgraded to a restricted byway. A PMA will be provided within the existing A303 road footprint to provide access to the adjacent Stonehenge Cottages.

Site 23.5 – The monument NHLE 1010140 lies outside the main works area, with the eastern portal bored tunnel face situated some 25m to the east. The tunnel will pass below the Avenue at a depth of approximately 12m. There will be no impact on the monument or associated remains. A PMA providing access from the downgraded A303 to agricultural land north and east of the eastern approach cutting will pass between the Avenue and the bored tunnel face. The existing A303 immediately south of the monument will be de-trunked and downgraded to a restricted byway. A PMA will be provided within the existing A303 road footprint to provide access to the adjacent Stonehenge Cottages.

Site 23.6 – The barrow NHLE 1012372 lies outside the main works area, however, site traffic may access the land above the tunnel to install monitoring equipment or for other reasons.

Site 23.7 – The southernmost barrow NHLE 1012381 lies outside the main works area, however, site traffic may access the land above the tunnel to install monitoring equipment or for other reasons.

Site 23.8 – The barrow NHLE 1012129 lies outside the main works area, however, site traffic may access the land above the tunnel to install monitoring equipment or for other reasons.

Mitigation

At **Site 23.1**, the ploughed-down scheduled monument NHLE 1010832 which is in arable farmland will be surrounded and protected by fencing that will be installed at the start of the PW stage. The fence will be offset approx. 10m from the monument as mapped by Historic England and geophysical survey, however, on the western side the buffer area may need to be adjusted in order to leave a working area for the construction of the western cut and cover tunnel portal that is approx. 30m to the west. (A 10m exclusion around the monument, Wilsford G1 NHLE 1010832, was required during archaeological trial trenching in 2018 (Highways England, 2019f)). At the PW stage a site specific Method Statement will describe specific protection measures. If an earth-fast fence is proposed and preliminary archaeological investigations are required to install the fence

posts as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS, in consultation with Wiltshire Council, Historic England and HMAG, for approval by Wiltshire Council (in consultation with Historic England).

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed and the land returned to agriculture.

At **Site 23.2** the scheduled monument NHLE 1008953 lies south of the existing west bound carriageway of the A303 which will be downgraded and converted into a restricted byway and PMA. The monument will be surrounded and protected by fencing that will be installed at the start of the PW stage. The fence will be offset approx. 10m from the monument as mapped by Historic England and geophysical survey, although on the north side the fence will respect the edge of the existing highway boundary. At the PW stage a site specific Method Statement will describe the specific protection measures proposed.

If an earth-fast fence is proposed and preliminary archaeological investigations are required to install the fence posts, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS, for approval by Wiltshire Council in consultation with Historic England.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed and the land returned to agriculture.

At **Site 23.3** the scheduled monument NHLE 1008947 is alongside the eastbound carriageway of the existing A303 and sits on a retaining wall above the road. A post and wire fence that tops the retaining wall will be retained. There are no protective fencing proposals as the monument lies on open access land and no works are proposed in this area.

At **Site 23.4** the scheduled monument NHLE 1012420 is set back from the eastbound carriageway of the existing A303 and is located within the grounds of a private residence that will be retained. The A303 will be downgraded and converted into a restricted byway and PMA, however, the monument will be protected by the existing boundary form, including the mature trees around the property boundary that will be retained. There are no proposals for protective fencing.

At **Site 23.5** the monument NHLE 1010140 (the Stonehenge Avenue) is scheduled in two parts either side of the existing A303. At this location the road will be downgraded and converted into a PMA route. On the north side the monument will be surrounded and protected by fencing that will be installed at the start of the PW stage. The fence will be offset approx. 10m from the monument as mapped by Historic England and geophysical survey, apart from the southern end where it will either tie-in to the existing hedgerow or replace an existing post and rail fence along the existing highway boundary (depending upon its condition) and the northern end where it will tie-in with existing field boundary fencing. DCO fencing which may be installed next to the monument at the later MW stage (north end) will either incorporate the existing section of protective fencing or will replace it. If it is replaced then the MW contractor will consult with Wiltshire Council, Historic England and HMAG prior to the installation of the fencing.

On the south side of the A303 the monument is outside of the DCO boundary. Here the existing post and rail fence will either be retained or will be replaced at the PW stage by a section of new fencing on the same alignment (depending upon its condition). DCO fencing which may be installed next to the monument at the later MW stage (north end) will either incorporate the existing section of protective fencing or will replace it. If it is replaced, then the MW contractor will consult with Wiltshire Council, Historic England and HMAG prior to the installation of the fencing.

A site specific Method Statement will describe specific protection measures (PW and MW stages).

If an earth-fast fence is proposed and preliminary archaeological investigations are required to install the fence posts as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before fencing is erected at the PW or MW stages the monument will be photographed.

Following construction, the protective fencing around the monument on the north side will be removed and the land returned to agriculture.

At **Site 23.6** the scheduled monument NHLE 1012372 is within a wooded area north of Luxenborough Plantation and approx. 110m south of the existing A303. The DCO boundary crosses the north end of the monument. There are no proposals for protective fencing at the PW stage as the site will be protected by the existing boundary form. DCO fencing may be installed around the boundary of the wooded area at the later MW stage and will likely either incorporate the existing fencing or will replace it. If it is replaced then the MW contractor will consult with Wiltshire Council, Historic England and HMAG prior to the installation of the fencing and a site specific Method Statement will describe specific protection measures.

Before any fencing is erected at the MW stage the monument will be photographed.

It is assumed that if DCO fencing is installed it would be retained after construction.

At **Site 23.7** the scheduled monument NHLE 1012381 on King Barrow Ridge is within a partially wooded area with boundary trees. The western side comprises a bridleway (AMES10) and an existing fence separates it from fields to the east and north. The south end abuts the grounds of a private residence. The A303 which will be downgraded and converted into a restricted byway and PMA is approx. 70m to the south. The DCO boundary crosses the south end of the monument. There are no proposals for fencing at PW stage since the monument is protected by the existing boundary form. If DCO fencing is required at MW stage the MW contractor will consult with Wiltshire Council, Historic England and HMAG prior to the installation of the fencing and a site specific Method Statement will describe specific protection measures.

If an earth-fast fence is proposed and preliminary archaeological investigations are required to install the fence posts as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the MW stage the monument will be photographed.

It is assumed that if DCO fencing is installed around the woodland it would be retained after construction.

At **Site 23.8** the scheduled monument NHLE 1012129 is alongside the eastbound carriageway of the existing A303 which will be downgraded and converted into a restricted byway and PMA. The monument will be surrounded and protected by fencing that will be installed at the start of the PW stage. The fence will be offset approx. 10m from the monument as mapped by Historic England and geophysical survey, although on the south side the fence will respect the edge of the existing highway boundary.

At the PW stage a site specific Method Statement will describe specific protection measures.

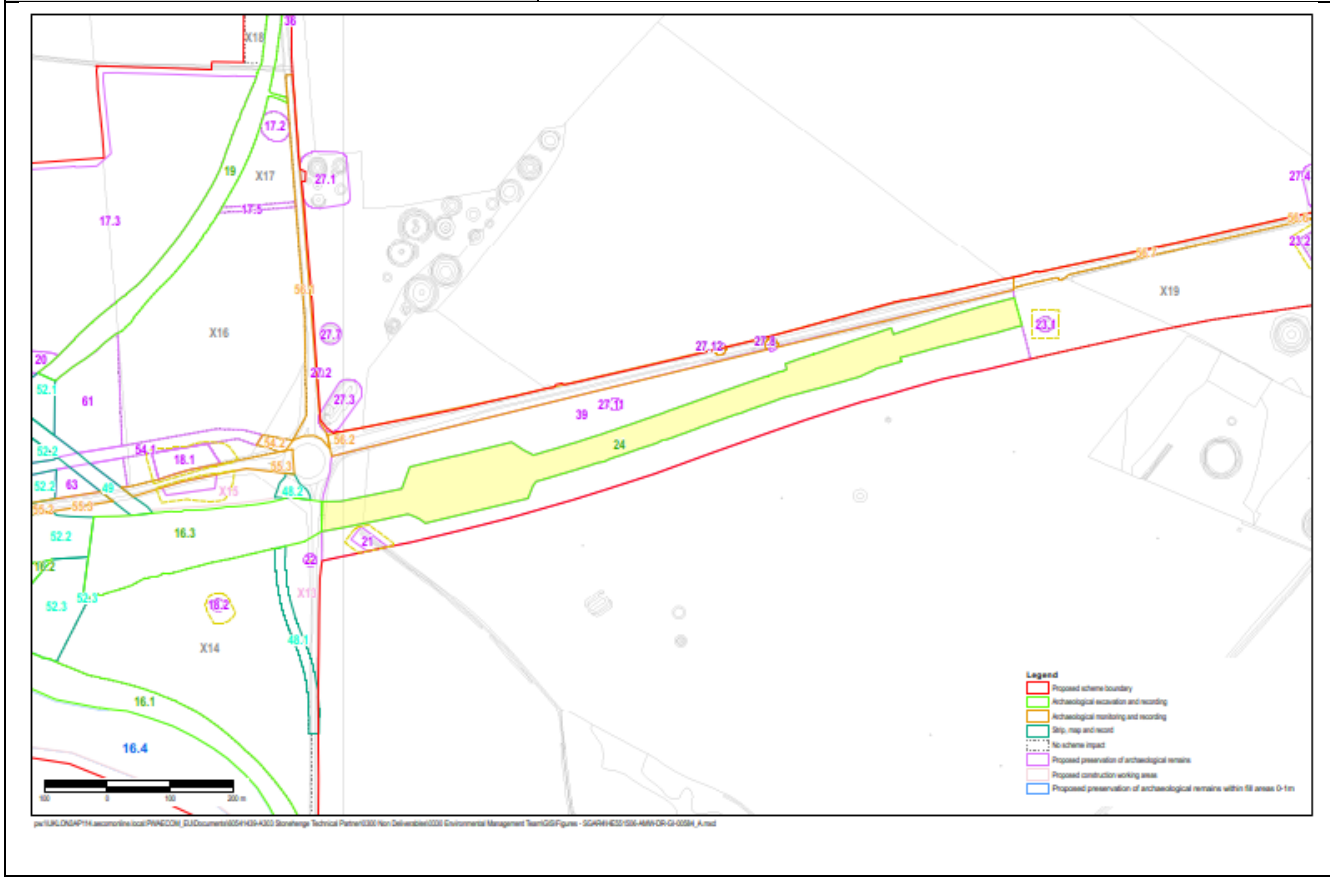
If an earth fast fence is proposed and preliminary archaeological investigations are required to install the fence posts as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS, for approval by Wiltshire Council in consultation with Historic England.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed and the land returned to agriculture.

Site 24: Western Portal Approach – Late Neolithic – Early Bronze Age flint scatters, occasional scattered pits and post holes, isolated burials and a dry valley.

Designation:	Non-designated
Reference IDs:	UID 2001/MWI6924, MWI7128, MWI7198 (Bronze Age settlement) UID 2018/MWI12542, MWI13002 (flat graves associated with Wilsford G1 barrow) UID 2088/MWI12541 (pits) UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field system, military railway) UID 2098/MWI13149 (linear features)
Location (NGR):	410452, 141446
Site area (approximate):	5.87ha



Description

Site 24 comprises the western portal approach cutting.

Baseline

An enclosure situated to the south-west of the Winterbourne Stoke Crossroads barrow cemetery and an associated Bronze Age settlement is located approximately 50m north of the west end of Site 24 (UID 2001). The settlement was excavated during construction of the Longbarrow Roundabout in 1967 (Anon., 1968). Excavation revealed four circular features thought to be Late Bronze Age huts in the area of the roundabout and a number of pits south of the A303. The enclosure (NHLE 1011048) and a levelled bowl barrow within the north-western part of the enclosure lie approximately 170m north-west of Site 24.

A scheduled section of linear boundary NHLE 1010837 extends from a point 120m south-east of Longbarrow crossroads to a point 220m south-west of The Diamond on Wilsford Down (UID 2014). The monument is part of a complex of boundary earthworks which may have its origins in the Bronze Age. The scheduled section consists of a bank 5m wide and c. 0.5m high, flanked on its western side by a ditch 5m wide and 0.7m ditch. Evaluation trenching has shown that the ditch survives north of the scheduled area, within Site 24 (Wessex Archaeology, 2002f, Trench 22).

The plough-levelled bowl barrow NHLE 1010832 (Wilsford G1) lies approximately 15m east of the eastern limit of Site 24 (UID 2018). The monument will be unaffected by the Scheme and will be protected (Site 23.1). Investigated by Cunnington and Colt Hoare in 1805, the barrow was revisited in 1960 at the time of its levelling. The barrow was fully excavated, revealing that the central grave had contained at least two inhumations and a cremation. A further seven burials of infants and one young adult were found on the north side of the barrow, several of which were accompanied by Beakers (Anon, 1961). Works undertaken between 1998 and 2003 as part of the proposed A303 Stonehenge improvement uncovered two further inhumation burials immediately north of the area investigated in 1960, bringing the total number of individuals buried at the site to at least 13 (Leivers and Moore, 2008). The location of the barrow has recently been subject to geophysical survey (Wessex Archaeology, 2017c; Wessex Archaeology, 2018a).

Approximately 45m north of Site 24 two Middle Bronze Age pits were identified during a trial trench evaluation in 2001 (UID 2088) (Wessex Archaeology, 2002h). Both pits contained animal bone, flint and Middle Bronze Age pottery. The location of the features corresponded very broadly to two pit-type anomalies identified by an earlier geophysical survey.

Crossing the west side of Site 24 is an extensive area of co-axial field systems, enclosures and lynchets identified to the south of the A303 by a combination of aerial photograph analysis (part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project), and during several episodes of geophysical survey and trial trenching (UID 2089). In some, but not all, instances, trial trenching has confirmed the presence of archaeological features correlating with elements of the field systems identified via remote sensing techniques. Although these may have been established during multiple phases and subject to episodic alteration and reorganisation, the field systems are likely to date broadly to the later Prehistoric to Roman period, following a pattern observed across large swathes of Salisbury Plain.

Recent small scale excavations undertaken by Historic England investigated part of the field system, revealing a ditch incorporating a palisade (Roberts et al., 2018). The investigation determined that at least part of the field system may date to the earlier part of the Middle Bronze Age.

The field systems and lynchets mapped from aerial photographs across this area may also incorporate some medieval and post-medieval elements.

Crossing the eastern side of Site 24 (last 24m) are several ploughed-out linear features running from west of Normanton Gorse to east of The Diamond, identified from aerial photographs (UID 2098). Although these may predominantly be of natural origin, appearing to relate to a dry valley also identified by geophysical survey (Area SW1) (Wessex Archaeology, 2017c), some of the features mapped from aerial photographs, extending to the west of a probable late Prehistoric linear boundary (UID 2020.02) and assigned to UID 2089, have been confirmed by trial trenching to be of archaeological origin.

Recently completed archaeological evaluation along the Scheme mainline at Site 24 has uncovered Beaker/ Early Bronze Age activity associated with pits and burials that were not detected by geophysical survey (Highways England, 2019f) [REP1-045, 046].

Late Neolithic/Early Bronze Age pits

A circular pit (23403) measuring 0.80m by 0.85m was excavated in Trench 234 to a depth of 0.25m and contained a single deliberate backfill deposit (23404). Two sherds and several crumbs of Beaker pottery, some animal bone fragments, worked flint (including flake debitage and a scraper), burnt flint and a worked bone point (object no. 23408) were recovered from the fill. A radiocarbon determination returned a date of 2140-1920 cal. BC (UBA-39010: 3655±40 BP). This feature does not appear to correlate to any discrete geophysical anomaly. The only other feature in the trench, a tree-throw hole (23405), was investigated but did not contain any archaeological components.

Two small shallow sub-circular pits (24003 and 24005) located 13m apart in Trench 240 also contained pottery. Pit 24005 is dated to the Beaker period and the other (pit 24003) to the Early Bronze Age. A sample of hazel nut from Pit 24005 returned a radiocarbon determination of 2200-1970 cal. BC (UBA-39012: 3686±32 BP). Pit 24005 contained eleven sherds of Beaker pottery, from perhaps five different vessels, recovered from its secondary fill (possible deliberate backfill deposit 24006), while nine sherds of probable Collared Urn were recovered from the upper fill (24004) of Pit 24003. Both pits also contained small quantities of worked flint and burnt flint, with poorly preserved animal bone also present in pit 24003.

Late Neolithic/Early Bronze Age (Beaker period) inhumation graves

An inhumation burial was found in Trench 260 (approximately 15m north of the boundary of Site 24) and a further three features (potential graves 24412, 24416 and 24418) were revealed in plan at the south end of Trench 244 (approximately 30m north of Site 24), apparently cut in to the upper fill (24404) of a large tree-throw hole (24403) or area of root disturbance. Grave 24405 was sub-oval in plan (orientated SSW–NNE). It measured 1.28m by 0.80m and was a maximum of 0.26 m deep, with irregular moderately sloping sides and an irregular base. The grave was partly cut into the upper fill of an area of root disturbance (cut 24403) and its upper fill appeared to be cut in turn by an adjacent feature – 24412. The two just overlapped, and three sherds of plain Beaker pottery and a piece of burnt flint were recovered from fill 24413 of 24412. A radiocarbon date of 2340-2060 cal. BC (UBA-39015: 3790±35 BP) came from grave 24405. The grave was filled with two deposits: a lower deliberate backfill (24409/24423) and an overlying secondary fill (24406/24421). A relatively large quantity of Beaker pottery (nearly 500g in total) was recovered from the pit, with most of this deriving from the lower deliberate backfill (the upper deposit contained only 55g of the total). This assemblage includes portions of a plain Beaker vessel which appeared to have been placed on or near the bottom of the grave (object 24408 from the lower deliberate backfill 24409) in an already incomplete (and partially burnt) state. At least two other fragmentary vessels were represented (objects 24410 and 24423). Other finds comprised very small quantities of worked flint flakes and burnt flint. No human bone was observed during excavation, but neonate bone was recovered during processing of the environmental samples, suggesting that the feature may have been a grave.

Uncertain date

A posthole (23011) was found in Trench 230 (north end) which appears to represent a fence-line orientated approximately NNW–SSE (together with postholes 23003, 23005 and 23007). All were 0.32m in diameter and varied between 0.05m deep and 0.12m deep and were filled with single fills which did not contain any finds. These could also relate to later agricultural activity.

Two postholes were recorded in Trench 211 (21103, 21105) but contained no finds and are undated.

Soil and colluvial sequences and natural features

In the central part of the site where a shallow coombe crosses (Trenches 214, 250, 258, 259, 262, 263, 266 and 267) the natural geology comprised soliflucted or heavily cryoturbated Chalk overlain by a thin colluvial deposit (<0.15m deep), a mid reddish brown silty clay, with the ploughsoil above.

In Trench 260, a tree hollow (26023) measuring 1.30m by 0.95m and 0.24m deep was investigated because of its proximity to an inhumation grave dating to the Beaker period (26009). The hollow contained Beaker pottery (35 small very abraded sherds), mainly found towards the surface of the single fill (26024), and a relatively large quantity of burnt flint (2kg) from its single fill which was thought to have derived from natural silting.

Natural features comprising root disturbance or infilled slight depressions in the natural geology were widespread across the site.

Immediately south of Site 24 at chainage 6700, a probable solution hollow was located in Trench 241 (24105) within a slight but noticeable topographic depression. Excavation and augering to a maximum depth of 1.6m recorded colluvial fills consistent with a Holocene date, although it is likely that Pleistocene Coombe Deposits are present at greater depth. The presence of artefactual material feature indicates that the feature will have acted as a natural capture-point for ploughed-in archaeological surface material. The feature lies approximately 465m west of the Wilsford Shaft, a solution feature some 75m south of Site 24; this had a central shaft 30m in depth, containing votive offerings and significant palaeoenvironmental material,

interpreted as fulfilling a ritual or ceremonial function (Ashbee et al., 1989).

Ploughzone artefact sampling (test pitting and dry sieving)

A small assemblage of pottery of Prehistoric, Roman and medieval date was found but in no particular pattern. Struck flint was recovered across the site and is likely to be predominantly of Late Neolithic and/or Early Bronze Age date with some other pieces possibly indicating an earlier Mesolithic and/or Early Neolithic element.

Distributions of struck and burnt flint broadly correspond, although there are instances where the highest densities of worked and burnt flint are adjacent to each other rather than directly superimposed. It is probable that the eastern and western concentrations of worked and burnt flint may mark the locations of discrete foci for activity which have been somewhat dispersed by ploughing, whereas the struck flint concentrations north of and around the dry valley where there are no corresponding accumulations of burnt flint result from a different (and not necessarily anthropogenic) process. Some of the concentrations coincide with archaeological features, although these tend to be the exception: Trench 202 contained a pit; Trenches 240 and 241 contained pits; at the eastern end, Trench 260 contained a crouched inhumation.

Three areas within Site 24 where the density of material recovered together with the presence of diagnostic tool types, and/or subsurface features or topographical variations suggests a focus of activity.

An east – west band of higher density is situated in an area of generally low-density distributions. The eastern end of the Western Portal area has the lowest densities of worked flint, comparable to the densities found elsewhere on Normanton Down, which are generally lower than elsewhere in the immediate locality (Dr J Last, pers. comm.). This east – west band, which includes core material, an arrowhead, a piercer and blade elements, stands out among the generally low densities.

South of Winterbourne Stoke clump, the southern part of an area of the densest distributions within the Western Portal area lies within Site 24. This is also an area within which pits containing Beaker material and human remains were encountered. The southern part of this distribution coincides with a natural (sinkhole) feature which were found to contain lithic assemblages. It was also the area in which notably more distinctive material (cores and core fragments, arrowheads, scrapers) occurred. Some of this material may potentially be related to Beaker occupation.

In the western end of Site 24, adjacent to the A360, around evaluation trench 202 was a cluster of material containing an arrowhead, cores, retouched pieces, blades, a piercer and irregular debitage, among a raised density of flake material. This group of material may be related to Bronze Age activity concentrated around and beneath the existing Longbarrow roundabout.

The Stonehenge Environs Project (SEP) fieldwalking survey included land to the north, east and south-west of Site 24 (SEP Areas 50 and 59; Figure 5.13). This revealed moderate to high densities of worked flint south-south-east of the Winterbourne Stoke barrow group. Notable were areas 50 and 59 (Richards 1990, figs. 8 and 10), where values of up to 90+ pieces of worked flint per 50m run were occasionally encountered. Areas immediately to the north east of the Western Portal and Approaches (Area 54) had notably lower densities of struck flint. Prehistoric pottery was also present (Richards, 1990: fig. 16), including Peterborough Ware, Beaker and other Early and Middle Bronze Age wares (Richards, 1990: pp.7-8].

Scheme impact

The construction of the western approach cutting will impact the archaeological resource at Site 24 identified during various phases of archaeological evaluation, including the remains of field systems, enclosures and lynchets of uncertain date (UID 2089, UID 2098). Also Late Neolithic/Early Bronze Age activity associated with pits found in Trenches 234 and 240, and possibly contemporary burials (found adjacent to the site in Trenches 244 and 260), and remains that are contained within natural features (tree throws). At the west end remains possibly associated with the Bronze Age settlement excavated beneath Longbarrow Roundabout (UID 2001) may also extend into the site (features recorded in Trenches 22 and 23), and the remains of a modern military light railway.

The removal of the topsoil will result in the loss of three apparent concentrations of struck flint which is considered to be predominantly Late Neolithic/Early Bronze Age (small number of earlier elements also

present) and four concentrations of burnt flint.

Mitigation

Additional ploughzone artefact collection will be carried out to further investigate surface concentrations of struck flint. Archaeological excavation and recording (AER) is required to record Late Neolithic/Early Bronze Age activity associated with pits (Trenches 234 and 240), potential burials that may be situated within the construction footprint of the retained cut in the vicinity of Trenches 260 and 244 and other undated archaeological remains previously identified during evaluation investigations.

The mitigation area will encompass the full width of the footprint between the A360 and the bored tunnel cut face required to construct the retained cutting walls and the Green Bridge No. 4 bridge slab and accommodate power and water supplies for the TBM and the tunnel buildings. The Archaeological Contractor shall limit the amount of land take for the archaeology works to the extent of the proposed cutting(s) and any associated infrastructure. The southern boundary of Site 24 west of Green Bridge No. 4 will respect the later prehistoric boundary earthwork UID 2014 (NHLE 1010837) (Site 21).

Section of the Wessex Water pipeline and SSEN Western Power Cable (Site 49), crosses the northern and southern sides of the site, but will be investigated as part of Site 24 (area for additional ploughzone artefact collection and archaeological excavation and recording (AER)).

Research objectives identified in the Archaeological Research Agenda

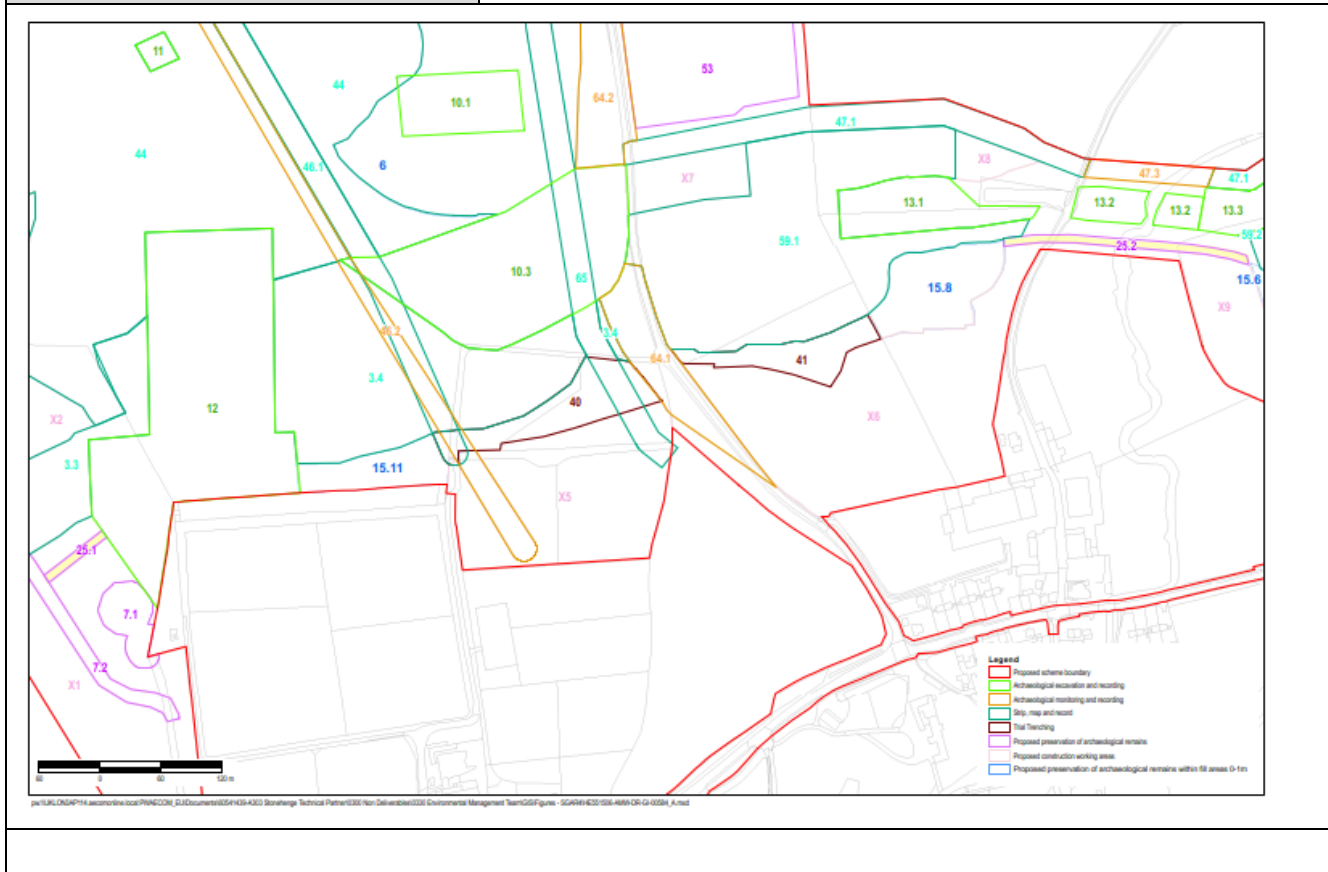
Site 24 passes through an extensive concentration of Neolithic long barrows and associated round barrow cemeteries. Evaluations have identified flat burials, Beaker pits and flint distributions suggestive of an area of activity possibly associated with a shallow dry valley. The study of flint scatters, occasional scattered pits and post holes, field systems, enclosures and land divisions, including possible medieval lynchets, offers insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant:

- R.6: Burials and barrows
- R.8: Human generations
- R.7: Landscape history and memory
- R.9: Daily life
- M.8.1: What can Mesolithic technology (e.g. stone, antler, bone and wood working), its production, use and deposition, tell us about Mesolithic lifeways?
- M.8.2: How can we better understand spatial and temporal variation in lithic technology, use and deposition?
- M.8.3: To what extent can the composition, size and geographical characteristics of lithic scatters be used to define different types of site in the Mesolithic?
- M.9.1: How variable was site use and landscape use through this period?
- M.9.2: Can we further refine the dating of final Mesolithic sites and how do these relate to the Early Neolithic?
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g. pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N3: What was the relationship between Neolithic and Beaker settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments?
- N.6: What potential exists to better understand diet, health and mortality among later Neolithic/Early

Bronze Age populations within the WHS?

- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
-
- EBA.6: Does lithic material within the ploughzone at Western Portal indicates that this was a preferred location for activity towards the end of the Neolithic period and/or at the start of the Early Bronze Age?
- EBA.7: What are the distribution and date of individual inhumations in flat graves and how do these compare to the distribution and date of the placing of human remains in perhaps less formal contexts (for instance tree hollows), and to the distribution and date of burials beneath round barrows and in their mounds?
- EBA.8: What is the nature of the relationship between undecorated Beaker ceramics and infant burial?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- M.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?
- PM.4: How was the military presence in the WHS developed?
- PM.5: What physical and social impacts has the military had on the monuments and landscape of the WHS?
-

Sites 25.1 and 25.2: Possible Neolithic, Bronze Age, Iron Age and Saxon remains along or close to an all-weather temporary haul road at Green Bridge No.1 and temporary Till crossing	
Designation:	Non-designated
Reference IDs:	UID 1004.01 UID 1008 UID 2001 UID 2029 UID 2033 UID 2035.01/MWI6396 UID 2035.02/MWI7206 UID 2050 UID 2068 UID 2069 and MWI7153 UID 2072 UID 2073 UID 2143/MWI74878
Location (NGR):	Site 25.1: 406738, 141142 Site 25.2: 407777,141450
Site area (approximate):	Site 25.1: 0.06ha Site 25.2: 0.19ha



Description
<p>Site 25 extends between Green Bridge No. 1 at approximate chainage 2800 and eastern bank of the River Till (the temporary all-weather haul road continues to the Main Civils Compound at Longbarrow North).</p> <p>Possible pits were identified by geophysical survey, suspected to be of Bronze Age date (UID 1008), although trial trenching (Highways England, 2019d, Trenches 663-672) did not identify extensive surviving remains.</p> <p>Trial trenching of components of a pair of possible rectilinear enclosures (UID 2029) identified two undated ditches in Trench 673 (approximate chainage 2200) and a pit containing a small quantity of prehistoric pottery (Trench 673). Two undated linear features in Trench 677 (approximate chainage 2400) may comprise a ditch and a former headland or lynchet.</p> <p>An Early and Middle Iron Age to Roman period enclosed settlement (UID 2033) west of Scotland Lodge Farm lies immediately south of the new road alignment (chainage 2600). Trenches to the north of the enclosure did not identify any remains (Highways England, 2019d, Trenches 678-690, approximate chainage 2400-2800).</p> <p>South of the mainline (chainage 2900), trenching has identified a focus of Neolithic and Early Bronze Age activity (north-west of Scotland Lodge Farm), on a spur of high ground overlooking the River Till valley (Highways England, 2019d, Trenches 1068 and 1070). This site (Site 7) includes two non-designated ring ditches (UID 2035.01/MWI6396, UID 2035.02/MWI7206) originally identified from aerial photographs, detailed magnetometer survey and GPR survey, together with two pits which contained red deer antlers and Middle Neolithic Peterborough Ware pottery.</p> <p>Parsonage Down contains an extensive field system that is likely to date to the later prehistoric (Middle Bronze Age to Iron Age) and Roman periods (UID 1004.01). Multi-period settlement over the same time span also appears to be evidenced by a number of enclosures and linear features (e.g. UIDs 2036; 2039) and by a profusion of pit-like features across the eastern parts of Parsonage Down (UID 2038). The settlement and field system appear to overlie an older funerary and ceremonial landscape, evidenced by a group of potential barrows (UID 2030).</p> <p>Trial trenching in 2003 revealed an undated north to south aligned ditch predicted in a previous geophysical survey (Wessex Archaeology, 2003b: Area 4, Trenches 36 and 37; GSB Prospection Ltd, 2001a: Area 27). To the east, a broad, shallow pit of possible Iron Age date was recorded in Trench 38. Possible cart tracks (possibly medieval or later) were found in Trench 38.</p> <p>The River Till valley floor includes faint earthwork traces of a water management system or water meadows of probable post-medieval date (UID 2050). Geophysical surveys (GSB Prospection, 2001; Highways England, 2019a) identified an infilled relict river channel and weak linear features possibly relating to former floodplain water management systems. Auger survey in 2001 concluded that the presence of alluvium in the River Till valley bottom is patchy, discontinuous and variable both across the valley profile and along its longitudinal corridor (Wessex Archaeology, 2002j, p.9).</p> <p>A large oval/subrectangular shallow possible pit (possibly a Saxon sunken-featured building) was recorded in Trench 1322 (Highways England, 2019e), (approx. chainage 4200m).</p>
Scheme impact
<p>The construction of the temporary all-weather road at Green Bridge No.1 and the temporary crossing of the River Till may impact a range of buried archaeological remains belonging to the later prehistoric, Roman, Saxon, medieval and post-medieval periods.</p>
Mitigation
<p>The transect for the temporary haul road is outside of the WHS. Preservation of archaeological remains (except where the road crosses fieldwork mitigation areas where excavation will be required). At Sites 25.1 and 25.2 the existing topsoil will be retained and covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction (see section 6.2).</p>

Site 26: Ground movement monitor points along the ground surface above the tunnel section.	
Designation:	Non-designated
Reference IDs:	UID 2018, 2100, 2020, 3001, 2101, 3029, 3046, 3051, 3079, 3058, 3104, 3084, 3077
Location (NGR):	Approximately between NGR 411071, 141644 to 414029, 142106
Site area (approximate):	TBC
[Hold – no image as locations are subject to detailed design]	
Description	
<p>Site 26 comprises locations of equipment required to monitor tunnel movements. The number and location of these is subject to detailed design.</p> <p>Baseline</p> <p>There are 4 scheduled monuments situated above the route of the proposed tunnel which will be protected by an exclusion zone around each monument (delineated by protective fencing): Sites 23.1, 23.2, 23.3 and 23.5. These sites are therefore not discussed in the following baseline description.</p> <p><u>Chainage 7400m to 7750m</u></p> <p>Archaeological evaluation between chainage 6300m and 7500m has revealed tree throws, natural chalk and a small number of archaeological features including a posthole of possible post-medieval or modern date (Highways England 2019b [REP1-047, 048]).</p> <p>At chainage 7700m, an undated gully terminal (UID 2100) excavated during a trial trench evaluation in 2002 coincided with a pit-like anomaly detected during an earlier geophysical survey (Wessex Archaeology, 2002a).</p> <p>A late prehistoric linear boundary (UID 2020.02) runs across the route of the proposed tunnel, part of a complex of boundary earthworks/ditches. It has been recorded in a recent geophysical survey (Wessex Archaeology, 2017a), and in five trenches (Wessex Archaeology, 2017d), and during a recent geophysical between Normanton Gorse and the A303 (Wessex Archaeology 2018a; University of Birmingham, 2018).</p> <p><u>Chainage 7800m to 9000m</u></p> <p>The tunnel crosses a First World War aerodrome or airfield, constructed in 1917 and closed in 1921 (UID 2101.01/2101.02) (chainage 7800m to 8300m). Traces of the aerodrome, including a metal pipe network, were detected in a geophysical survey (Barber, 2014; Field and Pearson 2011; University of Birmingham, 2018, 17; ID 3698). A test pit (TP 84) dug during the course of geotechnical investigations located building footings of the former aerodrome (Wessex Archaeology, 2002a).</p> <p>Topsoil stripping for excavation of geotechnical trial pit revealed a shallow gully (UID 3029) (at chainage 8050m), the single fill of which produced one worked flint flake.</p> <p>Undated curvilinear and linear features have been identified by aerial photography (chainage 8600m) and they have also been detected by geophysical survey (University of Birmingham, 2018). An enclosure of uncertain date has been identified by geophysical survey south of Stonehenge Bottom (UID 3046)</p>	

(chainage 9000m).

Chainage 9000m to 9900m

Three boreholes in Stonehenge Bottom encountered no archaeological remains. In R71906 colluvium was recorded to a maximum depth of 1.5m above the chalk bedrock, but there was no buried land surface within or below the colluvium (Highways England, 2019j [REP1-056]); RX633 contained colluvium to 1.5m depth overlying a weathered chalk bedrock; and R71907 contained topsoil and subsoil overlying natural. These results were similar to those from an earlier series of geotechnical investigations (Wessex Archaeology, 2002a).

Possible trackways or droveways of medieval or later origin (UID 3051), are visible as earthworks and cropmarks on aerial photographs (chainage 9150m to 9500m) and identified by geophysical survey (GSB Prospection Ltd., 1993) and trial trenching (Wessex Archaeology, 2002g; Bishop, 2011b; Field, Bowden and Soutar, 2012). Recent geophysical survey carried out as part of the Stonehenge Hidden Landscapes Project identified a long linear, arc-shaped feature in this area (possibly associated with 'Normanton Ditch' (UID 3079.01)).

At chainage 9500m, geophysical survey found a predominantly east-west orientated plough pattern and some vehicle ruts and recent features (Linford, Linford and Payne, 2015). The north bore of the tunnel crosses under a bowl barrow (Site 23.3). The barrow has been included in recent geophysical surveys carried out as part of the Hidden Landscapes Project (University of Birmingham, 2018) and has also been surveyed and described as part of the Stonehenge WHS Landscape Project.

A series of Neolithic pits (UID 3058) and other evidence for Late Neolithic occupation were found in 1968 and 1969 during utility work within the existing A303 highway boundary. A small pit (the 'chalk plaque pit') was found during road widening in 1969, some 190m west of King Barrows (Field, Bowden and Soutar, 2012).

The route of the proposed tunnel crosses under a series of linear and curvilinear features (UID 3079.01), between chainage 9600m and 10100m. These represent infilled enclosure, field systems and boundary ditches extending across a large area to the north and south of the A303, between King Barrow Ridge and the Avenue to the north and Luxenborough Plantation and Coneybury Hill Plantation to the south. These features have been identified via assessments of aerial photographs, geophysical surveys and small scale excavations (Linford, Linford and Payne, 2015; University of Birmingham, 2018, 19 & 21; Wessex Archaeology, 2017a). It is possible that the features derive from multiple phases of activity and are likely to date from the Middle to Late Bronze Age, through to the Roman period. At chainage 9800m, a post-medieval/19th-century wood bank (UID 3104) survives as earthworks delineating four sides of a roughly rectangular tree plantation (Bishop, 2011b). At chainage 9800m, a bowl barrow (Site 23.4), forms part of a linear round barrow cemetery known as the New King Barrows.

Chainage 9900m to 10250m

Amesbury Abbey Park (UID 3084.02) covers chainage 9800m to 10400m. Remnants of the former parkland can still be seen but much of this land has returned to arable (Bishop 2011b). Traces of the former course of the road from Amesbury to Market Lavington (UID 3069) are visible as a cropmark on aerial photographs; it is also mapped by both RCHME's Salisbury Plain Training Area NMP and English Heritage's Stonehenge WHS Mapping Project. Traces of the road have been identified by geophysical survey, e.g. (Wessex Archaeology, 2017a; University of Birmingham, 2018; ID 8977), and observed during a watching brief in 2001 (Wessex Archaeology, 2002e).

There is a continuation of the series of linear and curvilinear features mentioned in the previous section (UID 3079.01). Magnetic survey reveals nearly 300m of ditch-like features running WSW–ENE with off-shoots. Part of Normanton Ditch (University of Birmingham, 2018, 21) probably forms a continuous feature with similar linear sections in neighbouring fields (Bishop, 2011b).

Chainage 10250m to 10460m

The eastern end of the proposed tunnel abuts parcels of vestigial ridge and furrow (UID 3077) (chainage 10300m to 10500m) which have been mapped by English Heritage's Stonehenge WHS Mapping Project, and detected by geophysical survey (Linford, Linford, and Payne, 2015; Wessex Archaeology, 2017a).

Trial trenching between chainage 10400m and 10500m partly covering the eastern end of the proposed tunnel (survey area NE2) did not reveal any substantial archaeological remains (Wessex Archaeology, 2017d). A pronounced coombe (NNW/SSE aligned), roughly parallel to the modern A303, contained colluvial deposits. On the upper slopes a thin ploughsoil overlay solid chalk rock with no periglacial markings, elsewhere periglacial cryoturbation features were both abundant and clear. Within the coombe substantial deposits of colluvium were recorded (over 1.05m depth in Trench 69 in the middle of the dry valley), although no standstill episodes were observed. It is believed that the colluvium is likely of general Bronze Age date.

Recent archaeological evaluation (fieldwalking, test pitting, trial trenching and geo-archaeological investigations) beyond the eastern limit of the tunnel portal uncovered a consistent sequence of deposits consisting of structural chalk, coombe deposits and colluvial units were recorded. In the centre of the valley where the colluvial units are thickest they preserved a buried soil near their base. The presence of prehistoric flint work within the buried soil suggests that this period of relatively little erosion and limited, incremental deposition extends from within the post-Pleistocene prehistoric period. The fact that a possible Roman ditch cuts this soil indicates that this phase of relative stasis probably extended to the Roman period.

Geotechnical exploratory investigations on the north side of the existing A303 Amesbury Bypass (Highways England, 2019j [REP1-056]) at chainage 10500m, revealed a topsoil overlying colluvium recorded to 1.7m depth where a band of flint cobbles overlay soliflucted chalk and weathered chalk bedrock (R72002).

Scheme impact

The Scheme mainline as it passes Stonehenge will require the installation of ground surface monitoring equipment. A zero-ground disturbance, fully reversible form of installation will be adopted. The requirement for the installations will be scoped to minimise the number required and the locations of the installations will be selected to avoid known archaeological remains.

Mitigation

Preservation of archaeological remains will be achieved through a zero-ground disturbance form of installation. Installation and removal of the monitoring equipment will be undertaken under archaeological supervision.

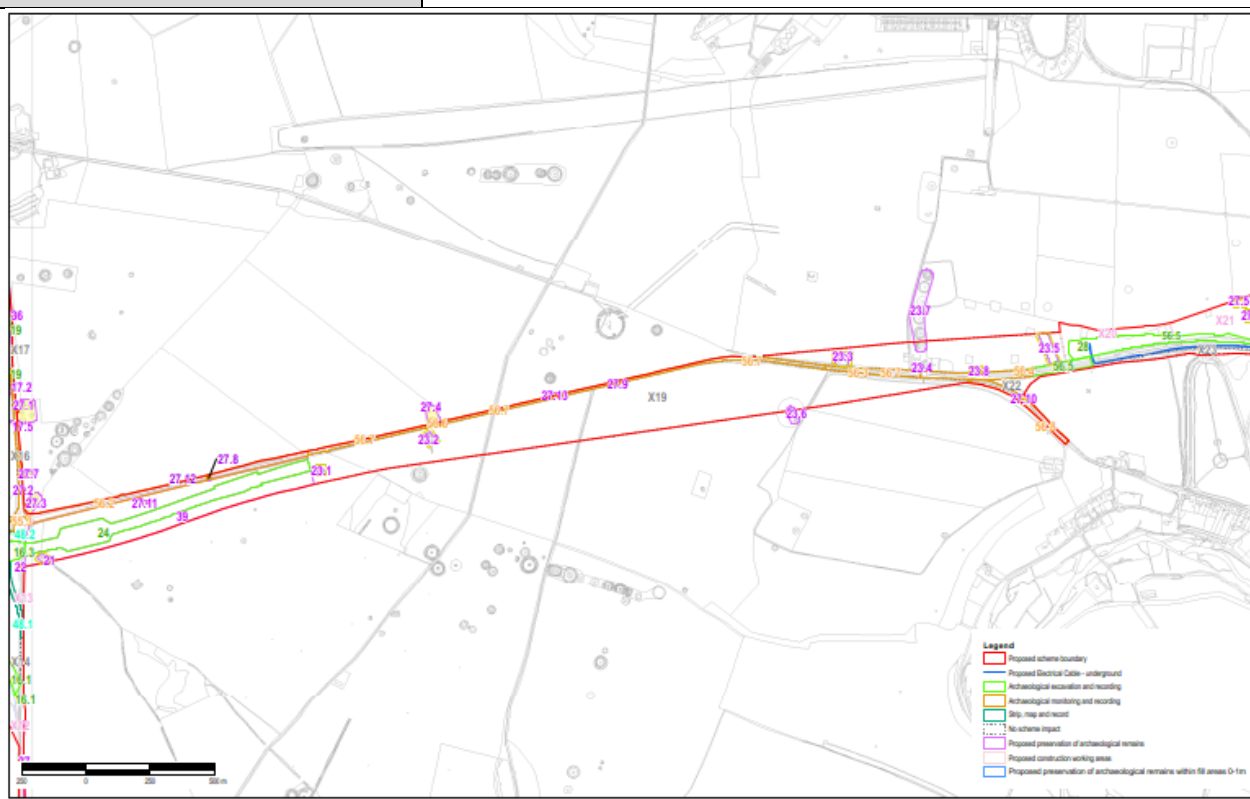
Site 27.1 to 27.13: Barrows and milestones along sections of the A303, A360 and Stonehenge Road which will be converted into green lanes. Non-designated 1918 military stone marker (military 1918 stone RFC/RAF Stonehenge Airfield Marker “A.M. No.1”).	
Designation:	Scheduled, Listed, Non-designated
Reference IDs:	<p>Scheduled Monuments</p> <p>UID 2003/NHLE 1011047 (Site 27.1)</p> <p>UID 2004/NHLE 1011842 (Site 27.2)</p> <p>UID 2006/NHLE 1011841 (Site 27.3)</p> <p>UID 3002/NHLE 1012369 (Site 27.4)</p> <p>UID 4009/NHLE 1009142 (Site 27.5)</p> <p>UID 4010/NHLE 1012128 (Site 27.6)</p> <p>UID 2005/NHLE 1011843 (Site 27.7)</p> <p>Listed milestones</p> <p>UID 6031/NHLE 1130999 (Site 27.8)</p> <p>UID 6040/NHLE 1131085 (Site 27.9)</p> <p>UID 6042/NHLE 1131071 (Site 27.10)</p> <p>Non-designated</p> <p>UID 2177 (Site 27.11)</p> <p>Boundary marker AM1 (Site 27.12)</p> <p>Boundary marker AM12 (Site 27.13)</p>
Location (NGR):	<p>Site 27.1 – 409971, 141856</p> <p>Site 27.2 – 409961, 141550</p> <p>Site 27.3 – 409995, 141500</p> <p>Site 27.4 – 411551, 141845</p> <p>Site 27.5 – 414698, 142286</p> <p>Site 27.6 – 414742, 142226</p> <p>Site 27.7 – 409979, 141612</p> <p>Site 27.8 – 410680, 141594</p> <p>Site 27.9 – 412272, 141961</p> <p>Site 27.10 – 413862, 141901</p> <p>Site 27.11 – 410431, 141498</p> <p>Site 27.12 – 410603, 141590</p> <p>Site 27.13 – 412032, 141923</p>
Site area (approximate):	<p>Site 27.1: 0.57ha</p> <p>Site 27.2: 0.09ha</p> <p>Site 27.3: 0.46ha</p> <p>Site 27.4: 0.53ha</p> <p>Site 27.5: 0.19ha</p> <p>Site 27.6: 0.19ha</p> <p>Site 27.7: 0.08ha</p> <p>Site 27.8: 0.03ha</p> <p>Site 27.9: 0.03ha</p>

Site 27.10: 0.03ha

Site 27.11: 0.03ha

Site 27.12: 0.03ha

Site 27.13: 0.03ha



Description

The following assets are located adjacent to the existing road network, including the A303, A360 and Stonehenge Road. The assets include a series of barrows and milestones, an airfield marker and a possible hengiform enclosure located by geophysical survey:

Site 27.1: A scheduled round barrow cemetery on the east side of the A360 (Winterbourne Stoke 17-21, 21a, 21b), comprising five bowl barrows and two saucer barrows (UID 2003). The westernmost barrow has been truncated by the A360. All the barrows were partially excavated in the 19th century and surveyed as part of the Stonehenge World Heritage Site Landscape Project (Bax et al., 2010) and the Stonehenge Hidden Landscapes Project (University of Birmingham, 2018).

Site 27.2: A bowl barrow that lies immediately east of the A360, forming part of the Winterbourne Stoke crossroads round barrow cemetery (UID 2004). The barrow has been levelled by cultivation from that shown on the OS 25-inch map of 1924; its diameter is calculated to be 8m. Not visible during recent earthwork survey (Bax et al., 2010). No traces of a possible ring ditch were recorded in this location during the Stonehenge Hidden Landscapes Project (University of Birmingham, 2018).

Site 27.3: A Neolithic long barrow (UID 2006) forms part of the Winterbourne Stoke Crossroads barrow cemetery, immediately north-east of the existing Longbarrow Roundabout. The long barrow is orientated south-west to north-east along the ridge and forms the origin and focal point of a linear round barrow cemetery which extends along the ridge to the north-east (UID 2003; 2004; 2005; 2007; 2008). Recent investigation indicates that the surviving barrow mound is 83.7m in length, 26.9m wide, and 3m high, flanked on the north-west and south-east sides by ditches (Bax et al., 2010). Partial excavation in the 19th century revealed a primary male inhumation with a flint implement and six secondary inhumations. The mound shows evidence of damage due to excavation, animal burrowing and quarrying. The long barrow

was also subject to geophysical surveys as part of the Stonehenge Hidden Landscapes Project (University of Birmingham, 2018).

Site 27.4: Three bowl barrows immediately north of the A303 on Stonehenge Down (UID 3002) which lie immediately north of the A303, adjacent to the DCO boundary. Two of the three barrows are aligned north – south; a smaller barrow is located immediately to the east of the southern barrow. The mound of the southern barrow, adjacent to the DCO boundary, is 24m in diameter and 1.8m high, surrounded by a ditch which is c.4m wide and survives as a slight earthwork. The overall diameter is c.32m. All three barrows were partially excavated in the 19th century and probable primary cremations were found in both of the larger barrows. A cremation was found in the smaller barrow contained within a particularly large Deverel-Rimbury bucket/barrel urn. The barrows may have been accompanied by five others, as Colt Hoare indicated that this was a group of eight barrows of different sizes sited next to the road (Field and Pearson, 2011). The locations of these other barrows are uncertain, although it is possible that they were levelled during subsequent modernisation/road widening works. Buried vestiges of the other monuments may, however, survive. A single trench was excavated to test the state of preservation of Amesbury 2 as part of the 2003 A303 Stonehenge Improvement Scheme. This demonstrated that 'the mound was generally well preserved, although some evidence of animal disturbance and erosion (probably the result of ploughing) was noted' (Leivers and Moore, 2008). The barrow group was recently subject to geophysical survey as part of the Stonehenge Hidden Landscapes Project (University of Birmingham, 2018).

Site 27.5: A bowl barrow (Amesbury 39b), situated on a gentle south facing slope 140m north of the A303 and north-west of Countess Farm buildings (UID 4009). It is one of two barrows in this area that retain some degree of surface expression. The barrow is visible as a faint circular cropmark on aerial photographs and has been mapped by both RCHME's Salisbury Plain Training Area NMP and English Heritage's Stonehenge WHS Mapping Project. The NHLE entry indicates that it survives an earthwork 0.4m high and 22m in diameter and is surrounded by an infilled ditch, c.2m wide. Recent geophysical survey (University of Birmingham, 2018) appears to have detected no trace of either a ring-ditch or associated features at this location.

Site 27.6: A bowl barrow (Amesbury 39c), situated on a gentle south facing slope 80m north of the A303 and west of Countess Farm buildings (UID 4010). It is located c.45 m to the north-west of Site 27.9). The NHLE entry indicates that the barrow has a mound 1m high and 22m in diameter and is surrounded by an infilled ditch c.2m wide. Recent geophysical survey (University of Birmingham, 2018) appears to have detected no trace of a ring-ditch at this location, although a weakly defined, short linear feature was identified.

Site 27.7: A bowl barrow on the east side of A360 forming part of the Winterbourne Stoke crossroads round barrow cemetery (UID 2005). The barrow mound is 22m in diameter and 3.25m high and is surrounded by a ditch 4m wide and 0.5m deep. Excavation in the 19th century revealed a primary skeleton with a small vessel.

Site 27.8: A milestone approximately 850m east of Longbarrow Roundabout (UID 6031). The milestone (grade II listed) was erected by the Amesbury Turnpike Trust in the 1760s. The rectangular limestone pillar has a gabled top with an incised inscription that reads 'LXXXI/ Miles from/ London/ III/ from Amesbury' (repeated on reverse face).

Site 27.9: A milestone along the A303 (UID 6040). The milestone (grade II listed) was erected by the Amesbury Turnpike Trust in the 1760s. The partly buried rectangular limestone shaft has a worn top. It has an inscription that reads '80/ MILES FROM/ LONDON/ ..'.

Site 27.10: A milestone near junction with A303, Stonehenge Road (UID 6042). The milestone (grade II listed) was erected by the Amesbury Turnpike Trust in the 1760s. The large limestone slab has a double curved top. The inscription reads 'LXXIX/ MILES FROM/ LONDON/ XIX/ FROM/ ANDOVER/ 1764'. There is a benchmark on the left side.

Site 27.11: A non-designated possible small hengiform enclosure just south of the A303 and east of the A360 was detected by geophysical survey in GPR Area 18 (GPR anomaly 10000) (Wessex Archaeology,

2018a). The feature measured c.4m in diameter and the ditch c.1m with two possible pit-like features within the ring ditch.

Site 27.12: Stonehenge Aerodrome boundary marker beside A303 (Marker AM1) (UID 6033). One of a group of six early 20th century (non-designated) concrete markers. The stone is located c.1km east of the Longbarrow roundabout. The stone is c.0.45m square and 0.35m high with a chamfered top. It has an inscription 'A.M.' above a broad arrow denoting British Government property and 'No.1' below.

Site 27.13: A concrete boundary marker that is located on the north side of the A303 southwest of Stonehenge. The marker is approx. 0.45m square in section, 0.35m tall, chamfered at the top with the inscription 'A.M.' above a broad arrow denoting British Government property and 'No 12' below.

Scheme impact

Site 27.1 - The barrow cemetery lies immediately adjacent to the DCO boundary, and associated remains may have extended into the A360 corridor. The A360 will be downgraded to a restricted byway, and related works will take place adjacent to the scheduled area.

Site 27.2 - The barrow lies immediately adjacent to the DCO boundary, and associated remains may have extended into the A360 corridor. The A360 will be downgraded to a restricted byway, and related works will take place adjacent to the scheduled area.

Site 27.3 - The long barrow lies immediately adjacent to the DCO boundary. The existing Longbarrow Roundabout will be removed and replaced with chalk grassland. The A360 and A303 will be downgraded to a restricted byway, which will pass the long barrow approximately 20m to the south-west.

Site 27.4 - There will be no impact on the monument or associated remains as it lies outside the main works area, however, the southern edge of the monument forms the northern boundary of the existing A303 corridor. The existing A303 will be de-trunked and downgraded to a restricted byway and works to achieve this will take place adjacent to the scheduled area.

Site 27.5 - The barrow lies outside the main works area, however, site traffic may access the land to install tunnel monitoring equipment or for other reasons.

Site 27.6 - The barrow lies outside the main works area, however, site traffic may access the land to install tunnel monitoring equipment or for other reasons.

Site 27.7 - The barrow lies immediately adjacent to the DCO boundary, and associated remains may have extended into the A360 corridor. The A360 will be downgraded to a restricted byway, and related works will take place adjacent to the scheduled area.

Site 27.8 – The asset is close to the exiting A303 which will be downgraded to become a NMU route, also site traffic may access the land within the DCO boundary during construction.

Site 27.9 – The asset is close to the exiting A303 which will be downgraded to become a NMU route, also site traffic may access the land within the DCO boundary during construction.

Site 27.10 – The milestone is next to Stonehenge Road which will be closed at this location. Work to close the road and blend it into the existing landscape could impact the asset.

Site 27.11 - The ring ditch lies outside the main works area but within the DCO boundary (north of the Scheme mainline), with the eastern portal bored tunnel face situated some 550m to the east. Site traffic may access the land during construction.

Site 27.12 – The boundary marker is close to the exiting A303 which will be downgraded to become a NMU route and will need to be protected; also site traffic may access the land within the DCO boundary during construction.

Site 27.13 – The boundary marker is close to the exiting A303 which will be downgraded to become a NMU route and will need to be protected; also site traffic may access the land within the DCO boundary during

construction.

Mitigation

Site 27.1 - The monument is already protected by an existing boundary fence and no further measures are proposed.

Site 27.2 – The monument is already protected by an existing boundary fence and no further measures are proposed.

Site 27.3 - The monument is already protected by an existing boundary fence and no further measures are proposed.

Site 27.4 - The monument is already protected by an existing boundary fence and no further measures are proposed.

Site 27.5 - The scheduled monument will be photographed and protected during construction works by fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys. Following construction, the protective fencing will be removed and the land returned to agriculture.

Site 27.6 - The scheduled monument will be photographed and protected during construction works by fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys. Following construction, the protective fencing will be removed and the land returned to agriculture.

Site 27.7 - The monument is already protected by an existing boundary fence and no further measures are proposed.

Site 27.8 - The listed milestone will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed, leaving the milestone in situ.

Site 27.9 - The listed milestone will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed, leaving the milestone in situ.

Site 27.10 - The listed milestone will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed, leaving the milestone in situ.

Site 27.11 - The heritage asset will be photographed (even if no visible remains can be discerned) and protected during construction works by fencing. The protective fencing will incorporate a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys. Following construction, the protective fencing will be removed and the land returned to agriculture.

Site 27.12 - The boundary marker will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed, leaving the boundary marker in situ.

Site 27.13- The boundary marker will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed, leaving the boundary marker in situ.

Site 28: Eastern Portal Approach: Buried soil horizon and double ditch, undated ditch, flint scatters, in situ flint knapping in stony hollow.

Designation:	Unscheduled
Reference IDs:	UID 3010.02/MWI12527 UID 3077.03/MWI12817 UID 3077.05/MWI12817 UID 3084.02 UID 3084.03/MWI13148 UID 4027/MWI75710 UID 4029/MWI12477 UID 4032/MWI74473, MWI74449
Location (NGR):	414029, 142103 414874, 142107
Site area (approximate):	3.46ha



Description

Site 28 comprises the eastern portal approach cutting and adjacent land, extending between approximate chainages 10200m and 11300m.

Baseline

Extensive evidence of Mesolithic occupation revealed during excavations since 2005, at Blick Mead, situated adjacent to a spring line overlooked by Vespasian's Camp (UID 4032). The investigations have recovered large quantities of lithic material, faunal remains from an area outside of the highway boundary, as well as palaeoenvironmental datasets.

Site 28 lies approximately 60m east of the course of the Stonehenge Avenue (NHLE 1010140), a linear feature formed of parallel banks and ditches approximately 10m apart, providing a formal approach to Stonehenge and linking it with the River Avon at West Amesbury (UID 3010.02). Although the banks and ditches survive west of King Barrow Ridge as slight earthworks of approximately 200mm height/depth, they are no longer visible on the surface east of King Barrow Ridge.

There are numerous Early Bronze Age round barrows to the north and south of Site 28 (NHLE 1010331, 1012127, 1012128, 1012129, 101230, 1012131, 1014088, 1009142, 1009143, 1009144 and 1009151).

Immediately south of Site 28, Vespasian's Camp (NHLE 10912126) is a large univallate hillfort on the western bank of the River Avon. Although hillforts are typically associated with the Iron Age, some may have originated in the Late Bronze Age and are often located on the site of earlier monuments; at Vespasian's Camp, three potential earlier barrows have been identified. The northernmost part of the bank of Vespasian's Camp is now cut by the line of the 1960s A303 Amesbury Bypass.

A pit containing a broken ground flint axe and nine fragments of animal bone was excavated by Faith Vatcher in 1967 prior to the improvement of the A303 (UID 4029). The exact location of the pit is unknown, although it seems likely to have been found where the ridge running northwards from Vespasian's Camp was cut by the road (Richards, 1990: p.66).

Remnants of the former Amesbury Abbey park can be seen in a series of small groups of trees to the north and west of Site 28, commonly known as the Nile Clumps.

Cropmarks comprising two parallel banks probably formed an avenue flanking a carriage drive in the Park and probably date to the 1760s and early 1770s, after which the area reverted back to arable and the banks were ploughed out (UID 3084.03).

Two vestigial parcels of ridge and furrow (aligned north-south) mapped by English Heritage's Stonehenge WHS Mapping Project, have been detected by geophysical survey (Linford et al., 2015) (UID 3077.03 and 3077.05).

A detailed gradiometer survey (Wessex Archaeology, 2017a, area NE2) identified a linear anomaly (4511) running north-south for c.95m, interpreted as a former agricultural feature such as a field boundary or enclosure ditch; it does not relate to any previously known archaeological feature, nor is it recorded on historic mapping. A possible plough damaged barrow was represented by a weak curvilinear anomaly with a diameter of c.15m (4512) to the west of 4511. The continuation of an existing field boundary identifiable on the 1885 edition of the Ordnance Survey map (4517) and another possible field boundary (4518) not identifiable on historic mapping were located. Areas of amorphous anomalies (4519; 4520) were detected across the east of the area (Wessex Archaeology, 2017a).

Uncertain date

An archaeological evaluation carried out in 2017 at the eastern portal location (Area NE2, crossing the western side of Site 28) suggested only limited potential (Trench 92) (Wessex Archaeology, 2017d). The only feature recorded was a small ditch in Trench 92 (9204), aligned north-south, 0.7m wide and 0.4m deep, with steep slightly concave sides and a narrow concave base. It was undated, and although it was close to the position of a linear anomaly detected by geophysical survey, it has a very different alignment.

Romano-British boundaries

Two parallel, NNW-SSE orientated ditches (50445 and 50448), 3.4m apart, appeared to cut the buried soil (50405) in Trench 504 and were overlain by colluvium (50402 and 50403). The westernmost ditch (50448) measured c.1.9m wide and 0.75m deep and was slightly more substantial than ditch 50445 to the east, (1.5m wide and 0.7m deep. The upper fill of ditch 50445 comprises redeposited coombe deposits (50495) and this material is likely to represent ploughed-in bank material which possibly was originally sited to the west of the

ditch. No sign of comparable bank material was found in ditch 50448. These ditches were not recognised in the geophysical survey interpretation, as they were deeply buried. They may form a trackway or defensive boundary and are approximately aligned towards, or to the immediate west of, Vespasian's Camp.

Uncertain date

An undated ditch (50603), north-south aligned, recorded at the eastern end of Trench 506 corresponds to a linear anomaly detected by geophysical survey and extends into the northern side of Site 28. The undated ditch may be related to another undated ditch of similar size and alignment in found in 2017 in Area NE2 (Trench 92, ditch 9204).

Soil, colluvial sequences and natural features

A small but pronounced coombe crosses Site 28 on a NNW/SSE alignment, parallel to the existing A303. Colluvial deposits were recorded in many of the trenches within Site 28, but was absent to the northwest on the upper slopes out of the coombe itself and in Trench 80 along the southern edge of the site. Beneath the colluvium periglacial cryoturbation features were both abundant and clear, indicating that little if any underlying chalk had been lost to the plough. Substantial deposits of colluvium were recorded in Trenches 77 (0.90m thick), 78 (0.94m), 82 (0.94m) and 85 (0.86m). The colluvial deposits were notable to some extent in that there were no apparent standstill episodes within the deposits (stone free worm sorted horizons) which led the excavators to conclude that the deposits represent a single continuous period of ploughing (upslope of area NE2). No artefacts were recovered to date the deposition sequence, but the excavators suggest a general Bronze Age date for the accumulation of the colluvium would be reasonable. Environmental samples from the colluvium in Trench 68 (samples 68002–4) contained wheat grain fragments and chaff, seeds from wild plants, and charcoal fragments from mature wood.

Further evaluation in 2018 (Highways England, 2019b [REP1-047, 048]) uncovered a very small number of archaeological features, comprising two parallel ditches of possible Romano-British date cut into a buried soil of probable Late Iron Age to Romano-British date and sealed by post-Roman colluvium in Trench 504 north of Vespasian's Camp, and an undated ditch in Trench 506 (also a small number of features of post-medieval/modern date, and a small number of natural features). Artefacts consisted primarily of an even, low-density scatter of worked and burnt flint across Site 28, with a small number of slightly higher concentrations which may be the remains of activity areas now dispersed within the ploughzone.

The ploughsoil and colluvium (50401 and 50402-4 respectively) lay above a buried soil (50405), which in turn overlay slope gravel wash (50406) and natural coombe deposits (50407).

In adjacent Trench 505, a thin calcareous colluvial subsoil (mid yellowish brown silty clay loam), was present for 30m at the downslope north-west end of the trench. In this locality, potential colluvial deposits (unexcavated) at the base of test pits were also observed in a swathe closely following the ENE–WSW coombe that feeds into the more pronounced NNW–SSE dry valley. The former correlates with a geophysical anomaly interpreted as superficial geology and the potential colluvial deposits in test pits were recorded in a 10m swathe either side of this.

Trench 502 contained a thin subsoil that lay above the compact natural chalk indicates that at least the most recent ploughing has not incised the surface of the chalk.

Small quantities of finds of mixed date found in the test pits excavated through the colluvium show the reworked nature of the colluvium (e.g. TP 1506 4210; 1508 4209).

The deposit sequence was investigated by a targeted auger survey across a north-south aligned coombe (12 boreholes) and in Trench 504 (excavated to a depth of 2.5m across the centre of a NNW-SSE aligned dry valley and parallel to boreholes Transects A and B to allow the sequence identified in the borehole survey to be investigated, sampled and recorded in detail). Additionally a hand dug test pit measuring 2.00m by 0.50m was dug through deposits exposed in the eastern end of the south facing section of the trench for detailed environmental sampling and for finds recovery.

The deposit sequence revealed by the auger survey and confirmed by geo-archaeological assessment of Trench 504 comprised:

- Topsoil (0.3m to 0.57m thick);

- Made ground (0.30m) in Transect B (BH4 and BH5);
- Colluvium (upper and lower colluvium), 0.31m to 0.92m thick. Lower colluvium dated by OSL to AD 840–1050 (late Saxon), and the upper colluvium produced an age estimate of AD 1500–1600;
- Possible buried soil (representing land stabilisation) recorded in BH 9 and BH 11 (Transect A), and BH5 and BH 6 (Transect B), also present in Trench 504 where it thins westwards towards the valley margin. A thin basal relict soil (B horizon) overlain by an upper bA/B (or eroded A "topsoil"). One piece of burnt flint and two sherds (5g) of abraded Roman pottery were recovered from it. The basal horizon produced seven pieces of undiagnostic prehistoric worked flint, all flake debitage. OSL dated the buried soil horizon to 260BC – AD 130 (Late Iron Age and Romano-British).
- Coombe deposits and geological natural (Head deposits, structureless/weathered putty chalk and structural chalk).
- Palaeoenvironmental remains (plant remains and mollusc samples) were not significant due to the low numbers obtained and the likelihood of temporal mixing within the assemblages.
- Tree throws were present in Trenches 506 (secondary fill contained four worked flint flakes) and 507.
- Plough scars were present in Trenches 509 and 510.
- Trenches 502, 503, 505, 507, 509 and 510 contained no archaeological remains.

Worked and burnt flint

Ploughzone artefact sampling (test pitting and dry sieving) and sieving of ploughsoil from trial trenches recovered quantities of worked and burnt flint. Within the ploughzone, worked flint was distributed across the entire survey area with a relatively uniform low-level occurrence of pieces. Four small clusters of higher incidence (represented by flake debitage, some core material and fewer retouched tools) were noted, with the densest in the centre of the area (a similar pattern was recorded by the Stonehenge Environs Project in the 1980s). The burnt flint distribution was spread evenly across the survey area with small concentrations at the east and west ends. Concentrations of worked flint appear to be located adjacent to burnt flint clusters and together it indicate refuse material derived from nearby activity areas.

Some of the worked flint pieces are indicative of a Mesolithic and/or Early Neolithic date (sporadic distribution but found at the west end of Site 28 and in Trenches 505, and 509), however, the larger part of the assemblage is likely to be of Later Neolithic date (in contrast a significant group of debitage was found in Trench 512 (Site 29) that is of late Neolithic/Early Bronze Age date with a Mesolithic component).

Scheme impact

Construction of the eastern portal and approach cutting will result in the loss of the archaeological resource at Site 28, including the remains of Romano-British ditches (possibly related to activity at Vespasian's Camp), and other ditches of uncertain date which could represent former field systems. The cutting will also impact the extensive and relatively deep deposit sequences comprising colluvium and buried soil horizons which contain archaeological remains (features, finds and palaeoenvironmental evidence) preserved within the coombe that crosses the site.

Mitigation

A combination of ploughzone artefact sampling, geo-archaeological investigation and archaeological excavation and recording (AER) is required at Site 28. The Archaeological Contractor shall limit the amount of land take for the archaeology works to the extent of the proposed cutting(s) and any associated infrastructure.

Archaeological excavation and recording (AER) is required to record evidence of a Romano-British trackway or defensive boundary possibly related to the nearby hillfort, located on higher ground to the south (Vespasian's Camp) and to record a number of undated ditches. Additional ploughzone artefact collection is required to investigate concentrations of worked and burnt flint.

Geo-archaeological investigation will target colluvial deposits and buried soil horizons within the coombe area, as it is rare to find buried soils within colluvial contexts in the Stonehenge landscape. This will involve

hand excavated trenches across the coombe deposits to determine the presence, condition and extent of buried features, and to allow for the recovery of finds and for geo-archaeological and environmental sampling. Previous assessment has noted that due to temporal mixing the palaeoenvironmental potential of the buried soil and colluvium may be limited.

A section of the Wessex Water pipeline (Site 50), crosses the northern side of the site, but will be investigated as part of Site 28 (area for archaeological excavation and recording (AER)/geo-archaeological investigation).

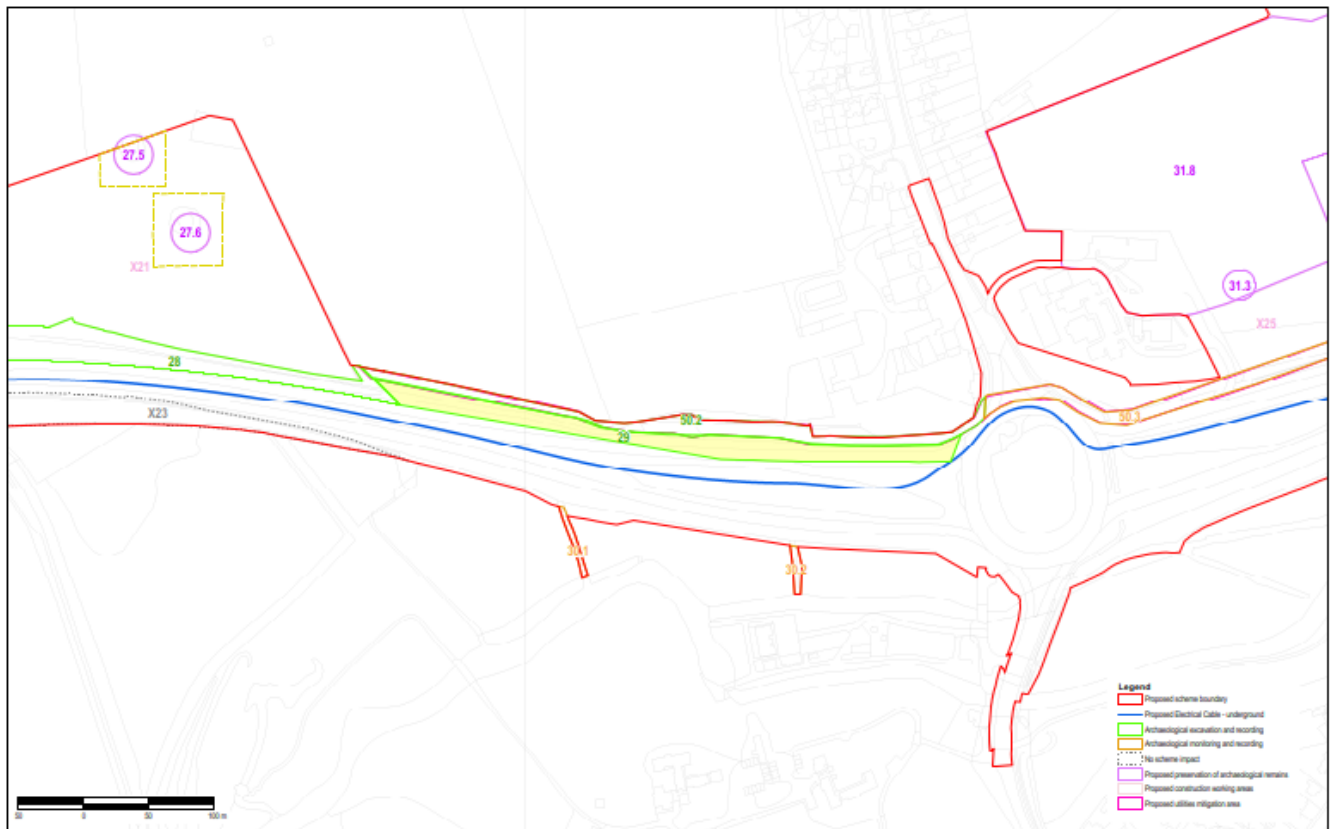
Research objectives identified in the Archaeological Research Agenda

The study of buried soil horizons, land divisions, flint scatters and in-situ flint knapping can provide insights into past land use, settlement patterns and lithics manufacture. The following ARA research themes and period-specific questions may be relevant:

- R.7: Landscape history and memory
 - R.8: Human generations
 - R.9: Daily life
 - M.3: Investigating change and diversity: understanding the transition from the later Mesolithic to the earlier Neolithic: how can we investigate the character of final Mesolithic archaeology.
 - M.8.1: What can Mesolithic technology (e.g. stone, antler, bone and wood working), its production, use and deposition, tell us about Mesolithic lifeways?
 - M.8.2: How can we better understand spatial and temporal variation in lithic technology, use and deposition?
 - M.8.3: To what extent can the composition, size and geographical characteristics of lithic scatters be used to define different types of site in the Mesolithic?
 - M.9.1: How variable was site use and landscape use through this period?
 - M.9.2: Can we further refine the dating of final Mesolithic sites and how do these relate to the Early Neolithic?
 - N.1: Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at the very end of the Mesolithic?
 - N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g. pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
 - MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
 - MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
 - MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
 - RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 29: Order Limits North of A303: Mesolithic site at Countess Farm West – Mesolithic material located within a buried soil horizon and colluvial deposits. Potential for Late Neolithic/Early Bronze Age flint knapping activity.

Designation:	Non-designated
Reference IDs:	UID 4036/MW11874
Location (NGR):	414874, 142107 415331, 142065
Site area (approximate):	1.00ha



Description

Site 29 comprises peripheral working areas on the north side of the existing A303, which rises on embankment immediately to the south.

Baseline

UID 4036: An evaluation in 2003 (trial trenches in Drainage Treatment Area 6) revealed a near in-situ worked flint scatter of Late Mesolithic or Early Neolithic date within a 0.47m thick relict soil of post-glacial/Holocene date (Wessex Archaeology, 2003d; Leivers and Moore, 2008). A series of four 1m square hand dug test pits excavated through this soil to establish the northern and southern limits of the flint scatter found it to be confined predominantly within the relict soil just off the edge of the river terrace. Worked and burnt flints were recovered throughout the thickness of the soil, although greater numbers of worked flint were present in the uppermost spits.

Worked flint was also recovered from overlying and underlying colluvial layers.

In 2017 a geotechnical test pit was archaeologically monitored between the A303 and Trench 3 (DTA 6) (Wessex Archaeology, 2017e).

Additional evaluation work was carried out in 2018 further to the west (Trenches 511 and 512 (Highways England, 2019b [REP1-047, 048]).

South of the A303 in the floodplain of the River Avon a well preserved Mesolithic site (Blick Mead) has been under investigation since 2005 (c.75m south of Site 29) (Jacques and Philips, 2013; Jacques, Philips and Lyons, 2018).

The eastern end of Site 29 lies immediately south of Countess Farm, a group of post-medieval listed buildings (built heritage asset numbers 6068-6071) and the presumed focus of Saxon settlement north of the Avon at Amesbury Countess.

Soil, colluvial sequences, natural features and artefact sampling along the northern side of Site 29

In the western part of Site 29 at approximate chainage 11350m, a large natural hollow in Trench 512 (51224) measuring approximately 15m in width and excavated up to a depth of 1.35m was found to be infilled with a colluvial sequence (hollow found beneath topsoil and a thin subsoil), including decalcified colluvial deposits (51220 and 51221). At the base of this upper colluvium, a dark stony horizon (51222) was encountered at a depth of 0.80-0.83m below the ground surface, and a further layer of decalcified colluvium (51215) underlay this. The natural hollow itself may have been created by solution into the underlying chalk. The hollow lies outside of the DCO boundary.

A coherent group of worked flint comprising primary knapping debris of Late Neolithic date, within which a small Mesolithic component (a bladelet and burin spall) is mixed, was recovered from deposit 51222. This stony horizon could represent a period of stasis within the continual slope process deposits, or it could be related to deflation, i.e. when fine-grained material is lost/washed out from the colluvium leaving heavy inclusions (flint and artefacts) in a horizon at the base of the colluvium.

A very similar assemblage of worked flint, in terms of quantity and form, and also including a microlith of Mesolithic date, together with one sherd/15g of Early Neolithic pottery and 5g of Beaker pottery was recovered from the overlying colluvium (51221). Worked flint comprising a scraper and six flakes were also recovered from the upper colluvial layer (51220). No finds were recovered from the underlying colluvium (51215), and therefore its date remains uncertain, as does its full extent.

The condition of the worked flint suggests it had not travelled far and the presence of artefacts of Mesolithic date is not unexpected given the presence of Mesolithic lithics approximately 120m at 2004 DTA6 to the north-east (Leivers et al., 2008) and Mesolithic occupation at Blick Mead, c.100m to the south (Jacques et al., 2014).

Located on the lower slopes of a valley side in the higher floodplain of the River Avon Drainage Treatment Area 6 (DTA 6) represents an important area that would have been potentially rich in resources for hunter/gatherer populations with access to both terrestrial and riverine/floodplain environments. Trenches 3 and 7 were located on a visible break of slope (river terrace); Trench 5 was located on the floodplain; and Trenches 4 and 6 were located above the terrace (higher ground):

- Trench 3 (crossing the lower south end) revealed localised pockets of a buried soil (forest brown soil 0.25m thick) containing Late Mesolithic and/ Early Neolithic worked flint overlying alluvial sediments the result of overbank flooding episodes. On the north side of the trench the deposit sequence comprised modern soils over weathered chalk or coombe deposits. Test pitting within the buried soil indicated that the flint scatter was confined to the buried soil just off the terrace edge (test pits 3B, 3C and 3D). Both worked and burnt flint found throughout the buried soil profile (greater numbers of worked flint from the upper spits), flint also recovered from overlying and underlying colluvium. The material was generally in a good condition suggesting little post-depositional movement (represents a near in-situ Late Mesolithic and/ Early Neolithic flint assemblage).
- Trench 4 also contained isolated pockets of buried soil lying within natural hollows in the natural geology, but archaeological features.

- Trench 5 contained a colluvial sequence (over 1m thick) overlying alluvial clays and a natural feature (506).
- Trench 6 contained a number of features (a modern pit and a possible drainage ditch pit).
- Trench 7 contained two gullies interpreted as contemporary boundary or drainage features. The southern part of the trench revealed a localised colluvial sequence over 1m deep, sealing features on the terrace edge. Some flintwork (possible Bronze Age date) and medieval pottery suggests that it is a mixed deposit.

The majority of the sequences are colluvial and an alluvial component is generally absent from the lower valley slopes, but present in Trench 5 at the base of the valley (possibly glacial or early post-glacial date).

TP 146 (SA505) contained no archaeological remains or finds but the deposit sequence (starting at 69.42m aOD) was broadly comparable to those from Trench 3:

- Topsoil (5051), a mid-brown silty clay loam (0–0.10m bgl);
- Colluvium (5052), a mid-brown silty clay with abundant flints and frequent chalk pieces (0.10–0.60m);
- Alluvial fill (5053), a very dark grey/brown silty sandy clay with (natural) flints throughout, below 0.80m it was very dark grey with occasional waterlogged plant remains (0.60–0.90m);
- Natural compact chalk (5054) (0.90m+).

Blick Mead

On a spring line of the Avon floodplain, south of the existing A303 and c. 70m south of Site 29, investigations have revealed evidence for Mesolithic occupation (lithic and faunal remains) which represents the earliest known activity in the WHS.

The Mesolithic layer is present between 67m aOD and 68m aOD immediately overlying sands and gravels at between 0.75m and 2m below the ground surface (comprising made ground and undifferentiated alluvium). The A303 has a surface at between 71.5m aOD and 73m aOD (c.1.5m above the level of the site).

The Mesolithic assemblage is from a thin waterlain deposit (Trenches 19, 22 and 23 (H3a) above an undulating gravel bench referred to as the higher gravel surface. Currently the A303 represents the northern boundary of the site which is also delineated by the extent of alluvium (west side) and by the edge of the higher gravel surface (east).

The British Geological Survey (BGS) mapping indicates that the dry valley to the north of the A303 comprises head deposits (clay, silt, sand and gravel) whereas at Blick Mead the sequence across the higher gravel surface is made ground (possibly the result of road construction for the A303), undifferentiated alluvium, cultural Mesolithic layer, river terrace sands and gravels.

A comparison between the level of the natural soliflucted chalk in Trench 512 (70.5m aOD) and in Trench 3 (average 69m aOD) at DTA 6 (north side of the A303) to the natural gravel recorded in boreholes at Blick Mead (67m aOD) indicates a vertical difference of c.3.5m between the floodplain edge north of the A303 and at Blick Mead. At Blick Mead the cross-site deposit sequence represents a valley alluvial sequence over sand and gravels (made ground over alluvium over sand over sand and gravel, with the Mesolithic flint occurring at the base of the alluvium/top of the sand). In contrast north of the A303 in Trench 512 and in Trench 3 at DTA 6, the excavated sequence comprises a chalkland colluvial sequence on the flood-plain edge (topsoil over colluvium over Chalk).

Scheme impact

Construction works for the approach to the flyover at Countess Roundabout will be confined to existing highway land. Within Site 29, archaeological deposits recorded within the DCO boundary may be impacted by peripheral construction working areas; and by the removal of existing trees at Countess Farm where necessary to facilitate construction and their subsequent replacement by new planting to help screen the new Countess flyover in views from Countess Farm.

Evidence of Late Mesolithic/Early Neolithic occupation may be impacted.

Mitigation

Following surface artefact collection, targeted ploughsoil sieving for artefact recovery will be combined with archaeological excavation and recording (AER) and geo-archaeological assessment.

Geo-archaeological assessment will investigate the potential for buried soils and colluvial deposits to survive within the coombe and dry valley that crosses the site and within the river floodplain, to determine the extent and character of the deposits. Palaeoenvironmental sequences (pollen and/ soil micromorphology) are likely to be preserved within/beneath colluvium/alluvium at various locations (including within buried soils), and these sediments may also mask archaeological features.

Archaeological excavation and recording (AER) (including a combination of targeted hand excavated trenching, test pitting involving sample sieving of deposit sequences and sample excavation) will investigate the potential for buried remains to occur in other hollows cut into the underlying soft soliflucted chalk natural as these may contain primary flint knapping debris (similar to that found in Trench 512) which would indicate that activity was taking place in the immediate vicinity in the Late Mesolithic and Late Neolithic periods (possibly associated with activity at Blick Mead).

A section of the Wessex Water pipeline (Site 50), crosses the northern side of the site, but will be investigated as part of Site 29 (area for archaeological excavation and recording (AER)/geo-archaeological investigation).

Research objectives identified in the Archaeological Research Agenda

Studies on Mesolithic material located within a buried soil horizon and colluvial deposits can throw light upon the earliest human activity in the Stonehenge area. The following ARA research themes and period-specific research questions may be relevant:

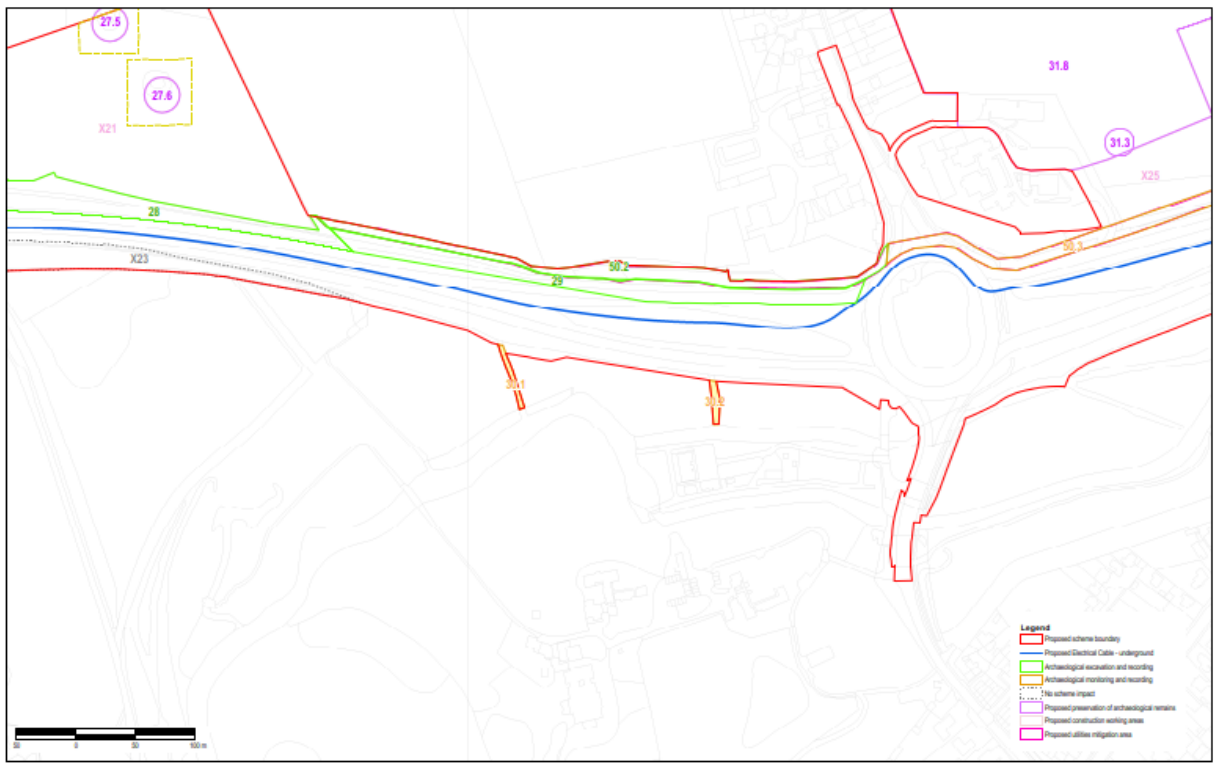
- R.7: Landscape history and memory
- R.9: Daily life
- M.1: Living in a changing world: what was the impact of the human presence upon the environment, vegetation, and animal population? To what extent did environmental change impact upon Mesolithic technology and tool kits?
- M.2: Mesolithic lifeways: settlement and mobility: what is the range and nature of structural remains, how were they built and what did they represent?
- M.3: Investigating change and diversity: understanding the transition from the later Mesolithic to the earlier Neolithic: how can we investigate the character of final Mesolithic archaeology?
- M.4: A clear understanding of the climate, environment, vegetation and animal populations in and around the WHS, and in particular the hydrology of the River Avon: this will be a crucial tool to understanding of the landscapes of the Late Glacial and Early Post-Glacial periods.
- M.5: A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.
- M.6: Further refining the chronology of sites, lithic industries and change.
- M.8.1: What can Mesolithic technology (e.g. stone, antler, bone and wood working), its production, use and deposition, tell us about Mesolithic lifeways?
- M.8.2: How can we better understand spatial and temporal variation in lithic technology, use and deposition?
- M.8.3: To what extent can the composition, size and geographical characteristics of lithic scatters be used to define different types of site in the Mesolithic?
- M.9.1: How variable was site use and landscape use through this period?
- M.9.2: Can we further refine the dating of final Mesolithic sites and how do these relate to the Early Neolithic?
- N.1: Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at

the very end of the Mesolithic?

- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Sites 30.1 and 30.2: Order Limits South of A303: Channel cleaning of existing highway drainage ditches east of Blick Mead.

Designation:	Non-designated
Reference IDs:	No UID
Location (NGR):	Site 30.1 – 415035, 141999 Site 30.2 – 415208, 141974
Site area (approximate):	Site 30.1: 0.02ha Site 30.2: 0.02ha



Description

Site 30 comprises existing drainage channels on the Avon floodplain on the south side of the existing A303 embankment.

Baseline

Investigations carried out on either side of the existing A303 at this location have identified the remains of Mesolithic/Early Neolithic occupation on either side of the road.

In 2003 trial trenches in Drainage Treatment Area 6 on the north side of the A303 revealed a near in-situ worked flint scatter of Late Mesolithic or Early Neolithic date within a 0.47m thick relict soil of post-glacial/Holocene date (Wessex Archaeology, 2003d; Leivers and Moore, 2008). A series of four 1m square hand dug test pits excavated in Trench 3 (c.19m from the DCO boundary) to establish the northern and southern limits of the flint scatter found it to be confined predominantly within the relict soil just off the edge of the river terrace. Worked and burnt flint were recovered throughout the thickness of the soil, although greater numbers of worked flint were present in the uppermost spits. Worked flint was also recovered from overlying and underlying colluvial layers.

In 2017 a geotechnical test pit was archaeologically monitored between the A303 and Trench 3 (DTA 6) (Wessex Archaeology, 2017e).

Additional evaluation work was carried out in 2018 further to the west (Trenches 511 and 512 (Highways England, 2019b [REP1-047, 048]).

South of the A303 in the floodplain of the River Avon a well preserved Mesolithic site (Blick Mead) has been under investigation since 2005 (Jacques and Philips, 2013; Jacques, Philips and Lyons, 2018).

Soil, colluvial sequences, natural features and artefact sampling north of the A303 opposite Site 30

Trench 512 contained a large natural hollow (51224) measuring approximately 15m in width and excavated up to a depth of 1.35m that was infilled with a colluvial sequence (hollow found beneath topsoil and a thin subsoil), including decalcified colluvial deposits (51220 and 51221). At the base of this upper colluvium, a dark stony horizon (51222) was encountered at a depth of 0.80-0.83m below the ground surface, and a further layer of decalcified colluvium (51215) underlay this. The natural hollow itself may have been created by solution into the underlying chalk.

A coherent group of worked flint comprising primary knapping debris of Late Neolithic date, within which a small Mesolithic component (a bladelet and burin spall) is mixed, was recovered from deposit 51222. This stony horizon could represent a period of stasis within the continual slope process deposits, or it could be related to deflation i.e. when fine-grained material is lost/washed out from the colluvium leaving heavy inclusions (flint and artefacts) in a horizon at the base of the colluvium.

A very similar assemblage of worked flint, in terms of quantity and form, and also including a microlith of Mesolithic date, together with one sherd/15g of Early Neolithic pottery and 5g of Beaker pottery was recovered from the overlying colluvium (51221). Worked flint comprising a scraper and six flakes were also recovered from the upper colluvial layer (51220). No finds were recovered from the underlying colluvium (51215), and therefore its date remains uncertain, as does its full extent.

The condition of the worked flint suggests it had not travelled far and the presence of artefacts of Mesolithic date is not unexpected given the presence of Mesolithic lithics to the immediate north (Leivers, et al., 2008) and Mesolithic occupation at Blick Mead, c.100m to the south (Jacques et al., 2014).

Located on the lower slopes of a valley side in the higher floodplain of the River Avon Drainage Treatment Area 6 (DTA 6) represents an important area that would have been potentially rich in resources for hunter/gatherer populations with access to both terrestrial and riverine/floodplain environments. Trenches 3 and 7 were located on a visible break of slope (river terrace); Trench 5 was located on the floodplain; and Trenches 4 and 6 were located above the terrace (higher ground)

- Trench 3 (crossing the lower south end) revealed localised pockets of a buried soil (forest brown soil 0.25m thick) containing Late Mesolithic and/ Early Neolithic worked flint overlying alluvial sediments the result of overbank flooding episodes. On the north side of the trench the deposit sequence comprised modern soils over weathered chalk or coombe deposits. Test pitting within the buried soil indicated that the flint scatter was confined to the buried soil just off the terrace edge (test pits 3B, 3C and 3D). Both worked and burnt flint found throughout the buried soil profile (greater numbers of worked flint from the upper spits), flint also recovered from overlying and underlying colluvium. The material was generally in a good condition suggesting little post-depositional movement (represents a near in-situ Late Mesolithic and/ Early Neolithic flint assemblage).
- Trench 4 also contained isolated pockets of buried soil lying within natural hollows in the natural geology, but archaeological features.
- Trench 5 contained a colluvial sequence (over 1m thick) overlying alluvial clays and a natural feature (506).
- Trench 6 contained a number of features (a modern pit and a possible drainage ditch pit).
- Trench 7 contained two gullies interpreted as contemporary boundary or drainage features. The southern part of the trench revealed a localised colluvial sequence over 1m deep, sealing features on the terrace edge. Some flintwork (possible Bronze Age date) and medieval pottery suggests that it is

a mixed deposit.

The majority of the sequences are colluvial and an alluvial component is generally absent from the lower valley slopes, but present in Trench 5 at the base of the valley (possibly glacial or early post-glacial date).

TP 146 (SA505) contained no archaeological remains or finds but the deposit sequence (starting at 69.42m aOD) was broadly comparable to those from Trench 3:

- Topsoil (5051), a mid-brown silty clay loam (0–0.10m bgl);
- Colluvium (5052), a mid-brown silty clay with abundant flints and frequent chalk pieces (0.10–0.60m);
- Alluvial fill (5053), a very dark grey/brown silty sandy clay with (natural) flints throughout, below 0.80m it was very dark grey with occasional waterlogged plant remains (0.60–0.90m);
- Natural compact chalk (5054) (0.90m+).

Investigations at Blick Mead along the southern side of Site 30

Blick Mead Mesolithic site is located on a spring line of the Avon floodplain, south of the A303 where investigations have revealed extensive remains of occupation (lithic and faunal remains) which represents the earliest known activity in the WHS. Site 30 lies c. 300m ESE of the Blick Mead Mesolithic site.

The Mesolithic layer is present between 67m aOD and 68m aOD immediately overlying sands and gravels at between 0.75m and 2m below the ground surface (comprising made ground and undifferentiated alluvium). The A303 has a surface at between 71.5m aOD and 73m aOD (c.1.5m above the level of the site).

The Mesolithic assemblage is from a thin waterlain deposit (Trenches 19, 22 and 23 (H3a) above an undulating gravel bench referred to as the higher gravel surface. Currently the A303 represents the northern boundary of the site which is also delineated by the extent of alluvium (west side) and by the edge of the higher gravel surface (east).

The British Geological Survey (BGS) mapping indicates that the dry valley to the north of the A303 comprises head deposits (clay, silt, sand and gravel) whereas at Blick Mead the sequence across the higher gravel surface is made ground (possibly the result of road construction for the A303), undifferentiated alluvium, cultural Mesolithic layer, river terrace sands and gravels.

A comparison between the level of the natural soliflucted chalk in Trench 512 (70.5m aOD) and in Trench 3 (average 69m aOD) at DTA 6 (north side of the A303) to the natural gravel recorded in boreholes at Blick Mead (67m aOD) indicates a vertical difference of c.3.5m between the floodplain edge north of the A303 and at Blick Mead. At Blick Mead the cross-site deposit sequence represents a valley alluvial sequence over sand and gravels (made ground over alluvium over sand over sand and gravel, with the Mesolithic flint occurring at the base of the alluvium/top of the sand). In contrast north of the A303 in Trench 512 and in Trench 3 at DTA 6, the excavated sequence comprises a chalk and colluvial sequence on the flood-plain edge (topsoil over colluvium over chalk).

Scheme impact

Archaeological investigations have indicated that the floodplain of the River Avon at this location has potential to contain Mesolithic/Late Neolithic occupation activity related to Blick Mead Mesolithic site and for alluvial/colluvial sequences to contain archaeological remains.

The new road will rise on an embankment from ch.11400 approx. onto a flyover above Countess Roundabout. Between ch.11400 and ch.11700 (approx.) new attenuation features are required either side of the road, these will comprise linear ponds and an improved ditch past Blick Mead, and will be constructed parallel to the road and within the DCO boundary. From the attenuation features water will flow along two existing drainage ditches east of the known extent of Blick Mead Mesolithic site, to discharge flows to the River Avon. The two existing drainage ditches or channels will be retained as they are, except for any necessary vegetation clearance to ensure the water can flow from the attenuation features.

Mitigation

There is potential for archaeological remains to be present in the river floodplain deposits where additional pockets of buried soil could be present above the alluvium which could contain Late Mesolithic and/ Early Neolithic worked flint, or activity related to that recorded at Blick Mead.

The areas required for the attenuation features will be subject to AMR as material is being dug-out of the existing channels formed within the embankment (made ground).

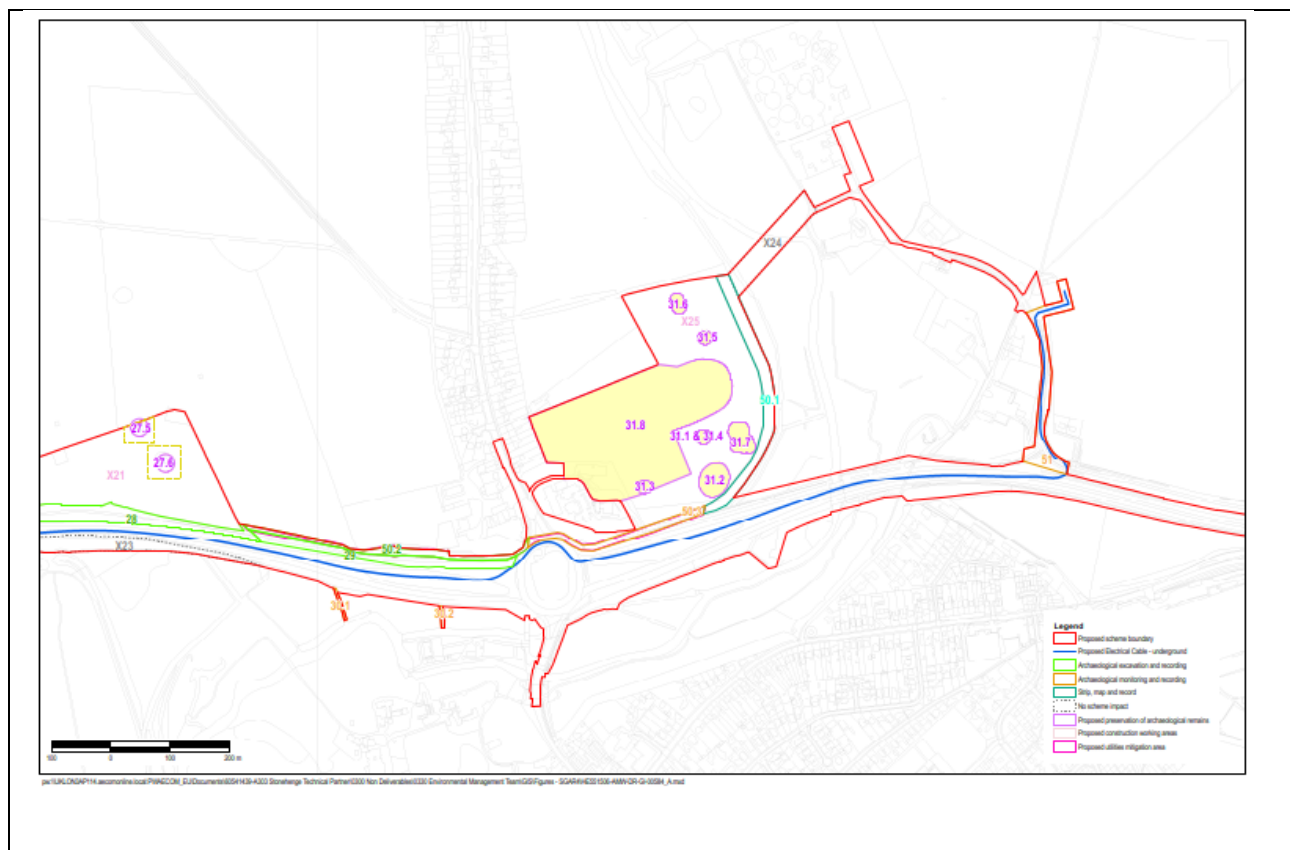
The existing drainage ditches will be retained as existing, subject to any necessary vegetation clearance: this will be subject to AMR.

Research objectives identified in the Archaeological Research Agenda

Studies on Mesolithic material located within a buried soil horizon and colluvial deposits can throw light upon the earliest human activity in the Stonehenge area. The following ARA research themes and period-specific questions may be relevant:

- R.7: Landscape history and memory
- R.9: Daily life
- M.1: Living in a changing world: what was the impact of the human presence upon the environment, vegetation, and animal population? To what extent did environmental change impact upon Mesolithic technology and tool kits?
- M.2: Mesolithic lifeways: settlement and mobility: what is the range and nature of structural remains, how were they built and what did they represent?
- M.3: Investigating change and diversity: understanding the transition from the later Mesolithic to the earlier Neolithic: how can we investigate the character of final Mesolithic archaeology?
- M.4: A clear understanding of the climate, environment, vegetation and animal populations in and around the WHS, and in particular the hydrology of the River Avon: this will be a crucial tool to understanding of the landscapes of the Late Glacial and Early Post-Glacial periods.
- M.5: A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.
- M.6: Further refining the chronology of sites, lithic industries and change.
- N.1: Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at the very end of the Mesolithic?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Sites 31.1 to 31.8: Countess East compound area - multi-period occupation (Neolithic, Iron Age, Roman and Saxon).	
Designation:	Non-designated
Reference IDs:	UID 4039.01/MWI12036 (Site 31.3) UID 4039.02/MWI12036 (Site 31.4) UID 4039.03/MWI12036 (Site 31.5) UID 4039.04/MWI12036; UID 4039.05/MWI12037 (Site 31.6) UID 4040/MWI11909 (Site 31.1) UID 4041/MWI11896 (Site 31.2) UID 4042.01/MWI12030 (Site 31.7)
Location (NGR):	Site 31.1 – 415650, 142271 Site 31.2 – 415669, 142198 Site 31.3 – 415548, 142185 Site 31.4 – 415648, 142253 Site 31.5 – 415653, 142436 Site 31.6 – 415605, 142495 Site 31.7 – 415712, 142269 Site 31.8 – 415529, 142285
Site area (approximate):	Site 31.1: 0.05ha Site 31.2: 0.23ha Site 31.3: 0.05ha Site 31.4: 0.05ha Site 31.5: 0.05ha Site 31.6: 0.07ha Site 31.7: 0.19ha Site 31.8: 4.89ha



Description

A series of evaluations have been carried out in this area (Site 31) since the 1990s which have identified significant buried archaeological remains (Wessex Archaeology, 1995; Wessex Archaeology, 2003c and Wessex Archaeology, 2004). Subsequently a geophysical survey in 2016 identified several anomalies of archaeological interest (Wessex Archaeology, 2017a). Recently a GPR survey over known anomalies was carried out in two areas within or close to the site (Highways England, 2019k).

Within the compound area there are various heritage assets representing multi-period activity and occupation that will require protection at an early stage (before the start of any preparatory works in the compound area). The remains comprise evidence of Neolithic activity, and Roman settlement (stone building and associated features) and Saxon settlement (series of sunken featured-buildings). Earlier test pitting (Wessex Archaeology, 1995) had produced c.60 sherds of Early/Middle Anglo-Saxon pottery from the same area as the sunken featured buildings.

Site 31.1: A pit containing Neolithic flintwork was discovered in 2003 (UID 4040). The pit in Trench 73 (7309) produced a relatively high quantity of struck flints which were broadly dated to the Neolithic.

Site 31.2: In 1993 a series of hand dug pits (28 no. total) revealed a sequence of post-glacial deposits (colluvial and alluvial) (UID 4041) (Anon., 1995). The upper part of the sequence included, within an area adjacent to the floodplain, evidence of prehistoric activity in the form of a scatter of worked flint. This was interpreted as a small and relatively nucleated area of Neolithic domestic activity, although subsequent trial trenching did not reveal any associated remains (Wessex Archaeology, 2003c).

Site 31.3: A Saxon building was discovered in Trench 79 (UID 4039.01). It was 4.7 by 3.32m and was 0.55m deep and was associated with a posthole at its eastern end. Although the north-eastern part of the building was not excavated, a complete horse skull was recorded from its surface.

Site 31.4: A Saxon building was recorded in Trench 73 (possibly two successive buildings) (UID 4039.02). The feature was roughly sub-rectangular in plan, aligned north-west to south-east and measured 6.5 x 4.75m and was 0.21m deep. A posthole was clearly visible on the northern side.

Site 31.5: A Saxon building was recorded in Trench 39 (UID 4039.03). The building was sub-rectangular in plan, aligned roughly east-west, 3.9m long, 3.1m wide and 0.22m deep. It also contained a posthole (3901) and another internal feature (3905).

Site 31.6: The remains of two sub-rectangular Saxon buildings were recorded in 2003 (Trench 30) and 2004 (Trench 85) (UID 4039.04; 4039.05). In Trench 30 the building was found to be heavily truncated, but it measured 2.64 x 2m, with a maximum depth of 0.15m and was aligned north-west to south-east. There were a number of associated postholes. The structure in Trench 85 (8505) was 3.60m long and 3.2m wide and 0.63m deep. It was also on a similar alignment to the building in Trench 30 but 15m further south.

Site 31.7: A substantial Romano-British masonry building was found in Trench 67 following (geophysics anomalies 4700, 4701) (UID 4042.01) which did not extend into the adjoining Trenches 66, 74 and 82. The walls were made of compacted chalk with a flint facing on the external faces (6710-13) with the exception of internal wall 6714, which was solely of chalk. Two sondages were excavated within the interior of the building but neither yielded clear evidence for surviving floor surfaces (mixture of demolition debris overlying the natural). A recent GPR survey (Area 1) provides further detail about the building (Highways England, 2019k). It is aligned north to south and is 30m long by 11.5m wide, widening to 15.5m at the northern end. The wider northern end comprises three roughly 4m square rooms separated by 1m wide walls. The southern end also comprises three rooms, the central being roughly 3m square and flanked by 2.5 x 3m rectangular rooms. The centre of the building is formed by a 17 x 9m room or courtyard. This contains two rows of four regularly spaced (3.5m), 1.5m diameter, discrete anomalies which are likely to be the bases of former pillars. Other features detected nearby could be related to the Romano-British building (geophysics anomalies 4001, 4002).

Site 31.8: Although not proven by trial trench evaluation this area is likely to contain archaeological remains associated with Neolithic pit digging activity, Roman and Saxon settlement, and post-medieval boundaries.

Scheme impact

This area is required for a construction compound and working area (X25, see Appendix D.2) and without protection remains relating to Neolithic activity, Roman and Saxon settlement will be impacted. The compound will be formed of imported material laid on existing topsoil which will be retained in situ.

Mitigation

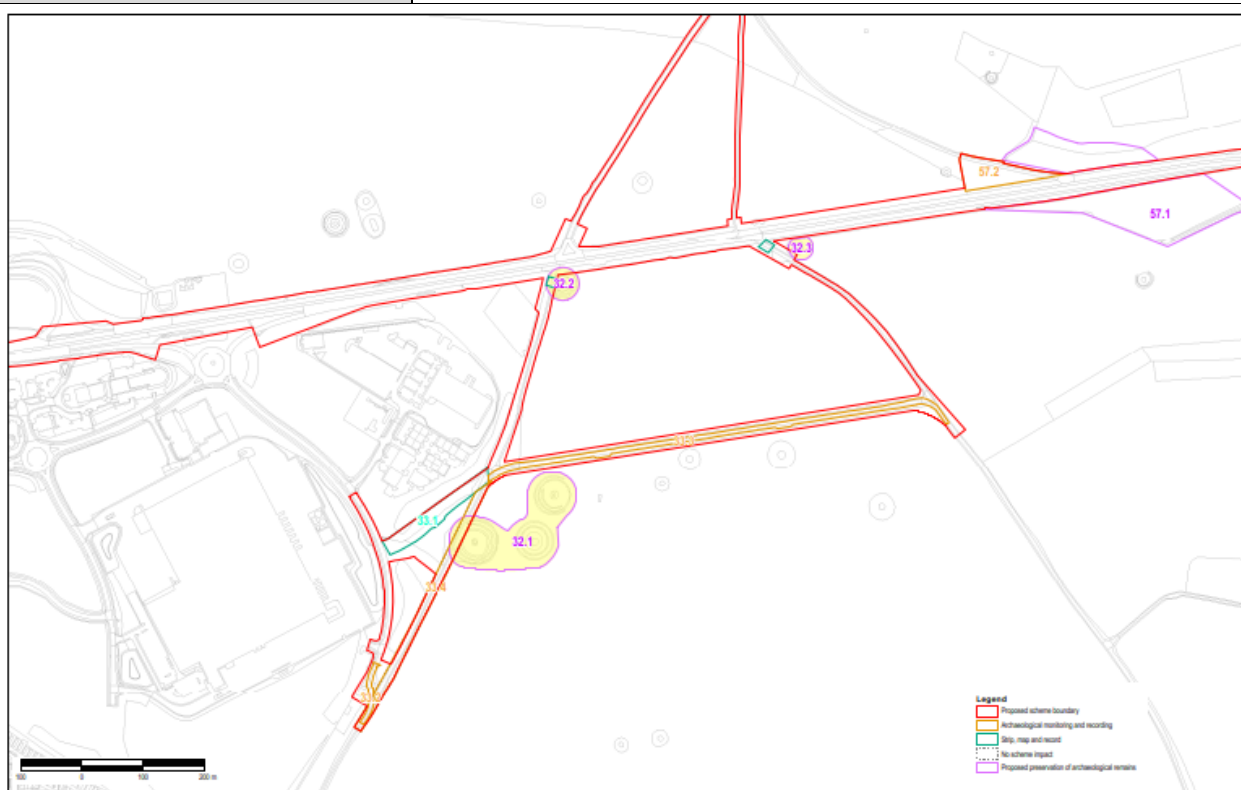
Seven sites identified as a result of archaeological surveys will be protected and preserved at the south and east sides of Countess East Satellite Compound. At Sites 31.1 to 31.7 the topsoil will be retained and the buried archaeological remains will be protected by fencing. The protective fencing will incorporate a 10m buffer beyond the extent of the remains as mapped by the evaluation investigations. At Site 31.8 within the satellite compound area itself, the existing topsoil will also be retained and will be covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction.

At the end of construction the fencing and fill material will be removed from all the sites and the area will be returned to agricultural use.

Within working area X25, a no-dig approach will be adopted (see 5.3.20 above). In the event that any use requiring ground disturbance is proposed, SSWSIs would be prepared in consultation with Wiltshire Council and Historic England, and approved by Wiltshire Council (in consultation with Historic England), which will set out the approach to assessment and mitigation which may include parts of these areas being subject to preservation.

Sites 32.1 to 32.3: Barrows east of Solstice Park.

Designation:	Scheduled
Reference IDs:	UID 4059/NHLE 1009566 (Site 32.1) UID 4060/NHLE 1009872 (Site 32.2) UID 4063/NHLE 1009871 (Site 32.3)
Location (NGR):	Site 32.1: 417825, 141814 Site 32.2: 417871, 142231 Site 32.3: 418256, 142291
Site area (approximate):	Site 32.1: 2.55ha Site 32.2: 0.43ha Site 32.3: 0.30ha


Description

Site 32.1: Two disc barrows and a bell barrow, 400m east of the Pennings, Earl's Farm Down (UID 4059; NHLE 1009566). The bell barrow lies in a broadly central position between the two disc barrows. The barrow mound is 36m in diameter and stands to a height of c.5m. Surrounding the mound is a berm which varies in width between 7 and 14m and a ditch 6m wide and 0.2m deep. Immediately to the north is a disc barrow. This comprises a level platform 45m across and a central mound 12m in diameter and 0.4m high. Surrounding the platform is a ditch 5m across and 0.2m deep and an outer bank 6m across and 0.3m high. Approximately 60m south-west of the northern disc barrow is a second example, comprising a level platform 50m across and a central mound 12m across and 0.4m high. Surrounding the platform is a ditch 4m wide and 0.4m deep, and an outer bank 8m across and 0.5m high.

Site 32.2: A bell barrow 550m east of New Barn, Earl's Farm Down (UD 4060). The barrow is located

immediately south-east of, and partially beneath the junction of the A303 and Amesbury Road and is set below the crest of a gentle south-facing slope in an area of undulating chalk downland. It is 30m in diameter and stands to a height of c.4m. The berm, c.2m wide, is no longer visible at ground level, while the ditch and outer bank are only visible as earthworks to the south of the barrow. The ditch is 2m across and 0.4m deep. The outer bank is 2m across and 0.5m high. An unmetalled track runs from north to south across the western side of the barrow.

Site 32.3: A bowl barrow 950m east of New Barn, Earl's Farm Down (UID 4063; NHLE 1009871). Round barrow located immediately south-east of the junction of the A303 and the Allington Track. It is one of several round barrows to the north and south of the A303 on Earl's Farm Down. The barrow mound is 30m in diameter and stands to a height of 1m. Surrounding the barrow mound is an infilled ditch, c.3m wide. The monument has been subject to some limited damage due to cultivation. Its current extents are now greater than the scheduled boundary and encompass the location of the monuments as identified by the relevant HER entries.

Scheme impact

Diversion of the Amesbury Road (byway AMES1) to connect Allington Track to Equinox Drive will require construction of a short length of new road across land west of the scheduled monuments at Site 32.1. Allington Track will be upgraded within existing boundaries. The junctions between Amesbury Road and the A303 (Site 32.2) and Allington Track and the A303 (Site 32.3) will be stopped up. The stopping-up of the road will impact part of the scheduled area the bell barrow where remains of the barrow may survive within the existing highway (Site 32.2). The stopping-up of the road next to the scheduled bowl barrow (Site 32.3) could impact remains that are associated with the barrow if they survive within the existing highway.

Mitigation

Site 32.1 is located alongside the Amesbury Road track, approx. 413m south of the A303. The western side of the monument extends under the existing Amesbury Road and into the adjacent field. The north side of the monument is bounded by a mature hedgerow. It is not possible to protect the monument along the existing byway (Amesbury Road track). The monument is already bounded along the byway by a post and rail fence and is fenced off within the field on the western side of the byway. The existing byway will be stopped-up and diverted at the MW stage.

If DCO fencing is installed at the MW stage, or if the existing fencing on the western side of the monument is replaced the MW contractor will consult with Wiltshire Council and Historic England, prior to the installation of the fencing and a site specific Method Statement will describe specific protection measures. If preliminary archaeological investigations are required to install the fence posts at the MW stage as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the MW stage the monument will be photographed.

Following construction the replacement fencing will be retained.

Site 32.2 is located at the junction formed by the westbound carriageway of the A303 and Amesbury Road track. The western side of the monument appears to extend into the highway boundary which is also the DCO boundary. It is not possible to protect the monument within the highway boundary. The monument is already bounded along the highway boundary by a mature hedgerow. The existing byway (Amesbury Road track) will be converted into a footpath at MW stage (trackway to be closed with a carriage gate). If DCO fencing is installed at the MW stage the MW contractor will consult with Wiltshire Council and Historic England, prior to the installation of the fencing and a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts at the MW stage as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before fencing is erected at the MW stage the monument will be photographed.

Following construction, the replacement fencing will be retained along the byway but removed along the DCO boundary.

At the junction the existing hard surface will be dug-out and replaced as a verge, new safety barriers would be installed across the existing opening, together with new signage and the gap in the A303 boundary fence closed. Archaeological mitigation comprising strip, map and record will be carried out in the works area to close the existing access to the A303 along Amesbury Road.

Site 32.3 is located at the junction formed by the westbound carriageway of the A303 and Allington Track (byway). The southwest side of the monument appears to extend into the DCO area next to the southbound side of Allington Track. Along Allington Track the monument is already protected by a post and wire fence which will be retained at the PW stage to protect the monument. The byway will be stopped-up at the MW stage. If DCO fencing is installed at the MW stage, or if the existing fencing on the western side of the monument is replaced the MW contractor will consult with Wiltshire Council and Historic England, prior to the installation of the fencing and a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts at the MW stage as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the MW stage the monument will be photographed.

Following construction the replacement fencing will be retained.

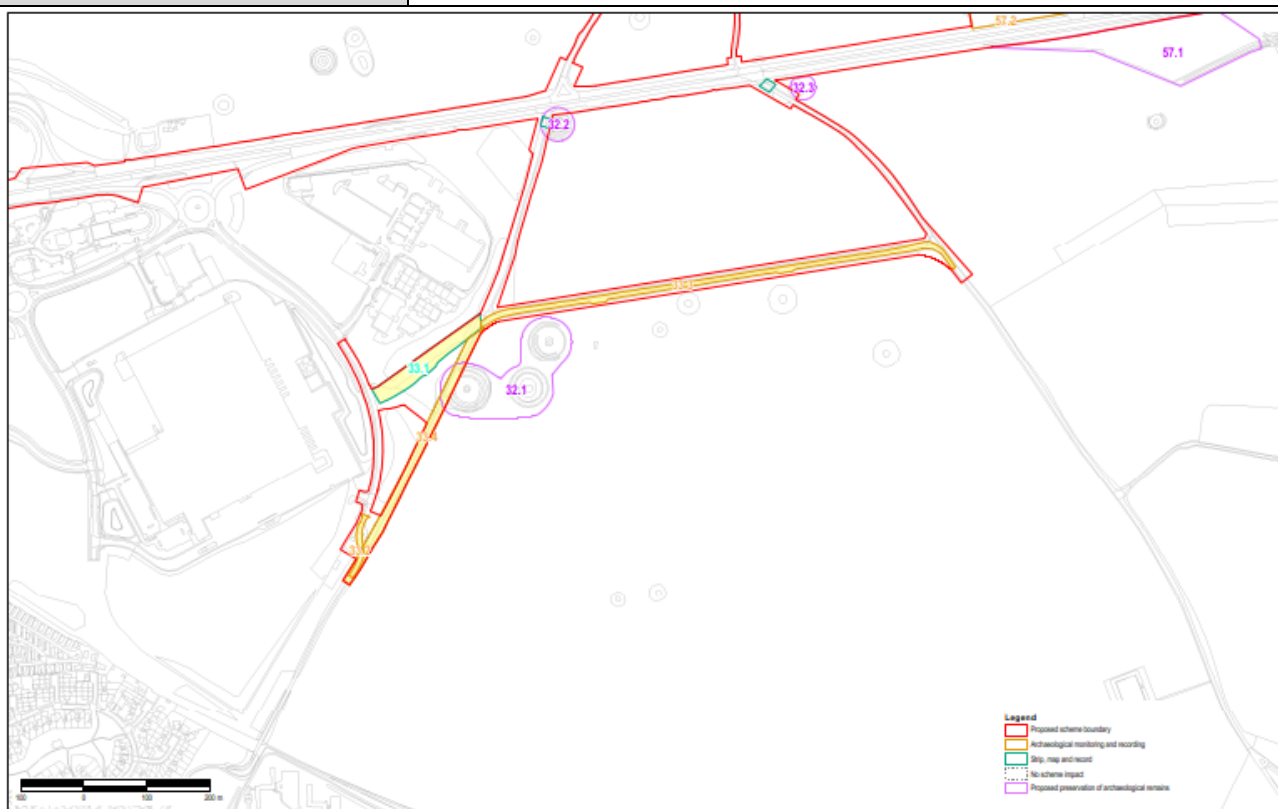
At the junction the existing hard surface will be dug-out and replaced as a verge, new safety barriers would be installed across the existing opening, together with new signage and the gap in the A303 boundary fence closed. Archaeological mitigation comprising strip, map and record will be carried out in the works area to close the existing access to the A303 along Allington Track.

Research objectives identified in the Archaeological Research Agenda

Archaeological investigation comprising strip, map and record can provide insights into the Early Bronze Age mortuary landscape. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

- R.6: Burials and barrows
- R.8: Human Generations
- R.7: Landscape history and memory
- R.9: Daily Life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?

Site 33.1 to 33.3: Byway AMES1 diversion east of Solstice Park (west of a group of scheduled barrows).	
Designation:	Non-designated
Reference IDs:	UID 4115/MWI12268, MWI12332, MWI12333, MWI12334, MWI12335, MWI12336, MWI12337
Location (NGR):	Site 33.1: 417665, 141842 Site 33.2: 418230, 142002 Site 33.3: 417556, 141571 Site 33.4: Start: 417741,141899. End: 417536,141505
Site area (approximate):	Site 33.1: 0.52ha Site 33.2: 0.08ha Site 33.3: 0.61ha Site 33.4: 0.64ha



Description

Site 33 comprises the proposed highway link between Allington Track and Equinox Drive and from the proposed AMES1 byway link between Equinox Drive and Amesbury Road. The Scheme proposals require the stopping-up of Amesbury Road and the closure of its connection with the A303 east of the Solstice Park junction.

Baseline

An extensive Late Prehistoric and/or Roman field system, largely identified from aerial photographs (RCHME's Salisbury Plain Training Area NMP and English Heritage's Stonehenge WHS Mapping Project) (UID 4115). The field system is associated with/divided by several more substantial linear boundaries or trackways. A further complex of field systems (UID 4161) extends to the south-east of, and partially coincides with this field

system. Some elements of the two UIDs occupy different alignments, suggesting that these features are not all of contemporary date. Elements of the field system have been investigated archaeologically during the construction of a new byway in 2003 to the south of the A303 between the former Amesbury Road and Allington Road, and during the installation of a water pipeline in 1991. Part of the field system was also excavated prior to the development of Solstice Park, in the early 2000s. Iron Age and Roman pottery, and struck flint have been collected across the area of the field system, both as surface finds and during archaeological excavations. Amesbury Road (Byway AMES1) follows the line of the Roman road from Salisbury to Marlborough, passing through the scheduled area of Site 32.1.

Site 33 is situated amidst a relatively dense concentration of scheduled and non-designated Early Bronze Age round barrows, notably the Earl's Farm Down barrow group, the New Barn Down barrow group, and the Bulford barrow group. Part of the scheduled area of NHLE 1009566, two Early Bronze Age disc barrows and a bell barrow 400m east of the Pennings, Earl's Farm Down, part of the Earl's Farm Down Barrow group, extends into the DCO boundary (Site 32.1). This includes the western edge of a disc barrow comprising a level platform 50 m across with a central mound 12m across and 0.4m high, the platform being surrounded by a ditch 4m wide and 0.4m deep, and an outer bank 8m across and 0.5m high. Amesbury Road crosses the outer bank and ditch on the eastern boundary of the Site. The proposed realignment of Amesbury Road will avoid the scheduled area and divert vehicular traffic away from the monument. The scheduled area would not be affected by any of the proposed works and will be protected during the works (preservation of archaeological remains).

Wiltshire and Swindon Historic Environment Record identify numerous non-designated funerary monuments dating from the Neolithic and Bronze Age in the surrounding area. This includes seven barrows excavated during development of Solstice Park business park (west of the site), and three possible ring ditches identified by geophysical survey in the same area. One of the ring ditches (MWI2380) crosses the site, although it was not detected. (AC Archaeology, 2012).

Excavation of seven ploughed-down Bronze Age barrows forming part of the Earl's Farm Down and New Barn Down barrow groups prior to the construction of the Solstice Park complex, immediately west of the Site, indicated that the barrows here were in use for over 500 years throughout the Early Bronze Age, and possibly starting in the later Neolithic. No mound evidence or preserved land surfaces survived, however environmental evidence suggests a landscape of relatively short grassland with some light woodland cover. The excavations at Solstice Park also identified part of a Bronze Age – Romano-British field system that has been mapped from aerial photography (MWI12268) which extends across Site 33, but which is more clearly visible in aerial photography to the east.

A linear anomaly (4000) extends 40m on a north-east to south-west orientation and is 4m wide. It is indicative of a ditch feature, and it is possible that this is part of the Bronze Age – Romano-British field system recorded across the area on a similar orientation. Another linear anomaly across the south-west of the site (4001), aligned north-west to south-east (perpendicular to 4000) could be part of the same field system.

Six small discrete anomalies (4002) (1.5 – 2m diameter) are indicative of pit features and could be of archaeological interest, but they do not form any clear alignment or pattern, suggesting that they are more likely natural pitting in the underlying chalk bedrock.

Geophysics also identified an area of disturbance at the north of the survey area and the line of a service.

Geophysical survey in 2018 did not identify any anomalies that could be confidently interpreted as archaeology (Highways England, 2019c [REP1-055]). Aerial photographs indicate that the area within the DCO boundary was used for spoil storage during construction of Solstice Park.

Scheme impact

The diversion of Amesbury Road will entail construction of a new section of metalled track in cutting. The new alignment will potentially impact the anomalies detected by geophysical survey which could be of archaeological interest, including the possible Bronze Age – Romano-British field system and pit-like features. Although no anomalies were detected in the more recent geophysical survey close to the nearby funerary monuments (NHLE 1009566) it is possible that features associated with these barrows may be present within

the site.

The existing section of Amesbury Road between the diversion tie-ins will be stopped up: the existing track surface would be grubbed up and converted to wildflower meadow (Site 33.4). Amesbury Road follows the line of the Roman road to Marlborough and passes through the scheduled area of NHLE 1009566, two Early Bronze Age disc barrows and a bell barrow 400m east of the Pennings, Earl's Farm Down.

Mitigation

Strip, map and record (SMR) is proposed at Site 33.1 along the new section of the diverted Amesbury Road between Equinox Drive and AMES1 byway, in order to allow the identification and recording of any archaeological remains that may survive within the footprint of the new private means of access.

Archaeological monitoring and recording (AMR) is proposed at Site 33.2 along the existing highway link between AMES1 byway and Allington Track, including new private means of access to private land; at Site 33.3, the proposed link between Equinox Drive and AMES1 byway, including private means of access; and at Site 33.4 during removal of the existing track surface along the stopped-up section of byway AMES1.

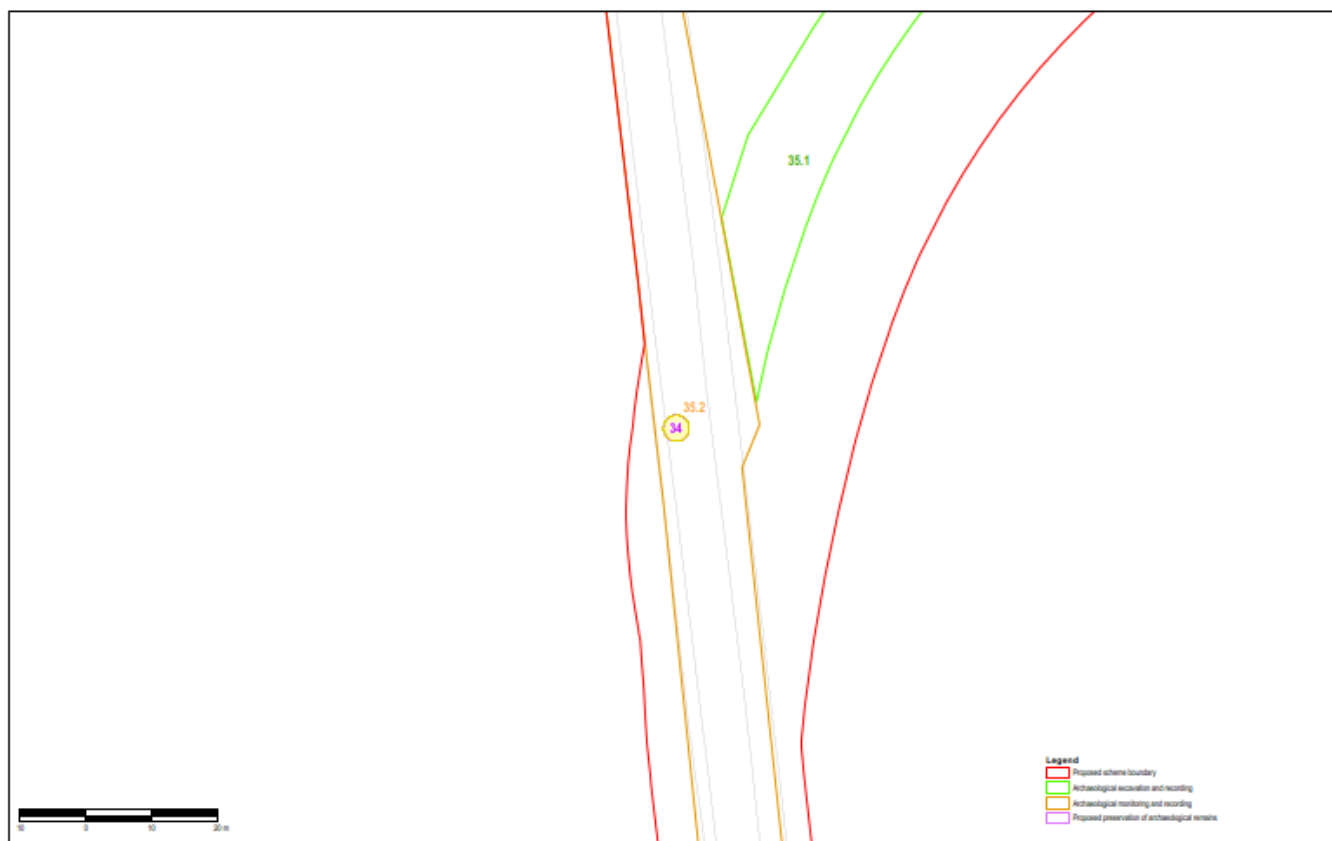
Research objectives identified in the Archaeological Research Agenda

The study of barrow cemeteries throws light upon past mortuary practices, as well as human demographics, diet, health and mobility. Research on field systems offers insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant:

- R.6; Burials and barrows
- R.7: Landscape history and memory
- R.8: Human generations
- R.9 Daily life
- EBA.1: Establish the chronology of individual barrows, and the phasing of their structures.
- EBA.2: Establish the dates and development of barrow cemeteries.
- EBA.3: What patterns are evident in the spatial relationships between the locations of barrows and the existing monuments in the Stonehenge and Avebury landscapes, and how did these change over time.
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?

Site 34: Listed milestone at Rollestone Corner.

Designation:	Listed (Grade II)
Reference IDs:	UID 6122/NHLE 1284782
Location (NGR):	409694, 144482
Site area (approximate):	0.13ha


Description

A grade II listed early 19th century milestone by the side of the B3086. Milestone approximately 120 metres south of junction with Bustard Road, B3086 (UID 6122; NHLE 1284782) is a rectangular limestone pillar with a cast-iron plate to front with raised lettering 'SALISBURY/ 10/ DEVIZES/ 13'.

Scheme impact

The milestone will require protection from construction during highway improvements along the B3086.

Mitigation

The listed milestone is alongside the northbound carriageway of the A360. It will be surrounded and protected by a wooden post and rail fence that will be installed at the start of the PW stage. Due to local constraints, the close proximity of the DCO boundary on the western side and the construction of the realigned Rolleston Junction to the east the fence will only be offset a short distance from the monument (estimated at approx. 1m to 2m either side of the milestone). DCO fencing which may be installed next to the monument at the later MW stage will either incorporate the existing section of protective fencing or will replace it. If it is replaced then the MW contractor will consult with Wiltshire Council and Historic England prior to the installation of the fencing.

At the PW stage a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts (PW and MW stages) as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the PW stage the monument will be photographed.

Following construction, the protective fencing will be removed, leaving the milestone in situ.

Site 35: Rollestone Corner – occasional tree throws containing material that could broadly be of Neolithic date.

Designation:	Non-designated
Reference IDs:	No UID
Location (NGR):	409720, 144570
Site area (approximate):	Site 35.1: 0.24ha Site 35.2: 0.42ha



Description

Site 35 comprises the footprint of the junction improvement at Rollestone Corner. It lies within the north-west corner of the WHS.

Baseline

A Grade II listed milestone situated on the B3086 will be retained in situ and protected during construction (Site 34).

Geophysical survey in 2018 identified numerous small circular anomalies crossing the site, representing possible pit-like features of uncertain origin, possibly archaeological or natural (they were also present to the west of the B3086) (Highways England, 2019a) [REP1-041].

An evaluation carried out between March and June 2018 found evidence for Late Neolithic activity represented by flint scatters. Five trial trenches excavated within Site 35 contained few remains (Highways England, 2019g [REP1-044]).

Soil sequence and natural features

Chalk geology was encountered across the site. A thin ploughsoil (0.20–0.30m thick) that overlay the natural geology in all trenches and test pits, with no evidence of any subsoil.

Plough scars were more frequent in the higher areas at the north of the site, suggesting that modern ploughing has had most impact in this area (also an impact from vehicles). Potential tree throw holes were recorded at the site (occurred in trenches and at the base of test pits).

A relatively large quantity of burnt flint (approximately 5kg) and a single worked flint flake were recovered from the lower fill (110704) of tree throw hole 110703 (minimum dimensions 1.6m x 1.1m, and 0.32m deep).

Trenches 1105, 1108 and 1110 contained no archaeological remains. Trench 1106 contained possible tree throws.

Archaeological features and deposits

A pair of vehicle wheel ruts were uncovered in Trench 1106, which corresponded to parallel linear geophysical trends. Wheel rut 110605 was excavated and found to be 0.21 m wide and 0.07 m deep, with evidence of bioturbation to the side. No finds were recovered from its single fill. The wheel ruts may relate to military activity across the north of the site (proximity of Rollestone Camp), although this has not been proven. A linear anomaly that had been detected by geophysics crossing the south end of the trench (part of a possible field system) was not identified during the excavation of Trench 1106 and may have been ploughed-out.

Artefact distributions and dates

Ploughzone artefact sampling (test pitting and dry sieving) and sieving of ploughsoil from trial trenches recovered quantities of worked and burnt flint. Within the ploughzone a small assemblage of worked flint was distributed somewhat unevenly. The main area of high density was concentrated in and around Trenches 1108 (42 pieces) and 1110. Although Trench 1110 contained only a single piece, much higher levels came from the surrounding Test Pits. The highest concentrations of worked flint coincided with concentrations of burnt flint. Significant groups of material of Late Neolithic date came from Test Pits 0973 4449 and 0973 4450, adjacent to Trench 1110. The excavators concluded that overall the groups of flintwork appears to be broadly contemporary and form a coherent assemblage of knapping waste that is of Late Neolithic date (material is in near mint condition, lightly patinated but without significant wear) and may derive from single episodes of deposition of knapping waste.

Scheme impact

Construction of the realigned road junction (Site 35.1) will impact Late Neolithic flint scatters that are associated with buried tree throw features and which appear to represent knapping waste. The flint scatters indicate a Late Neolithic presence in the area that is previously undocumented. It is also likely to impact the pit-like features that are of potential archaeological interest (detected by geophysical survey but which were untested at evaluation). The redundant section of the existing B3086 carriageway will be removed and the land returned to agriculture.

Mitigation

Archaeological excavation and recording (AER) is proposed within the offline footprint of the realigned road junction (Site 35.1) to investigate the features containing lithic material and to determine the extent of contextually-secure Late Neolithic flint knapping activity. A sampling strategy for excavation of the tree-throws and potential pit-like features will be determined following topsoil stripping, when the distribution and extent of features is known, but will not be less than 12.5% (see section 6.3). Features that are considered to be anthropogenic would be completely excavated and recorded.

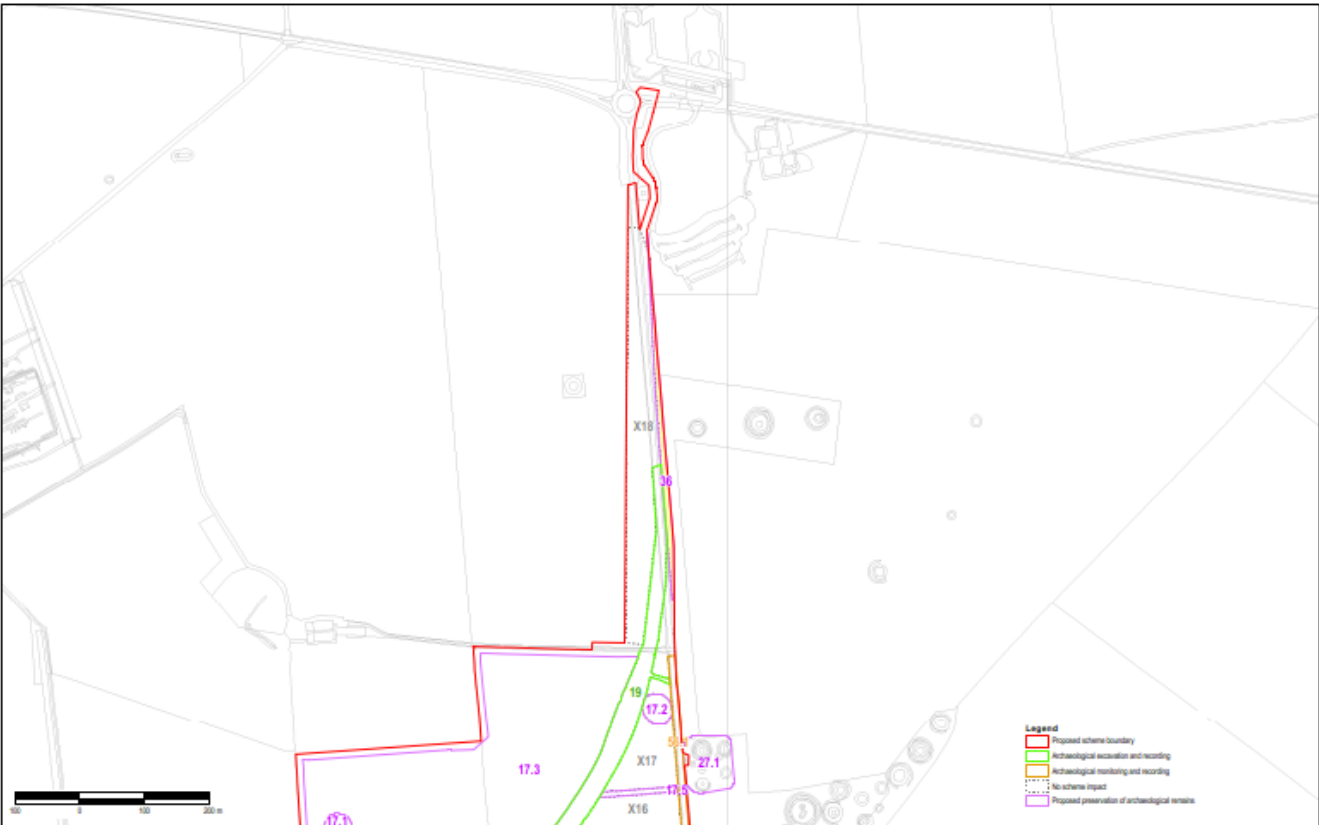
Works to remove the redundant section of the B3086 and tie in the new carriageway to the existing carriageways will be subject to archaeological monitoring and recording (Site 35.2).

Research objectives identified in the Archaeological Research Agenda

The study of occasional tree throws that contains material that could broadly be of Neolithic date can provide insights into activities related to settlement and lithic manufacture. The following ARA research themes and period-specific questions may be relevant:

- R.7: Landscape history and memory
- R.9: Daily life

- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- PM.4: How was the military presence in the WHS developed?
- PM.5: What physical and social impacts has the military had on the monuments and landscape of the WHS?

Site 36: NMU route north from A360 North Link Road towards Stonehenge Visitor Centre	
Designation:	Non-designated
Reference IDs:	UID 2078/MWI6405, MWI7125, MWI7201 UID 2144/MWI74878
Location (NGR):	409913, 142105 to 409872, 142677 (approx.)
Site area (approximate):	0.37ha
	
Description	
<p>The A360 is next to a number of known monuments including the Winterbourne Stoke Crossroads barrows. Geophysical surveys in the area has detected evidence of prehistoric activity associated with these barrows which is also likely to be present along the NMU route (Wessex Archaeology, 2017c). Also there is a group of bowl and bell barrows (all scheduled monuments) on either side of the NMU route and the A360 (NHLE 1008949, 1008950, 101139, 101140) on Winterbourne Stoke Down.</p> <p>An extensive area containing numerous possible undated pits has been identified by geophysical surveys north of the A303 and immediately west of the A360 (UID 2144). The anomalies maybe archaeological or relate to natural pitting in the underlying chalk bedrock.</p> <p>To the south a possible rectangular enclosure and possible associated linear features have been identified by aerial photographs and geophysical survey (UID 2078). An east to west orientated section of an undated ditch was exposed during stripping for a compound just to the west of the A360 and south of a trackway. Several of the linear features associated with/forming part of the enclosure were detected by recent geophysical survey.</p>	
Scheme impact	
North of Longbarrow Roundabout (and within the WHS from where the re-aligned A360 North ties into the	

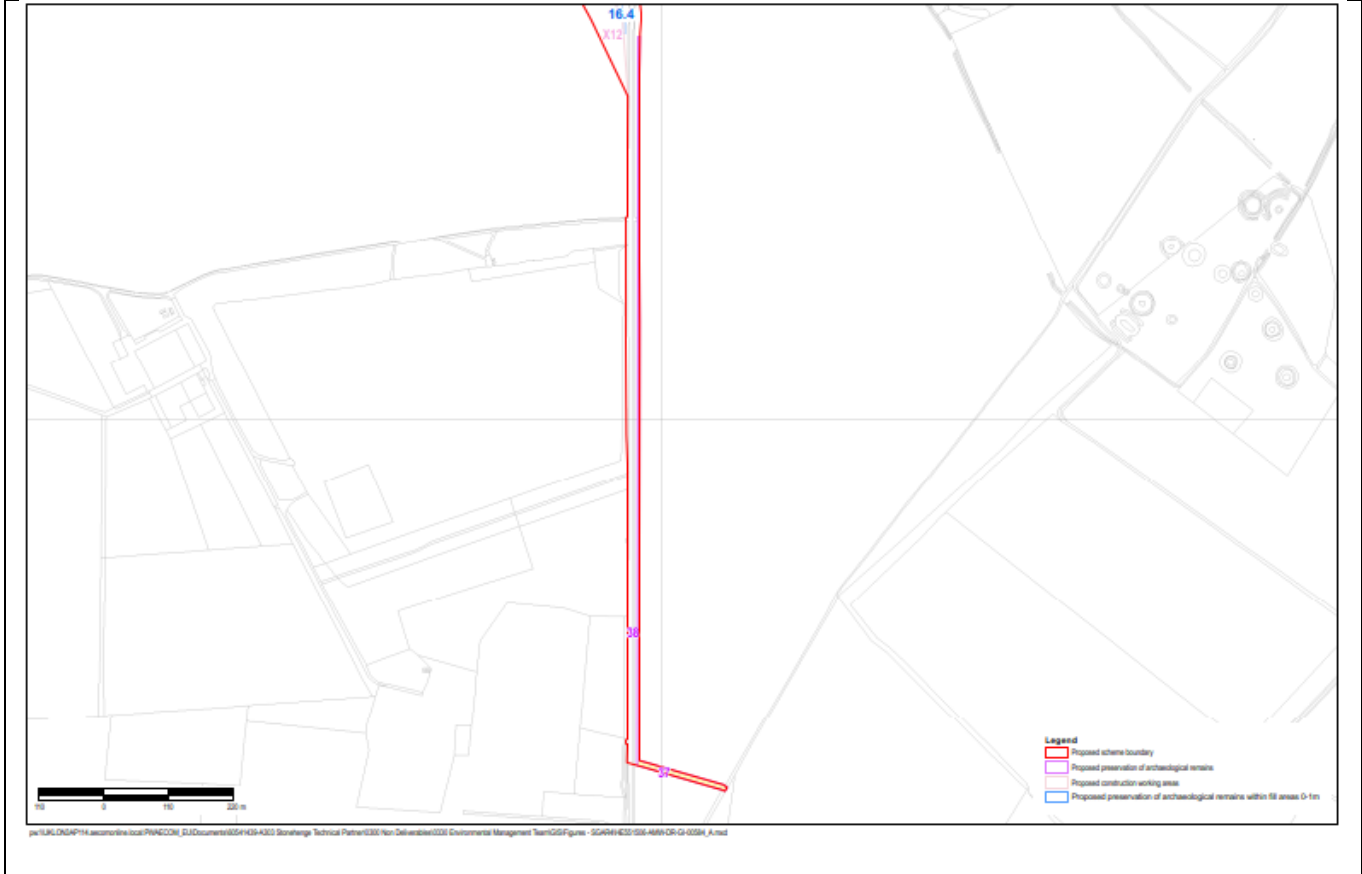
existing carriageway) a new NMU route will be provided along the eastern side of the A360 as far as the roundabout for the Stonehenge visitor centre. The new NMU route crosses an area of archaeological potential associated with a range of prehistoric monuments.

Mitigation

The NMU route will be constructed on the existing topsoil and shallow amounts of imported fill material, separated by a geotextile barrier membrane as identified in the MS, to ensure that any buried archaeological remains are protected at construction. Protective fencing will be installed alongside the NMU route to ensure that construction traffic does not stray outside of the NMU route and to prevent damage to the WHS. The fencing will be long-term, demarcating land to the east of the NMU route from users and remain post-construction.

Site 37: NMU route south from A360 South Link Road to Druids Lodge

Designation:	Non-designated
Reference IDs:	n/a
Location (NGR):	409960, 140653 to 409960, 139412 (dog-leg to 410113, 139370)
Site area (approximate):	0.60ha



Description

The A360 is next to a number of known monuments including a henge monument 300m south of Longbarrow Roundabout (NHLE 1021349) and a linear boundary from south-east of Winterbourne Stoke crossroads to south-west of The Diamond on Wilsford Down (NHLE 1010837). Extensive linear features have also been mapped from aerial photographs close to the route of the NMU suggesting the presence of undated field systems and enclosures. The area is likely to contain evidence of prehistoric activity associated with these monuments and others in the wider area.

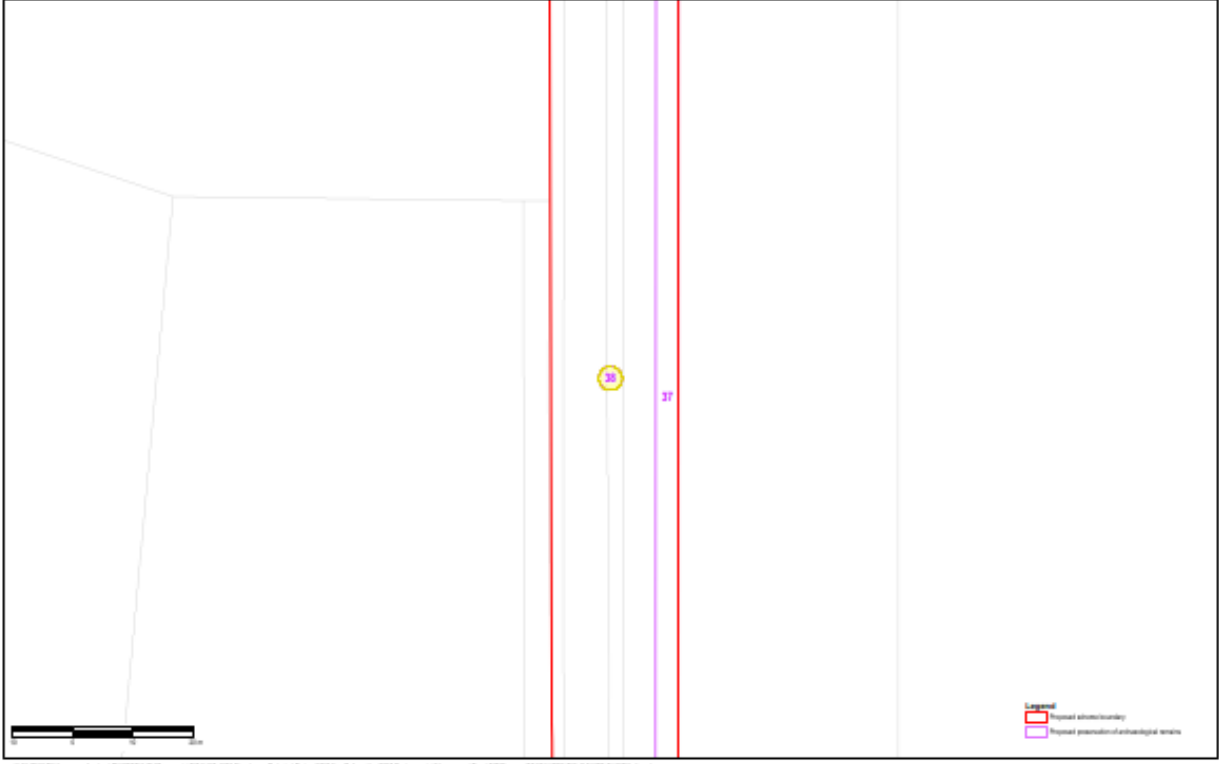
Scheme impact

South of Longbarrow Roundabout and within the WHS construction of the NMU route along the eastern side of the A360 (c.2.1km long) will impact an area of archaeological potential associated with a range of prehistoric monuments.

Mitigation

The NMU route will be constructed on the existing topsoil and shallow imported fill material, separated by a geotextile barrier membrane as identified in the MS, to ensure that any buried archaeological remains are protected at construction. Protective fencing will be installed alongside the NMU route to ensure that construction traffic does not stray outside of the NMU route and to prevent damage to the WHS. The fencing will

be long-term, demarcating land to the east of the NMU route from users and remain post-construction.

Site 38: Milestone along A360, Berwick St James.	
Designation:	Listed (Grade II)
Reference IDs:	NHLE 1318705
Location (NGR):	409952, 139634
Site area (approximate):	0.03ha
	
Description	
<p>A grade II listed late 18th century milestone inside the WHS and by the side of the A360 that requires protection from the construction of the NMU. The milestone (NHLE 1318705) along the Devizes Road consists of a limestone pillar with cast-iron plate to front. Lettering on it reads 'SALISBURY/ 7/ DEVIZES/ 16'.</p>	
Scheme impact	
<p>South of Longbarrow Roundabout and within the WHS construction of the NMU route along the eastern side of the A360 could impact a historic milestone (listed building) that is located alongside the existing road.</p>	
Mitigation	
<p>The listed milestone is alongside the southbound carriageway of the A360. It will be surrounded and protected by a wooden post and rail fence that will be installed at the start of the PW stage. Due to local constraints, the close proximity of the DCO boundary on the eastern side and the construction of the proposed NMU route to the west the fence will only be offset a short distance from the monument (estimated at approx. 1m to 2m either side of the milestone). DCO fencing which may be installed next to the monument at the later MW stage will either incorporate the existing section of protective fencing or will replace it. If it is replaced then the MW contractor will consult with Wiltshire Council and Historic England</p>	

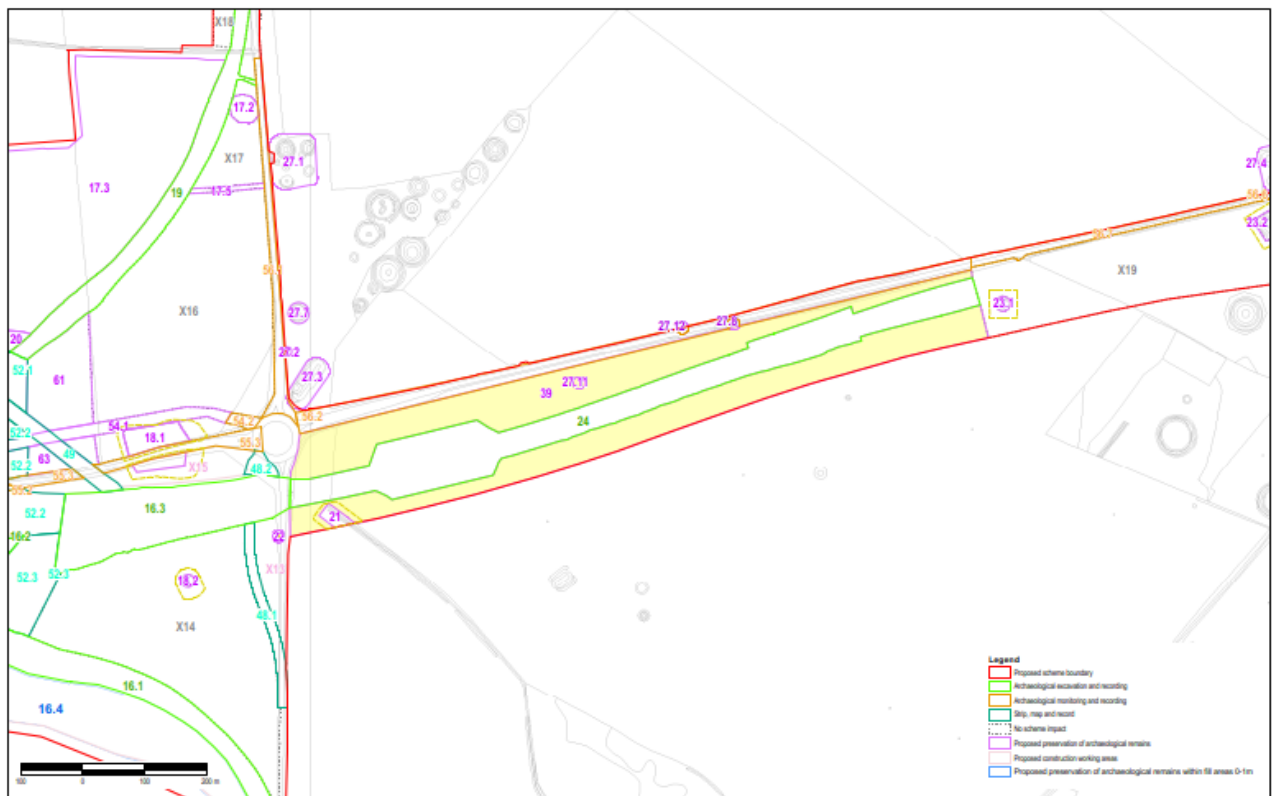
and, for sites within the WHS, HMAG prior to the installation of the fencing.

At the PW stage a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts (PW and MW stages) as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Site 39: A360 to Western Portal, land within DCO boundary excluding Site 24 (north and south of western approach cutting).

Designation:	Non-designated
Reference IDs:	UID 2001/MWI6924, MWI7128, MWI7198 (Bronze Age settlement) UID 2018/MWI12542, MWI13002 (flat graves associated with Wilsford G1 barrow) UID 2088/MWI12541 (pits) UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field system, military railway) UID 2098/MWI13149 (linear features)
Location (NGR):	From 409967, 141340 to 411071, 141643 (approx.)
Site area (approximate):	9.62ha



Description

The surviving remains of an enclosure situated to the south-west of the Winterbourne Stoke Crossroads barrow cemetery, an associated Bronze Age settlement approximately 50m north of the west end of Site 24 (UID 2001); an extensive area of co-axial field systems, enclosures and lynchets identified to the south of the A303 (combination of aerial photograph analysis and during several episodes of geophysical survey and trial trenching) (UID 2089); and the truncated remains of linear features identified from aerial photographs that run from west of Normanton Gorse to east of The Diamond (UID 2098).

Excavations undertaken by Historic England investigated part of the field system, revealing a ditch incorporating a palisade (Roberts et al., 2018).

Recently completed archaeological evaluation within the DCO boundary has uncovered Late Neolithic/Early Bronze Age activity associated with pits and burials (Highways England, 2019f [REP1-045, 046]). In addition,

soil and shallow colluvial sequences were found to be preserved within a shallow coombe that crosses the site (natural features, such as tree throws, have also produced Late Neolithic/ Early Bronze Age finds). Extensive ploughzone artefact sampling has identified a number of concentrations of both struck flint (predominantly Late Neolithic/Early Bronze Age date but with some earlier elements) and burnt flint. These are discussed in relation to Site 24 (qv.).

Scheme impact

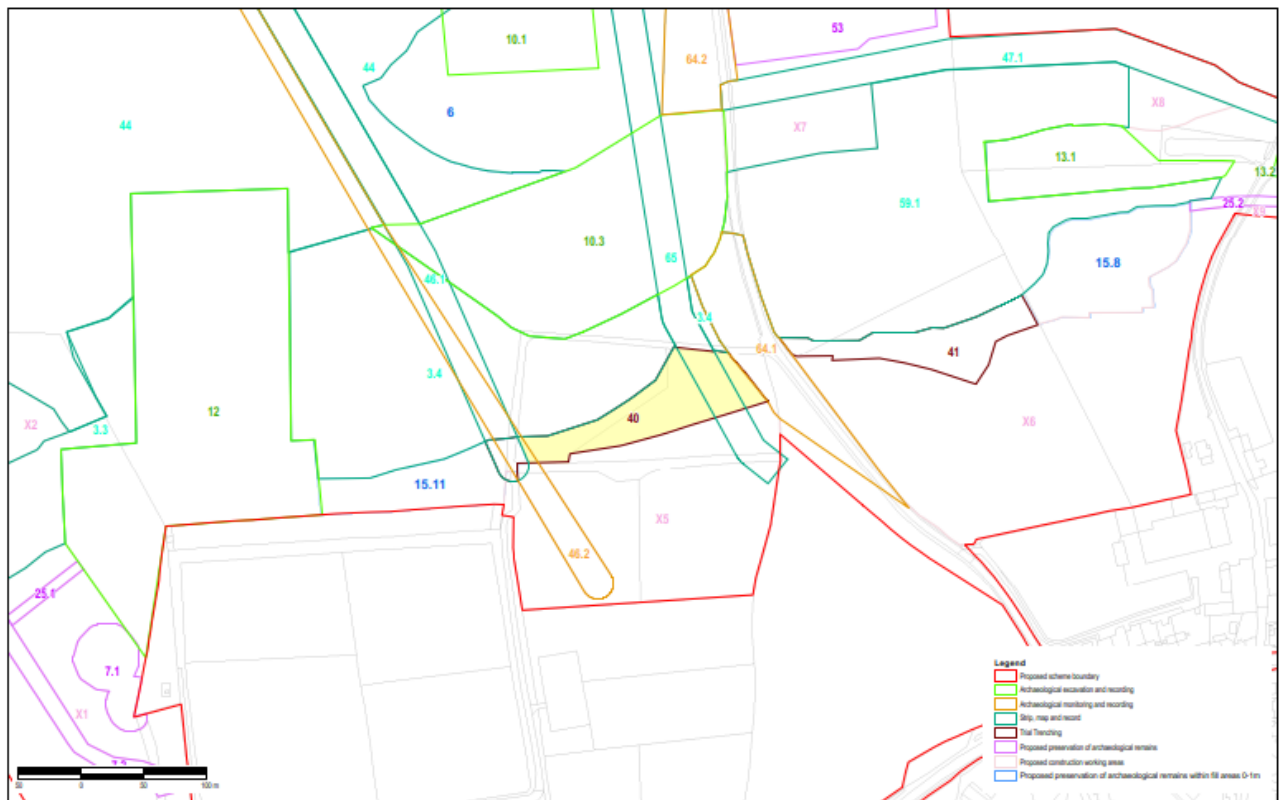
Although outside of the Scheme mainline the area between Longbarrow Roundabout and the western portal could be used for storage and/ as a working area. In addition, the existing A360 will be downgraded and converted into a new restricted byway (PRoW and PMA) that will be parallel to the new A303 alignment east of Winterbourne Stoke roundabout and will cross the new road on Green Bridge No.4. Archaeological remains associated with Late Neolithic and Bronze Age activity will need protection.

Mitigation

Known monuments within the area will already be protected by fencing (refer to Site 21, Site 27.8 Site 27.11 and Site 27.12). Elsewhere at Site 39 (including the restricted byway), the topsoil will be retained and either (a) surface protection measures (such as track matting) will be installed under archaeological supervision; or (b) a barrier membrane will be placed on the existing topsoil and fill material will then be placed onto the membrane to a suitable depth to ensure that the archaeological remains, including finds distributions of Late Neolithic/Early Bronze Age struck flint and prehistoric burnt flint that are present within the ploughsoil are protected at construction. All construction activities will take place on areas where surface protection measures or fill have been installed. Vehicle movements will not be permitted outwith protected areas.

Site 40: Winterbourne Stoke Bypass (west) - evaluation north of Winterbourne Stoke, northeast of Scotland Lodge Farm (landscape fill area).

Designation:	Non-designated
Reference IDs:	UID 1004.01
Location (NGR):	407230, 141292
Site area (approximate):	0.75ha


Description

Site 40 covers a proposed landscape fill area to the west of the B3083 road northeast of Scotland Lodge Farm. Archaeological evaluation in Site 40 comprised geophysical survey (Highways England, 2019a [REP1-041]); no surface artefact collection was proposed in the approved SSWSI. Archaeological evaluation (trial trenching) was carried out to the north of the site (Highways England, 2019d [REP1-049, 050]). Site 40 was included in an approved SSWSI for trial trenching, however access was not available at the time of the survey and the 10 trenches proposed were not excavated.

Field systems cross the north side of the area and are known largely from aerial photographs. These form part of an extensive pattern of similar features between chainages 00-1800m north and south of the existing A303 (UID 1004.01) and are likely to date from the later prehistoric and Roman period. Traces of possible enclosures have been identified amongst the field systems.

The southern edge of a chalk coombe the profile of which has been mapped by ERT and borehole survey (Highways England 2019m, Transect 4) extends into the north of the site. Geophysical survey (Highways England, 2019a [REP1-041]: Area NW9c) identified a small number of linear anomalies which might relate to part of the wider field system identified to the north (Area NW9a) and to the west (NW9b), and traces of possible ridge and furrow cultivation.

Scheme impact

This area will be used for landscape fill to help integrate the new bypass (north of Site 41) into the landscape.

Works will involve vehicle movement and the loading of the existing ground surface with imported fill material. Topsoil will be left in situ and fill will be deposited in a controlled manner to a depth of <1m thickness.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including intrusive archaeological investigations such as trenching. Site 40 was not included in the previous trial trench evaluation programme. Ploughzone artefact collection (fieldwalking) combined with additional trial trenching and topsoil sample sieving will be implemented at the Preliminary Works stage. This will comprise the machine excavation of ten trial trenches in the previously specified locations (including topsoil sample sieving during trenching) and will be carried out before or at the start of the Preliminary Works stage. The results of the evaluation will inform any detailed mitigation requirements here.

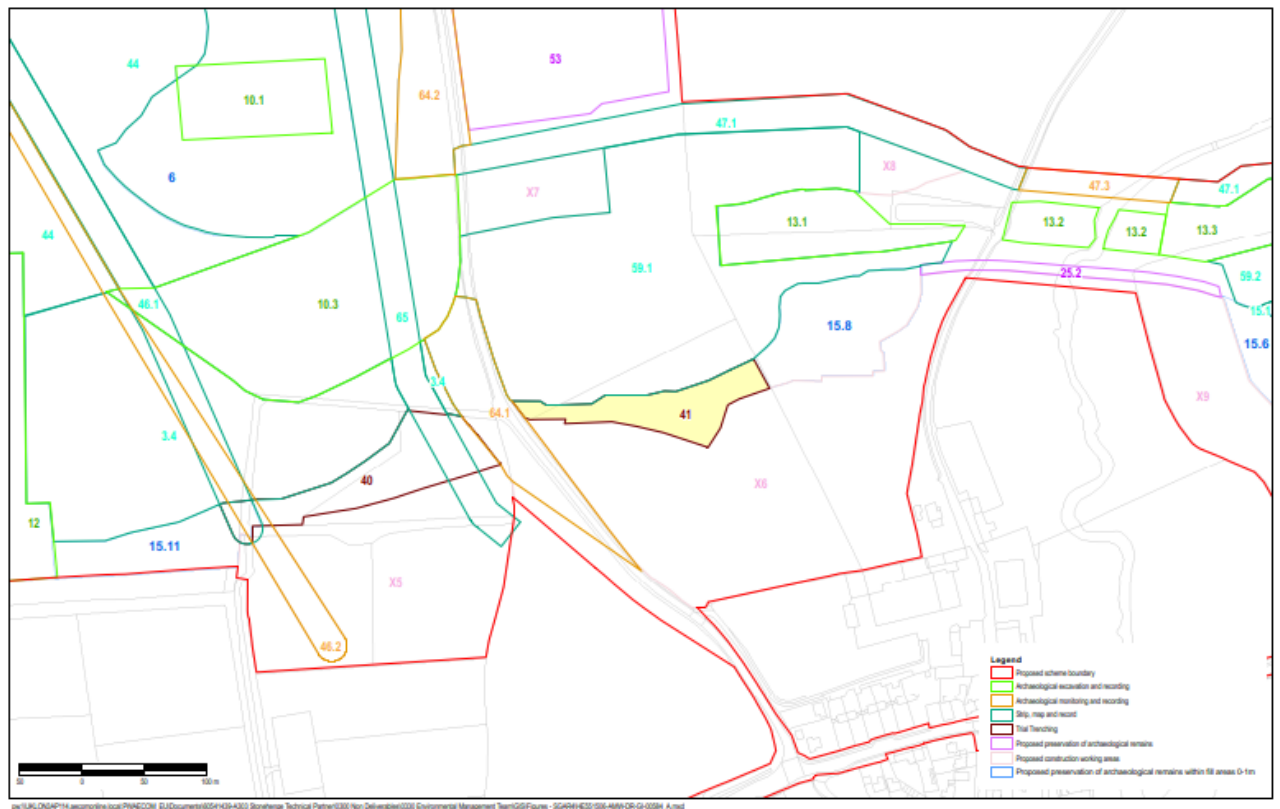
Research objectives identified in the Archaeological Research Agenda

The study of field systems, trackways and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains.

- R.7: Landscape history and memory
- R.8: Human generations
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- RB.2: Are there recognisable patterns of [Roman] activity, including ritual/religious activity, at the existing 'ancient' monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 41: Winterbourne Stoke Bypass (east) - evaluation north of Winterbourne Stoke, northwest of Manor Farm (landscape fill area).

Designation:	Non-designated.
Reference IDs:	UID 1004.01
Location (NGR):	407449, 141343
Site area (approximate):	0.51ha


Description

Site 41 covers a proposed landscape fill area east of the B3083 road and is an 'L-shaped' survey area of approx. 4.77ha., that is located northwest of Manor Farm. Archaeological evaluation (trial trenching) at the north end of the site in 2003 (Wessex Archaeology, 2003b) was positioned to investigate linear cropmarks in an area outside that covered by geophysical survey. Although no archaeological features were found (Trenches 32 and 33), a sedimentary sequence was recorded in Trench 32 (1.2m deep, with a possible buried soil formation recorded between shallow (0.5m) bands of colluvium). Deposits in Trench 33 were much shallower (0.6m) and contained no colluvium, the drift geology here comprising clay with flints and periglacial coombe deposits. Additional extensive geophysical survey that included the site area was carried out in 2018 (geophysics zones 10b, 10c and 10h) (Highways England, 2019a [REP1-041]). Subsequent trial trenching in August to October 2018 had intended to further evaluate the site but was withdrawn from the scope of works (Highways England, 2019d [REP1-049, 050]).

Field systems cross the northwest side of the area and are known largely from aerial photographs. They form part of an extensive pattern of similar features between chainages 00-1800m north and south of the existing A303 (UID 1004.01). These are likely to date from the later prehistoric and Roman period and may be associated with activity at the hillfort. Traces of possible enclosures have been identified amongst the field systems. The field system was re-used in the medieval/post-medieval period.

Archaeological evaluation in Site 41 comprised geophysical survey (Highways England, 2019a [REP1-041]);

no surface artefact collection or trial trenching was included in the approved SWSIs. Previous evaluation in January 2003 included two trenches (Trenches 32 and 33) at or close to the west end of Site 41 (Wessex Archaeology, 2003b). Trench 32 revealed a sedimentary sequence 1.2m thick with a possible buried soil formation recorded between shallow bands of colluvium. The deposit sequence in Trench 33 was shallower (0.6m thick) and contained no colluvium. The drift geology comprised clay with flints and periglacial coombe deposits.

Scheme impact

This area will be used for landscape fill to help integrate the new bypass into the landscape (north of Site 41). Works will involve vehicle movement and the loading of the existing ground surface with imported fill material. Topsoil will be left in situ and fill will be deposited in a controlled manner to a depth of <1m thickness.

Mitigation

Site 41 was not included in the previous trial trench evaluation programme.

Ploughzone artefact collection (fieldwalking) combined with additional trial trenching and topsoil sample sieving will be implemented at the Preliminary Works stage. The results of the evaluation will inform any detailed mitigation requirements here. The geo-archaeological potential represented by the possible buried soil and clay with flints deposits will be addressed as part of the Scheme-wide geo-archaeological strategy.

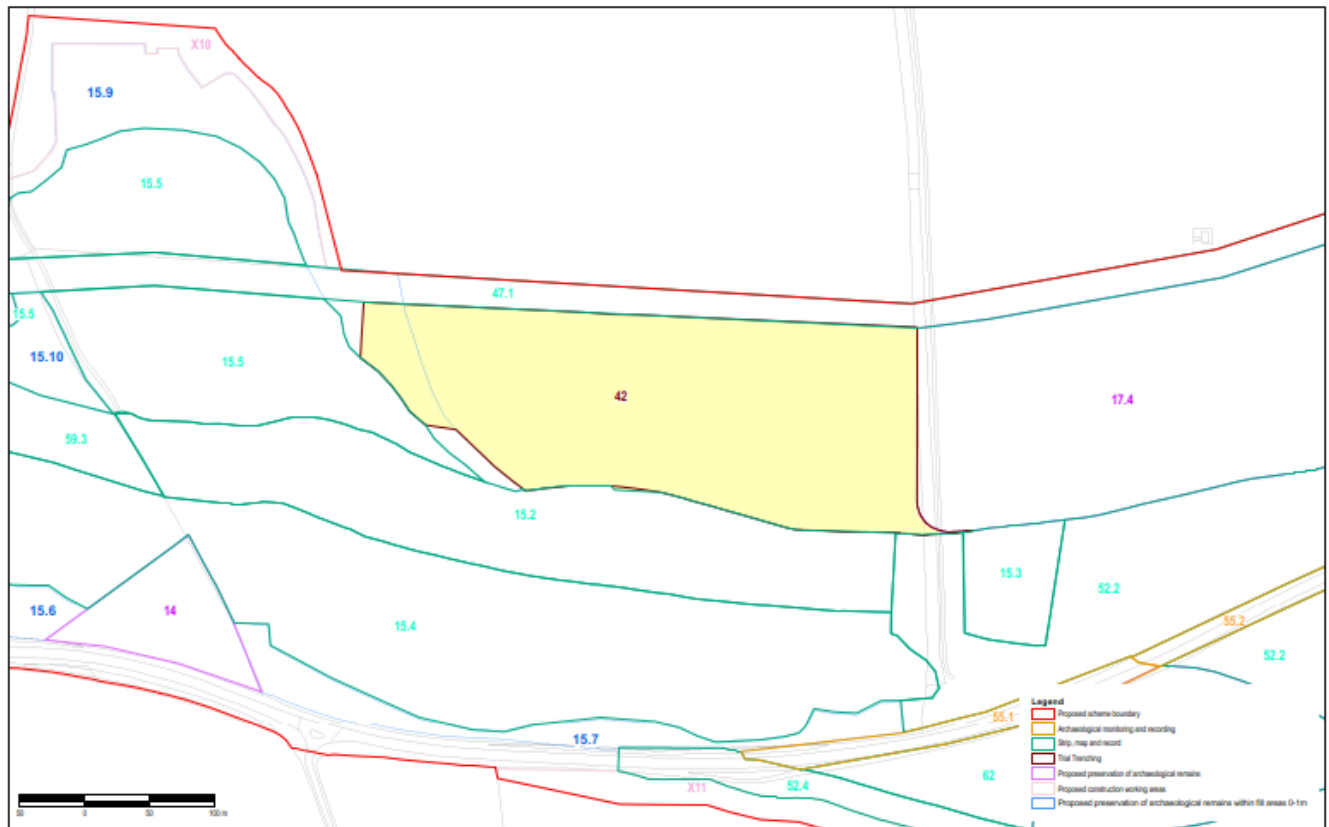
Research objectives identified in the Archaeological Research Agenda

The study of field systems, trackways and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains.

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 42: Main Civils Compound - evaluation west of Longbarrow Roundabout (tunnel production area).

Designation:	Non-designated
Reference IDs:	UID 2053
Location (NGR):	408821, 141433
Site area (approximate):	5.67ha


Description

Site 42 is a rectangular area of approx. 5.5ha. west of Longbarrow Roundabout (includes part of the utility corridor (Site 47) that crosses the site). The area lies within the Main Civils Compound site and is required for construction of the Tunnel Production Area (temporary segment production plant, and an associated storage area, batching unit and slurry ponds) and excavated material processing area.

The area is situated on the eastern periphery of an extensive complex of linear features identified from aerial photographs and geophysical surveys representing lynchets and fragmented rectilinear/co-axial field systems (UID 2053). The form of these features and finds recovered during intrusive investigations suggest that they are predominantly of late Prehistoric to Roman date, although some elements could relate to medieval or post-medieval land divisions, lynchets or strip fields (e.g. traces of ridge and furrow) (Wessex Archaeology, 2002a; Highways England, 2019e [REP1-052, 053]). Colluvial deposits attaining thicknesses in excess of 1m were also encountered in some locations during trial trenching in areas coinciding with these features. Geophysical surveys (GSB Prospection, 2001: field 56; Wessex Archaeology, 2017d: Area NW6; and Highways England, 2019a [REP1-041]) have detected traces of medieval/post-medieval ridge and furrow cultivation and lynchets.

Scheme impact

Construction of the Tunnel Production Area will require topsoil to be stripped and excavation and terracing to accommodate foundations, service runs and ponds.

Mitigation

Ploughzone artefact collection (fieldwalking) combined with additional trial trenching and topsoil sample sieving will be implemented at the Preliminary Works stage.. The trenches will be positioned to determine archaeological presence within apparently blank areas and to target potential features identified through and geophysical surveys. The results of the evaluation will inform any detailed mitigation requirements here.

An area along the northern part of the site will be excluded from trial trenching as it is within a utility corridor – section of the Wessex Water pipeline (Site 47) where it will be investigated through archaeological monitoring and recording (AMR) at the Preliminary Works stage.

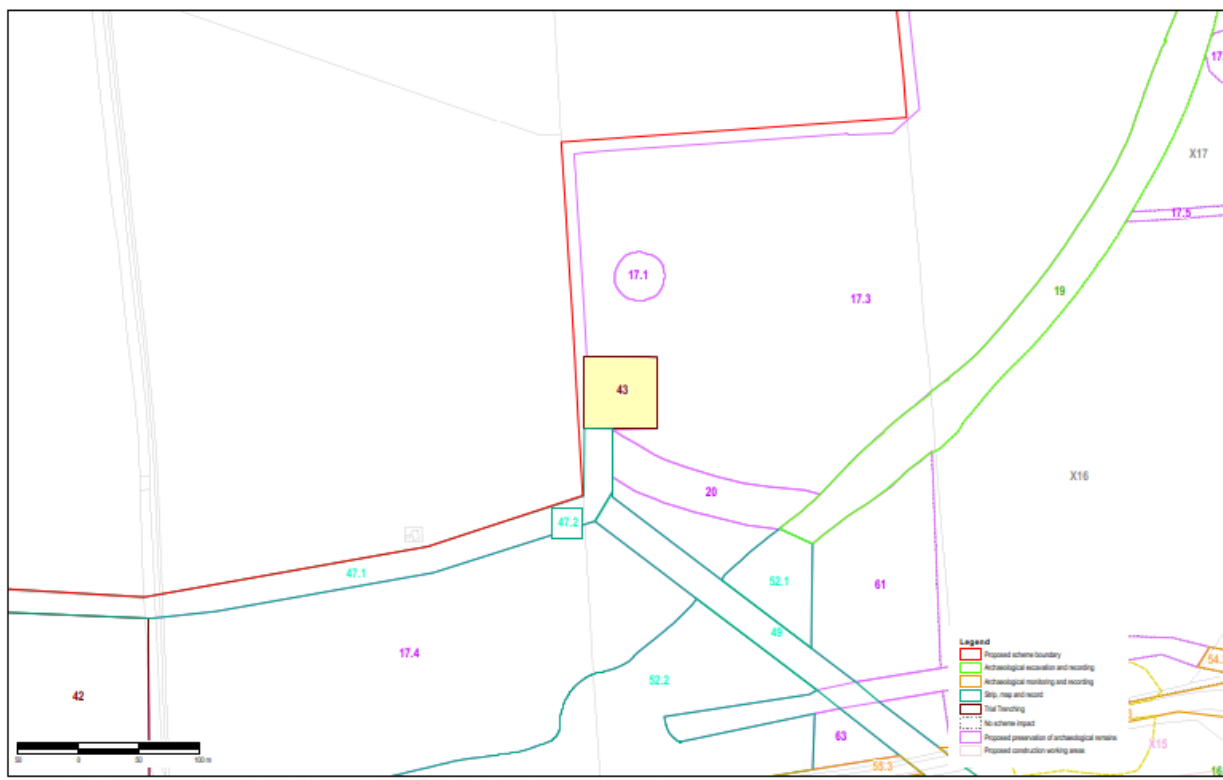
Research objectives identified in the Archaeological Research Agenda

The study of settlement, field systems and land divisions can offer insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant:

- R.6; Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- N.1: Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at the very end of the Mesolithic?
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N.3: What was the relationship between Neolithic and Beaker settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments?
- N.7: Recent research elsewhere in the Stonehenge landscape has suggested that Woodlands Grooved Ware appears in the area very soon after 3000 BC. The occurrence of a possible Late Neolithic occupation site north of Long Barrow Junction has the potential to elaborate on the chronological span of the currency of Woodlands Grooved Ware, and on its contexts of use and deposition.
- BA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- EBA.5: [dating of] Cremation burials...
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlements and land use, including burials and cemeteries?

Site 43: Main Civils Compound - Evaluation area northwest of Longbarrow Roundabout (electric substation)

Designation:	Non-designated
Reference IDs:	UID 2144
Location (NGR):	409359, 141653
Site area (approximate):	0.36ha


Description

Site 43 is a relatively small rectangular area of approx. 0.36ha. northwest of Longbarrow Roundabout. The site lies within the Main Civils Compound site and is required for the construction of a temporary electricity substation and water supply connection.

Numerous possible undated pits of archaeological or natural origin (natural pitting in the underlying chalk) (UID 2144) were identified by geophysical surveys, the latest and most extensive of which was carried out in 2017 (Wessex Archaeology, 2017c).

Trial trenching in 2018 examined the line of the A360 northern link road c. 200m to the east of the substation site. The trenching identified a possible Late Neolithic pit east of Site 43 (Highways England, 2019h [REP1-042, 043], Trench 431).

The substation site lies immediately north of an extensive 'Wessex Linear' boundary feature. This was sectioned in Trench 429 (Highways England, 2019h [REP1-042, 043]); no secure dating evidence was recovered, however a late prehistoric date is generally presumed for these long distance boundaries.

Scheme impact

The site is required for the construction of a temporary electricity substation (Longbarrow Substation). Topsoil would be removed over the substation footprint, and cable entry/exit trenches and foundation trenches for the transformers would be excavated. Switch houses would be containerised on pad foundations.

Mitigation

Ploughzone artefact collection (fieldwalking) combined with additional trial trenching and topsoil sample sieving will be implemented at the Preliminary Works stage.. The trenches will be positioned to determine archaeological presence within apparently blank areas and to target potential features identified through and geophysical surveys. The results of the evaluation will inform any detailed mitigation requirements here.

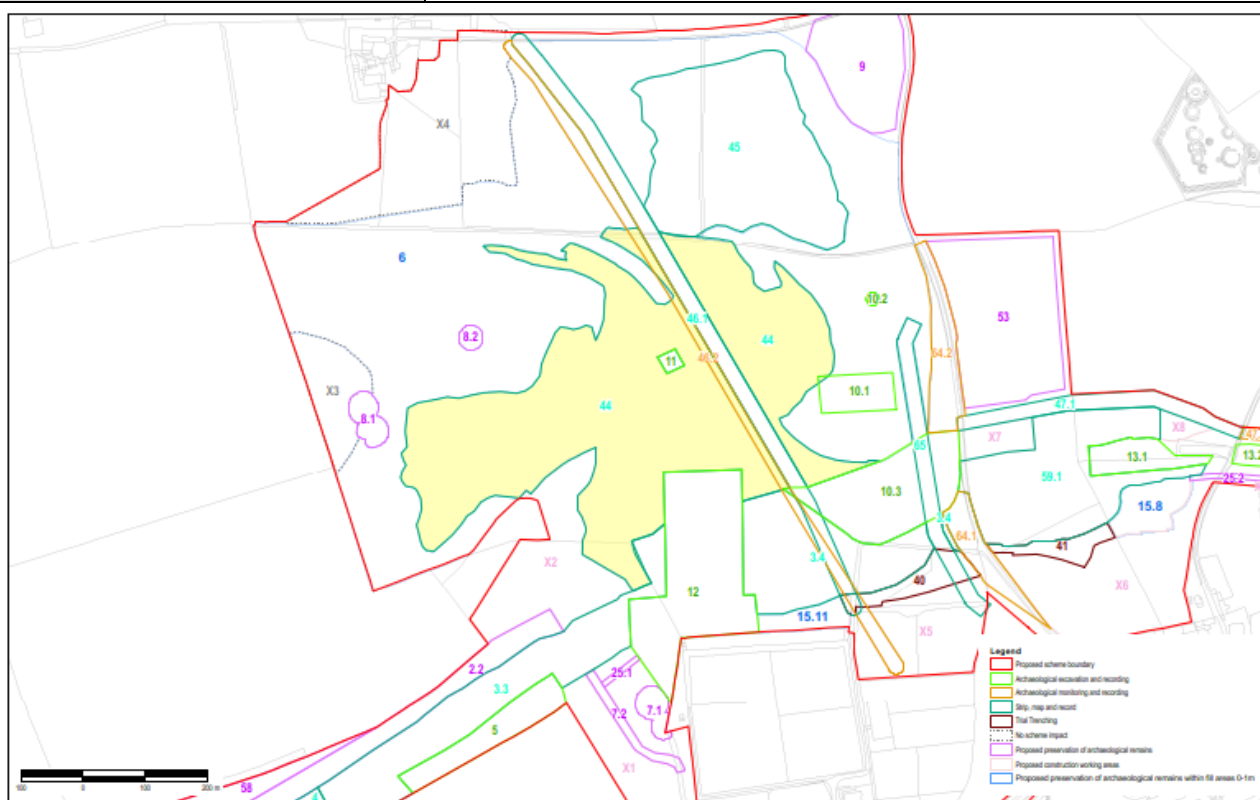
Research objectives identified in the Archaeological Research Agenda

The study of field systems, trackways and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains. Burials that may extend into this area, if present, can provide insights into the Early Bronze Age mortuary landscape. Burials illustrate past mortuary practices, as well as a better understanding of prehistoric people's origins, demography, health, diet and conflict:

- R.6: Burials and barrows
- R.8: Human generations
- R.7: Landscape history and memory
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- EBA.5: There is scope for further dating cremation burials now that cremated bone is directly datable (and from very small samples).
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- RB.2: Are there recognisable patterns of [Roman] activity, including ritual/religious activity, at the existing 'ancient' monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 44: Parsonage Down East excavated material deposition area (fill depth over 1m) - Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium

Designation:	Non-designated
Reference IDs:	UID 1000 UID 1004 UID 1004.01 UID 1005
Location (NGR):	406859, 141607
Site area (approximate):	8ha


Description

Site 44 is a large irregular area at Parsonage Down, (approx.7.9ha. in size) that contains within it an area for archaeological excavation and recording (AER) (Site 11) and part of the existing Esso Pipeline and its proposed realignment (Sites 46.1 and 46.2) along its eastern flank.

The extensive remains of field systems known largely from aerial photographs which lie partly within the DCO boundary between chainages 00-1800m north and south of the existing A303. These are likely to date from the later prehistoric and Roman periods and may be associated with activity at the hillfort (Yarnbury Camp). Traces of possible enclosures have been identified amongst the field systems. The field system was re-used in the medieval/ post-medieval period (UID 1004.01). A boundary feature visible on aerial photographs as a soil/ cropmark (UID 1005) follows a broad south-west – north-east alignment with an additional north-west section. It is on a similar alignment/respected by another field system in this area (UID 1004) and it may also be associated with activity at Yarnbury Camp (UID 1000). Extensive geophysical survey has detected a series of linear anomalies in the area representing field boundaries some of which form part of an orthogonal pattern (Highways England, 2019a [REP1-041]).

Extensive trial trench evaluation has identified a series of undated lynchets which may be of medieval and

post-medieval date, although some may have earlier prehistoric origins. These were found in Trenches 987 (the same lynchet appears to have extended over c.300m and was also found in Trenches 978 and 980), 1035 (corresponding to a geophysics anomaly), 1054, 1217 and 1222 (Highways England, 2019d [REP-049,050]). Tree throws are also recorded in many of the trenches but do not appear to be associated with cultural material (Trenches 983, 987, 1039, 1216, 1217, 1223, 1225 and 1228).

The soil sequence revealed in the trial trenches was generally an active ploughsoil (0.20–0.30 m thick), a mid greyish-brown silty loam, directly over the natural Chalk bedrock. However, in the central part of the evaluated area where a coombe is present in Trenches 711, 985–987, 1222, 1223, 1225, 1228 variable depths of colluvium were recorded dependant on topographic location within this dry valley (also recorded in trench 1035 and 1054).

Six boreholes drilled along a 68 m north to south transect located over a coombe encountered a sequence of deposits including a possible buried soil within the periglacial deposits was recorded in two boreholes (BH5 and BH6) and located towards the top of the periglacial coombe deposits, close to the boundary with the overlying Holocene colluvium. The layer was well developed and thick (up to 0.37 m thick in BH5) and if in situ may have developed within the Windermere interstadial, before being buried by soliflucted chalk deposits after a return to periglacial conditions.

A full sequence through the colluvium was examined in Trench (1222) but it contained no finds. The snails from colluvial sequences 122201-9 are mostly dominated by open grassland species.

A small amount of Roman material was found in the trench ploughsoil (Roman pottery in Trench 987 and a worn Roman coin in Trench 986).

Scheme impact

The site lies north of the new A303 main line in an area proposed for the deposition of excavated material and landscaping. The deposited material is likely to be greater than 2m deep in this area, consequently it will be topsoil stripped before excavated material is dumped onto it.

The site may contain parts of field systems of possible later Prehistoric and Roman date, activity related to Late Neolithic/Beaker burial activity which may be more extensive within the coombe and neighbouring areas; and parts of lynchets of possible medieval and post-medieval date. Archaeological remains may be present within the colluvium.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including intrusive archaeological investigations such as trenching. Strip, map and record will be used to map and investigate the field systems of possible later Prehistoric and Roman date, and any activity related to Late Neolithic/Beaker burial activity which may be more extensive within the coombe and neighbouring areas; and parts of lynchets of possible medieval and post-medieval date. The geoarchaeological potential of the colluvial sequences will be investigated as part of the scheme-wide geo-archaeological strategy.

Research objectives identified in the Archaeological Research Agenda

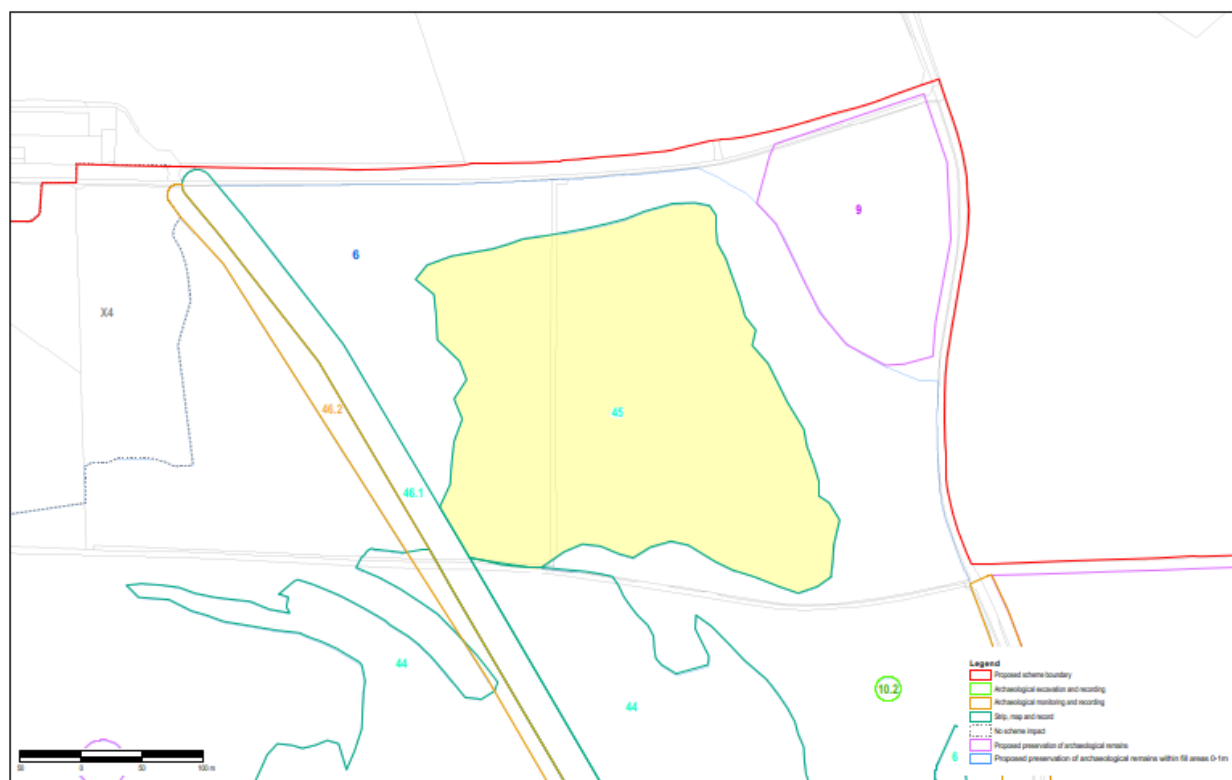
The study of field systems, trackways and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains. Burials that may extend into this area, if present, can provide insights into the Early Bronze Age mortuary landscape. Burials illustrate past mortuary practices, as well as a better understanding of prehistoric people's origins, demography, health, diet and conflict:

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.8: Human generations
- P.1: Establishing the nature of the palaeoenvironment [SAARF]

- P.2: Determining the effects of climate on the formation of the landscape, geological deposits and periglacial features, including those which may have influenced later activity, such as solution hollows... and periglacial striations... [SAARF]
- P.5.1: What is the public perception of the Pleistocene?
- P.5.3: How can we engage the public with remote periods without any obvious surviving 'monuments'? What should be our strategic marketing approach?
- P.5.4: How can our understanding of Pleistocene environmental change inform the current climate change debate?
- P.6: Understanding the record: The use of geomorphological and sedimentological modelling to understand the taphonomic processes that determine the significance of many Palaeolithic remains
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- EBA.5: There is scope for further dating cremation burials now that cremated bone is directly datable (and from very small samples).
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape? (Scheme-specific)
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas? (Scheme-specific)
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.2: Are there recognisable patterns of [Roman] activity, including ritual/religious activity, at the existing 'ancient' monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

**Site 45: Parsonage Down East excavated material deposition area (fill depth over 1m)
Undated field systems and lynchets, possible small enclosures**

Designation:	Non-designated
Reference IDs:	UID 1004 UID 1005 UID 2039
Location (NGR):	406915, 142007
Site area (approximate):	3.79ha



Description

Site 45 is a square area at Parsonage Down located between Site 9 and Site 44 (approx.3.80ha in size). The extensive remains of field systems known largely from aerial photographs lie partly within the DCO boundary between chainages 00-1800m north and south of the existing A303. These are likely to date from the later prehistoric and Roman periods and may be associated with activity at the hillfort (Yarnbury Camp). Traces of possible enclosures have been identified amongst the field systems. The field system was re-used in the medieval/post-medieval period (UID 1004.01). A boundary feature visible on aerial photographs as a soil/cropmark (UID 1005) follows a broad south-west – north-east alignment with an additional north-west section. It is on a similar alignment/respected by another field system in this area (UID 1004) and it may also be associated with activity at Yarnbury Camp (UID 1000). Geophysical survey has detected a series of linear anomalies in the area representing field boundaries some of which form part of an orthogonal pattern (Highways England, 2019a [REP1-041]).

A sub-oval enclosure (UID 2039) approximately 185m across to the east of the site (Site 9) has been identified from cropmark evidence. It is likely to be part of the Iron Age/Romano-British settlement on High Down, from which it is divided by the B3083. Geophysical survey indicates that it survives as a continuous ditch-like feature with some evidence for bank material on either side of the ditch and with some internal pit-like anomalies that may relate to associated activity, with at least two clusters (geophysical anomalies

12003 and 12005) (Highways England, 2019a [REP1-041]).

Extensive trial trench evaluation has identified a series of undated lynchets which may be of medieval and post-medieval date, although some may have earlier prehistoric origins. These were found in Trenches 946 (e-w aligned and had been detected by geophysics), 947 (n-s aligned), 968 (n-s aligned which also corresponded to a geophysical anomaly), 1204 (n-s aligned) (Highways England, 2019d [REP-049,050]).

The soil sequence revealed in the trial trenches was generally an active ploughsoil (0.20–0.30 m thick), a mid greyish-brown silty loam, directly over the natural Chalk bedrock. However, in the central part of the evaluated where a coombe is present in Trenches 956, 957 and 1202 variable depths of colluvium were recorded dependant on topographic location within this dry valley. A full sequence through the colluvium was examined in Trench 1202. Very few finds were recovered from these trenches, limited to four flint flakes from Trench 1202.

Tree throws are also recorded in many of the trenches but do not appear to be associated with cultural material (Trenches 931, 932, 933, 934, 946, 947, 958, 968, 1202 and 1204).

A few trenches produced prehistoric pottery from the ploughsoil (Trenches 957 and 958) and Beaker pottery was recovered from the coombe deposit in Trench 1202. Trench 946 produced a higher density of burnt flint (>200 pieces).

A scatter of archaeological features were recorded, including a small sub-circular pit of uncertain date in Trench 957 that contained a small quantity of burnt flint, and undated possible pit in Trench 968 and a north-south possible boundary ditch in the same trench which corresponded to a 33m long linear geophysics anomaly.

Scheme impact

The site lies north of the new A303 main line in an area proposed for the deposition of excavated material and landscaping. The deposited material is likely to be greater than 2m deep in this area, consequently it will be topsoil stripped before excavated material is dumped onto it.

The site may contain parts of field systems of possible later Prehistoric and Roman date, parts of lynchets of possible medieval and post-medieval date, and remains associated with possible Iron Age/Romano-British settlement on High Down.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including intrusive archaeological investigations such as trenching. Strip, map and record will be used to map and investigate the field systems of possible later Prehistoric and Roman date, parts of lynchets of possible medieval and post-medieval date, and remains associated with possible Iron Age/Romano-British settlement on High Down.

Research objectives identified in the Archaeological Research Agenda

The study of field systems, trackways and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

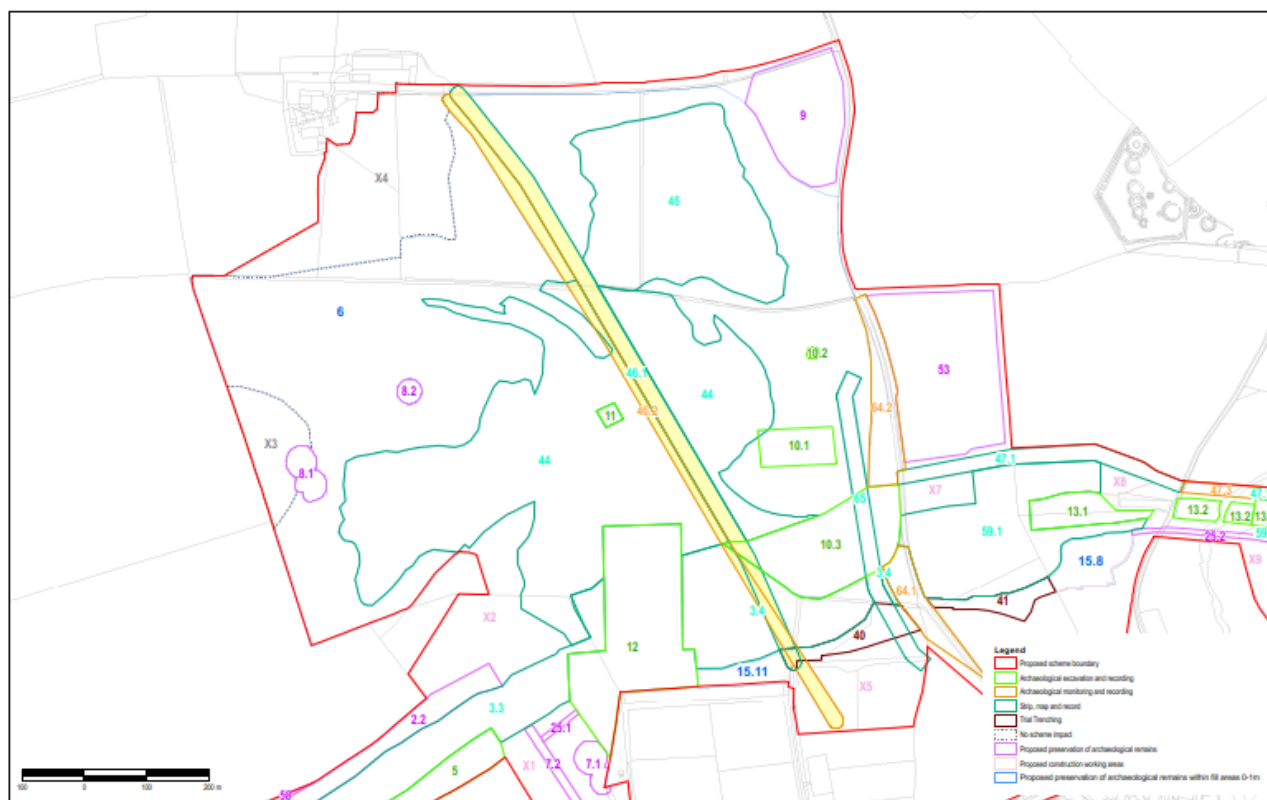
- R.7: Landscape history and memory
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems,

and what was their chronological relationship?

- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape? (Scheme-specific)
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas? (Scheme-specific)
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.2: Are there recognisable patterns of [Roman] activity, including ritual/religious activity, at the existing 'ancient' monuments within the landscape, including Neolithic monuments, Bronze Age barrows and Iron Age hillforts?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Sites 46.1 and 46.2: Parsonage Down East excavated material deposition area - Utility Diversion – Existing and Realigned Esso Pipeline: Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium at Parsonage Down.

Designation:	Non-designated
Reference IDs:	UID 1004.01 UID 1005
Location (NGR):	Start: 407114, 141239 End: 406568, 142169 (Sites 46.1 and 46.2)
Site area (approximate):	Site 46.1: 2.7ha Site 46.2: 1.9ha



Description

Site 46 comprises the preferred option for the diversion of the existing Esso fuel pipeline that crosses Parsonage Down. The pipeline diversion (NNW-SSE aligned) will bisect the tunnel spoil deposition area/ecology habitat creation area/landscape area within the DCO boundary (approx. 1.2km in length). It runs from the western side of Site 40 (area of landscape fill) to the northern edge of the DCO boundary, and passes through Site 10.3 and an area where additional archaeological evaluation is proposed within the deposition area at Parsonage Down (Site 44).

Archaeological remains that have been recorded in this area comprise:

- Neolithic activity (Middle Neolithic pit) was found during an evaluation (Highways England, 2019d [REP1-049, 050]: Trench 1219).
- An Early Bronze Age urned cremation in a Food Vessel (damaged by plough) was found during an evaluation (Highways England, 2019d [REP1-049, 050]: Trench 985).
- Extensive remains of field systems which are likely to be later prehistoric and Roman and re-used in the

in the medieval/post-medieval period (UID 1004.01).

- Traces of possible enclosures have been identified amongst the field systems.
- Evidence for rectilinear enclosures of uncertain date and land boundaries north and north-west of Scotland Lodge were found during an evaluation in 2018 (Highways England, 2019a [REP1-041]; Highways England, 2019d [REP1-049, 050]).
- A boundary feature visible on aerial photographs as a soil/cropmark (UID 1005).

Numerous lynchets of likely medieval and post-medieval date (some may have earlier later prehistoric origins), and ditches that form part of a larger sub-rectangular enclosure were recorded during an evaluation in 2018 (Highways England, 2019d [REP1-049, 050]). An area of lynchets and dispersed features has been detected on a spur of higher ground north-west of Scotland Lodge overlook the River Till valley.

Colluvium was recorded in a coombe that is present in the central part of the spoil deposition area.

Scheme impact

Site 46.1: the proposed pipeline diversion route lies parallel to and approximately 25m east of the existing pipeline which will also be removed after the new pipeline has been commissioned. The construction easement for the utility corridor will be up to 25m wide, including topsoil storage. The corridor will impact part of more extensive field systems which are likely to be later prehistoric and Roman in date and lynchets of likely medieval and post-medieval date which may have had earlier origins. Areas of colluvium will be present within the chalk coombe.

Site 46.2: the existing pipeline will be removed after the new pipeline has been connected. In order to discover whether any remains have survived that require investigation and recording, archaeological mitigation will be required within the existing easement for the pipeline.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works activities at the site, including intrusive archaeological investigations such as trenching. Archaeological mitigation works will be carried out at the Preliminary Works stage and will be carried out in two phases. Phase 1 will involve investigations associated with the proposed new pipeline corridor. Phase 2 will involve an investigation along the existing pipeline corridor.

Strip, map and record is proposed along the route of the pipeline diversion (Site 46.1). Archaeological monitoring and recording (AMR) will be carried out during removal of the existing pipeline (Site 46.2). Depending on programme requirements the section of new pipeline within Site 10.3 may be investigated as part of the area for archaeological excavation and recording, and the section that runs through Site 44 may be investigated as part of the area for strip, map and record and geo-archaeological investigation.

Research objectives identified in the Archaeological Research Agenda

Investigation of any further burials, if present can provide insights into the Early Bronze Age mortuary landscape. Burials illustrate past mortuary practices, as well as a better understanding of prehistoric people's origins, demography, health, diet and conflict. The study of field systems, enclosures and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

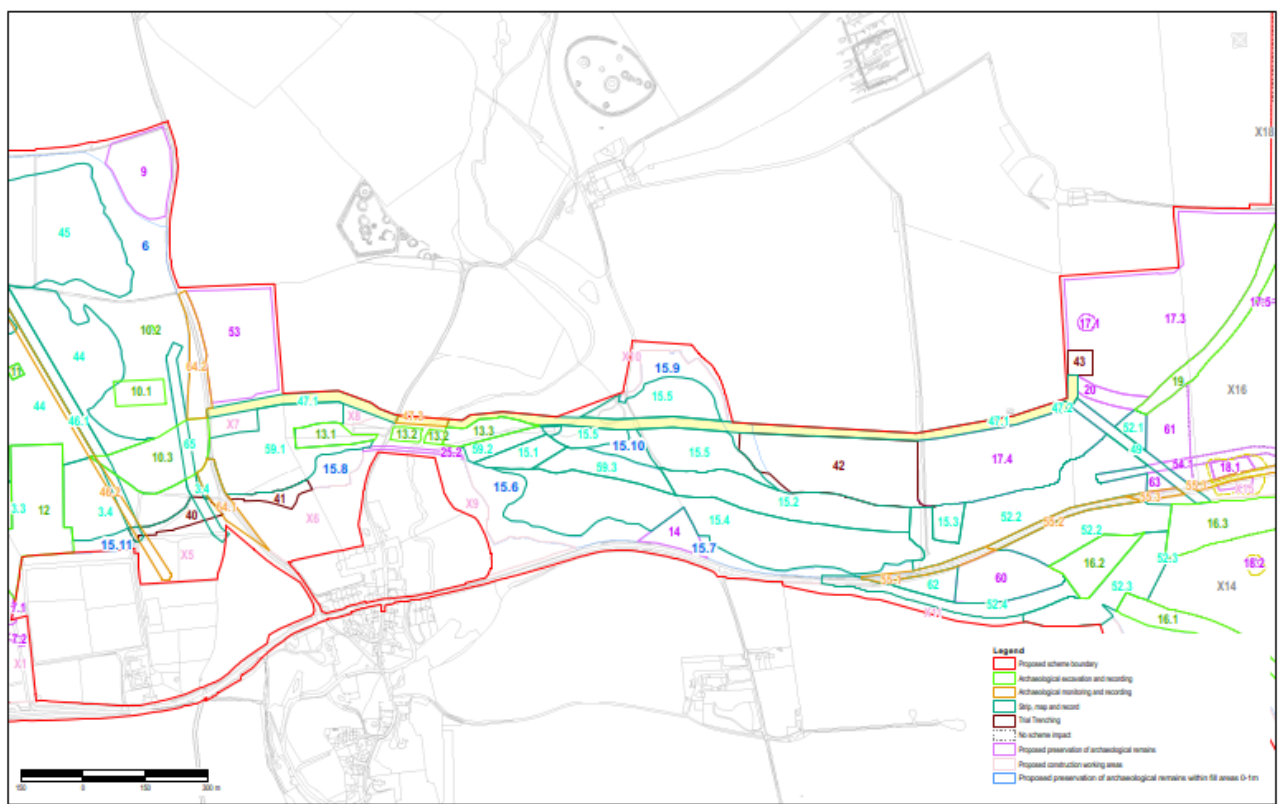
- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.8: Human generations
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g. pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS?

Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?

- N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?
- N.4: A key aim is to better understand the chronologies of key artefact types.... Specifically, what is the currency... of Peterborough Ware and its sub-styles...?
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- EBA.5: There is scope for further dating cremation burials now that cremated bone is directly datable (and from very small samples).
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape?
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas?
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception?
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments?
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 47.1 and 47.2: Winterbourne Stoke Bypass (east): Utility Corridor – Wessex Water Pipeline (Part 1): Extensive prehistoric activity, relict water meadow features, Geo-archaeological deposits

Designation:	Non-designated
Reference IDs:	UID 2050/MWI6987 UID 2061/MWI7173 UID 2014.02/MWI6406 UID 2076 & 2078/MWI7201
Location (NGR):	Site 47.1: Start: (407283, 141549 End: 409363, 141637 Site 47.2: 409338, 141554
Site area (approximate):	Site 47.1: 4.75ha Site 47.2: 0.06ha



Description

Site 47.1 and Site 47.3 comprise a new water supply pipeline serving the Main Civils Compound at Longbarrow north, and the Western Portal tunnel support buildings and TBM. The water pipeline connects the construction locations to an existing water main within the B3083 north of Winterbourne Stoke and will enter the DCO boundary from the B3083 south of the temporary construction compound on the north side of the new A303 alignment. From here the pipeline continues in an easterly direction on the north side of the Scheme mainline to a location close to the proposed temporary electricity substation in the Main Civils Compound (total length approx. 2.72km).

Site 47.2: comprises a Wessex Water supply tank at the eastern end of the proposed pipeline.

Where the utility corridor crosses the River Till it skirts the northern edge of Sites 13.1, 13.2 and 13.3. It also passes through Site 42, an area where additional archaeological evaluation is proposed within the Tunnel Production Area at the proposed Longbarrow compound site; and Site 20, an area of preservation of

archaeological remains designed to protect a part of a Wessex linear ditch that has been recorded during evaluation surveys.

Archaeological remains that have been recorded during previous archaeological investigations within and close to the pipeline easement (25m wide) that is outside of the WHS, comprise:

- Extensive area of possible pits (Highways England, 2019a [REP1-041]).
- Tree throw holes and possible post holes (Wessex Archaeology, 2003b; Highways England, 2019e [REP1-052, 053]).
- A possible barrow (UID 2043; MWI74876) (GSB Prospection Ltd, 2001a; Wessex Archaeology, 2003b; Trench 37).
- A large pit on the western edge of the River Till floodplain associated with worked and burnt flint, animal bone, and pottery of Iron Age date (Wessex Archaeology, 2003b: Trench 38).
- Earthwork remains of a water management system or water meadows of probable post-medieval date (UID 2050; MWI6987).
- An infilled relict river channel and weak linear features possibly relating to former floodplain water management systems (GSB Prospection, 2001a; Highways England, 2019a [REP1-041]).
- Alluvium in the River Till valley bottom with colluvium was present on the edges of the floodplain, and chalk coombes to the west (Wessex Archaeology, 2001: p.9).
- Undated lynchets and hedged field boundaries (Highways England, 2019e [REP1-052, 053]).
- A slightly curving boundary ditch (UID 2068) along the eastern flank of the Till valley to The Diamond copse tentatively dated to the later prehistoric/Roman period (Highways England, 2019e [REP1-052, 053]: Trenches 1379, 1386, 1385).
- An undated possible round barrow north of Grant's Barn (UID 2061; MWI7173).
- An extensive area of possible pits/ tree throws.
- An extensive 'Wessex Linear' later prehistoric long-distance boundary feature which crosses the existing Longbarrow Roundabout (UID 2014.02) (Highways England, 2019h [REP1-042, 043]: Trenches 426 and 429).

Scheme impact

The easement for the utility corridor (**Site 47.1**) will normally be 25m wide, although it may be narrower where is adjacent to designated assets. Within the easement the area that will be topsoil stripped will be no greater than a maximum 15m (topsoil to be retained within a minimum 10m wide strip for temporary soil storage).

Site 47.2 will be a 25m x 25m square constructed at the eastern end of the utility corridor (constructed by the Main Works Contractor).

The pipeline will be bored beneath the channel of the River Till but will require some excavation for push pits on each side of the floodplain. **Site 47.3** will impact faint earthwork traces of a water management system or water meadows of possible post-medieval date that are present along the River Till valley floor (channel of the River Till protected as a Special Area of Conservation). Colluvium recorded during a 2003 evaluation is present in shallow deposits along the valley bottom, shallow coombes and on footslope locations (Bronze Age to medieval date). Parts of lynchets of uncertain date, also recorded during a 2003 evaluation will also be impacted. Numerous possible undated pits of archaeological or natural origin (natural pitting in the underlying chalk) (UID 2144) were identified by geophysical surveys, the latest and most extensive of which was carried out in 2017 (Wessex Archaeology, 2017c). Part of the 'Wessex Linear' will be impacted (Wessex Archaeology, 2002f; Wessex Archaeology, 2014).

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Topographic survey of the remains of the post-medieval water meadows that are visible as earthwork features prior to works within the utility corridor (Site 47.3).

Strip, map and record (SMR) will be carried out along the utility corridor, including that part that crosses Site 20, but excluding where it enters Site 13.3 which it will be investigated as part of the area for archaeological excavation and recording (AER). The results of the AMR will help to inform any detailed mitigation requirements at Site 42.

Research objectives identified in the Archaeological Research Agenda

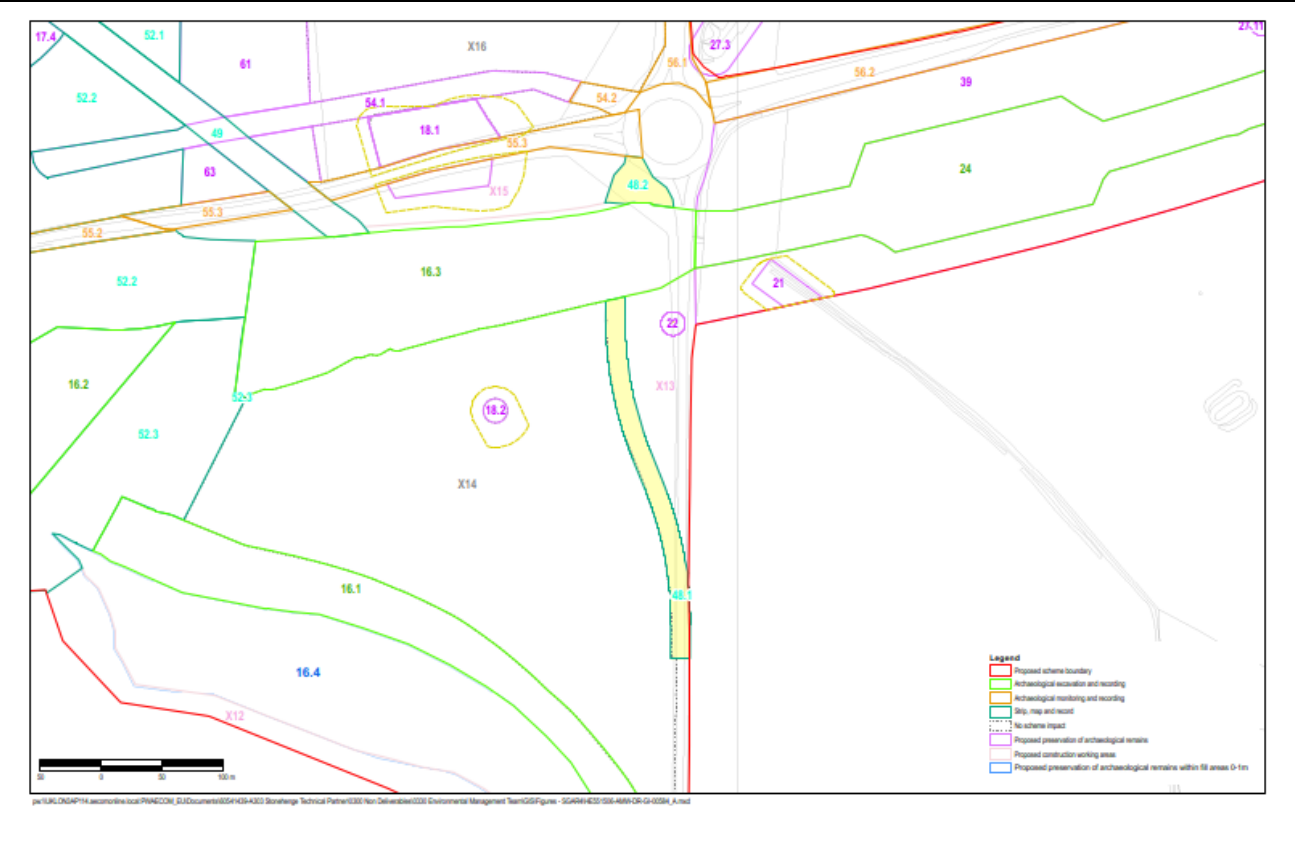
The study of field systems, enclosures, and land divisions, as well as deposit sequences and alluvium within the Till valley, offers insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant;

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic?
- N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?" The pits and the lithic material contained predominantly within the ploughzone have the potential to allow investigation of non-mortuary activity within the landscape, and the possibility of identifying settlement sites, especially of Beaker date.
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape? (Scheme-specific)
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas? (Scheme-specific)
- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)

- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- RB.4: The production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Sites 48.1 and 48.2: Temporary Diversion of the A360 and Utility Corridor - SSEN Southern Power Cable. Potential for Neolithic and Bronze Age activity associated with the Diamond barrow group; Bronze Age settlement and Wessex linear boundary SW of Winterbourne Stoke crossroads

Designation:	Scheduled; Listed; non-designated
Reference IDs:	UID 2191/MWI6075 UID 2131 UID 2068/MWI6407 UID 2087 UID 2170 UID 2169.01 UID 2169.02 UID 2010 UID 2011 UID 2080/MWI7006 UID 2002
Location (NGR):	Start: 409943, 139416 End: 410118, 141391
Site area (approximate):	Site 48.1: 0.49ha Site 48.2: 0.14ha



Description

Site 48 comprises the indicative route of the proposed temporary diversion of the A360 via a temporary bridge over the new A303 cutting. The diversion route would also be followed by the proposed temporary

and permanent power connection to the Main Civils Compound and Western Portal. The underground cable will enter the DCO boundary from the south within the A360 road (north of Druid's Lodge). It will diverge from the existing highway slightly to the west as it approaches Longbarrow Roundabout to pass over the new A303 alignment across the temporary bridge to be installed to carry A360 traffic. From this location opposite the existing Longbarrow Roundabout it shares a utility corridor with the Wessex Water pipeline (Site 49), continuing west and north to the temporary electricity sub-station in the Main Civils Compound, and eastwards across the line of the existing A360 into the WHS. The temporary connection route within Site 49 (qv) passes along the northern edge of Site 24 (area for archaeological excavation and recording (AER)) to Green Bridge No. 4 (approx. chainage 6400) where it turns north to avoid the northern extent of the slab footprint required to construct the bridge. The permanent connection route forms part of Site 48 and will follow the southern edge of Site 24 on entering the WHS, passing north of the scheduled linear earthwork (NHLE1010837) before turning north over the new A303 cutting via Green Bridge No. 4 and re-join the shared water/power utility corridor to the proposed tunnel service buildings at approx. chainage 7000m

Archaeological remains that have been recorded in this area (inside and outside of the WHS) comprises:

- An extensive area of field systems and lynchets of likely later prehistoric date and occasional ploughed down barrows detected by aerial photography (e.g. UID 2191; MWI6075).
- A Grade II listed milestone (NHLE 1318705) is located alongside the A360 north of Druid's Lodge.
- Two late prehistoric linear earthworks detected by aerial photography (UID 2131 extends north-west towards Oatlands Hill (MWI7102); UID 2068 (MWI6407) is on a broadly parallel alignment north-east of Oatlands Hill).
- An area of significant Neolithic and Early Bronze Age activity east of the A360 is represented by two Neolithic long barrows (UID 2087, UID 2170), pits (UID 2169.01, 2169.02), hengiform monuments (UID 2010) and bowl barrows (UID 2011).
- A large pit-like feature (UID 2080, MWI7006) with an assemblage of worked flint, burnt flint, prehistoric pottery (Neolithic, Early Bronze Age and Middle Bronze Age to Early/Middle Iron Age) (Wessex Archaeology, 2002f).
- A scheduled bowl barrow (NHLE 1011045, UID 2002) c.90m west of the route.
- A Grade II listed 18th-century milestone (NHLE 1130972) approx. 100m south of Longbarrow Roundabout.
- A scheduled monument (Bronze Age enclosure & bowl barrow) (NHLE 1011048/MWI7128/MWI7198) north of the route between the temporary A360 bridge and the northern edge of the new A303 cutting.
- A scheduled monument (Wessex linear boundary earthwork) (NHLE1010837) south-east of Winterbourne Stoke crossroads.

Scheme impact

The temporary road diversion and utility corridor has been designed to avoid impacting designated assets (Site 18.2, scheduled monument; Site 21, scheduled monument; and listed milestones, Site 22 and Site 38). The easement for the utility corridor, including where it is a shared utility corridor, will normally be 25m wide, but will be minimised in width to suit where it passes adjacent to scheduled monuments NHLE1011048 and 1010837. Within the easement the area that will be topsoil stripped will be no greater than a maximum 15m (topsoil to be retained within a minimum 10m wide strip for temporary soil storage).

The temporary road diversion and utility corridor could impact parts of field systems and lynchets of uncertain date and Early Bronze Age activity that may be on the periphery of a more densely occupied area; and evidence of Middle and Late Bronze Age occupation that is associated with the buried remains of a 'C-shaped' enclosure where the deposition of whole or substantial portions of pots and significant concentrations of burnt flint indicate the survival of significant remains (connections with Bronze Age settlement at the existing Longbarrow Roundabout (Vatcher and Vatcher, 1968) may also be evidenced).

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage. Strip, map and sample will be carried out along the utility corridor (Site 48.1) and temporary road diversio , apart from the section that is within the earthworks cutting for the Scheme mainline where it will be investigated as part of Site 16.3. Between the earthworks cutting and the existing Winterbourne Stoke roundabout, archaeological monitoring and recording will also be carried out for a short length of temporary road that is outside of the utility corridor at the existing Longbarrow roundabout (Site 48.2).

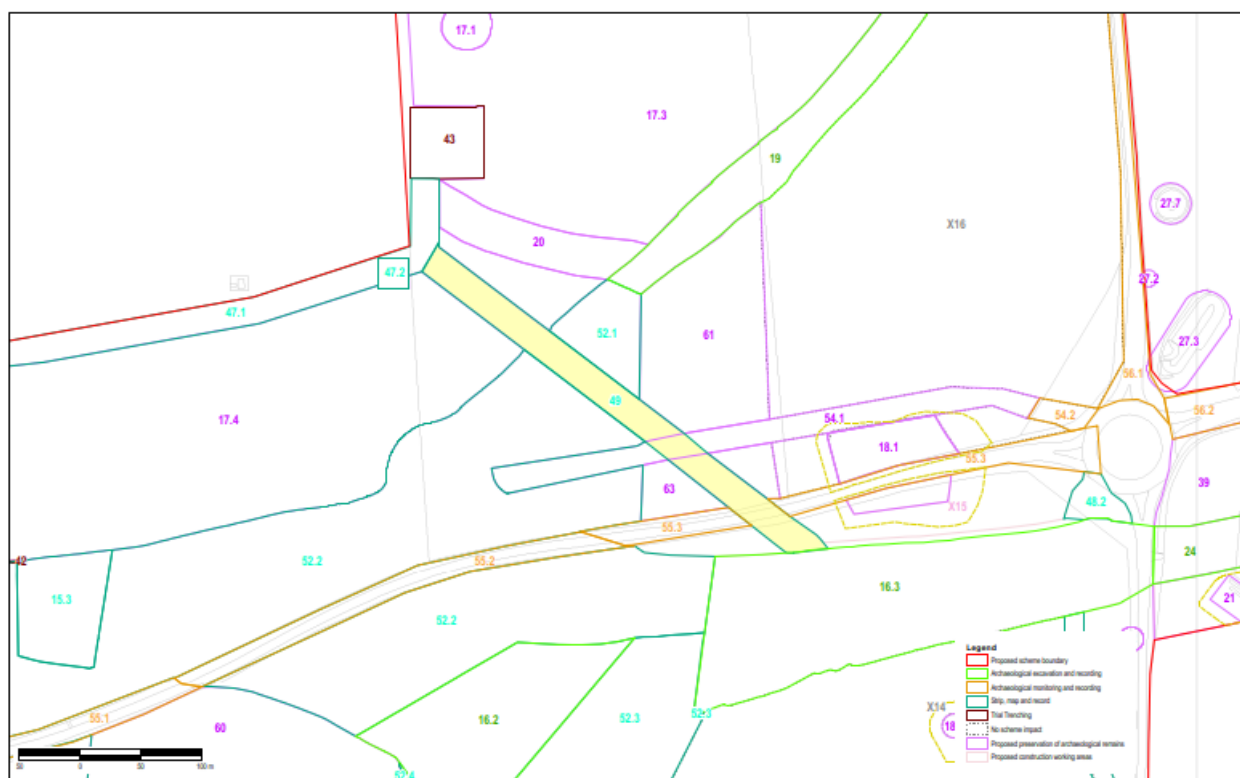
Research objectives identified in the Archaeological Research Agenda

The study of field systems, enclosures, and land divisions, as well as burial sites, offers insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant;

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.8: Human generations
- R.9: Daily life
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 49: Utility Corridor - Main Civils Compound to western tunnel portal Wessex Water Pipeline (Part 2) and SSEN Western Power Cable. Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement and Wessex linear boundary NW of Winterbourne Stoke crossroads

Designation:	Scheduled; Non-designated
Reference IDs:	MWI6984 UID 2001/NHLE 1011048 UID 2073 UID 2093 UID 2014.01
Location (NGR):	409523, 141447
Site area (approximate):	0.95ha



Description

Site 49 is a utility corridor associated with the Western Portal and Main Civils Compound elements of the Scheme. The utility corridor is shared to provide temporary and permanent water and power connections between the compound and the portal/tunnel support buildings.

The shared corridor will leave the temporary electricity substation/water connection location in the Main Civils Compound in a south easterly direction, passing beneath the existing line of the A303 and following the northern edge of the new A303 cutting past the scheduled enclosure (NHLE1011048) crossing the A360 where it enters the WHS, and runs along the north side of the retained cutting (Site 24 - area for archaeological excavation and recording (AER)) to Green Bridge No. 4 (approx. chainage 6400) where it turns north to avoid the northern extent of the slab footprint required to construct the bridge, before following the northern edge of the retained cutting once more, to the proposed tunnel service buildings at approx. chainage 7000m.

- An area of linear and curvilinear features east of the A360 road (Wessex Archaeology, 2014).

- A sinuous linear feature (UID 2073) where the pipeline crosses the existing A303 (Highways England, 2019h [REP1-042, 043]: Trench 339).
- The northern edge of former Oatlands Hill Aerodrome (MWI6984).
- The southern edge of a scheduled monument (Bronze Age enclosure and bowl barrow: NHLE 1011048/MWI7128/MWI7198), located south of the existing A303 (Wessex Archaeology, 2016b). The enclosure may be associated with a Bronze Age settlement located 100m to the east which was removed during the construction of the present roundabout in 1967 (Vatcher and Vatcher, 1968).
- A former military light railway between Larkhill and Druid's Lodge (UID 2093) (Wessex Archaeology, 2002f) and the line of a Wessex Linear (UID 2014.01).
- Late Neolithic and Early Bronze Age activity at the western portal approach (Highways England, 2019f [REP1-045, 046]) (Wessex Archaeology, 2018a: feature 10000), (Highways England, 2019f [REP1-045, 046]: Trench 241).
- Two Beaker inhumation graves, pits and tree throws contained Beaker and Early Bronze Age material (Highways England, 2019f [REP1-045, 046]: Trenches 234 and 240).
- A series of small enclosures recorded from aerial photographs and geophysical survey (Linford et al, 2015) but not located by an evaluation (Highways England, 2019f [REP1-045, 046]).

Scheme impact

The utility corridor has been designed to avoid impacting designated assets. The easement for the utility corridor will normally be 25m wide, but will be reduced where it is adjacent to designated assets (Site 18.1; NHLE1011048-11-48) and within the WHS, where the utility corridor will be confined as closely as possible to the permanent landtake for the cutting, within Site 24 (area for AER). Within the easement (outside the WHS) the area that will be topsoil stripped will be no greater than a maximum 15m (topsoil to be retained within a minimum 10m wide strip for temporary soil storage).

The utility corridor(s) could impact a modern military light railway, parts of field systems and lynchets of uncertain date and Early Bronze Age activity that may be on the periphery of a more densely occupied area (refer to Site 24); and evidence of Middle and Late Bronze Age occupation that is associated with the buried remains of a 'C-shaped' enclosure where the deposition of whole or substantial portions of pots and significant concentrations of burnt flint indicate the survival of significant remains (connections with the settlement excavated at the existing Longbarrow roundabout (Vatcher and Vatcher, 1968) may also be evidenced).

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Strip, map and record (SMR) will be carried out along the utility corridor(s), excluding within the WHS, where it will be investigated as part of the Site 24 area for archaeological excavation and recording (AER).

Research objectives identified in the Archaeological Research Agenda

The study of field systems, enclosures, and land divisions, as well as burial sites, offers insights into past landscape use and development. The following ARA research themes and period-specific questions may be relevant;

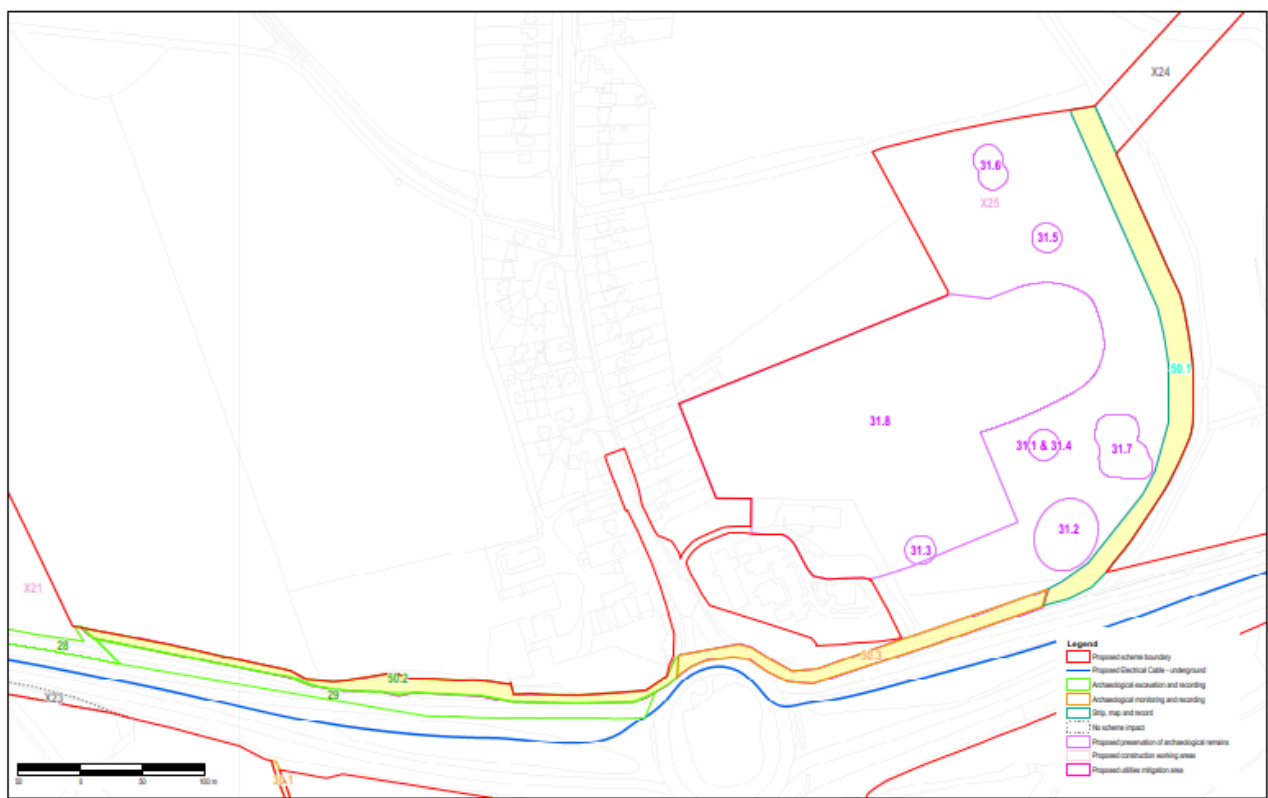
- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.8: Human generations
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately

sighted on pre-existing barrows, or actively avoiding them?

- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?
- PM.4: How was the military presence in the WHS developed?
- PM.5: What physical and social impacts has the military had on the monuments and landscape of the WHS?
- PM.6: What archaeological remains survive from the removal of buildings (such as the First World War aerodrome) and other features.

Site 50.1, 50.2 and 50.3: Utility Corridor – Countess East: Wessex Water Pipeline (Part 3). Neolithic pits and flintwork, Roman and Saxon activity including structures.

Designation:	Non-designated
Reference IDs:	UID 4034 UID 4039 UID 4040-41 UID 4042 MWI12817 MWI75711 MWI75712
Location (NGR):	Start: 415616, 142422 End: 414103, 142107
Site area (approximate):	Site 50.1: 0.84ha Site 50.2: 0.40ha Site 50.3: 0.35ha



Description

Site 50 is a utility corridor associated with temporary and permanent water connections to the Eastern Portal element of the Scheme. The water pipeline will start outside of the WHS, but within the DCO boundary to the northeast of Countess Roundabout (where it connects into an existing water pipeline at Countess East) and will pass in a southerly direction to the A303, following the DCO boundary, to follow the northern side of the existing A303 to Countess Roundabout. After crossing the A345 road it will enter the WHS and will continue in a westerly direction along the northern side of the existing A303 highway embankment and the new cutting to the Eastern Portal (total length approx. 1.66km). The temporary water

connection will be provided at the north side of the cut at the Eastern Portal. Following completion of the tunnel, the water pipeline will be extended over the cut and cover section to provide a permanent connection to the tunnel service buildings. Following construction, the route within Countess East will become the line of a new farm access track to an existing ditch crossing accessing land east of the DCO boundary.

Archaeological remains that have been recorded in this area (inside and outside of the WHS) comprises:

- Early to Middle Saxon settlement (UID 4039), Neolithic pits and flintwork (UID 4040-41) and a stone-built Roman building of uncertain function (UID 4042) (Wessex Archaeology, 2003c).
- An undated trackway (MWI75712) north-east of Countess Services and undated pits (MWI75711).
- Amesbury Countess was formerly a separate settlement, distinct from the centre of Amesbury and West Amesbury, on the north bank of the River Avon (UID 4034).
- Countess Farm is assumed to have been the focus of early medieval settlement north of the Avon.
- Part of the former Amesbury Abbey Park (remnants of the designed landscape survive as a series of small groups of trees to the north of the A303, commonly known as the Nile Clumps).
- A rectilinear arrangement of earthworks of unknown date visible as cropmarks (chainages 11000m and 11100m).
- An area of probable medieval ridge and furrow (MWI12817).
- A worked flint assemblage consistent with primary knapping debris largely of Late Neolithic date, with a limited Mesolithic component found within colluvium in a natural hollow (Highways England, 2019b [REP1-047, 048]: Trench 512).
- Mesolithic activity at Blick Mead that is contained within an alluvial sequence.
- A possible ring ditch and linear anomalies likely to be associated with former field boundaries (Wessex Archaeology, 2017a), although subsequent trial trenching revealed only a small ditch (Wessex Archaeology, 2017d; Highways England, 2019b [REP1-047, 048]).
- A buried soil cut by a pair of parallel ditches produced a date of between 260 BC-AD 130 for the buried soil, indicating a likely late Iron Age or Romano-British date for the ditches (Highways England, 2019e [REP1-052, 053]).
- Vespasian's Camp is a univallate Iron Age hillfort comprising a large ramparted enclosure, which incorporates several earlier barrows within its defences (UID 4012/NHLE 1012126/Asset Group AG32).

Scheme impact

The utility corridor has been designed to avoid impacting designated assets (scheduled monuments and listed buildings). The easement for the utility corridor will normally be 25m wide, although it may be reduced in width acceding to the working area within the DCO boundary and/or where it is adjacent to designated assets or assets that are to be preserved. Within the easement the area that will be topsoil stripped will be no greater than a maximum 15m (topsoil to be retained within a minimum 10m wide strip for temporary soil storage) (Sites 50.1 and 50.2).

Site 50.1: The utility corridor could impact remains associated with a stone-built Roman building of uncertain function (Site 31.7) (UID 4042) (Wessex Archaeology, 2003c), and colluvial and alluvial deposits that contained evidence of Neolithic domestic activity (Site 31.2) (UID 4041) (Anon., 1995). It could also impact the Early to Middle Saxon settlement (Site 31.5) which may cover a more extensive area than shown by the evaluation results.

Site 50.2: To the west of the A345 the utility corridor passes through Site 28 and Site 29. The utility corridor could impact the remains of Late Mesolithic/Early Neolithic distributions of struck flint found in trial trenching (Site 29). On its approach to the Eastern Portal the utility corridor could impact the remains of Romano-British ditches (possibly related to activity at Vespasian's Camp), and other ditches of uncertain date which could represent former field systems. Colluvial deposits and a buried soil horizon are also present at the

same location (Site 28) within a coombe which contain features, finds and palaeoenvironmental remains.

Site 50.3: Between Countess East and Countess Farm, the utility corridor will be within the existing highway boundary; the highway here is on embankment above the floodplain.

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Site 50.1: Within Countess East the utility corridor will be subject to strip, map and record.

Site 50.2, Archaeological excavation and recording will be undertaken on the utility corridor where it enters the WHS (Site 29 and Site 28) which will be investigated as part of the areas for archaeological excavation and recording (AER).

Site 50.3: : Archaeological monitoring and recording (AMR) will be the carried out along the utility corridor It is assumed at this stage that archaeological remains have been destroyed within the footprint of the existing highway, however this will be verified through AMR.

Research objectives identified in the Archaeological Research Agenda

There is only limited evidence for Saxon activity within or close to the WHS and if remains are present relating to the Saxon settlement it may provide a valuable insight into the changing relationships between Anglo-Saxons and the Britons. The study of field systems, enclosures and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

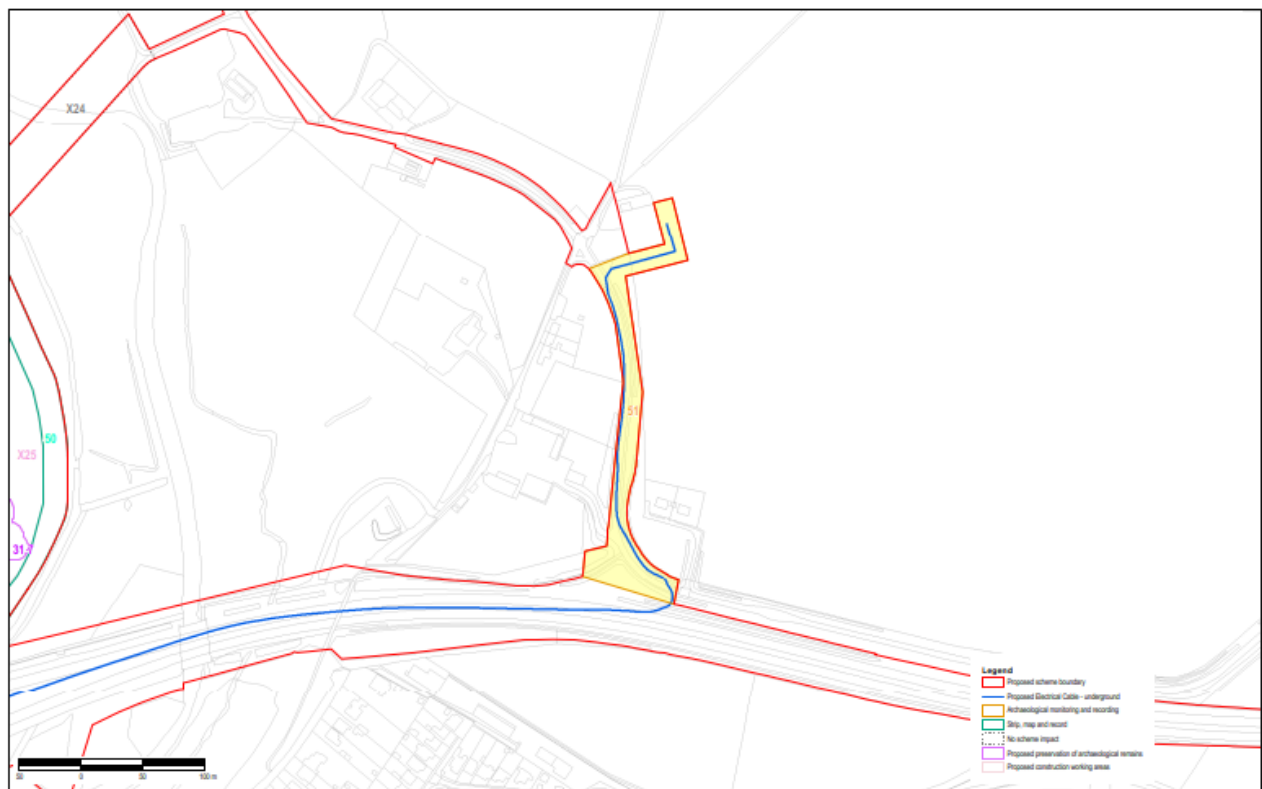
- R.7: Landscape history and memory
- R.9: Daily life
- M.5: A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.
- N.1: Can we better characterise an earliest Neolithic... presence within the WHS? Does it pre-date the monuments as current evidence would suggest? Does the earliest Neolithic owe a legacy to Late Mesolithic inhabitation of these landscapes, or does it represent a process of infill following a hiatus at the very end of the Mesolithic?
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?"
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns?
- RB.4: The production of good quality archaeobotanical datasets to provide information on the scale of the Roman agricultural economy
- EM.1: What role did the Avon Valley have as a communication route for Saxon migrants moving into Wiltshire from the south coast, and how did this impact on the existing communities?
- EM.3: What determined the locations of the early Saxon settlements, and any subsequent shifts? What evidence is there for continuity in settlement and land use from the Romano-British period?
- EM.4: To what extent were prehistoric monuments, Roman settlements and other landscape features used in defining Saxon estates and other boundaries, and are they referred to in late Saxon charters?
- EM.5: What role did prehistoric monuments play in the lives of Anglo-Saxon communities and to what

extent were they 'Christianised' in the later 1st millennium AD, replacing earlier, and potentially very deep-rooted beliefs?

- EM.6: Where, when and how did mid-late Saxon and medieval settlements develop? How were they internally organised, e.g., with tenement boundaries? Is there evidence for settlement shift?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 51: Utility Corridor – Ratfyn: SSEN Eastern Power Cable. Line of former military light railway. Potential for prehistoric activity.

Designation:	Listed; Non-designated
Reference IDs:	UID 4012/NHLE 1012126, MWI12554
Location (NGR):	Start: 416253, 142527, End: 414103, 142107
Site area (approximate):	0.75ha


Description

Site 51 is a utility corridor associated with a permanent power connection to the Eastern Portal. The utility route will start at the existing substation at Ratfyn (within the DCO boundary) and will run in a southerly direction, following the line of the former military light railway to the A303 (east of the Avon bridge). The route will follow the existing A303 across the Avon to Countess Roundabout. From here, where it is within the WHS, it will run in a westerly direction alongside the existing A303 road. Where the Scheme mainline alignment diverges from the existing A303, the route will keep to the existing A303 past Vespasian's Camp until it reaches the tunnel service building location at the eastern portal (total pipeline length approx. 2.8km).

- Archaeological remains that have been recorded in this area (inside and outside of the WHS) comprises:
- A former military light railway (MWI12603) was constructed in the early twentieth century to link the Salisbury-Andover main line to Bulford and Larkhill (dismantled in the 1930s).
- Countess Roundabout and the crossing of the Avon floodplain was constructed in the late 1960s.
- A group of Grade II listed buildings at Countess Farm (including the stables and barn at Countess Farm: NHLE 1131055).
- A worked flint assemblage consistent with primary knapping debris largely of Late Neolithic date, with a limited Mesolithic component found within colluvium in a natural hollow (Highways England, 2019e [REP1-052, 053]: Trench 512).

- Mesolithic activity at Blick Mead that is contained within an alluvial sequence.
- A possible ring ditch and linear anomalies likely to be associated with former field boundaries (Wessex Archaeology, 2017a), although subsequent trial trenching revealed only a small ditch (Wessex Archaeology, 2017d; Highways England, 2019b [REP1-047, 048]).
- A buried soil cut by a pair of parallel ditches produced a date of between 260 BC-AD 130 for the buried soil, indicating a likely late Iron Age or Romano-British date for the ditches (Highways England, 2019b [REP1-47, 048]).
- Vespasian's Camp is a univallate Iron Age hillfort comprising a large ramparted enclosure, which incorporates several earlier barrows within its defences (UID 4012/NHLE 1012126/Asset Group AG32).
- A Neolithic pit was excavated in 1967 on Vespasian's Ridge (MWI12477).

Scheme impact

The utility corridor has been designed to avoid impacting designated assets (scheduled monuments and listed buildings). The easement for the utility corridor will normally be 25m wide, although it may be narrower where is adjacent to designated assets. Within the easement the area that will be topsoil stripped will be no greater than a maximum 15m (topsoil to be retained within a minimum 10m wide strip for temporary soil storage).

The utility corridor could impact remains of the former military light railway (MWI12603) at Ratfyn. The utility corridor will follow the existing highway boundary of the A303 for most of its length, and it is likely that it will be within disturbed ground. Disturbance associated with previous road building and improvement works will have impacted surface and near-surface remains resulting in their destruction, however there is potential that remains may survive west of Vespasian's camp associated with Neolithic pits previously recorded on Vespasian's Ridge. The existing A303 follows the edge of the Avon floodplain and it is unlikely that any traces of alluvial/colluvial deposits associated with the flood plain or river terrace slopes will be encountered. Nevertheless, the utility corridor passes close to the remains of Late Mesolithic/Early Neolithic occupation at Blick Mead Mesolithic site and contemporary distributions of struck flint found to the north of the DCO boundary (Site 29).

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Archaeological monitoring and recording (AMR) will be the carried out along the utility corridor, excluding where it enters the existing A303 highway where buried remains are likely to have been destroyed as a result of previous highway construction and improvement activities.

Research objectives identified in the Archaeological Research Agenda

The following ARA research themes and period-specific questions may be relevant;

- R.7: Landscape history and memory
- R.8: Human generations
- R.9: Daily life
- M.5: A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?"
- PM.4: How was the military presence in the WHS developed?
- PM.5: What physical and social impacts has the military had on the monuments and landscape of the

WHS?

- PM.6: What archaeological remains survive from the removal of buildings ... and other features...

Sites 52.1, 52.2, 52.3 and 52.4: Longbarrow Junction, parts of re-aligned A360, and Winterbourne Stoke Link. Extensive later prehistoric activity: scattered pits, linear boundary, trackway. Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement NW of Winterbourne Stoke Crossroads	
Designation:	Non-designated
Reference IDs:	UID 2065/MWI6932, MWI6933, MWI6934, MWI6944, MWI7002, MWI7004, MWI7005 (Site 52.3) UID 2067/MWI6984 (Site 52.3, Site 52.4) UID 2068/MWI6407, MWI12690 (land boundaries) (Site 52.3, Site 52.4) UID 2073/MWI7125 (land boundary) (52.3) UID 2078/MWI7125 (land boundary) (Site 52.3) UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field systems) (Site 52.2, Site 52.3, Site 52.4) UID 2143/MWI74878 (Site 52.3, Site 52.4) UID 2144/MWI74878 (Site 52.1, Site 52.2)
Location (NGR):	Site 52.1: 409500, 141516 Site 52.2: 409273, 141339 Site 52.3: 409390, 141252 Site 52.4: 409145, 141065
Site area (approximate):	Site 52.1: 0.42ha Site 52.2: 9.16ha Site 52.3: 2.87ha Site 52.4: 1.85ha

incised trackway associated with the settlement.

Numerous linear and curvilinear features have been detected by geophysical survey west of Winterbourne Stoke roundabout, crossing the eastern side of Site 52.3 (UID 2078) (GSB Prospection Ltd, 1999: Site 38). More recently several linear features associated with/forming part of an enclosure were detected by geophysics (Area NW5) (UID 2078) (Wessex Archaeology, 2017c; University of Birmingham, 2018).

An extensive area of co-axial field systems, enclosures and lynchets identified to the south of the A303 (combination of aerial photograph analysis and during several episodes of geophysical survey and trial trenching) (UID 2089).

A cluster of suspected prehistoric pits located on the south side of the proposed Longbarrow Roundabout junction and extending south beyond the Scheme boundary (UID 2143).

Numerous possible undated pits of archaeological or natural origin (natural pitting in the underlying chalk) located north of the existing A303 were identified by geophysical surveys, (the latest and most extensive survey was carried out in 2017) (Wessex Archaeology, 2017c) (UID 2144).

The area north of the existing A303 (Sites 52.1 and 52.2) was investigated by trial trenching in 2003 (Trenches 59-64) (Wessex Archaeology, 2003b) and in 2018 (Trenches 401 to 425) (Highways England, 2019h). The area south of the A303 (Sites 52.3 and 52.4) were investigated in 2002 (Trenches 1 to 11) (Wessex Archaeology, 2002f) and in 2018 (Trenches 303 to 343) (Highways England, 2019h).

Site 52.1: no archaeological remains were found in the two trenches that cross into this area (Trenches 423 and 425).

Site 52.2 Evaluation trial trenching in 2003 and 2018 has found sparse evidence of archaeological activity. A ditch (NW-SE aligned) in Trench 63 is broadly dated to the Late Neolithic/Bronze Age period, and a possible prehistoric pit in Trench 407 contained a burnt deposit. Tree throws were found in many of the trenches but not in association with archaeological remains (Trenches 404 to 414). Colluvial deposits were recorded in Trenches 404 (max. 0.55m thick), 406, and 407, but was also not associated with archaeological remains. A small amount of Romano-British pottery was recovered from the ploughsoil in Trenches 411 and 414, and there was a concentration of burnt flint associated with Trenches 412 to 414.

Parts of 2003 evaluation trenches cross into this site area. Within the site no archaeological remains were found, but an undated ditch (aligned NW-SE) found in Trenches 59 and also in Trench 63 (east of the site) suggests that it will cross this area.

Site 52.3: Undated pits and/ linear features were found in many of the 2002 evaluation trenches at Site 52.3 (Trenches 1, 3, 4, 5, 7, 8, 9 and 10) corresponding to anomalies detected by geophysical survey, but it also identified other pits and linear features that had not been identified by the survey. Trenches 6 and 11 contained no archaeological remains, although a shallow subsoil deposit in Trench 11 may represent localised colluvium. Prior to trenching fieldwalking had identified a concentration of worked flint in the vicinity of Trench 7.

No archaeological remains were found in the trenches opened in 2018, apart from a gully of uncertain date (Trenches 324 and 329), possibly belonging to an earlier field system, and an undated possible lynchet or hedgerow boundary in Trench 339.

Early Bronze Age

A pit in Trench 2 produced a relatively large amount of pottery, along with worked flint and burnt flint. Two pits in Trench 3 were also dated to the Early Bronze Age, and one also contained a large assemblage of worked flint in a relatively fresh condition which may represent a single knapping episode.

Middle Bronze Age

A pit in Trench 7 contained a near complete Bucket Urn. A posthole in the same trench was also dated to the Middle Bronze Age.

Romano-British

Trench 7 contained a north-south aligned ditch of possible Romano-British date.

Site 52.4: apart from two undated linear features which were found in Trenches 307 and 319 that possibly belong to field systems, and a possible lynchet in Trench 314 and an undated posthole in Trench 318, the remaining

trenches contained no archaeological remains. Tree throws were recorded in some of the trenches (for example, Trenches 305, 308, 309, 314 and 315). The tree throw in Trench 314 produced two small sherds of later prehistoric pottery. In Trenches 312 to 320 a large spread of burnt flint was found outside the open end of a C-shaped enclosure (refer to Site 16.2) which may represent an area of disposal associated with the enclosure.

Scheme impact

Construction of the Scheme mainline, the re-aligned A360 and Winterbourne Stoke Link in deep cuttings will impact the remains of prehistoric pit digging and field boundaries/ lynchets of possible later prehistoric, Romano-British and medieval/post-medieval date.

Mitigation

Strip, map and record is proposed over each of these areas (Sites 52.1 to 52.4), to record evidence of dispersed pit digging of possible Early to Middle Bronze Age date, and to record isolated prehistoric or later linear boundaries and lynchets which may belong to larger enclosures or field systems.

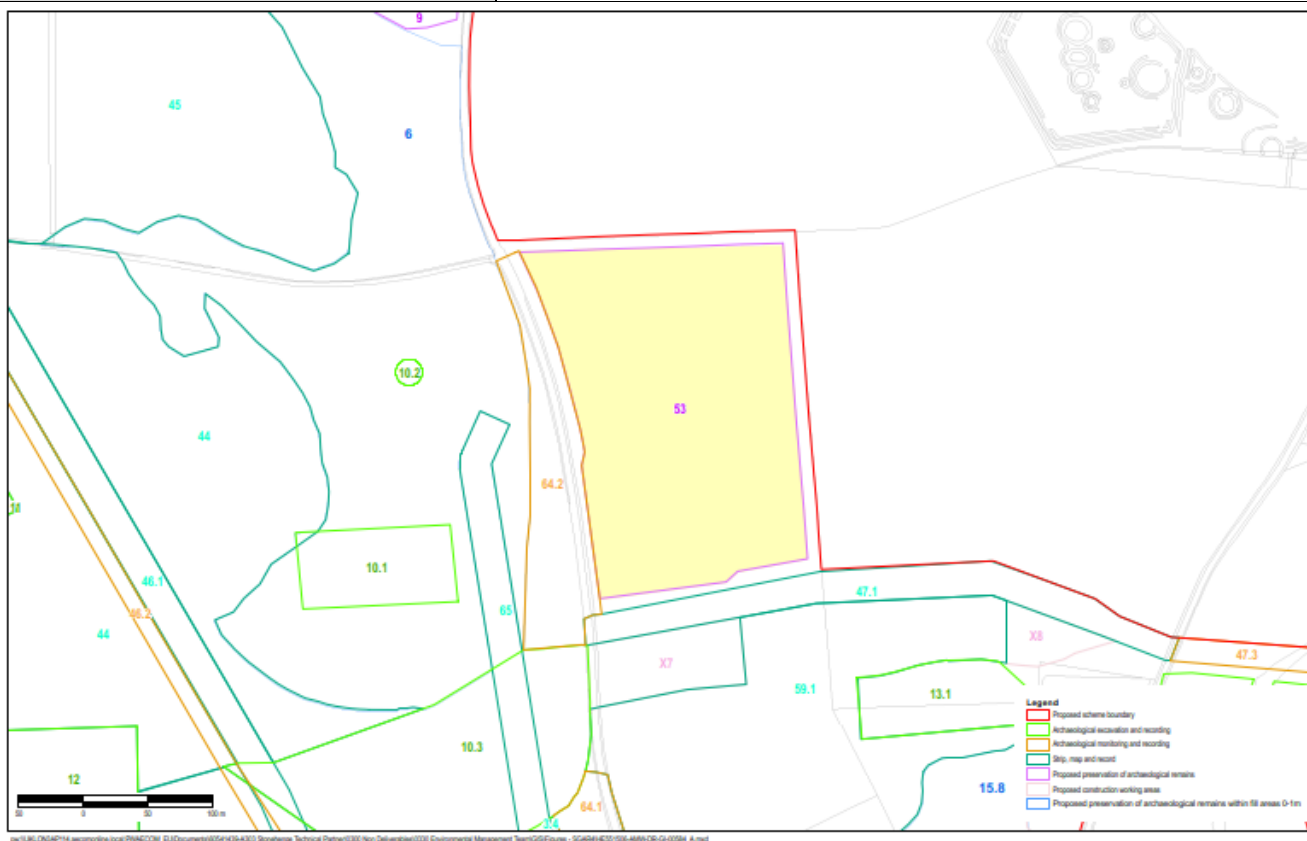
Research objectives identified in the Archaeological Research Agenda

The study of field systems, enclosures and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

- .7: Landscape history and memory
- R.8: Human generations
- N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape during the Early Bronze Age/Beaker period?
- MBA.3: What is the chronology of various elements of the Later Bronze Age field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- IA.2: How was the landscape reorganised over this transition, and how did society change?
- RB.3: Is there any relationship between the earlier monuments and the locations of Romano-British settlement patterns and land use, including burials and cemeteries? ... Is there evidence that prehistoric monuments were seen as a useful source of stone for the construction of Roman villas (or other buildings)? If so did this affect settlement location?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

- PM.4: How was the military presence in the WHS developed?
- PM.5: What physical and social impacts has the military had on the monuments and landscape of the WHS?
- PM.6: What archaeological remains survive from the removal of buildings and other features.

Site 53: Satellite Compound Area, B3083. Extensive prehistoric activity including scattered pits; Iron Age/Romano-British settlement to north.	
Designation:	Non-designated
Reference IDs:	UID 1001.01 UID2038 UID 2039
Location (NGR):	407346, 141695
Site area (approximate):	4.57ha



Description

Background

An extensive series of 'Celtic field systems' extend across Parsonage Down, east of Yarnbury Camp is known largely from aerial photographs (UID 1004.01). These incorporate co-axial field systems, where there is a series of regular fields on a common axis and some areas of more irregular, possible later aggregate field systems and are likely to date from the Later Prehistoric and Roman period. Traces of possible enclosures have been identified amongst the field systems, which comprise rectangular bank defined fields of varying sizes, and, on steeper slopes, strip lynchets. The field system was re-used in the medieval/post-medieval period.

An extensive rectilinear field system that is also of likely Roman date (UID 2038).

A sub-oval enclosure approximately 185m across to the east of Site 9 has been identified from cropmark evidence (UID 2039). It is likely to be part of the Iron Age/Romano-British settlement on High Down, from which it is divided by the B3083. Geophysical survey indicates that it survives as a continuous ditch-like feature with some evidence for bank material on either side of the ditch and with some internal pit-like anomalies that may relate to associated activity, with at least two clusters (geophysical anomalies 12003 and 12005) (Highways

England, 2019a [REP1-041]).

Scheme impact

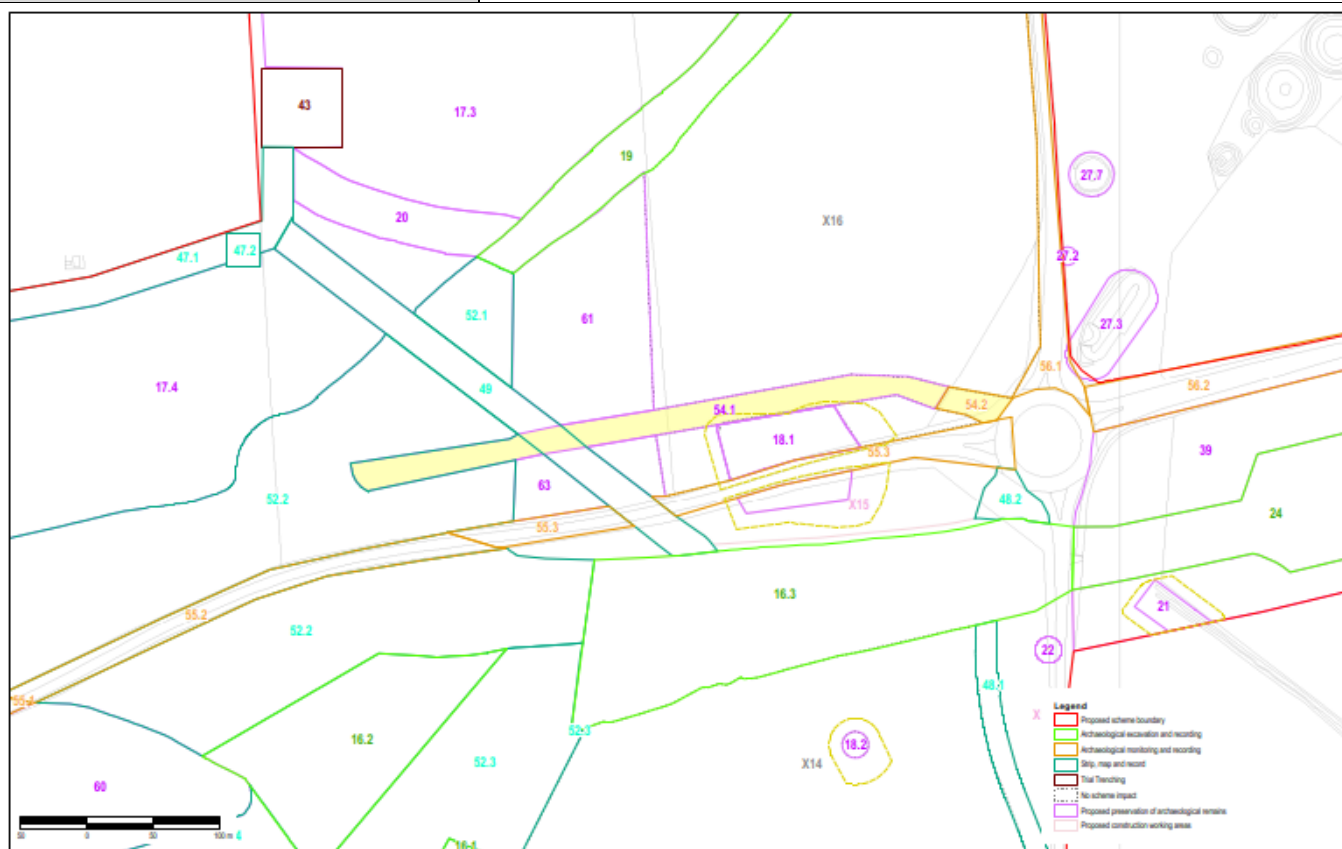
Construction of the Satellite Compound Area will impact the buried remains of field systems and possible enclosures of possible later prehistoric, Roman, medieval/post-medieval date and remains of an Iron Age/Romano-British settlement on High Down.

Mitigation

Preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. After construction the compound will be dismantled and the imported fill and protective membrane will be removed, and the site returned to agricultural use.

Sites 54.1 and 54.2: Longbarrow Junction - temporary road between northern dumb-bell roundabout and Winterbourne Stoke crossroads. Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement, enclosure and ring ditch W of Winterbourne Stoke crossroads

Designation:	Non-designated
Reference IDs:	UID 2001/MWI6924, MWI7128, MWI7198 UID 2014.02/MWI6406 UID 2076/MWI7201 UID 2078/MWI6405, MWI7125, MWI7201 UID 2089/MWI6990, MWI7003, MWI7094, MWI10757, MWI12625, MWI13128, MWI13155 UID 2144/MWI74878
Location (NGR):	Site 54.1: 409669, 141427 Site 54.2: 409883, 141437
Site area (approximate):	Site 54.1: 0.80ha Site 54.2: 0.09ha



Description

Site 54 is a short linear corridor north of the existing A303. During construction, a temporary road would carry traffic between the northern dumb-bell roundabout and the existing Winterbourne Stoke Crossroads roundabout. In order to construct the temporary road at the eastern end a small wooded area will be cleared of vegetation.

Excavation in 1967 prior to the construction of the present A303/A360 roundabout revealed an enclosure, four circular features thought to be Late Bronze Age huts and a number of pits (Vatcher and Vatcher, 1968). An archaeological watching brief along a cable route to the west of the roundabout and south of the A303 identified a

number of ditches, a pit, post-holes and stake-holes (UID 2001).

Numerous possible undated pits of archaeological or natural origin (UID 2144) have been identified by geophysical surveys crossing the western side of the site (the latest and most extensive survey was carried out in 2017 (Wessex Archaeology, 2017c).

An extensive co-axial field system extends into the northern side of the site (UID 2089). Enclosures and lynchets are known from aerial photograph analysis (part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project).

A section of linear boundary, visible as a cropmark on aerial photographs (UID 2014.02), and numerous linear and curvilinear features have been detected by geophysical survey north-west of Winterbourne Stoke Crossroads (GSB Prospection Ltd, 1999, Site 38). More recently several linear features associated with/forming part of an enclosure were detected by geophysics (Area NW5) (UID 2078) (Wessex Archaeology, 2017c; University of Birmingham, 2018). A trench excavated through the linear boundary in the early 2000s revealed a very large ditch aligned approximately north-west to south-east (Wessex Archaeology, 2002f). The ditch was also investigated in 2013, south-west of the Winterbourne Stoke Crossroads and found to be 4.6m wide and 1.5m deep. No artefacts were recovered to confirm a suspected Late Bronze Age date (Wessex Archaeology, 2014).

Numerous linear and curvilinear anomalies were detected by geophysical survey within the area during several phases of work by GSB Prospection in the 1990s/early 2000s (UID 2076). An aerial photographic assessment in 2001 confirmed the presence of the features.

Scheme impact

The construction of the temporary road and the vegetation clearance will impact archaeological remains of probable prehistoric and medieval/post-medieval date, including the remains associated with the possible Late Bronze Age settlement, investigated in 1967 during the construction of the existing roundabout.

Once the Scheme has been constructed the temporary road will be removed and the land returned to agricultural use (Site 54.1). At Site 54.2 the area that is existing woodland will be converted to agricultural use.

Mitigation

A shared utility corridor (Site 49) that will provide temporary and permanent water and power connections between the Main Civils Compound and the western portal tunnel entrance crosses the western side of Site 54.1.

Preservation of archaeological remains is proposed at Site 54.1 (see section 6.2). The temporary road would be formed above existing levels, with topsoil retained in situ and the road sub base placed on the existing topsoil, separated by a geotextile membrane as identified in the MS. The required depth of stone would be determined at detailed design stage, informed by bearing capacity tests.

At Site 54.2 archaeological monitoring and recording (AMR) will be carried out during vegetation clearance and topsoil stripping activities associated with the site clearance.

Research objectives identified in the Archaeological Research Agenda

Site 54.2: The study of field systems, enclosures and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:

- R.7: Landscape history and memory
- R.8: Human generations
N.2: While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter and, where present, cut feature settlement signatures (e.g., pits and rare structural traces), can we develop a better understanding of the scale, tempo, duration and composition of Neolithic settlement areas in the WHS? Can we identify changes in the location and character of settlement areas over the course of the Neolithic? What form does domestic architecture take?
- N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement

architecture influence or provide the prototype for monumental structures...?

- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape during the Early Bronze Age/Beaker period?
- MBA.1: What was happening within, and immediately around the Neolithic monuments at Stonehenge and Avebury during the Middle and Late Bronze Ages?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- IA.1: What was the level of continuity between the Late Bronze Age and the earliest Iron Age, and what was the pace of change?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 55 comprises sections of the existing A303 west of the A360 that will be removed as part of the Scheme.

Site 55.1: a linear ditch or boundary of possible Bronze Age date visible as a cropmark on aerial photographs crosses the middle of the site (UID 2068). It has been mapped as part of the RCHME: Salisbury Plain Training Area NMP project, and the English Heritage Stonehenge WHS Mapping Project. The feature was investigated within two trial trenches during an evaluation in 2003 (Wessex Archaeology, 2003b) and has also been identified by recent geophysical surveys (Wessex Archaeology, 2017a; Wessex Archaeology, 2017c) and trial trenching (Wessex Archaeology, 2017d).

The site of Grant's Barn, a demolished 19th century outfarm of loose courtyard plan is recorded on the north side of the existing A303 (UID2060). The A303 also forms the northern boundary of Oatlands Airfield (UID 2067). It was a grass airfield which opened in 1941 as a training unit for fighter reconnaissance squadrons. Use of the site from 1942 was only intermittent and the site was closed in 1946 (Wessex Archaeology, 1998a).

Sites 55.2 and 55.3: excavation in 1967 prior to the construction of the present A303/A360 roundabout revealed an enclosure, four circular features thought to be Late Bronze Age huts and a number of pits (Vatcher and Vatcher, 1968). An archaeological watching brief along a cable route to the west of the roundabout and south of the A303 identified a number of ditches, a pit, post-holes and stake-holes (UID 2001).

Numerous possible undated pits of archaeological or natural origin (UID 2144) have been identified by geophysical surveys crossing the western side of the area (the latest and most extensive survey was carried out in 2017 (Wessex Archaeology, 2017c).

An extensive co-axial field system extends into the northern side of the area (UID 2089). Enclosures and lynchets are known from aerial photograph analysis (part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project).

A section of linear boundary, visible as a cropmark on aerial photographs (UID 2014.02), and numerous linear and curvilinear features have been detected by geophysical survey north-west of Winterbourne Stoke Crossroads (GSB Prospection Ltd, 1999, Site 38). More recently several linear features associated with/forming part of an enclosure were detected by geophysics (Area NW5) (UID 2078) (Wessex Archaeology, 2017c; University of Birmingham, 2018). A trench excavated through the linear boundary in the early 2000s revealed a very large ditch aligned approximately north-west to south-east (Wessex Archaeology, 2002f). The ditch was also investigated in 2013, south-west of the Winterbourne Stoke Crossroads and found to be 4.6m wide and 1.5m deep. No artefacts were recovered to confirm a suspected Late Bronze Age date (Wessex Archaeology, 2014).

Numerous linear and curvilinear anomalies were detected by geophysical survey within the area during several phases of work by GSB Prospection in the 1990s/early 2000s (UID 2076). An aerial photographic assessment in 2001 confirmed the presence of the features.

A scheduled monument is located either side of the A303 next to Site 55.3. The scheduled monument will be preserved in the two areas either side of the A303 (Site 18.1). It comprises an enclosure that is no longer visible and a levelled bowl barrow which survives as a buried feature of 20m overall diameter in the north-west part of the enclosure (UID 2001, NHLE 1011048). The enclosure is visible on aerial photographs and was confirmed by geophysical survey (GSB Prospection Ltd, 1999; Wessex Archaeology, 2017a). (Note: there is a mismatch between the indicative mapped location of the designated area and the extent of the archaeological remains as mapped by the geophysics).

Scheme impact

At Sites 55.2, 55.3 the A303 will be removed and will be replaced by permanent chalk grassland. The surface and structure of the existing highway will be broken out and removed. The western side of Site 55.1 will be converted into a private means of access and the eastern side will be returned to agricultural use.

If remains survive beneath the road then activities associated with downgrading of the existing A303 will impact archaeological remains of probable prehistoric and medieval/post-medieval date, including the remains associated with the possible Late Bronze Age settlement, investigated in 1967 during the construction of the existing roundabout.

Mitigation

A shared utility corridor (Site 49) that will provide temporary and permanent water and power connections between the Main Civils Compound and the western portal tunnel entrance separates Sites 55.2 and 55.3. At Site 55 archaeological monitoring and recording (AMR) will be carried out during the downgrading of the existing A303.

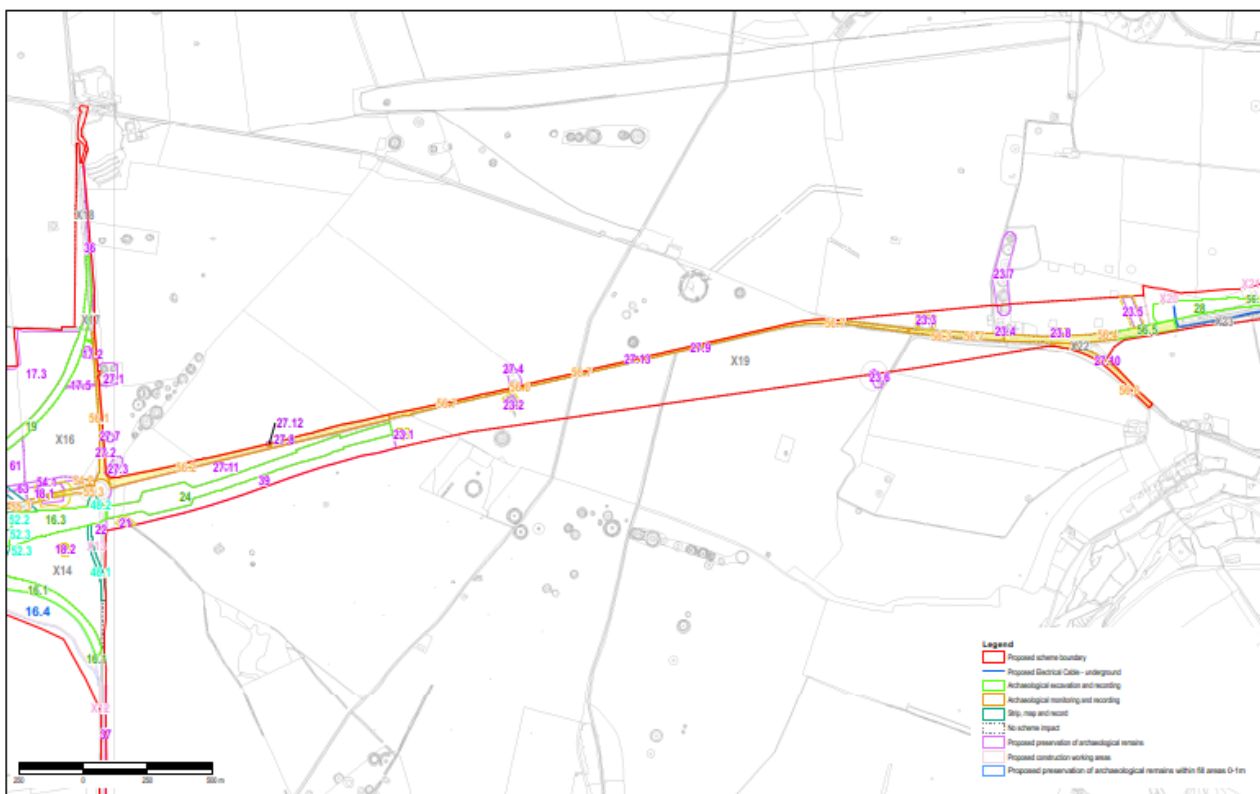
Research objectives identified in the Archaeological Research Agenda

AMR of Site 55 will allow investigation of the field systems, aiding an appraisal of landscape and settlement development. The following ARA research themes and period-specific questions may be relevant;

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Sites 56.1 to 56.7: Existing A303 and A360 within and along the boundary of the WHS. Downgrading of existing road: extensive prehistoric activity potential for remains relating to scheduled barrow groups.	
Designation:	Non-designated, Scheduled
Reference IDs:	<p>Site 56.1</p> <p>UID 2001/MWI6924, MWI7128, MWI7198 UID 2003/NHLE 1011047/MWI7081-7087 UID 2004/NHLE 1011842/MWI7080 UID 2005/NHLE 1011843/MWI7079 UID 2006/NHLE 1011841/MWI12485 UID 2076/MWI7201 UID 2077/MWI6402 UID 2078/MWI6405, MWI7125, MWI7201 UID 2101/MWI12606 UID 2151/MWI6403</p> <p>Site 56.2</p> <p>UID 2001/ MWI6924, MWI7128, MWI7198 UID 2006/NHLE 1011841/MWI12485 UID 2014.01 UID 2089/MWI6990, MWI7003, MWI7094, MWI10757, MWI12625, MWI13128, MWI13155 UID 2093/MWI12608, MWI73256 UID 2098/MWI13149 UID 2101/MWI12606 UID 2180/MWI75990</p> <p>Site 56.3</p> <p>UID 3051/MWI12627, MWI13146 UID 3074/MWI12501, MWI12533, EWI4272 UID 3079/MWI12687, MWI12859, MWI12870, MWI13143, MWI73460, MWI74764, MWI74675, MWI74678</p> <p>Site 56.4</p> <p>UID 3020/NHLE 1012129, MWI12921 UID 3069/MWI12700 UID 3079/MWI75680, MWI75682 UID 3084</p> <p>Site 56.5</p> <p>UID 3010.02/NHLE 1010140, MWI12527 UID 3084</p> <p>Site 56.6</p> <p>UID 2020/MWI13133, MWI75989 UID 2180/MWI75990 UID 2101.01/MWI12606 UID 2101.02</p>

Location (NGR):	Site 56.1: 409929, 141820 Site 56.2: 410518, 141563 Site 56.3: 413157, 142019 Site 56.4: 413679, 141995 Site 56.5: 413986, 142026 Site 56.6: 411542, 141801 Site 56.7: Start: 411067, 141690 End: 413443, 142001 Site 56.8: Start: 413643, 141973 End: 414023, 141736
Site area (approximate):	Site 56.1: 0.82ha Site 56.2: 2.63ha Site 56.3: 0.24ha Site 56.4: 1.15ha Site 56.5: 0.78ha Site 56.6: 0.08ha Site 56.7: 2.76ha Site 56.8: 0.87ha



Description

Site 56 comprises sections of the existing A360, the A303 east of the A360 and a section of Stonehenge Road that will be downgraded to a restricted byway. Sites 56.1 to 56.6 identify stretches of the A360 and A303 where archaeological survival may be anticipated related to specific known remains, site 56.7 relates to the remainder of the A303 and Site 56.8 to Stonehenge Road.

Site 56.1: Excavation in 1967 prior to the construction of the A303/A360 Longbarrow roundabout revealed an enclosure, four circular features thought to be Late Bronze Age huts and a number of pits (Vatcher and

Vatcher, 1968). An archaeological watching brief along a cable route to the west of the roundabout and south of the A303 identified a number of ditches, a pit, post-holes and stake-holes (UID 2001).

Numerous linear and curvilinear anomalies were detected by geophysical survey within the area during several phases of work by GSB Prospection in the 1990s/early 2000s (UID 2076). An aerial photographic assessment in 2001 confirmed the presence of the features.

Numerous linear and curvilinear features have been detected by geophysical survey north-west of Winterbourne Stoke Crossroads (GSB Prospection Ltd, 1999: Site 38). More recently several linear features associated with/forming part of an enclosure were detected by geophysics (Area NW5) (UID 2078) (Wessex Archaeology, 2017c; University of Birmingham, 2018).

The western boundary of the former Stonehenge Airfield (UID 2101) which was constructed in 1917 follows the highway boundary along the eastern side of the A360. Traces of the aerodrome, including a metal pipe network, were detected via a geophysical survey carried out as part of the Stonehenge Hidden Landscapes Project (University of Birmingham, 2018; ID 3679, 3698 and possibly [LF26]).

At the north end of the site the A360 passes alongside a possible levelled barrow (UIDs 2077 and 2151) (Site 17.2) which will be protected during construction. A geophysical survey detected a large sub-circular anomaly (gradiometer feature – 8103) representative of a large pit-like feature or pond barrow. Subsequent trial trenching and geo-archaeological assessment (Trench 448) could not confirm the presence of a pond barrow but did identify a number of natural solution features (Highways England, 2019h [REP1-042, 043]). Colluvial deposits were present infilling the upper part of natural depressions or solution hollows (44807 and 44828). Cultural material (struck flint, burnt flint and Romano-British pottery) were recovered in the colluvium.

To the south of Site 17.2 the A360 passes alongside the scheduled remains of a number of round barrows, saucer barrows and a long barrow which together form part of the Winterbourne Stoke crossroads round barrow cemetery (Sites 27.1, 27.2, 27.3 and 27.7).

Site 56.2: Excavation in 1967 prior to the construction of the present A303/A360 roundabout revealed an enclosure, four circular features thought to be Late Bronze Age huts and a number of pits (Vatcher and Vatcher, 1968) (UID 2001).

North east of Winterbourne Stoke crossroads is a scheduled long barrow (Site 27.3) (UID 2006/NHLE 1011841), part of the Winterbourne Stoke crossroads barrow group.

Also next to Winterbourne Stoke crossroads is a former military light railway constructed in the early 20th century that crosses the A303 (UID 2093) (Wessex Archaeology, 2002f) and the line of a Wessex Linear (UID 2014.01).

Stonehenge Airfield (UID 2101) which was constructed in 1917 follows the highway boundary along the northern side of the A303 (demarcated by a series of boundary stones that will be preserved – Sites 27.12 and 27.13). Traces of the aerodrome, including a metal pipe network, were detected via a geophysical survey carried out as part of the Stonehenge Hidden Landscapes Project (University of Birmingham 2018: ID 3679, 3698 and possibly [LF26]).

Approx. 920m east of the Winterbourne Stoke crossroads are a series of ploughed-out linear features (UID 2098) running from west of Normanton Gorse to east of The Diamond, and identified from aerial photographs. They may predominantly be of natural origin, appearing to relate to a dry valley also identified by geophysical survey (Wessex Archaeology, 2017c: SW1). However, some of the features mapped from aerial photographs, extending to the west of a probable late Prehistoric linear boundary (UID 2020.02) and assigned to UID 2089, have also been detected by recent geophysical survey and confirmed by trial trenching to be of archaeological origin (Wessex Archaeology, 2017c). Numerous possible undated pits (UID 2180) have also been identified by geophysical survey (Wessex Archaeology, 2017d: SW9) along the southern boundary of the A303 in the same area.

Site 56.3: At Stonehenge Bottom several deeply incised, roughly parallel ruts representing trackways or droveways of Medieval or later origin, are visible as earthworks and cropmarks on aerial photographs. The droveways are visible for a distance of about 335m, and are located 700m to the east of Stonehenge, on the course of the A303 trunk road. They have been mapped by English Heritage's Stonehenge WHS Mapping Project, identified by geophysical survey (GSB Prospection Ltd, 1993) and trial trenching (Wessex

Archaeology, 2002g). The features were also noted during the Stonehenge WHS landscape project (Bishop, 2011a; Field et al., 2012). Recent geophysical survey carried out as part of the Stonehenge Hidden Landscapes Project identified a long linear, arc-shaped feature in this area, which correlates approximately with the position of one of the previously identified 'trackways' (University of Birmingham 2018, 25; ID 8808 [LF09]).

Numerous linear and curvilinear features, representing infilled enclosure, field system and boundary ditches extending across a large area to the north and south of the A303, between King Barrow Ridge and the Avenue to the north and Luxenborough Plantation and Coneybury Hill Plantation to the south (UID 3079). The UID also includes the linear feature referred to as the 'Normanton Ditch' (RCHME, 1979: pp.25-6). These features have been identified via assessments of aerial photographs, geophysical surveys and small scale excavations (Linford et al., 2015; Roberts et al., 2016; University of Birmingham, 2018; Wessex Archaeology, 2016b). It is possible that the features do not form part of a coherent field system established during a single episode, but may instead derive from multiple phases of activity. The features are likely to date from the Middle to Late Bronze Age, through to the Roman period. Evidence of possible Neolithic/Bronze Age settlement activity was found in a pit which contained cultural material including Grooved Ware vessels, struck flint and animal bone (UID 3074), found just south of the A303 during evaluation.

Site 56.4: A levelled scheduled bowl barrow located 150m east of Stonehenge Cottages, on the northern edge of the existing A303 will be protected from construction activities (Sites 23.8 and 27.7) (UID 3020). The southern side of the barrow was destroyed by the down-cutting of the A303. Partial excavation in advance of the installation of a water main in 1980 revealed a barrow ditch. Ditches seen in the roadside ditch during mechanical cleaning in 2001 were identified as a re-cut of the barrow ditch. The remaining part of the barrow mound is now difficult to identify on the ground but is surrounded by an infilled ditch. The overall diameter of the barrow is calculated to have been c.34m. The surviving part of the monument has also been recorded during recent geophysical survey, which indicated that the ditch extends beyond the formal constraint area of the scheduled monument (Wessex Archaeology, 2017a; University of Birmingham, 2018).

Numerous linear and curvilinear features, representing infilled enclosure, field system and boundary ditches extend across a large area to the north and south of the A303, between King Barrow Ridge and the Avenue to the north and Luxenborough Plantation and Coneybury Hill Plantation to the south (UID 3079). The UID also includes the linear feature referred to as the 'Normanton Ditch' (RCHME, 1979: pp.25-6). These features have been identified via assessments of aerial photographs, geophysical surveys and small scale excavations (Linford et al., 2015; Roberts et al., 2016; University of Birmingham, 2018; Wessex Archaeology, 2016b). It is possible that the features do not form part of a coherent field system established during a single episode, but may instead derive from multiple phases of activity. The features are likely to date from the Middle to Late Bronze Age, through to the Roman period.

The former extent of historic Amesbury Abbey Park reached which reached its greatest extent in the mid-18th century (UID 3084).

Traces of the former course of the road from Amesbury to Market Lavington (UID 3069) are visible as a cropmark on aerial photographs; it is also mapped by both RCHME's Salisbury Plain Training Area NMP and English Heritage's Stonehenge WHS Mapping Project. Traces of the road have been identified by geophysical survey (Wessex Archaeology, 2017a; University of Birmingham, 2018: ID 8977), and observed during a watching brief in 2001 (Wessex Archaeology, 2002e).

Site 56.5: The Avenue (part of scheduled monument known as Stonehenge, the Avenue, and three barrows adjacent to the Avenue forming part of a round barrow cemetery on Countess Farm). The scheduled monument alongside the existing A303 will be protected during construction. The Avenue is a linear feature dating to the end of the Late Neolithic or the start of the Early Bronze Age, which appears to have provided a formal approach to Stonehenge, linking it with the River Avon at West Amesbury and the West Amesbury Henge (UID 3010.02). It consists of parallel banks c.6m wide and 0.2m high enclosing a corridor c.12m wide. The banks are flanked by a partially infilled outer ditch c.3m wide. The Avenue varies slightly in overall width, with an average of c.30m. From King Barrow Ridge it curves gradually towards the south-east for a distance of 500m, crossing the exiting A303 and Stonehenge Road, it then runs in a straight line towards the River Avon. It is visible as a slight earthwork for the first 1km to the centre of Stonehenge Bottom, but from that

point, it is difficult to identify above ground. The Avenue has been investigated archaeologically on several occasions, including as part of the Stonehenge Riverside Project (Parker Pearson et al., 2008), in association with the removal of part of the former A344 (Wessex Archaeology, 2016a), and during salvage excavations in 1968, 1979 and 1980 (Pitts, 1982). The Avenue has also been covered by several recent geophysical surveys (e.g. University of Birmingham, 2018; Wessex Archaeology, 2017a).

The site lies within the former extent of historic Amesbury Abbey Park which reached its greatest extent in the mid-18th century (UID 3084).

Site 56.6: The site which is along the A303 is adjacent to a pair of scheduled monuments (Site 23.2, NHLE 1008953; and Site 27.4, NHLE 1012369) which will be protective during construction, however, the existing A303 will be converted into a restricted byway and PMA. Known remains in this area comprise the adjacent scheduled monuments (burial mounds) whose extents may cross into the highway itself. Also the remains of Stonehenge Aerodrome and Airfield have been detected by geophysical survey (UIDs 2101.01 and 2101.02). The First World War aerodrome was constructed in 1917. The main Technical Site was located on the north side of the A303, and the domestic site was on the south side of the road and provided messing accommodation for officers and ratings. The site closed in January 1921 and the Domestic site became the Stonehenge Pedigree Stock Farm for approximately 10 years. The Technical site was demolished in 1929. During 1944 the airfield may have been briefly used by aircraft attached to American 29th Infantry division, but this is uncertain. Numerous possible undated pits have also been identified by geophysical survey, but it is possible that they may be associated with natural pitting in the chalk bedrock. To the west of the monument is a late prehistoric linear boundary, forming part of a complex of boundary earthworks/ditches in this part of the Stonehenge landscape (UID 2020.02). A 70m long section of the linear boundary, in Normanton Gorse, is scheduled. It is visible on aerial photographs and was also detected by geophysical survey and trial trenching.

Site 56.7: Stonehenge Airfield (UID 2101) which was constructed in 1917 follows the highway boundary along the northern side of the A303. Traces of the aerodrome, including a metal pipe network, were detected via a geophysical survey carried out as part of the Stonehenge Hidden Landscapes Project (University of Birmingham 2018: ID 3679, 3698 and possibly [LF26]). Approx. 920m east of the Winterbourne Stoke crossroads are a series of ploughed-out linear features (UID 2098) running from west of Normanton Gorse to east of The Diamond, and identified from aerial photographs. They may predominantly be of natural origin, appearing to relate to a dry valley also identified by geophysical survey (Wessex Archaeology, 2017c: SW1). However, some of the features mapped from aerial photographs, extending to the west of a probable late Prehistoric linear boundary (UID 2020.02) and assigned to UID 2089, have also been detected by recent geophysical survey and confirmed by trial trenching to be of archaeological origin (Wessex Archaeology, 2017c). Numerous possible undated pits (UID 2180) have also been identified by geophysical survey (Wessex Archaeology, 2017d: SW9) along the southern boundary of the A303 in the same area. Ditches of an unknown date are visible as cropmarks on aerial photographs (UID 3028), but they may have been associated with the Stonehenge Aerodrome. Geophysical survey and small scale excavations undertaken in this area (and coinciding with UID 2097) during the Stonehenge Riverside Project revealed numerous pits and postholes, some containing Middle Bronze Age pottery.

Site 56.8: Stonehenge Road formerly carried the Amesbury to Devizes road prior to construction of the Amesbury Bypass (the present A303) in the later 1960s. A milestone near the junction with A303, Stonehenge Road (UID 6042, grade II listed) was erected by the Amesbury Turnpike Trust in the 1760s (Site 27.10). This section of Stonehenge Road abuts the northern limit of the West Amesbury Conservation Area.

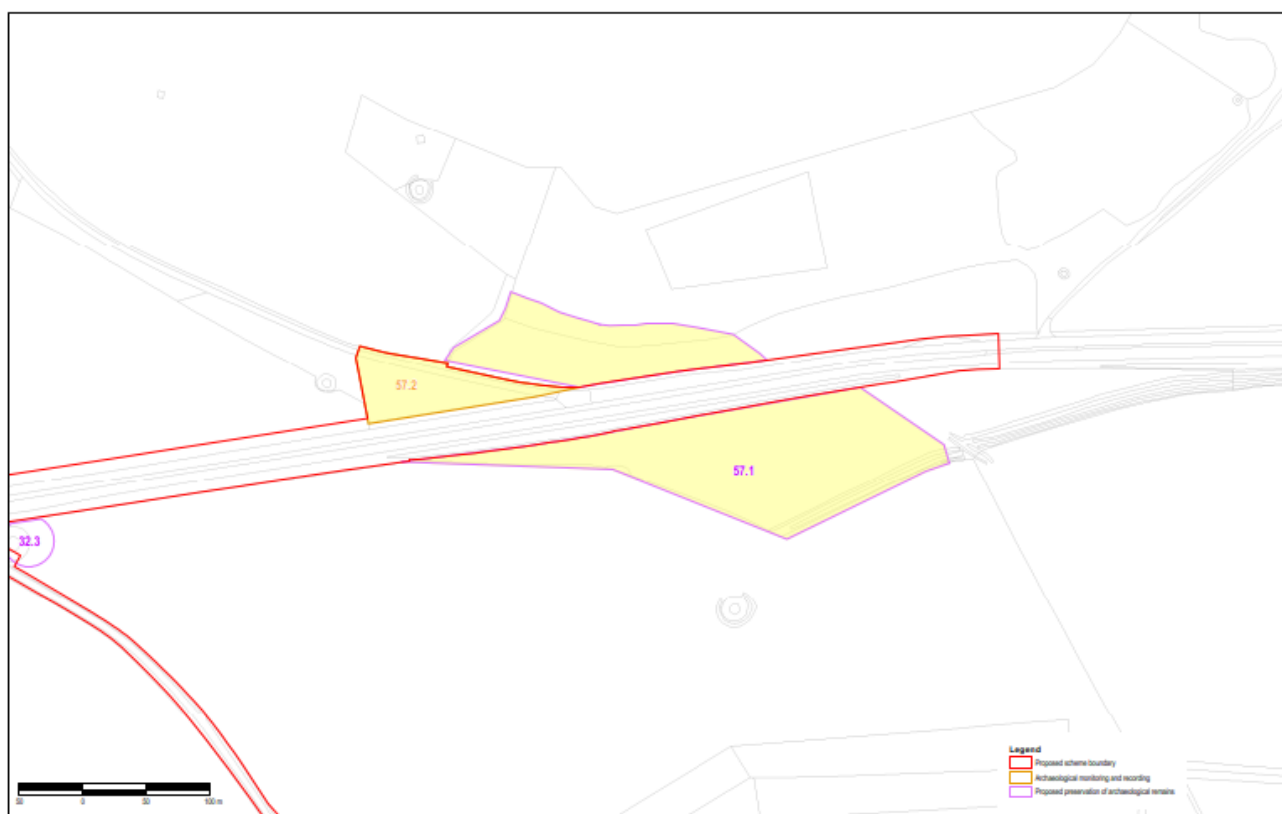
The Avenue lies some 50m east of Site 56.8 at its closest point, its line being severed by Stonehenge Road some 100m south east of Site 56.8. Stonehenge Road passes between, two scheduled bowl barrows (NHLE1012130, 1012131) west of the Avenue and a non-designated ring ditch south-east of the New King Barrows (UID 3076), while the northern extent of the site lies immediately south of undated round barrow NHLE1012129 (Site 23.8 and 27.7) (UID 3020). Coneybury Henge (UID 3019) and Coneybury Hill (UID 3068) lie to the south-west of Site 56.8 at distances of approximately 500-550m respectively.

West of Stonehenge Road, an area of ridge and furrow of likely medieval date is mapped from aerial photographs over some 8ha.

Scheme impact
<p>The A360 north of Winterbourne Stoke crossroads will be downgraded and converted into a restricted byway and private means of access, between the crossroads and where the re-aligned A360 North ties into the existing carriageway (Site 56.1). The A303 east of the A360 from the WHS boundary to the western tunnel portal entrance will also be downgraded and converted into a restricted byway and private means of access (Site 56.2). East of the western tunnel portal entrance the A303 will also be downgraded and converted into a restricted byway and private means of access (Site 56.7). At Stonehenge Bottom the A303 will be downgraded and converted into a restricted byway and private means of access (Sites 56.3, Site 56.4 and 56.6). East of Site 56.4 the A303 will become a private means of access. South of Site 56.4, Stonehenge Road will be downgraded and converted into a restricted byway and private means of access (Site 56.8). Existing woodland, trees and hedges will be retained either side of the downgraded section of Stonehenge Road; the hardstanding north-east of the junction with the existing a303 will be broken out. East of Stonehenge Road, the existing A303 will be removed and the land converted into managed chalk grassland (Site 56.5). South of Site 56.4, Stonehenge Road will be downgraded and converted into a restricted byway and private means of access (Site 56.8). Existing woodland, trees and hedges will be retained either side of the downgraded section of Stonehenge Road; the hardstanding north-east of the junction with the existing A303 will be broken out.</p> <p>If remains survive beneath the road then activities associated with downgrading of the existing A360 and A303 will impact archaeological remains of probable prehistoric and medieval/post-medieval date, including the remains associated with the possible Late Bronze Age settlement, investigated in 1967 during the construction of the existing roundabout, and remains related to the funerary landscape through which the roads pass.</p>
Mitigation
<p>In all areas of Site 56, the existing carriageway formation will be modified to provide the required width to suit the restricted byway/PMA, with a new surface finished as a bound aggregate in a suitable colour (see OEMP, Design Principles); the remaining road surface not required as part of the byway/PMA will be broken out and converted to chalk grassland. Apart from Site 56.5, archaeological monitoring and recording (AMR) will be carried out during the downgrading of the existing A360 and A303 and Stonehenge Road. At Site 56.4 AMR will include monitoring during the removal of two laybys that are on either side of the existing A303 carriageway.</p> <p>At Site 56.5, archaeological excavation and recording (AER) will be carried out to record any surviving evidence of The Avenue and any remains that might be associated with it. East of Site 56.5 works will be confined to removal of existing carriageway surfaces in a section comprising made ground or within cutting; no archaeological mitigation is proposed in this section.</p>
Research objectives identified in the Archaeological Research Agenda
<p>If remains survive within the existing highway boundary (Site 56.1) or to the south of the Winterbourne Stoke crossroads (Site 56.2), the archaeological investigations may provide an opportunity to investigate the development of the Winterbourne Stoke crossroads round barrow cemetery. The study of field systems, enclosures and linear boundaries offers insights into past landscape use. The following ARA research themes and period-specific research questions may be relevant, depending on the surviving remains:</p> <ul style="list-style-type: none"> • R.6: Burials and barrows • R.7: Landscape history and memory <p>R.8: Human generations</p> <ul style="list-style-type: none"> • N.3: What was the relationship between settlement and monuments? Did the location of earlier settlement and other quotidian activity influence the siting and form of later monuments? Could settlement traces become meaningful in the same way as monuments, as markers of place and memory? To what extent did settlement architecture influence or provide the prototype for monumental structures...?"

- N.5: What impact did monument construction have on the physical landscape?
- EBA.2: Establish the dates and development of barrow cemeteries.
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.1: What was happening within, and immediately around the Neolithic monuments at Stonehenge and Avebury during the Middle and Late Bronze Ages?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sited on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- EM.7: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?
- PM.1: The layout and use of roads and tracks has been little explored.
- PM.4: How was the military presence in the WHS developed?
- PM.5: What physical and social impacts has the military had on the monuments and landscape?
- PM.6: What archaeological remains survive from the removal of buildings and other features.

Sites 57: Improvement to Double Hedges/A303 on slip	
Designation:	Scheduled
Reference IDs:	UID 4069.01/MWI12260, MWI12311, MWI12258; NHLE 1009613
Location (NGR):	From 418717, 142438 to 419506, 142428
Site area (approximate):	Site 57.1: 3.342ha Site 57.2: 0.50ha



Description
<p>Parts of two linear boundary features (alternatively interpreted as trackways) of probable late prehistoric/Roman date, and numerous undated trackways, possibly of medieval or later origin (UID 4069.01). The scheduling seems to cover sections of these features which are better preserved as earthworks, although they also continue beyond the constraint area/boundary of the Scheduled Monument. The non-designated continuations of these features (assigned to UIDs 4069.02 to .04). The multiple trackways run up and along a hill ridge. The most substantial trackway south of the road is damaged by motor-bikes and scrub. It consists of a ditch with a bank to the south and traces of one to the north, overall width c.11m.</p>
Scheme impact
<p>The scheduled monument (Site 57.1) will not be directly impacted by the Scheme. A short length of the existing A3028 will be re-aligned at the junction with the A303 and the redundant part of the A3028 will be downgraded and converted into chalk grassland (Site 57.2).</p>
Mitigation
<p>The scheduled monument is located in two areas either side of the A303. The scheduled area (Site 57.1) does not appear to extend into the highway boundary, which is also the DCO boundary. A short length of the existing A3028 will be re-aligned at the junction with the A303 and the redundant part of the A3028 will be downgraded</p>

and converted into chalk grassland (Site 57.2). All works will be within the existing highway boundary.

During the MW stage any remains associated with the monument that are revealed by works within the DCO boundary will be investigated by archaeological monitoring and recording (AMR).

The northern part of the monument is already fenced along the highway boundary (post and wire fence) and has a mature hedgerow. Protective fencing is not proposed at the PW stage, but it may be installed at the MW stage. If DCO fencing is installed to replace the existing post and wire fencing and hedgerow at the MW stage the MW contractor will consult with Wiltshire Council and Historic England prior to the installation of the fencing and a site specific Method Statement will describe specific protection measures.

If preliminary archaeological investigations are required to install the fence posts at the MW stage as identified in the MS, the Archaeological Contractor will prepare a SSWSI that sets out the scope and nature of the preliminary investigations, in accordance with the DAMS.

Before the fencing is erected at the MW stage the monument will be photographed.

Following construction, the replacement fencing will be retained.

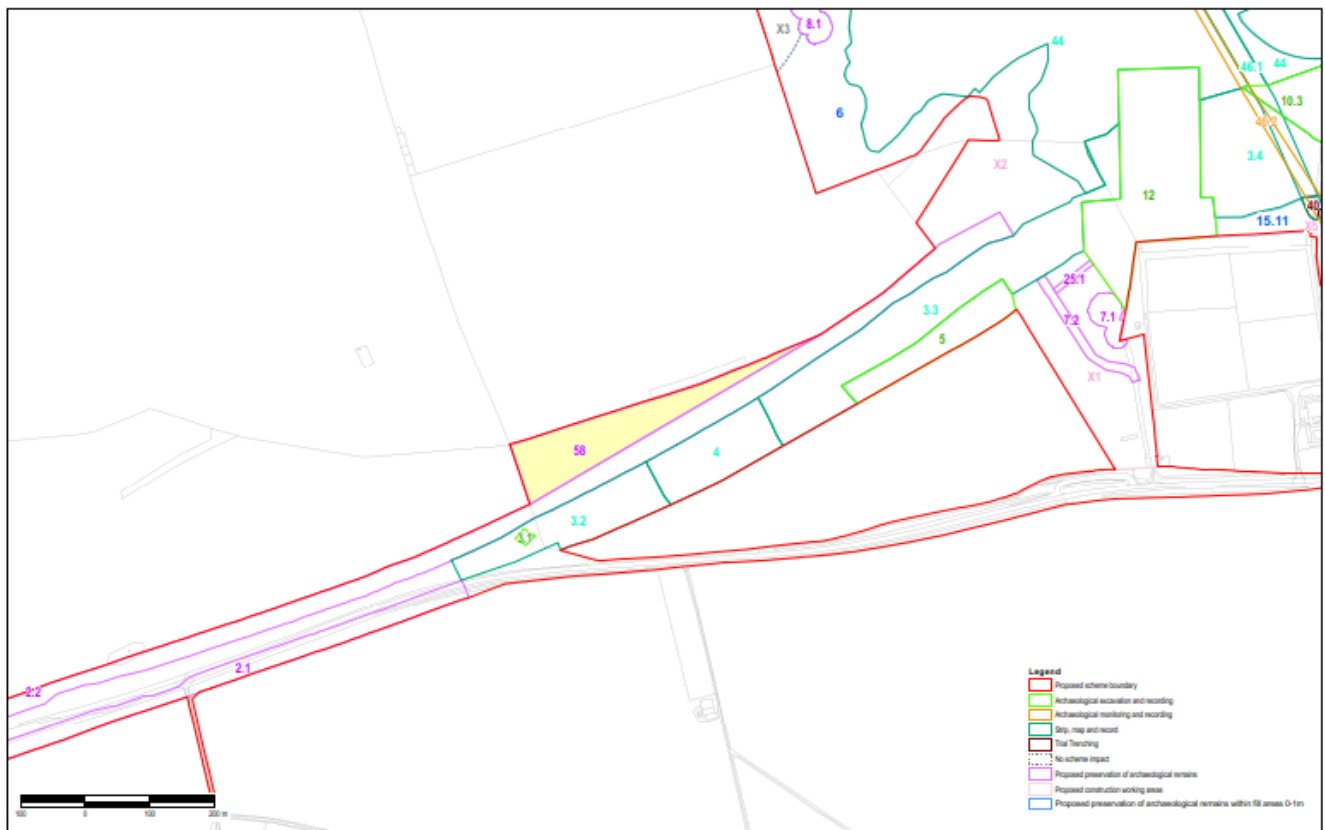
Research objectives identified in the Archaeological Research Agenda

AMR at Site 57.2 will allow investigation of the field systems, aiding an appraisal of landscape and settlement development. The following ARA research themes and period-specific questions may be relevant;

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 58: Stockpile area at Parsonage Down, chainage 2000m to 2500m - enclosures, field systems and isolated burials (Iron Age)

Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 (field systems) UID 2027/MWI6935 (burial) UID 2029/MWI6948, MWI7133 (field systems – enclosures)
Location (NGR):	406027, 140901
Site area (approximate):	2.25ha


Description

Extensive field systems east of Yarnbury Camp north and south of the existing A303 are known largely from aerial photographs (UID 1004.01). These incorporate co-axial field systems, where there is a series of regular fields on a common axis and some areas of more irregular, possibly later, aggregate field systems and are likely to date from the Later Prehistoric and Roman period, possibly associated with activity at the hillfort. A particularly well-preserved part of the field system to the north-east of Yarnbury Camp is scheduled, along with an oval enclosure (NHLE 1009646).

The system comprises rectangular fields of varying sizes and strip lynchets. The field system was re-used in the medieval/post-medieval period with traces of ridge and furrow being visible within some of the embanked field units in the centre of the field system. Traces of possible enclosures are identifiable amongst the field systems.

Two possible rectilinear enclosures of unknown date were mapped from aerial photographs and geophysical survey (UID 2029) (GSB Prospection Ltd, 2001b) which may be associated with the later prehistoric settlement to the east (UID 2033). Archaeological evaluation has confirmed the presence of features that correspond with these

land divisions and evidence of Late Bronze Age activity and Iron Age burial (Wessex Archaeology, 2003a; Wessex Archaeology, 2003b; Highways England, 2019d [REP1-049, 050])

Scheme impact

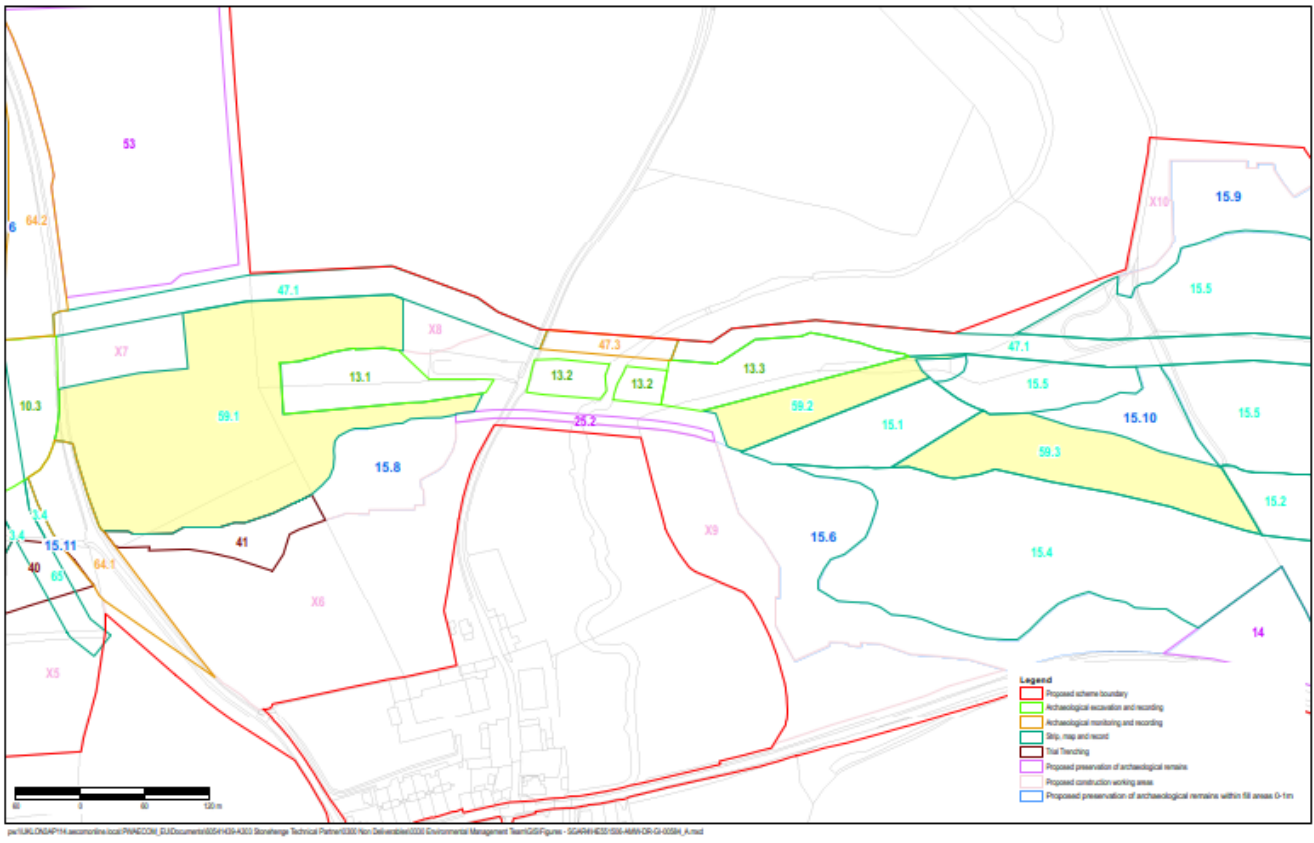
Site 59 is proposed for species rich chalk grassland reversion but will be utilised as part of the working area, for a temporary topsoil stockpile. The proposed stockpile area could impact sensitive buried archaeological remains of later prehistoric date without protection.

Mitigation

Preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. After construction the fill and membrane will be removed and the area will be reverted to species rich chalk grassland.

Sites 59.1 to 59.3: Drainage pond part of mainline and landscape fill area west of River Till, parts of mainline and landscape fill area east of River Till. Extensive prehistoric activity: Pit digging activity, field systems and enclosures, colluvial deposits. .

Designation:	Non-designated
Reference IDs:	UID 2050/MWI6987 UID 2053/MWI7009, MWI7111, MWI75994
Location (NGR):	Site 59.1 – 407444, 141454 Site 59.2 – 407991, 141468 Site 59.3 - 408243, 141410
Site area (approximate):	Site 59.1: 4.55ha Site 59.2: 0.72ha Site 59.3: 1.58ha



Description

Site 59.1: The Site which is required for the Scheme mainline and as a stockpile area and area of fill (>1m) (chainage 3550 to 3850) is located on the western side of the River Flit floodplain next to an area that contains ditched boundaries and linear features of unknown date and possible Iron Age pits (Site 13.1). Trial trench evaluation produced natural features, and a Saxon sherd from the ploughsoil (Trench 725) (Highways England, 2019e). Trench 39 revealed a 0.60m thick deposit of colluvium, but it was not associated with any other remains (Wessex Archaeology, 2017d). Although no archaeological remains were found during trench in 2003 (Wessex Archaeology, 2003b), a sedimentary sequence was recorded in Trench 32 (1.2m deep, with a possible buried soil formation recorded between shallow (0.5m) bands of colluvium). Deposits in Trench 33 were much shallower (0.6m) and contained no colluvium, the drift geology here comprising clay with flints and periglacial coombe deposits.

Site 59.2: The Site is located on the eastern side of the River Flit floodplain next to an area that has produced ditched boundaries, lynchets and hedged field boundaries of uncertain date (Site 15.1). Trial trench evaluation has revealed a pair of parallel ditches of Late Bronze Age date (Trench 41) and colluvium that is present in the dry valley that crosses the area (Trenches 40 and 41) (Wessex Archaeology, 2017d). Colluvium was also present in Trench 734 where it is represented as a series of laminated sandy layers (Highways England, 2019e). During the trenching in this area a few crumbs of prehistoric pottery, an early Roman brooch and two pieces of Saxon pottery have been found in the ploughsoil.

Site 59.3: The Site (chainage 4400m to 4650m) is located next to an area that has produced evidence of Saxon occupation and possible settlement (Site 15.4). Previous trial trench evaluation has revealed ditches of Late Bronze Age date in this area (Trenches 44 and 46). In Trench 46 the ditch corresponded to an extensive boundary feature recorded both from aerial photography and geophysical survey (Wessex Archaeology, 2017d). More recently, in 2018, further trial trenching in the area did not produce any other archaeological remains (Highways England, 2019e: Trenches 744, 747, 748 and 750).

Scheme impact

The construction of the Scheme mainline to the east of the existing B3083 road and the proposed stockpile area to the north could impact low density archaeological remains that have been identified by trial trench evaluation including ditched boundaries and linear features.

Mitigation

Strip, map and record, combined with geo-archaeological investigations as part of the Scheme -wide geo-archaeology strategy will be the preferred method of archaeological mitigation at all three sites.

Research objectives identified in the Archaeological Research Agenda

SMR and geo-archaeological investigation of Site 59 will allow investigation of the field systems, aiding an appraisal of landscape and settlement development. The following ARA research themes and period-specific questions may be relevant;

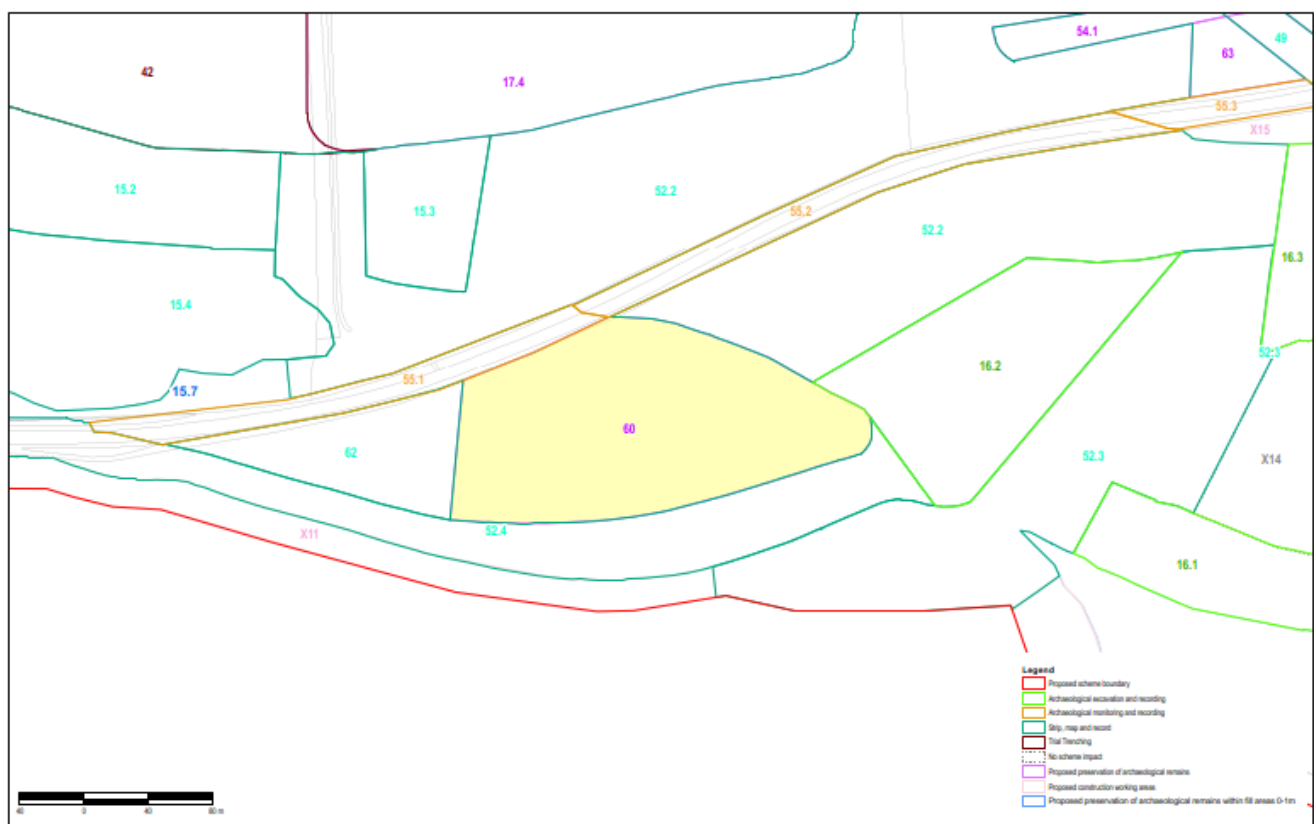
- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- MBA.5: Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- IA.3: Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- IA.4: What were the relationships (if any) between Iron Age activity and the earlier ceremonial centres?
- IA.5: Is there evidence of an Iron Age and Romano British rural economy connected with the settlements? Does the evidence suggest that this is pastoral or is activity limited in some areas of the landscape? (Scheme-specific)
- IA.6: Activity during the Iron Age and Roman periods, particularly settlement, is focused on Yarnbury Camp, Scotland Lodge and Parsonage Down, is there evidence for landscape use between these monuments within the landscape, is there evidence of a different perception and use of landscape in these areas?

(Scheme-specific)

- IA.7: Is there evidence through continuity or change of activity which might represent an Iron Age perception of the Bronze Age ritual landscape? Is there evidence to suggest that the landscape was used and organised with respect to this perception? (Scheme-specific)
- IA.8: Is there a relationship between earlier field systems and continuity of use, and change of use of field systems which may indicate respect for earlier monuments? (Scheme-specific)
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 60: Longbarrow Junction - stockpile area west of southern dumbbell roundabout. Extensive later prehistoric activity: scattered pits, linear boundary, trackway

Designation:	Non-designated
Reference IDs:	UID 2144/MWI74878 UID 2068 UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field systems)
Location (NGR):	409198, 141145
Site area (approximate):	2.40ha


Description

An extensive co-axial field system extends into the area (UID 2089). Enclosures and lynchets are known from aerial photograph analysis (part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project).

Extensive possible undated pits of archaeological or natural origin (natural pitting in the underlying chalk) were identified by geophysical surveys (UID 2144).

A linear ditch or boundary of possible Bronze Age date visible as a cropmark on aerial photographs and crosses the site at the eastern end (UID 2068).

The site lies adjacent to an area that contains Late Neolithic pits, a Late Bronze Age enclosure and later prehistoric boundaries and spreads of worked and burnt flint found in the topsoil (Site 16.2).

Trial trench evaluation has produced a number of undated pits (Trenches 1358 and 1359) and a later prehistoric 'Wessex Linear' boundary ditch (Trenches 1359 and 1360) (Highways England, 2019e). A relatively high density

of burnt flint was recovered from the ploughsoil in Trenches 1358 to 1360. At the north end of the site a gully which corresponded to a linear geophysical anomaly is likely to belong to a field system but is of uncertain date (Highways England, 2019h: Trench 321)

Scheme impact

Following construction the land will revert to agriculture. During construction the land will be utilised as part of the working area for topsoil storage. The proposed stockpile area could impact buried archaeological remains and distribution of burnt flint.

Mitigation

Preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. After construction the stockpile area will be dismantled and the imported fill and protective membrane will be removed, and the site returned to agricultural use.

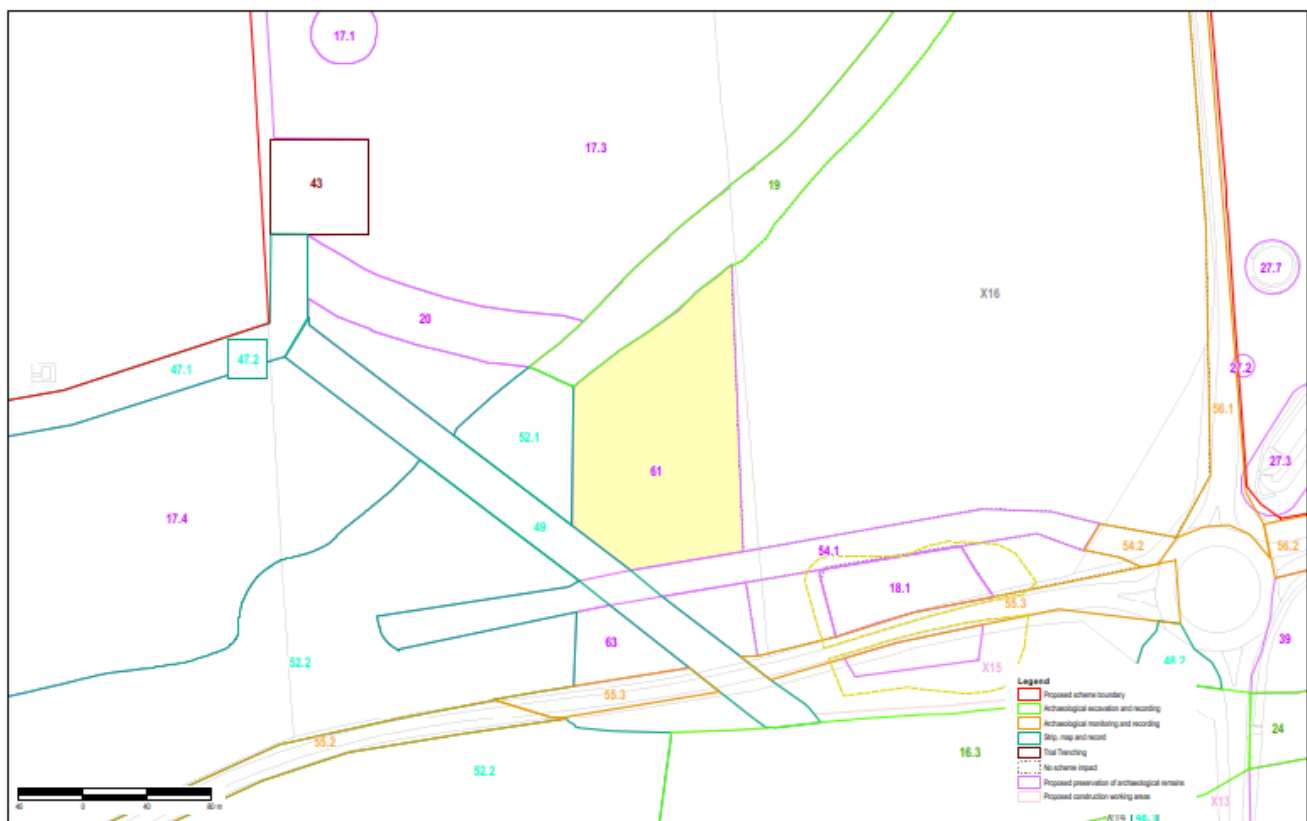
Site 61: Longbarrow Junction - stockpile area east of Main Civils Compound Area. Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement and Wessex linear boundary NW of Winterbourne Stoke crossroads

Designation: Non-designated

Reference IDs: UID 2144/MWI74878
UID 2076
UID 2078/ MWI6405

Location (NGR): 409598, 141504

Site area (approximate): 1.50ha



Description

Numerous linear and curvilinear anomalies were detected by geophysical survey during several phases of work by GSB Prospection in the 1990s/early 2000s (UID 2076).

Possible rectangular enclosure and possible associated linear features identified by aerial photographs and geophysical survey (UID 2078) (GSB Prospection Ltd 1999). May also be associated with south-south-west to north-north-east linear feature to the south (UID 2073). An east to west orientated section of ditch was exposed during stripping for a compound just to the west of the A360 and south of a trackway.

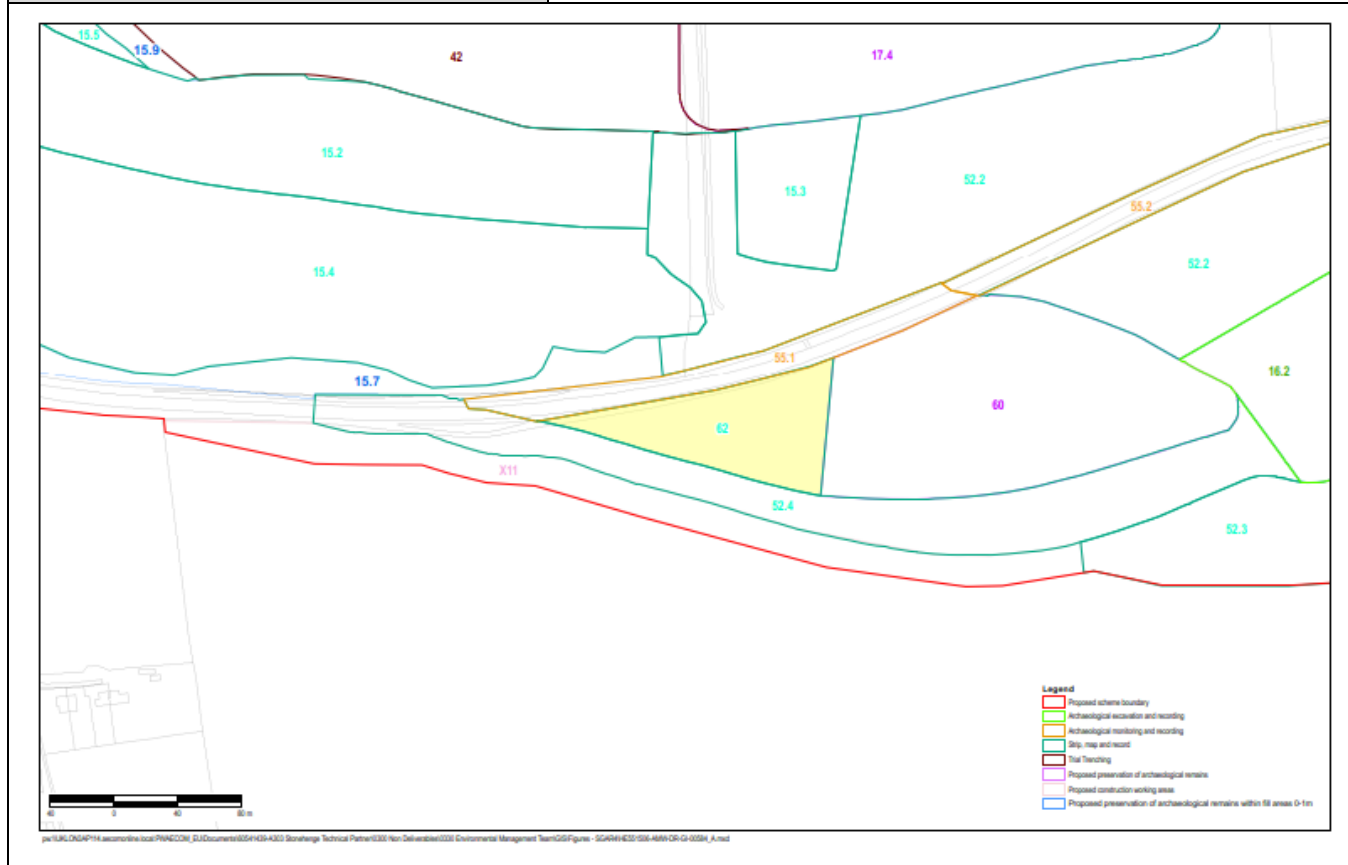
An extensive area containing numerous possible undated pits has been identified by geophysical surveys north of the A303 and immediately west of the A360 (UID 2144). The anomalies maybe archaeological or relate to natural pitting in the underlying chalk bedrock.

A trench evaluation in 2018 recorded a large ditch in Trenches 426 and 429 that is identified as a 'Wessex Linear' (it is also present in Site 20). Other features that were recorded included a tree throw (Trench 428) and modern plough scars (Trench 426) (Highways England, 2019h).

Scheme impact

<p>The proposed stockpile area could impact buried archaeological remains.</p>
<p>Mitigation</p>
<p>Preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. After construction the stockpile area will be dismantled and the imported fill and protective membrane will be removed, and the site returned to agricultural use.</p>

Site 62: Longbarrow Junction - stockpile and woodland area west of Longbarrow Junction southern dumbbell roundabout. Extensive later prehistoric activity: scattered pits, linear boundary, trackway	
Designation:	Non-designated
Reference IDs:	UID 2144/MWI74878 UID 2089/MWI7003, MWI7094, MWI12625, MWI13128, MWI13155 (field systems)
Location (NGR):	409025, 141129
Site area (approximate):	0.75ha



Description

An extensive co-axial field system extends into the area (UID 2089). Enclosures and lynchets are known from aerial photograph analysis (part of the RCHME: Salisbury Plain Training Area NMP project and the English Heritage Stonehenge WHS Mapping Project).

Extensive possible undated pits of archaeological or natural origin (natural pitting in the underlying chalk) were identified by geophysical surveys (UID 2144).

Trial trenching has indicated a low potential for archaeological remains in this area. No archaeological features were found in Trench 308, although two tree hollows produced a small amount of worked and burnt flint (Highways England, 2019h). A deposit of colluvium was found in Trench 1357, 0.34m thick (Highways England, 2019e).

Scheme impact

The area will be used as part of a stockpile area during construction and will then be planted as a new woodland area to integrate the Scheme into the landscape, both of these activities could potentially impact upon archaeological remains.

Mitigation
Strip, map and record will be the preferred method of archaeological mitigation.
Research objectives identified in the Archaeological Research Agenda
<p>SMR and geo-archaeological investigation of Site 62 will allow investigation of the field systems, aiding an appraisal of landscape and settlement development. The following ARA research themes and period-specific questions may be relevant;</p> <ul style="list-style-type: none"> • R.6: Burials and barrows • R.7: Landscape history and memory • R.9: Daily life • EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape? • MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them? • MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out? • MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship? • LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

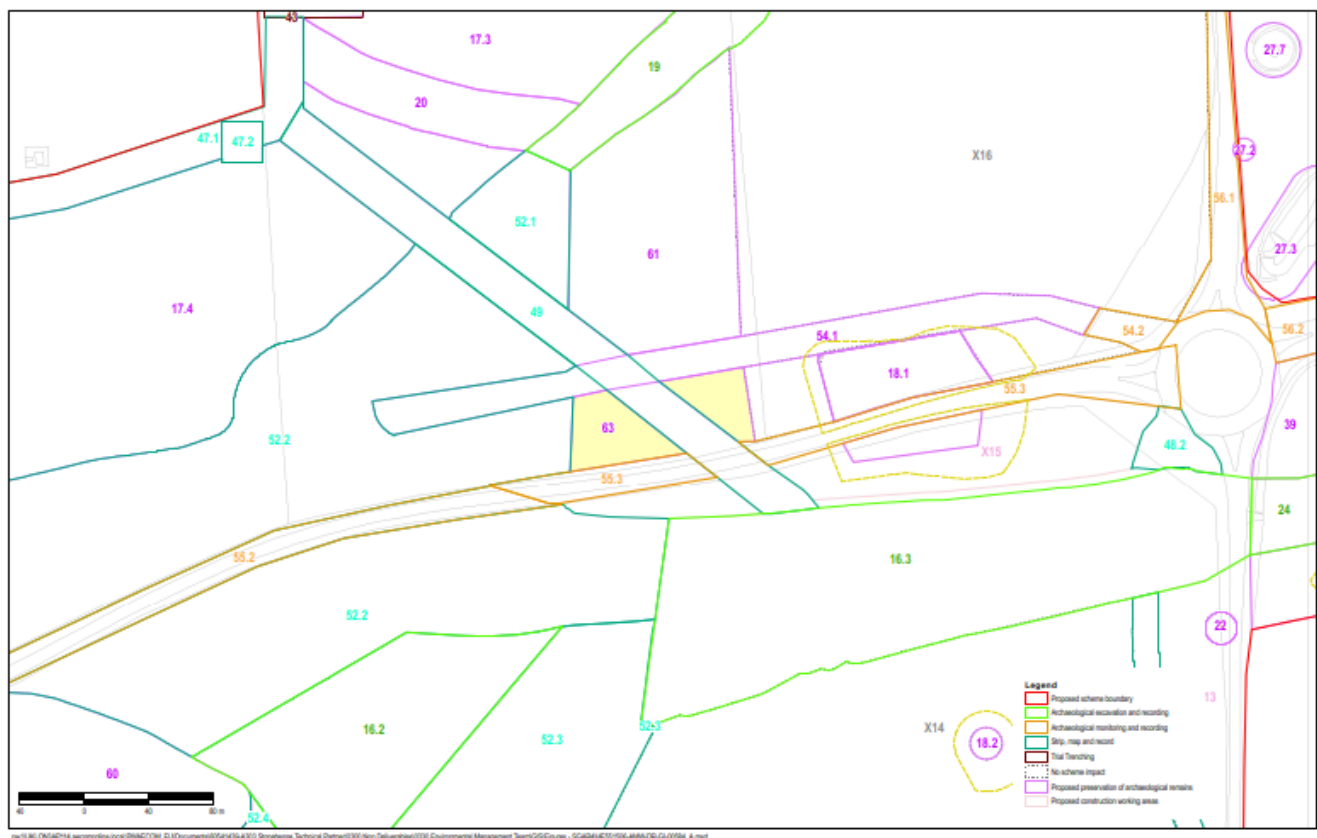
Site 63: Longbarrow Junction - stockpile area southeast of Main Civils Compound Area. Potential for Neolithic and Bronze Age activity associated with Bronze Age settlement and Wessex linear boundary NW of Winterbourne Stoke crossroads

Designation: Non-designated

Reference IDs: UID 2144/MWI74878
UID 2076
UID 2078/ MWI6405

Location (NGR): 409595, 141381

Site area (approximate): 0.36ha



Description

A proposed stockpile area located between the existing A303 and the temporary road to Winterbourne Stoke crossroads. The site is bisected by a utility corridor (Site 49).

Numerous linear and curvilinear anomalies were detected by geophysical survey during several phases of work by GSB Prospection in the 1990s/early 2000s (UID 2076).

Possible rectangular enclosure and possible associated linear features identified by aerial photographs and geophysical survey (UID 2078) (GSB Prospection Ltd 1999). May also be associated with south-south-west to north-north-east linear feature to the south (UID 2073). An east to west orientated section of ditch was exposed during stripping for a compound just to the west of the A360 and south of a trackway.

An extensive area containing numerous possible undated pits has been identified by geophysical surveys north of the A303 and immediately west of the A360 (UID 2144). The anomalies maybe archaeological or relate to natural pitting in the underlying chalk bedrock.

The stockpile area is next to a Bronze Age enclosure (scheduled monument) (Site 18.1) and the eastern

boundary of the stockpile will follow an existing field boundary.

Scheme impact

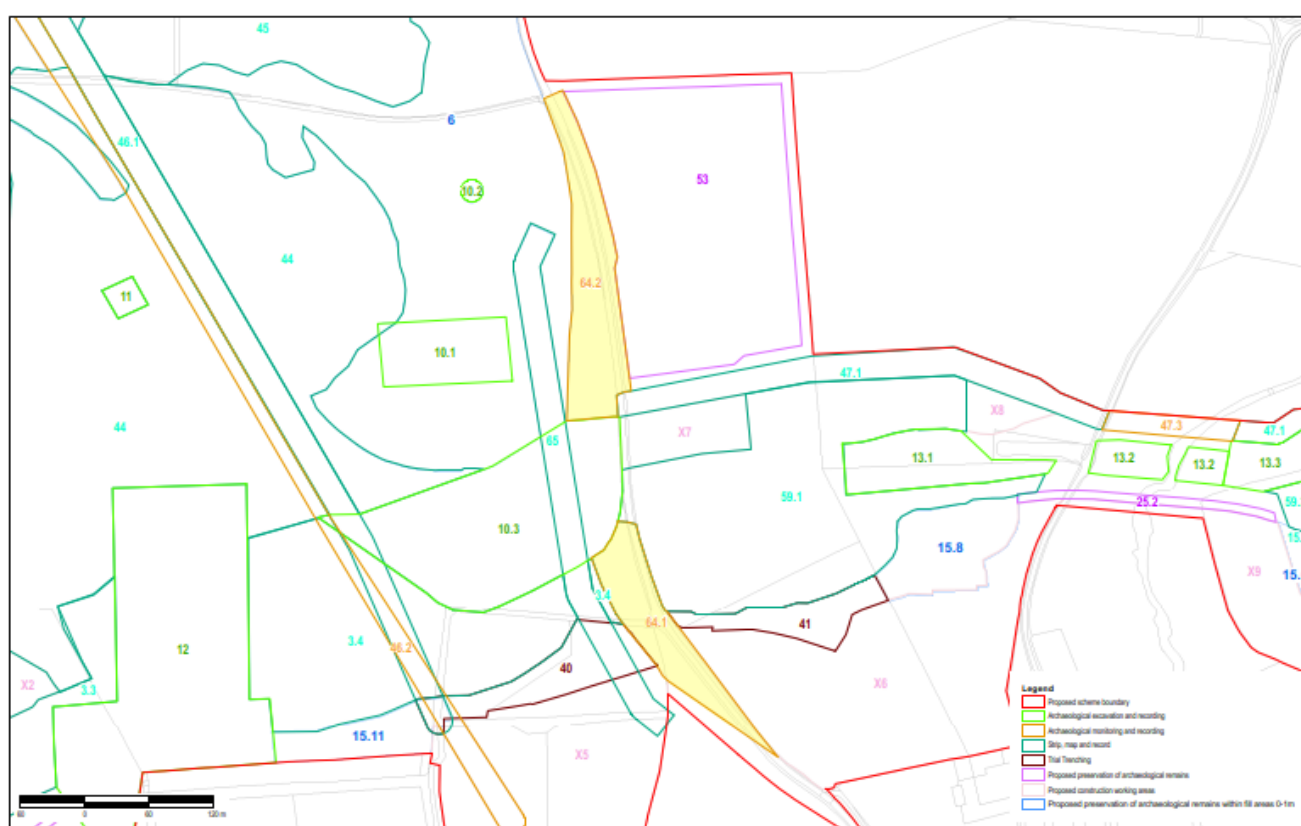
The proposed stockpile area could impact buried archaeological remains.

Mitigation

Preservation of archaeological remains (see section 6.2). The existing topsoil will be retained and covered with a geotextile membrane as identified in the MS, and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. After construction the stockpile area will be dismantled and the imported fill and protective membrane will be removed, and the site returned to agricultural use.

Sites 64.1 and 64.2: Realigned B3083 south of Satellite Compound Area. Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium

Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6250, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267, MWI7223, MWI7261 UID 2038/MWI74875
Location (NGR):	Site 64.1 – 407240, 141640 Site 64.2 – 407289, 141342
Site area (approximate):	Site 64.1: 0.83ha Site 64.2: 1.18ha


Description

Extensive field systems known largely from aerial photographs lie partly within the DCO boundary north and south of the existing A303. These are likely to date from the Later Prehistoric and Roman period, and may be associated with activity at Yarnbury Camp hillfort (UID 1004.01).

A cluster of pit-like features that are distributed across the eastern parts of Parsonage Down (UID 2038).

Archaeological investigations in 2018 to the west detected a field system of east–west orientated lynchets at regular intervals (Site 10.1: Trenches 1052, 1057, 1220 and 1229) (Highways England, 2019d [REP1-049, 050]), and the eastern side of a penannular ring ditch or oval enclosure (Trench 1057). A Middle Neolithic pit (Trench 1219) was found during trenching at Site 10.2 which was rich in finds (prehistoric pottery, struck flint, burnt flint and animal bone).

Scheme impact

Construction of the proposed new realigned B3083 and the conversion of the existing road into a new area of woodland planting could impact upon buried archaeological remains.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record prehistoric and later field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works, including intrusive archaeological investigations.

On either side of the Scheme mainline strip, map and record (SMR) is proposed for the new road alignment, and archaeological monitoring and recording (AMR) will be required where the existing road will be converted into a landscape area.

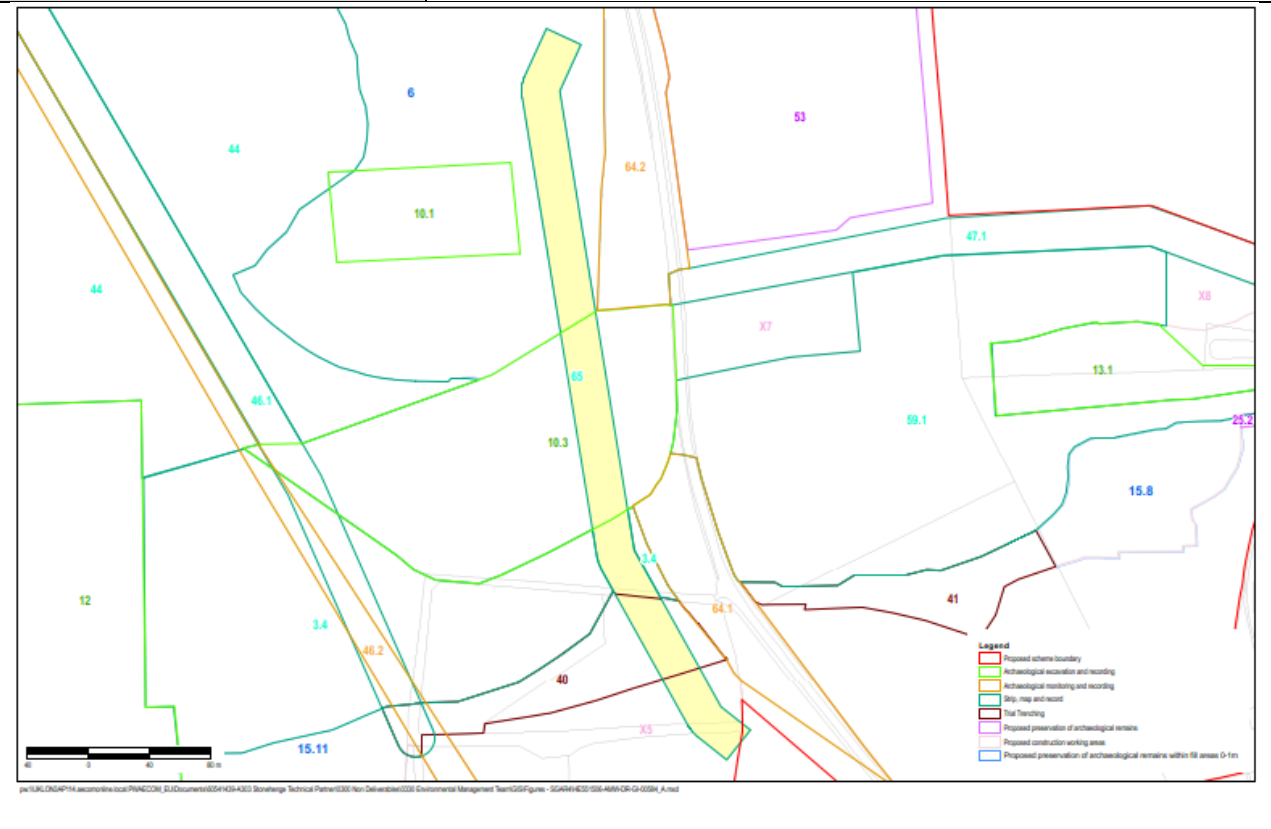
Research objectives identified in the Archaeological Research Agenda

SMR/AMR of Site 64 will allow investigation of the field systems, aiding an appraisal of landscape and settlement development. The following ARA research themes and period-specific questions may be relevant;

- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

Site 65: Parsonage Down East excavated material deposition area - water main diversion B3083 realignment. Undated field systems and lynchets, possible small enclosures; coombe deposits and colluvium

Designation:	Non-designated
Reference IDs:	UID 1004.01/MWI6094, MWI6232, MWI6250, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267, MWI7223, MWI7261 UID 2038/MWI74875
Location (NGR):	407231, 141465
Site area (approximate)	1.24ha



Description

Extensive field systems known largely from aerial photographs lie partly within the DCO boundary north and south of the existing A303. These are likely to date from the Later Prehistoric and Roman period, and may be associated with activity at Yarnbury Camp hillfort (UID 1004.01).

A cluster of pit-like features are distributed across the eastern parts of Parsonage Down (UID 2038). Archaeological investigations in 2018 to the west detected a field system of east–west orientated lynchets at regular intervals (Site 10.1: Trenches 1052, 1057, 1220 and 1229) (Highways England, 2019d [REP1-049, 050]), and the eastern side of a penannular ring ditch or oval enclosure (Trench 1057). A Middle Neolithic pit (Trench 1219) was found during trenching at Site 10.2 which was rich in finds (prehistoric pottery, struck flint, burnt flint and animal bone).

Scheme impact

Construction of the proposed water main diversion will require an easement of approx. 25m which has the potential to impact the remains of part of an extensive field system and lynchets that have been detected to the north of the A303.

Mitigation

The site is part of Parsonage Down LiDAR survey area. Airborne LiDAR will be carried out to record prehistoric and later field systems/lynchets identified by aerial photography. The survey will be programmed prior to the start of any Preliminary Works, including intrusive archaeological investigations. Strip, map and record (SMR) will be carried out at the PW stage within the utility corridor, which is alongside Sites 64.1 and 64.2.

Research objectives identified in the Archaeological Research Agenda

SMR of Site 65 will allow investigation of the field systems, aiding an appraisal of landscape and settlement development. The following ARA research themes and period-specific questions may be relevant;

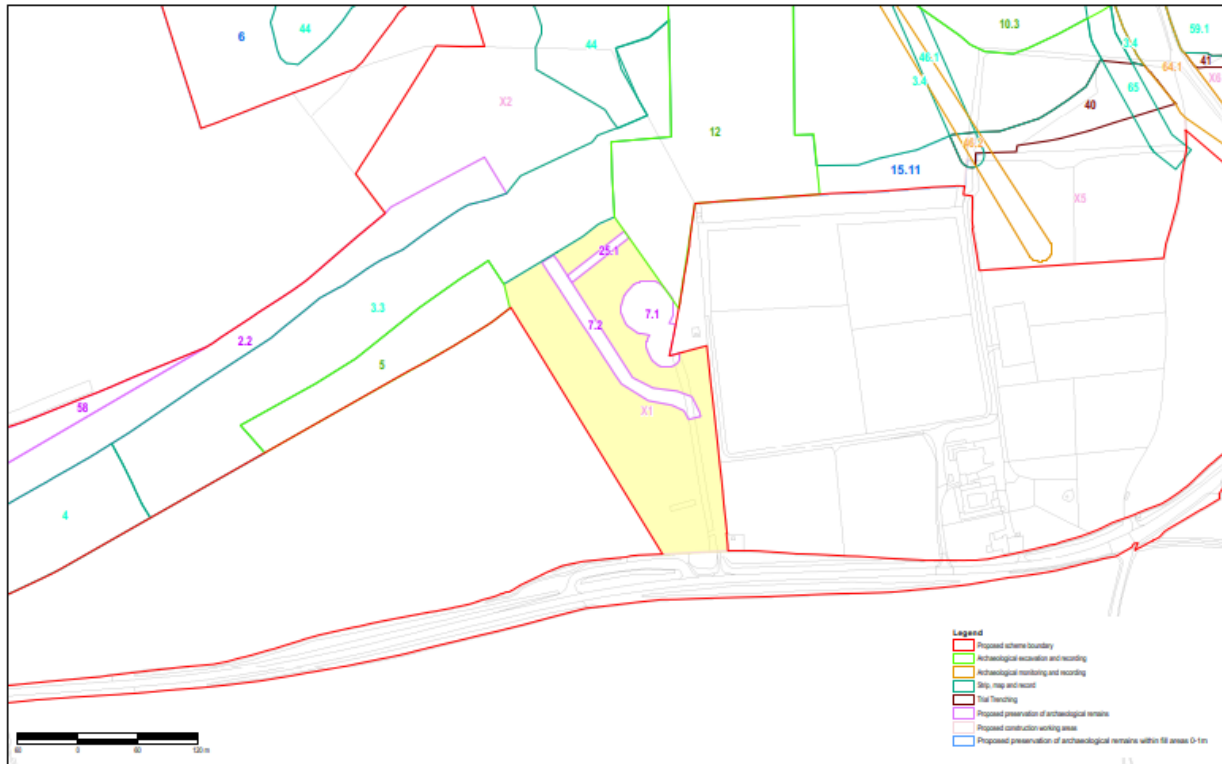
- R.6: Burials and barrows
- R.7: Landscape history and memory
- R.9: Daily life
- EBA.4: What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- MBA.2: What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- MBA.3: What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- MBA.4: How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- RB.3: Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- LM.2: What was the nature of medieval agriculture and animal husbandry in the locale, and how did it impact on earlier monuments and their visibility? Was there an extension of arable agriculture at the expense of downland grazing?

D.2 Areas excluded from archaeological mitigation

X1

Proposed working area.

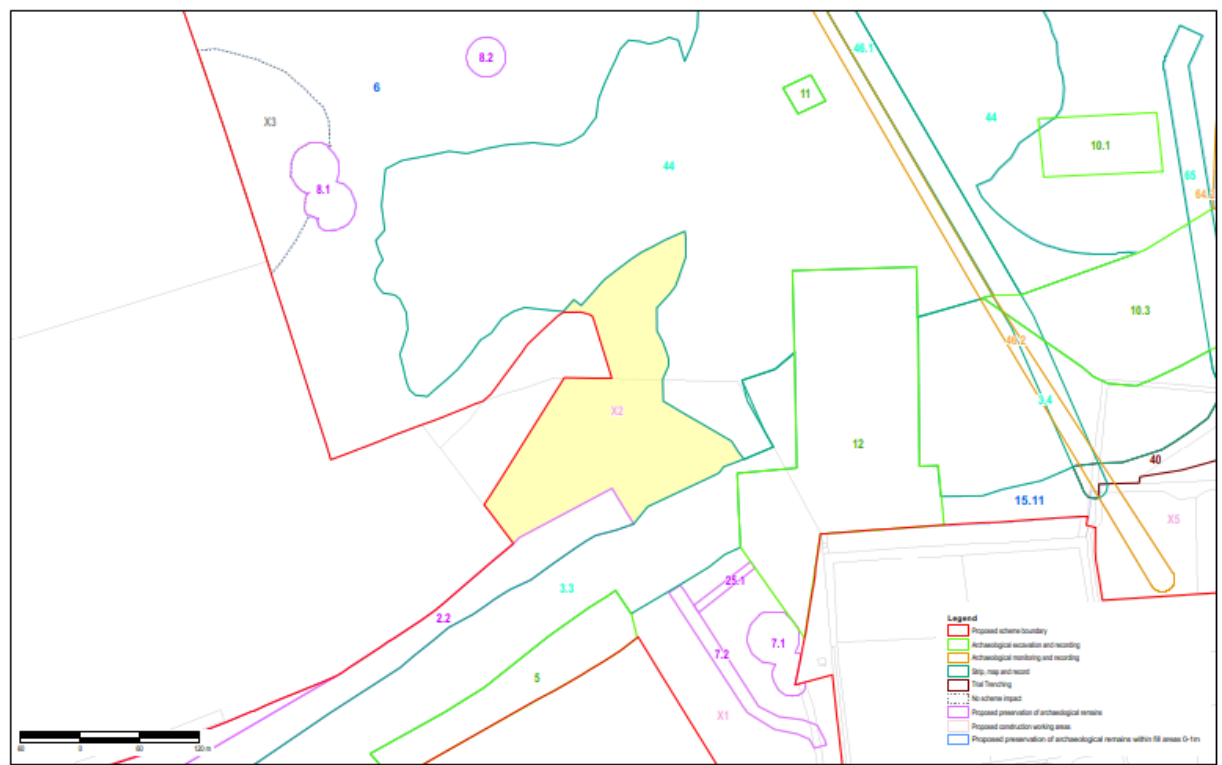
Land south of Green Bridge No.1, land to be returned to agricultural use.



X2

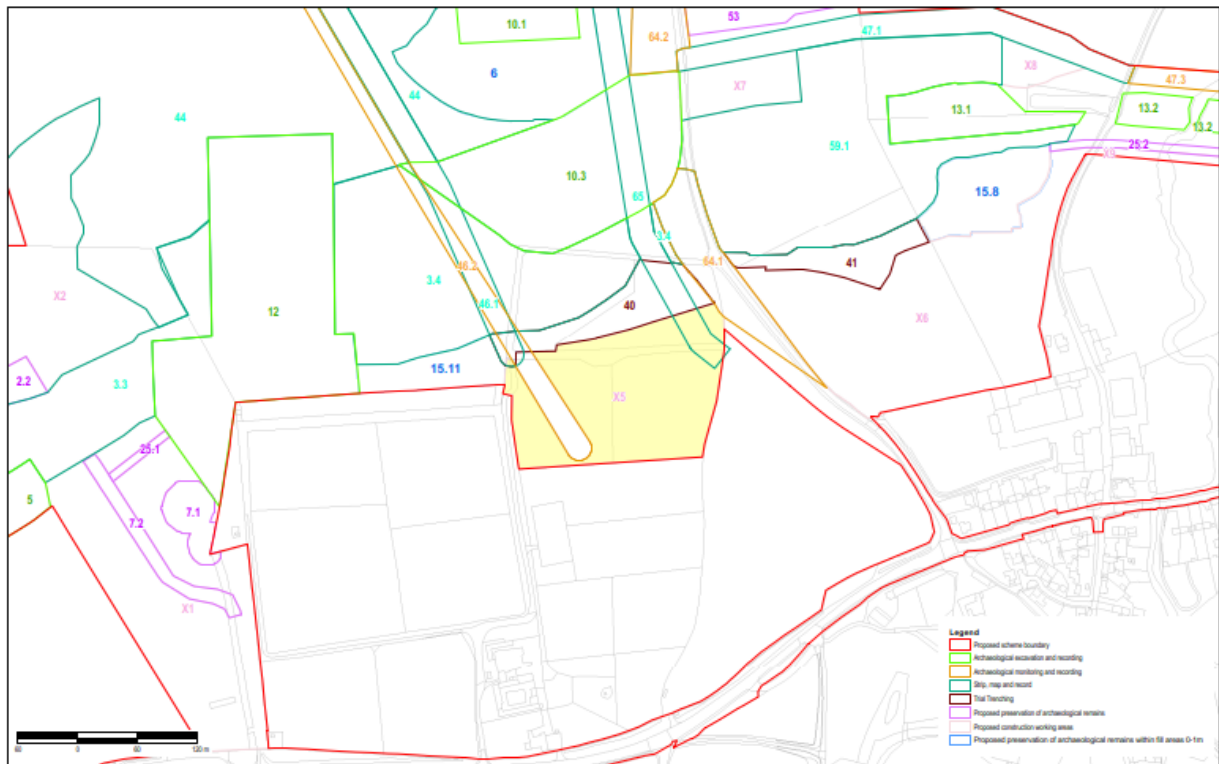
Proposed working area.

Landscape area: species rich chalk grassland but with two 1m high bunds.

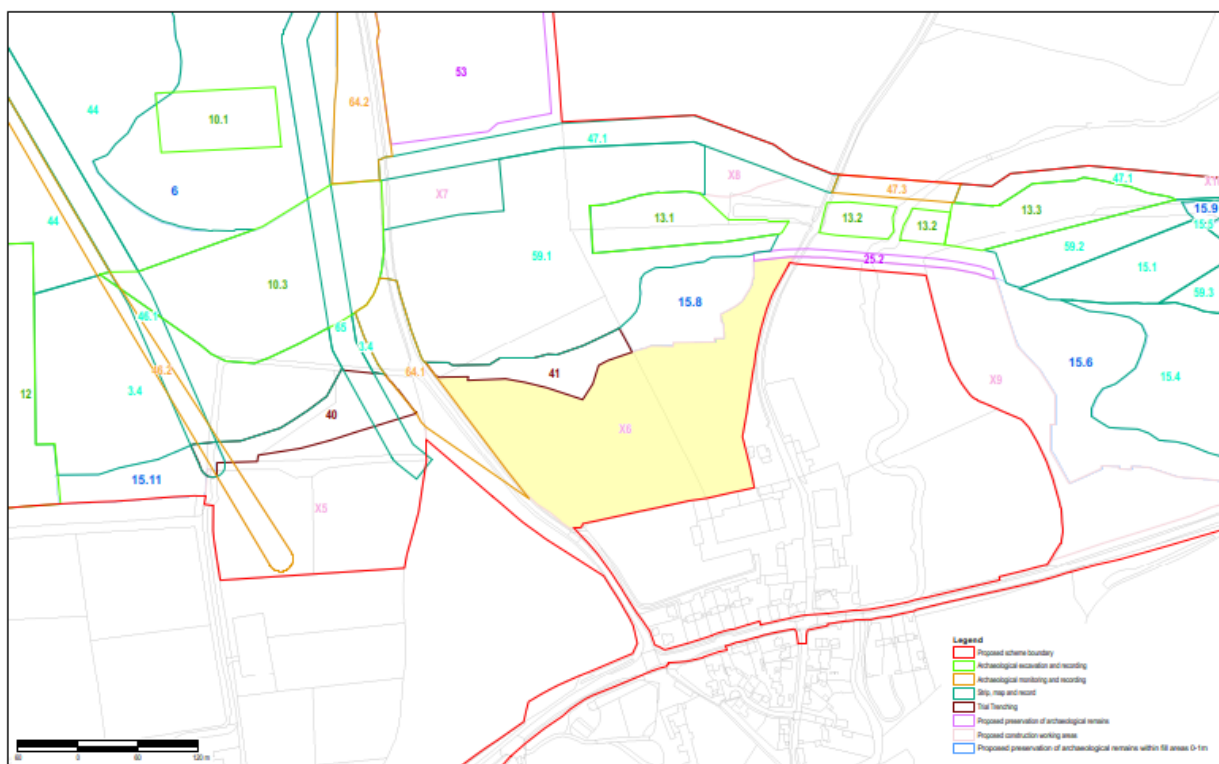


<p>X3</p>	<p>Outside construction working area - no scheme impact. Landscape area: species rich chalk grassland.</p>
<p>Legend</p> <ul style="list-style-type: none"> Proposed scheme boundary Archaeological excavation and recording Archaeological monitoring and recording Strip, map and record No scheme impact Proposed preservation of archaeological remains Proposed construction working areas Proposed preservation of archaeological remains within 10 metres 0-1m 	
<p>X4</p>	<p>Outside construction working area - no scheme impact. Land to be returned to agricultural use.</p>
<p>Legend</p> <ul style="list-style-type: none"> Proposed scheme boundary Archaeological excavation and recording Archaeological monitoring and recording Strip, map and record No scheme impact Proposed preservation of archaeological remains Proposed construction working areas Proposed preservation of archaeological remains within 10 metres 0-1m 	

X5 Proposed working area.
Land to be returned to agricultural use.

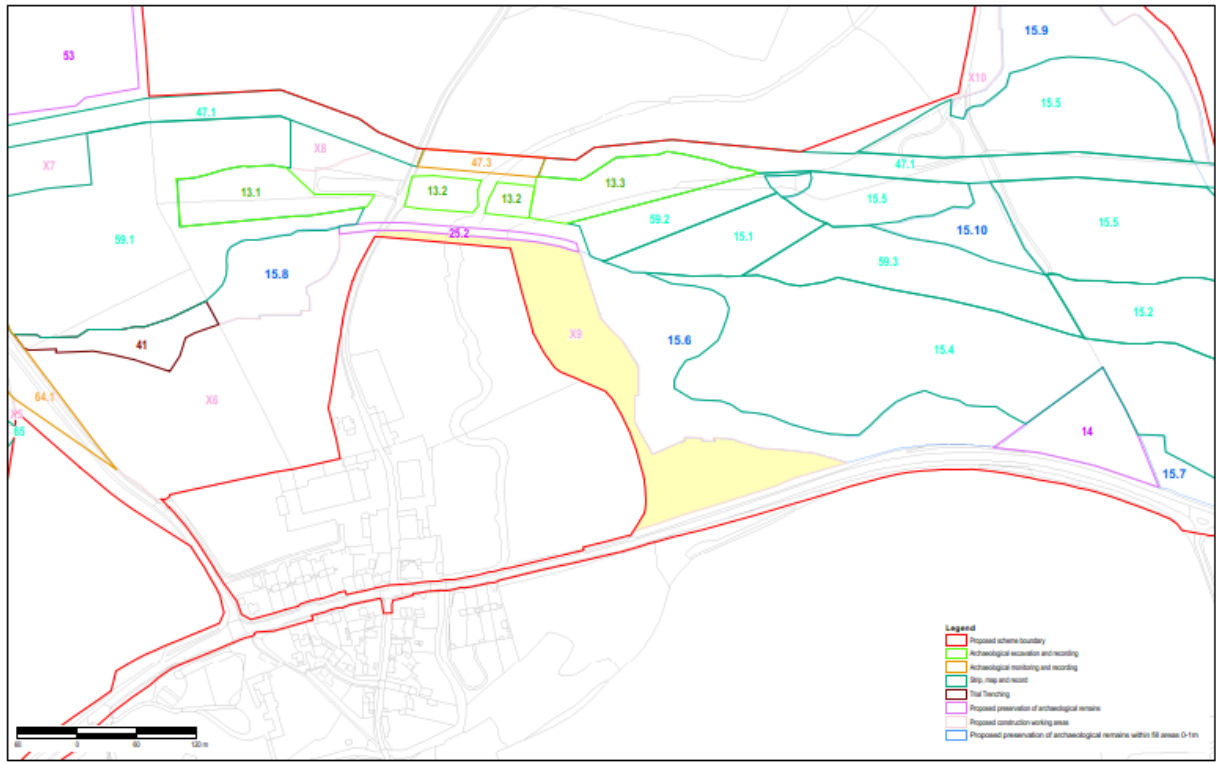


X6 Proposed working area.
Land to be returned to agricultural use.



X9

Proposed working area.
Landscape area next to highway: species rich chalk grassland.



X10

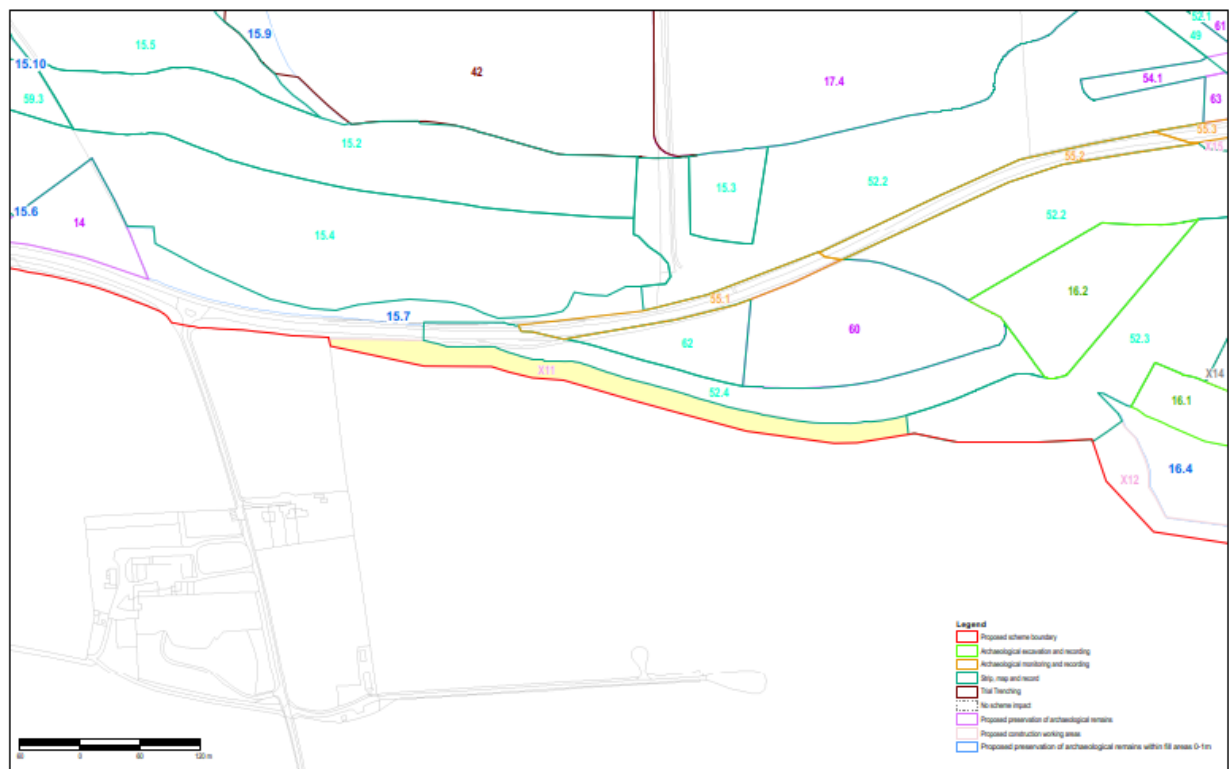
Proposed working area.
Land to be returned to agricultural use.



X11

Proposed working area.

Land to be returned to agricultural use.

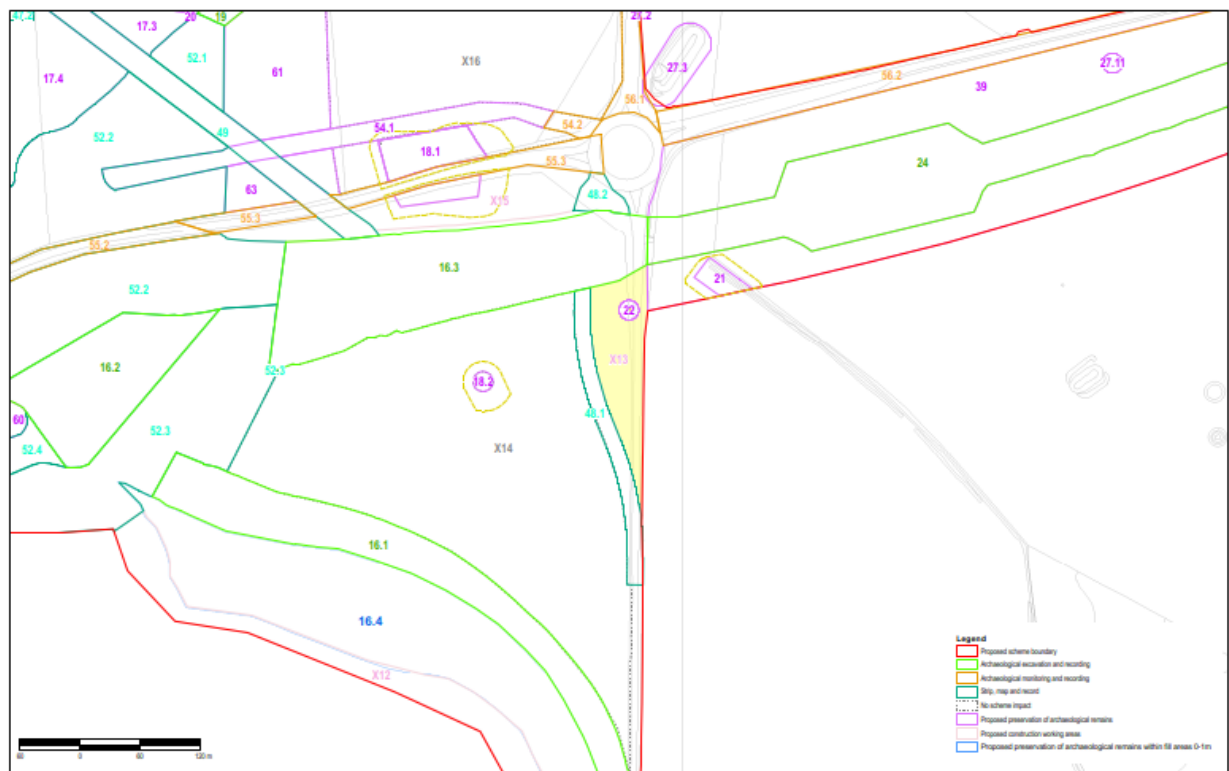


X12 Proposed working area. Species rich chalk grassland next to link road.



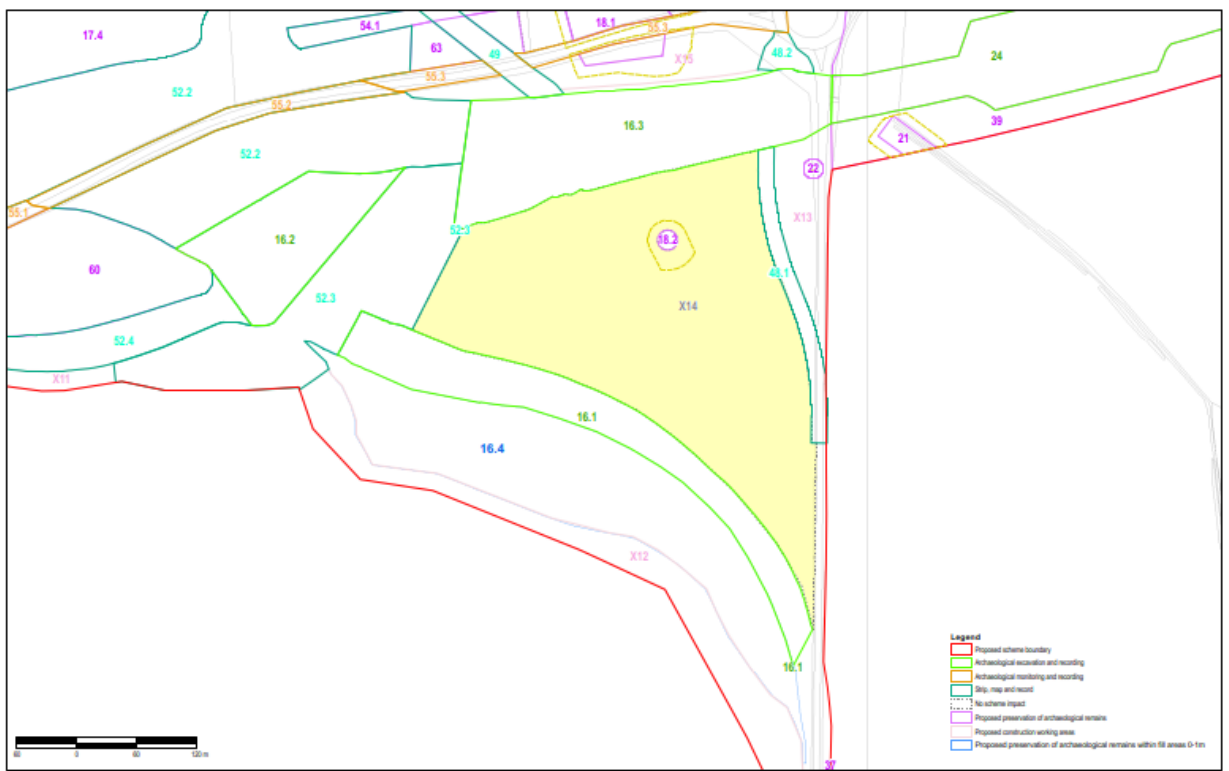
X13 Proposed working area.

Land to be returned to agricultural use.



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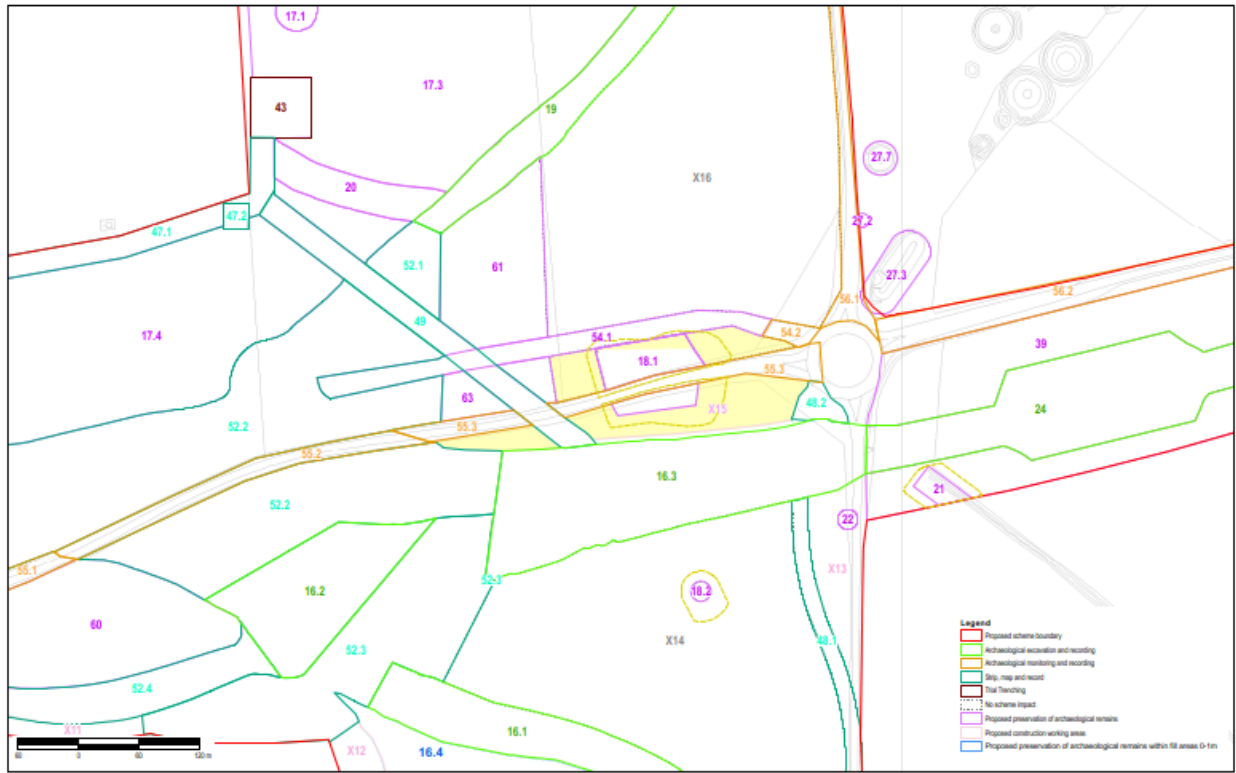
**X14 Outside construction working area - no scheme impact.
Land to be returned to agricultural use.**



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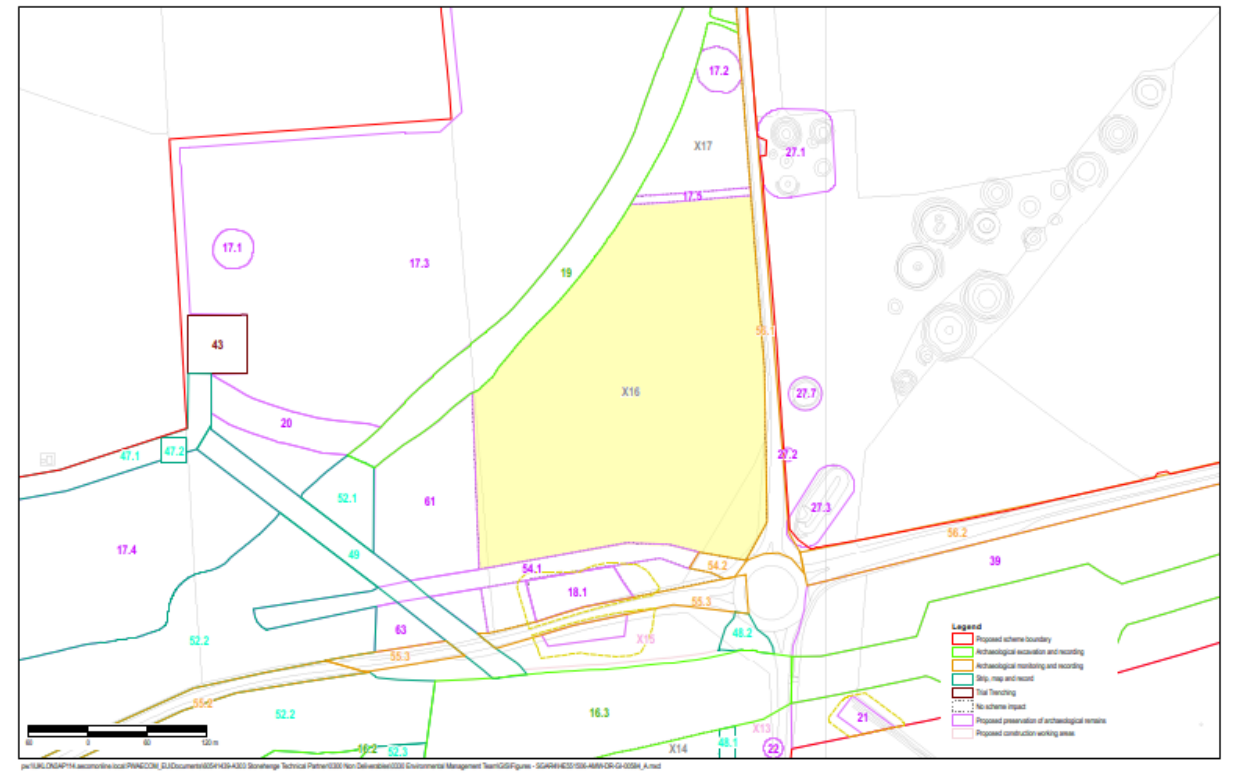
X15 Proposed working area.

Species rich chalk grassland next to link road.



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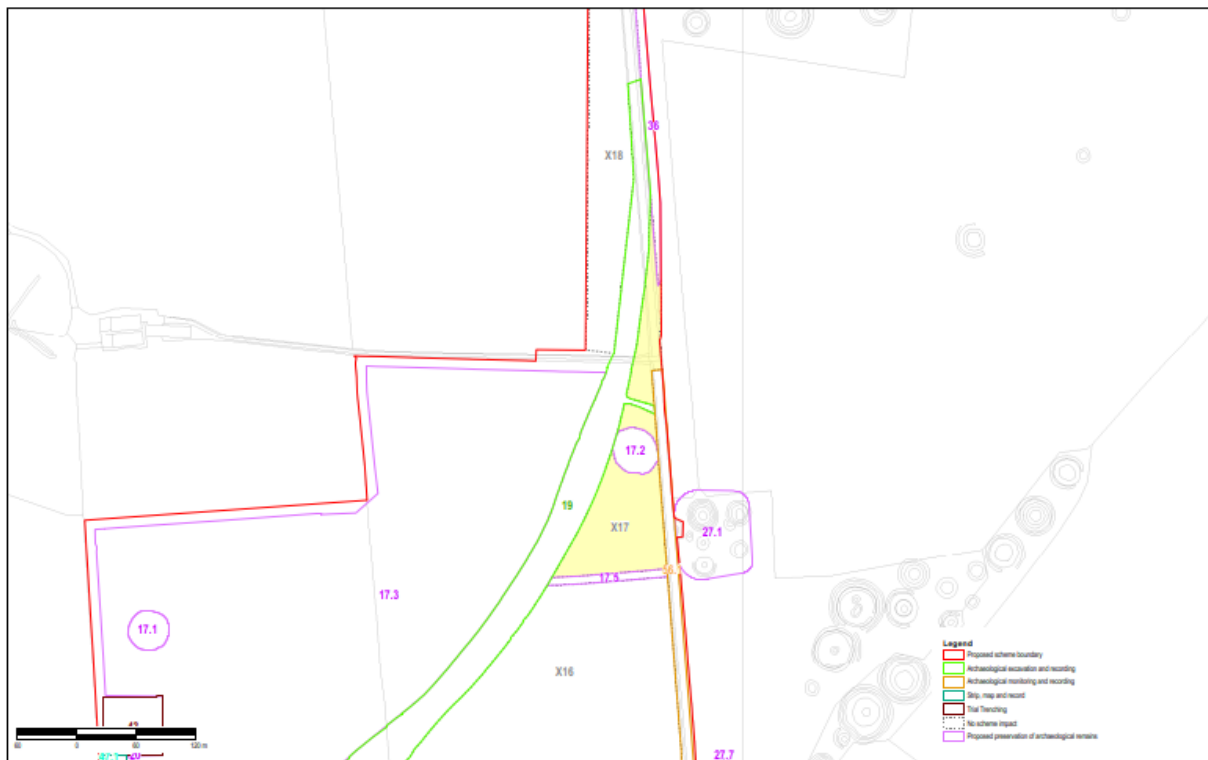
X16 Outside construction working area - no scheme impact. Land to be returned to agricultural use.



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X17 Outside construction working area - no scheme impact.

Land to be returned to agricultural use.

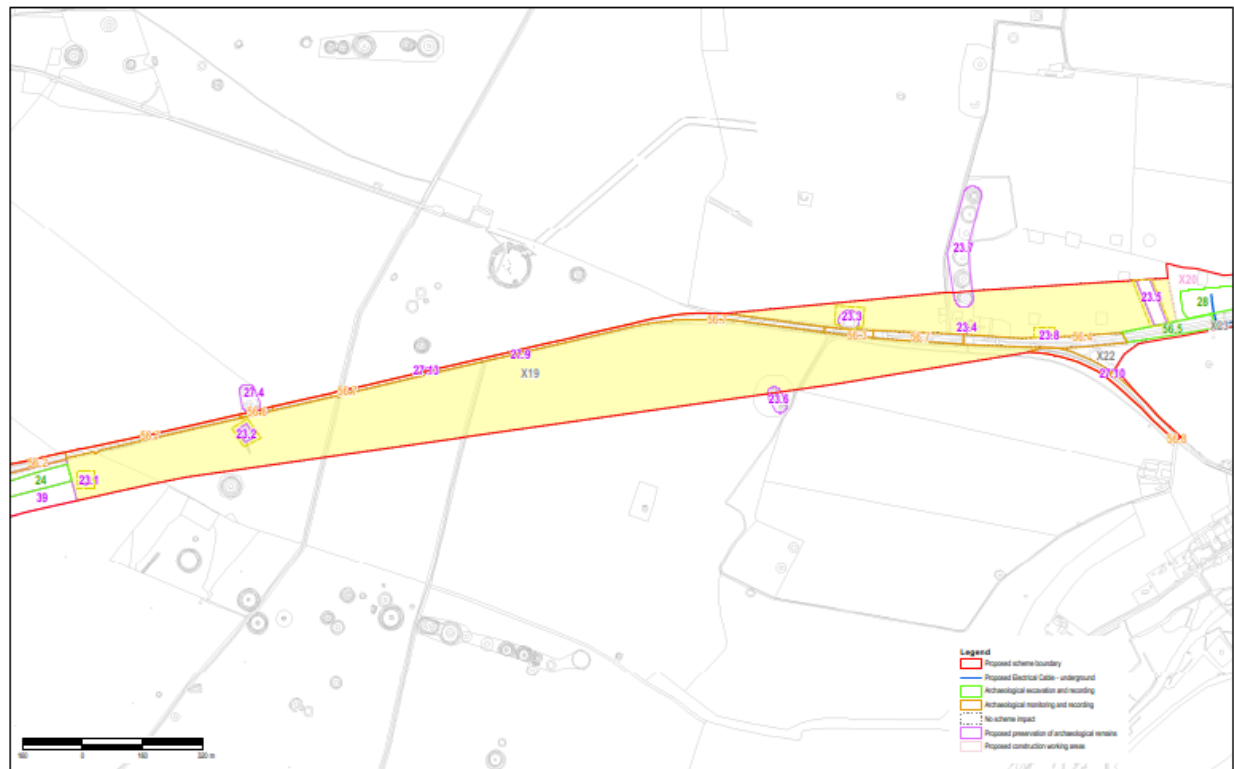


**X18 Outside construction working area - no scheme impact.
Land to be returned to agricultural use.**



X19 Outside construction working area, - no scheme impact.

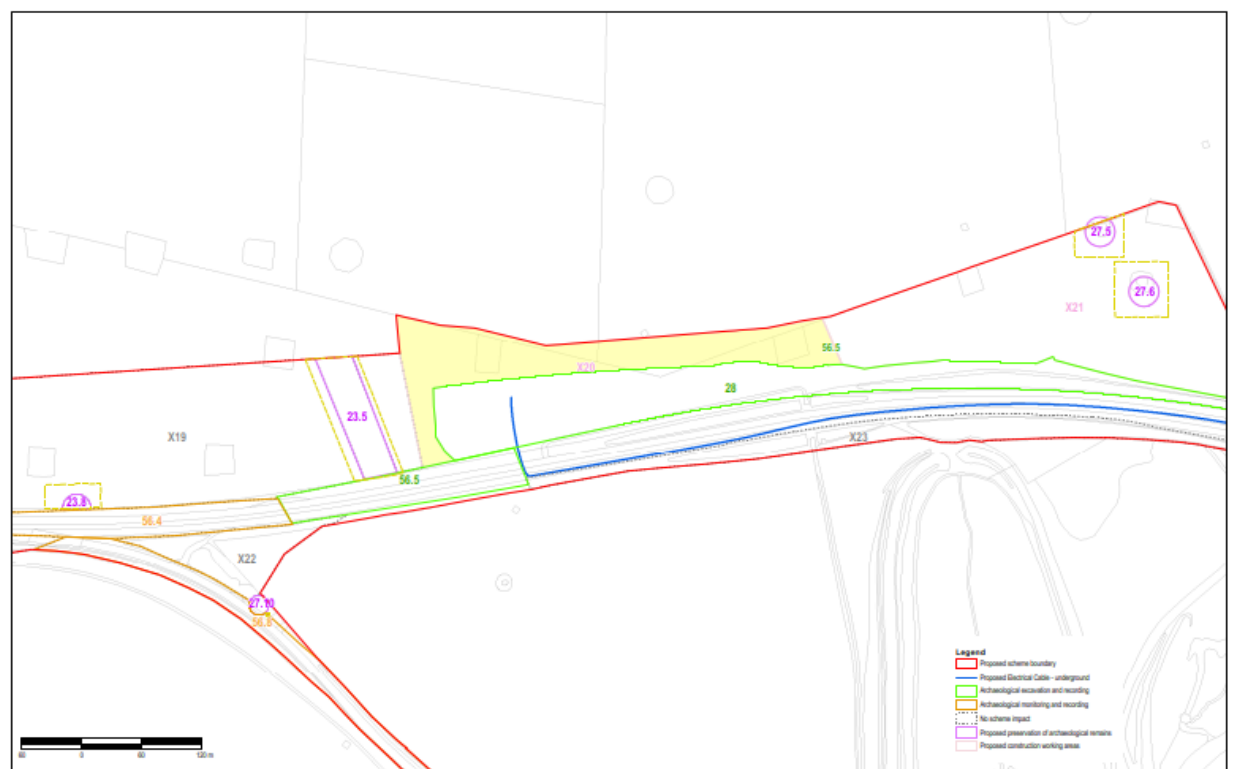
Land to be returned to agricultural use (western and eastern sides Open Access Land).



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X20

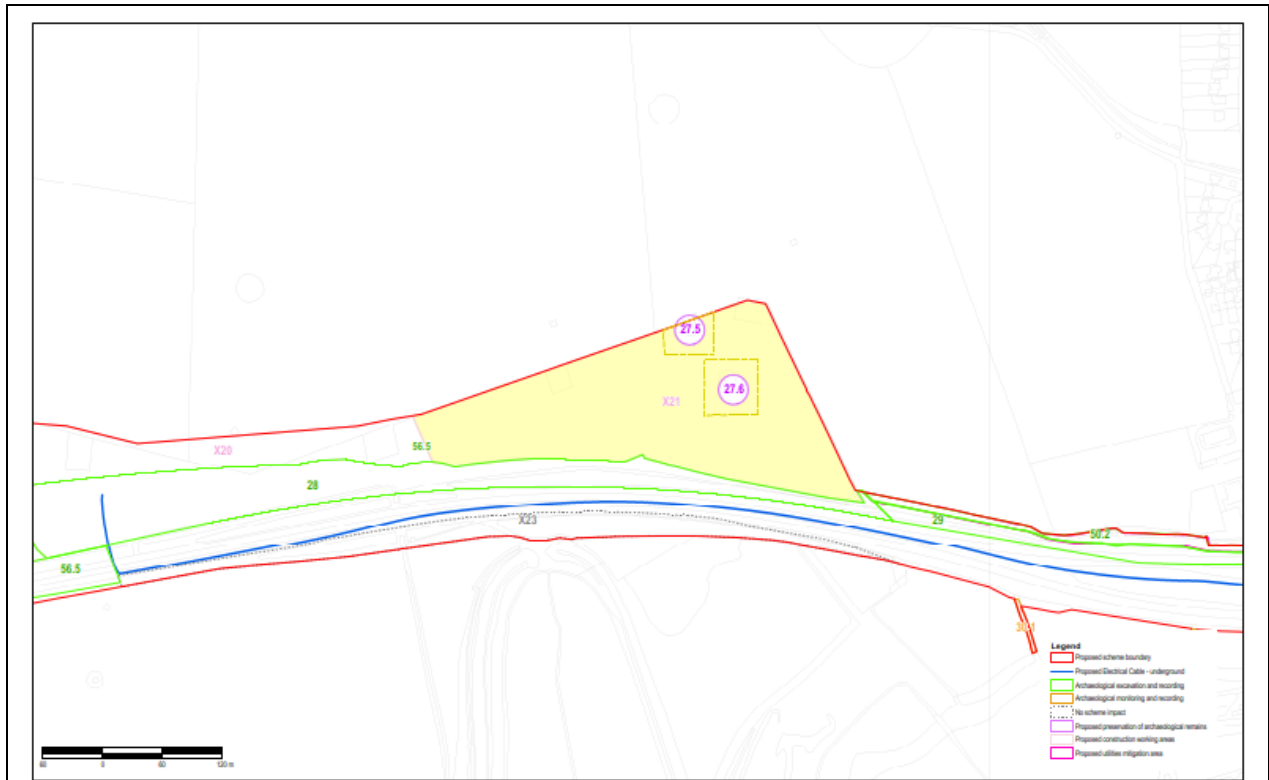
**Proposed working area.
Species rich chalk grassland next to cut and cover**



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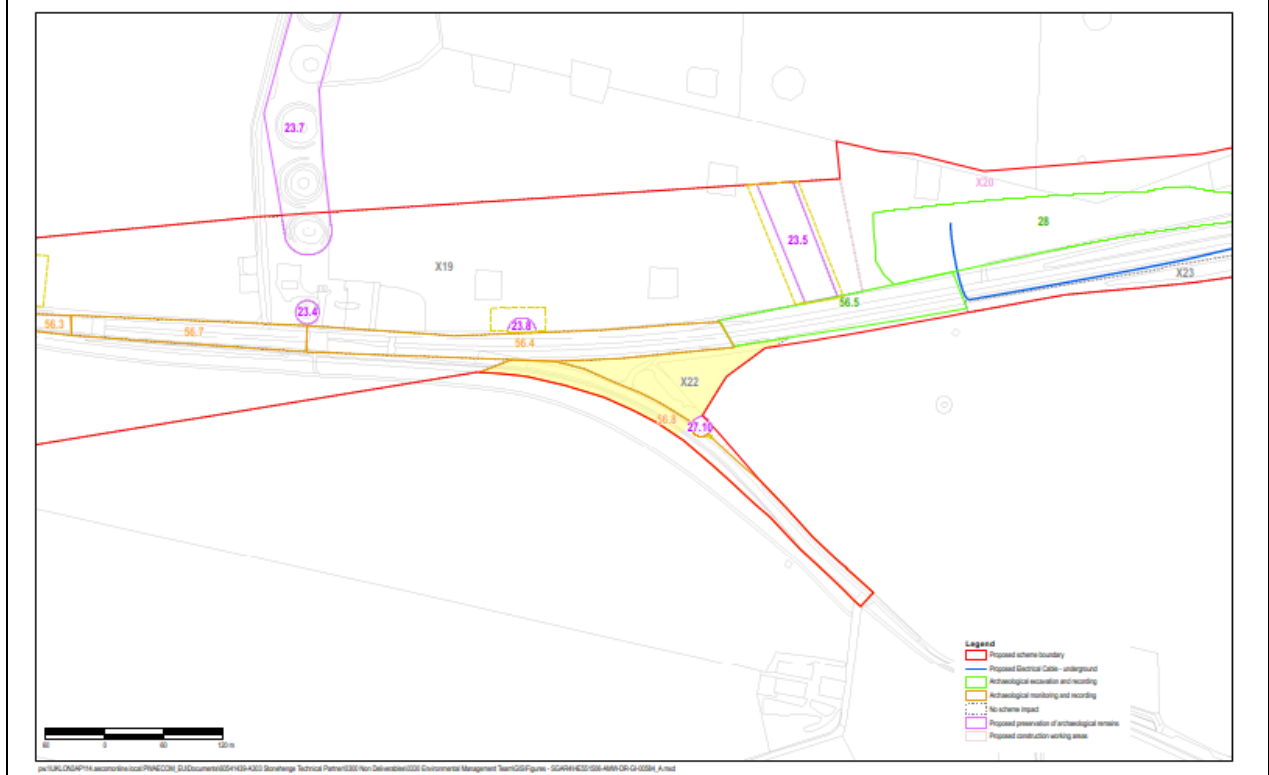
X21

**Proposed working area.
Land to be returned to agricultural use.**



X22

**Outside construction working area - no scheme impact.
Retained woodland trees and hedges alongside highway boundary.**

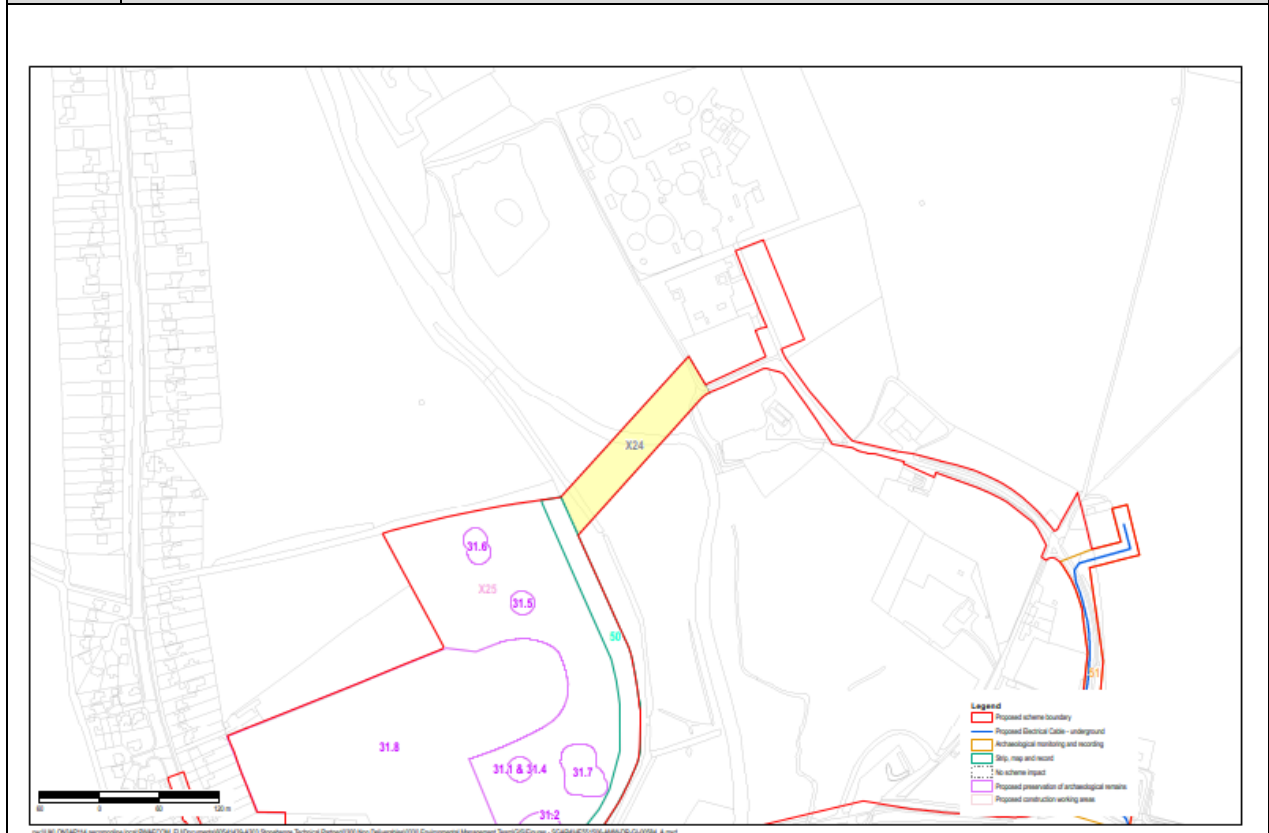


X23

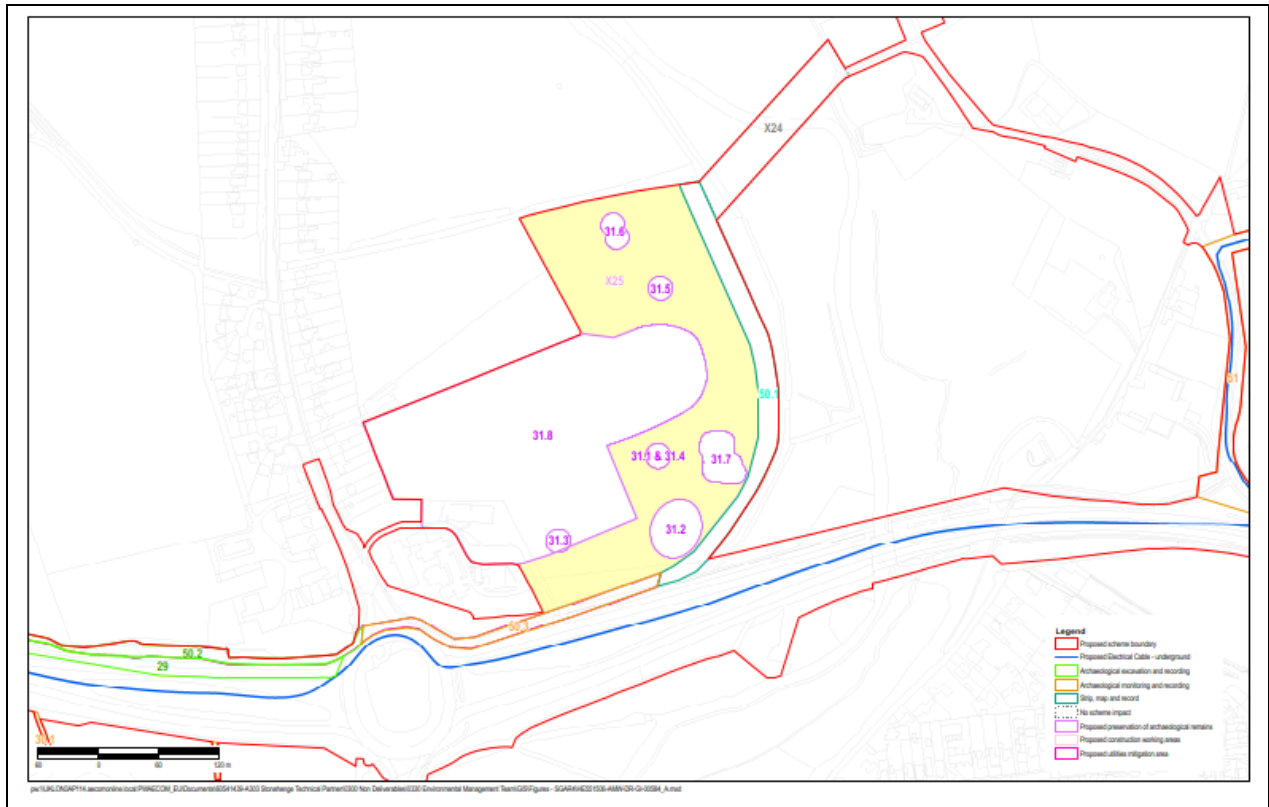
**Outside construction working area - no scheme impact.
Retained woodland trees and hedges alongside highway boundary.**



X24 Outside construction working area - no scheme impact.



X25 Proposed working area.
Land to be returned to agricultural use.



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Appendix E Public Archaeology and Community Engagement (PACE) Strategy

E.1 Outline PACE Strategy

E.1.1 Summary

- E.1.1.1 Given the exceptional significance of Stonehenge and its landscape and the anticipated high level of public interest, the A303 Stonehenge Public Archaeology and Community Engagement Strategy (PACE strategy) will aim to collaboratively interpret and communicate the results of archaeological investigation and recording to a wide audience. This will include both local communities directly impacted by the Scheme, that is, people living and working within the Scheme corridor; visitors and travellers passing through it; and wider national and international audiences.
- E.1.1.2 The PACE strategy will aim to deliver a lasting legacy from the archaeological investigation and recording works undertaken for the Scheme. The objective will be to provide information to the widest variety of audiences, ranging from those with a strong interest in archaeology and heritage to those with no specific involvement.

E.1.2 Introduction

- E.1.2.1 This Public Archaeology and Community Engagement strategy presents the overarching strategy for the outreach and engagement programme associated with the proposed A303 Amesbury to Berwick Down road improvement scheme.
- E.1.2.2 The PACE strategy may incorporate site-based activities, initiatives undertaken during ongoing excavations, and activities to be undertaken throughout the post-excavation phase.

E.1.3 Planning policy, public archaeology and community engagement

- E.1.3.1 The National Policy Statement for National Networks (DfT, 2014) notes that Guidance on written schemes of investigation is set out in the PPS5 Practice Guide and its successor documents.
- E.1.3.2 The National Planning Policy Framework notes that that planning should 'conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations' (MHCLG, 2019, para. 184).
- E.1.3.3 Planning Practice Guidance on conserving and enhancing the historic environment notes that 'Part of the public value of heritage assets is the contribution that they can make to understanding and interpreting our past. So where the complete or partial loss of a heritage asset is justified, the aim then is to capture and record the evidence of the asset's significance which

is to be lost, interpret its contribution to the understanding of our past, and make that publicly available' (MHCLG, 2018, para. 003).

E.1.4 Aims and objectives

E.1.4.1 The aim of the PACE Strategy will be to raise awareness of the significance of the WHS landscape, and encourage the enjoyment, interaction and engagement with the archaeological process and discoveries arising from the mitigation works undertaken along the proposed A303 Amesbury to Berwick Down route corridor, including the initial assessment work for route selection and the evaluation phase of fieldwork.

E.1.4.2 The objectives of the PACE programme will be:

- Engagement and appreciation: Encouraging engagement with and appreciation of the exceptional significance of Stonehenge and its landscape;
- Knowledge about archaeology along the Scheme corridor: Advancing public understanding and stimulating public curiosity about archaeology along the Scheme corridor with reference to the WHS and its OUV;
- Public understanding of developer-led archaeology: Making the archaeological process more understandable to the public, particularly in relation to a major road scheme;
- Accessible learning: Creating accessible learning opportunities for people to be involved in actively discovering more about archaeology;
- Disseminating fieldwork information: Disseminating information about archaeology along the A303 Amesbury to Berwick Down scheme to schools, the local community, local societies and groups with a keen interest in history and archaeology, and the academic community;
- Sharing research: Showcasing the research impact of development-led archaeological fieldwork and how it can inform our understanding of the past with local, national and international audiences;
- Inclusive participation, oral histories and intangible heritage: Encouraging engagement with those that may not normally engage with archaeology or local history by collaborating to link the Scheme's mitigation programme to record local and visitor histories and identities, heritage values and community stories; and
- Protection and responsibility: Working in partnership with participants to foster a sense of appreciation and stewardship of the WHS and the archaeology and heritage of the wider area.

E.1.4.3 The PACE strategy is informed by a number of existing frameworks for archaeology and cultural heritage outreach activities in the WHS and the wider area, including the Interpretation, Learning & Participation Strategy (English Heritage, 2011b) and the 2015 Stonehenge and Avebury WHS Management Plan (Simmonds and Thomas, 2015).

- E.1.4.4 The PACE programme will aim to mesh with existing and ongoing heritage outreach and interpretation programmes led or coordinated by English Heritage, the National Trust and the Stonehenge and Avebury World Heritage Site Steering Committees and WHS Partnership Panel. It will complement other local engagement activities led by local heritage organisations and museums in Wiltshire and the South West. Where possible, it will link in to existing local and regional lecture series, STEM outreach projects, and arts and museum programmes.
- E.1.4.5 The PACE programme will look to work with partner organisations to develop the heritage legacy and benefits as the Scheme develops, tying in to the priorities set out within the 2015 WHS Management Plan.

E.1.5 Project location

- E.1.5.1 The PACE programme will address the WHS as a whole (including the Avebury part of the WHS) but will be physically focussed on the Stonehenge landscape and the route of the proposed A303 Amesbury to Berwick Down scheme. However, it is anticipated that it will involve an extensive and accessible digital and social media element. This will aim to reach out to as wide a public as possible, given the national and international interest of the WHS.

E.1.6 Methodology

- E.1.6.1 The PACE programme will be developed in close consultation with HMAG and ASAHRG, and the Stonehenge and Avebury World Heritage Site Steering Committees and WHS Partnership Panel. Other potential consultees may include representatives of museums, Wiltshire Council Arts and Community Services, community networks, civic fora and local archaeology and history groups.
- E.1.6.2 The PACE strategy, programme and resourcing will be required to be in place at the beginning of the PW stage. Accordingly, the scoping and consultation stage will be completed in advance of commencement of the PW stage.
- E.1.6.3 An inception meeting will be held to confirm the project timetable and discuss and clarify any issues relating to the proposed approach, methodology and schedule.
- E.1.6.4 During the scoping and consultation stage, consultees and community groups will be contacted to create interest in and awareness of the project, seek inputs on what aspects interest them and could potentially benefit them most.
- E.1.6.5 A range of activities will be developed, selected based on advice from consultees and community groups.
- E.1.6.6 Activities will be undertaken, with a schedule developed which reflects the Scheme programme, and, where possible, links to local, regional and national arts, museum, STEM and heritage events programming.
- E.1.6.7 Monitoring and evaluation of PACE programme outcomes will be undertaken and reported upon.

E.1.7 Audiences and participation

E.1.7.1 Local heritage groups will be approached for advice and input, and may be invited to participate, if interested. The PACE programme will be open to suggestions from the HMAG, ASAHRG, the Stonehenge and Avebury World Heritage Site Steering Committees and WHS Partnership Panel and the local community. The programme will form part of the Project's communication planning/strategy.

E.1.7.2 The PACE programme will aim to engage with:

- Local communities, working in partnership with existing community organisations;
- Members of local archaeology and history societies, civic societies;
- Communities concerned with sacred and intangible heritage;
- Council for British Archaeology (CBA) Young Archaeology Clubs, CBA regional groups;
- Primary and secondary school pupils and teachers;
- Higher education students, including archaeology students;
- Academic archaeologists and members of learned societies;
- Interest-focused and period-focused archaeological research groups;
- Visitors to the Stonehenge landscape and people travelling through the landscape; and
- Interested people on a regional, national and international basis.

E.1.8 Outline of activities

E.1.8.1 Opportunities for public archaeology will be arranged to view work in progress and to highlighting the heritage-led aspects of the Scheme, providing a 'behind-the-scenes' insight and showcasing archaeological discoveries arising from the investigations where safe and practicable.

E.1.8.2 Opportunities for engagement and outreach could involve local, regional and national talks to educational establishments, community heritage groups, environmental interest groups, learned societies and parish/town councils, as well as an oral history project and an artist in residence.

E.1.8.3 A professional specialist heritage interpreter role will be appointed to enhance public understanding and communication of the archaeological mitigation programme, adding value by drawing out key narratives and ideas and providing engaging material and approaches.

E.1.8.4 Given the exceptional significance of Stonehenge and its landscape and the anticipated high level of public interest, it will be important to reach national and international audiences, for example via digital platforms and evocative and exciting documentary films.

E.1.8.5 It is anticipated that the PACE programme would involve a range of free heritage activities. These will be fully scoped but could include:

- Live, local, site- based activities
 - Guided site tours and site open days. These will be subject to health, safety and access considerations.
 - Guided walks and talks.
- Live, local, hands-on participative and learning events
 - Demonstrations and/or practical workshops on past crafts, such as flint knapping, pottery making, weaving and food preparation.
 - Living history events appropriate to the periods and events reflected in the archaeological remains identified in mitigation fieldwork.
 - Volunteer involvement in off-site post-excavation, such as finds cleaning, processing and recording, subject to regulations regarding the use of volunteers on development-led archaeological projects.
 - Pop-up exhibitions and artefact handling sessions.
- Display and interpretation
 - Provision of information panels on the archaeological excavations including details of the excavations and photographs of finds; panels will be regularly updated.
 - Temporary exhibitions, interpretation and displays organised in partnership with local, regional and, if appropriate, national museums.
 - Permanent or semi-permanent displays/information along the Scheme (subject to permissions), to allow visitors to the area, as well as residents, to appreciate the archaeological heritage of the A303 corridor.
- Education and learning
 - Curriculum-linked, hands-on, classroom-based archaeology sessions aimed at involving children and teachers in their local archaeology and heritage. Teaching materials including handouts, quizzes and session contents. A training session at each of the schools would provide teachers with guidance and support in conjunction with the Historic England Heritage Schools Programme. The sessions would introduce the learning resources and provide support so that the teachers

can fully engage with the information provided to ensure they are proactively used across a variety of subject areas. This will help to encourage and promote the ongoing legacy of the project.

- Public talks and lectures, ranging from local talks to community organisations, local archaeology and history societies, to talks at regional, national and international conferences. Some of these talks may be recorded and posted online to enable a wide audience to access them.
- Oral history projects
 - Recording/research exploring attachment to place.
 - Capturing memories of farming and landscape, previous archaeological excavations and tourism, stories of the A303, recording personal experiences of living in, visiting and travelling through the Stonehenge landscape and environs.
- Artist(s) in residence
 - Exploring, for example, visual, spatial and aural aspects, landscape, environment and construction. Exhibitions of work, film of process.
 - Facilitating workshops with local communities, adults and children.
 - Linked, if appropriate, to other artistic responses to the Scheme, the landscape and the historic environment – photo and art competitions, exhibitions of entries.
- Documentary films
 - The PACE programme could involve documentary films, recording the progress of archaeological discovery and interpretation in advance of road construction. These could focus solely on heritage aspects, or be part of a wider ranging documentary.
 - The programme would seek to reach out to and coordinate with both UK-based and international heritage documentary programme makers, to reach a wide international audience.
 - If documentary films are secured, it will be important for the professional filming of archaeological fieldwork to be integrated into the fieldwork programme at the earliest possible opportunity.

E.1.9 Archaeological reporting and publication

- E.1.9.1 The archaeological reporting and publication requirements will be developed in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, in accordance with section 8 of the DAMS. Interim reporting related to archaeological evaluation and mitigation will be published on the Archaeology Data Service archive, as noted in Section 9 of this DAMS. Fieldwork updates will be published annually in fieldwork roundups in appropriate local and period journals. Fieldwork data will be fed into the Wiltshire Historic Environment Record.
- E.1.9.2 It is anticipated that academic publications would take the form of either a multi-period monograph, a series of thematic or chronological monographs, and/or topic-, theme-, period-, or object-specific articles in appropriate journals. Popular booklets for children and adults may be produced in tandem with formal analytical reporting.
- E.1.9.3 The final scope and publication outlet/format for the popular and academic publications associated with the Scheme have not yet been decided. However, it is anticipated that as far as reasonably feasible, these will be print publications also accessible online as open-access publications. Digital publication, dissemination and stable online archiving via the Archaeology Data Service archive will be prepared/arranged by the Archaeological Contractor.
- E.1.9.4 To help promote and launch these publications, a day conference may be organised to include presentations from project contributors and specialists. This would serve to promote the publication of the monographs and would also be a further opportunity to share the results of the project.

E.1.10 Partnership and collaboration

- E.1.10.1 It is envisaged that the PACE programme will link to ongoing and planned local heritage activities, such as:
- Exhibitions and displays at the Wiltshire Heritage Museum in Devizes, the Salisbury and South Wiltshire Museum, Salisbury and the Alexander Keiller Museum at Avebury;
 - Events organised by English Heritage at the Stonehenge monument and the Stonehenge Visitor Centre, and by the National Trust in the Stonehenge landscape and at Avebury;
 - The Council for British Archaeology's Festival of Archaeology (July, annually);
 - Heritage Open Days (September, annually); and
 - Cultural festivals and events in nearby villages and towns in Wiltshire, such as Winterbourne Stoke, Amesbury, Devizes and Salisbury.
- E.1.10.2 Where possible, the programme will seek to establish links with local creative practitioners. Local community organisations may also be interested in participating, in advertising activities, or in providing venues.

E.1.11 Media and communications

- E.1.11.1 The PACE programme will be linked to the wider media and communications strategy. Media relations will be maintained throughout the archaeological mitigation programme, with relevant details provided to media outlets, to inform local communities and the academic community of the progress of archaeological works where appropriate.
- E.1.11.2 Information about the PACE programme will be disseminated through a range of media to reach a wide and diverse audience. This may include, for example, parish newsletters, local and regional radio programmes, newspaper or magazine features, as well as national outlets. Information would be provided in local public and community venues, including libraries.
- E.1.11.3 Digital channels will be used to share the results of fieldwork and post-excavation analysis, explore developing interpretations, convey the excitement of discovery and contribute to disseminating the results of archaeological investigation. Digital platforms provide the opportunity to reach audiences worldwide.
- E.1.11.4 The PACE programme will provide easily accessible online information and frequent updates on archaeological mitigation. This could include:
- A 'dig diary', a 'lab log' and a blog or vlog, aiming to keep the public updated about ongoing fieldwork and post-excavation analysis.
 - Supplementary activities could also be developed to enrich and enhance understanding and engagement, such as interactive games and visualisations.
 - A moderated online community forum in which members of the public could engage with the past, discussing discoveries as they arise. This would encourage digital public engagement with discussions and interpretation.
- E.1.11.5 The PACE programme will engage audiences through social media platforms, for example Twitter, Facebook and Instagram.

E.1.12 Monitoring and evaluation of programme outcomes

- E.1.12.1 It will be necessary to measuring the impact of effect of public archaeology and community engagement in terms of its change or benefit to participants' perceptions of wellbeing, sense of place, social interaction, provision of creative and cultural opportunities and understanding of archaeology and the Scheme.
- E.1.12.2 A strategy of ongoing data collection would be developed to allow the impact of the outreach activities to be assessed. This would include data regarding visitor numbers to exhibitions and attendees at talks/open days.
- E.1.12.3 Simple survey forms would be handed out to a sample of PACE programme participants. Qualitative survey would focus on participatory visitor enjoyment of the programme. Site-based activities would also involve qualitative analysis via participatory observation and conversations.

- E.1.12.4 Any data collection from digital media would carefully consider ethical issues and adhere to guidelines related to privacy, digital surveillance, online abuse and metrics data.
- E.1.12.5 All survey and feedback information (hard copy, social media analytics and visitor comments) would be collated and presented in an accessible, distilled format within a report that describes the intended and actual outcomes of the programme.

E.2 Action Plan

E.2.1 Stage 1 PACE Action Plan: Scoping

- E.2.1.1 A Steering Committee will be established to guide and oversee development and delivery of the PACE Strategy and Action Plan. The proposed membership of the Steering Committee comprises Highways England, Wiltshire Council, The National Trust, Historic England, English Heritage Trust and the WHS Coordination Unit. Highways England will retain overall responsibility and sign-off for the approval and delivery of the Strategy and Action Plan.
- E.2.1.2 The Action Plan will be developed in consultation with the Steering Committee through the scoping and consultation stages. An initial Action Plan for this Stage 1 is outlined below.

Stage 1 PACE Action Plan: Scoping

Item No.	Action	Objective	Responsible	Lead body and/or Sign-off	Start	End
STAGE 1: Prior to Preliminary Works						
01	PACE programme Scoping					
01-A	Develop initial PACE schedule in line with mitigation programme	Ensure timely planning and effective coordination of PACE programme within wider archaeological mitigation programme. The PACE programme will start before the Preliminary Works commence.	A303 Project Team	Highways England	Sep – Oct 2019	Dec 2019
01-B	Inception meeting of Highways England, Technical Partner and Steering Committee (Highways England, Wiltshire Council, The National Trust, Historic England, English Heritage Trust, WHS Coordination Unit)	Confirm Steering Committee Terms of Reference, timetable and proposed approach for development of PACE method statement and action plan, methodology and schedule	A303 Project Team	Highways England	Sep – Oct 2019	Dec 2019
01-C	Prepare Preliminary Method Statement Report on PACE approach, methodology and monitoring and evaluation methods, deliverables and timetable	Prepare preliminary method statement covering all aspects of PACE strategy	A303 Project Team	PACE Steering Committee (consultee) Highways England (approver)	Oct 2019	Jan 2020
02	Stakeholder engagement strategy and mapping					

02-A	Develop strategic vision for PACE programme engagement strategy, aligned with wider A303 stakeholder engagement objectives	Review past engagements, define PACE strategy vision and anticipated engagement level	A303 Project Team	Highways England	Jan 2020	Apr 2020
02-B	Scope/identify stakeholders, including community groups and local heritage groups	Understand relevant groups, organisations, and people who might wish to engage Understand stakeholder perspectives and interests Inform stakeholder engagement requirements and audience mapping	A303 Project Team	Highways England	Jan 2020	Apr 2020
02-C	Prepare PACE Stakeholder Engagement Strategy and Mapping Report	Structured report setting out the approaches to engagement Collating initial key contact point details for stakeholders	A303 Project Team	PACE Steering Committee (consultee) Highways England (approver)	Jan 2020	Apr 2020
02-D	Review PACE Stakeholder Engagement Strategy and Mapping Report	Undertake quarterly review to ensure it remains up to date	A303 Project Team	Highways England (approver)	Ongoing	Until completion of all archaeological site works
03	Consultation and engagement					
03-A	Consultation with Wiltshire Council, HMAG and ASAHRG, and the Stonehenge and Avebury World Heritage Site Steering Committees and WHS Partnership Panel	Seek views on and, where possible, reach agreement regarding PACE programme scope, approach, methodology and schedule, outline review and monitoring mechanisms	A303 Project Team, Wiltshire Council, HMAG, ASAHRG, WHS-SCs, WHSPP	Highways England	Jan 2020	Apr 2020

03-B	Engage with stakeholders e.g. representatives of museums, Wiltshire Council Arts and Community Services, community networks, community groups, civic fora and local archaeology and history groups	Create interest in and awareness of the project, seek inputs on what aspects interest them and could potentially benefit them most.	A303 Project Team, & various TBC	Highways England	Jan 2020	Apr 2020
03-C	Consultation with Archaeology Data Service [see 11-F, 11-H, 11-I below] and WSHER [11-C] to agree outline costs and format of all archive material to be lodged online. (Details will be confirmed in the Archaeological Contractor's Digital Data Management Plan (DDMP), which will be prepared following appointment of the Archaeological Contractor.)	Ensure that online dissemination formats are compatible and agreed	A303 Project Team, Archaeology Data Service, WSHER	Highways England	Jan 2020	Apr 2020
03-D	Prepare Outline Method Statement Report on PACE approach, methodology and monitoring and evaluation methods, deliverables and timetable	Method statement informed by consultation with stakeholders	A303 Project Team	PACE Steering Committee (consultee) Highways England (approver)	Jan 2020	Apr 2020
04	Establish Archaeological Contractor's PACE Team (TBC, as part of Archaeological Contractor procurement process)					
04-A	Identify and assign key A303 Project Team personnel involved in PACE programme		A303 Project Team	Highways England	Feb – May 2020	May 2020

04-B	Identify key roles, develop job description and identify individuals within Archaeological Contractor's team.	Roles may include: <ul style="list-style-type: none"> • PACE coordinator • Specialist heritage interpreter • Community archaeologist(s) • Artist in residence • Oral historian • Digital information specialist 	A303 Project Team and Archaeological Contractor	Highways England	Feb – May 2020	June 2020
05	Audience mapping					

<p>05-A</p>	<p>Identify PACE audiences, including:</p> <ul style="list-style-type: none"> - Community organisations - Local archaeology and history societies, civic societies - Communities concerned with sacred and intangible heritage - Council for British Archaeology (CBA) Young Archaeology Clubs, CBA regional groups - Primary and secondary school pupils and teachers - Higher education students, including archaeology students - Academic archaeologists and members of learned societies - Interest-focused and period-focused archaeological research groups - Visitors to the Stonehenge landscape and people travelling through the landscape - Interested people on a regional, national and international basis 	<p>Identify relevant groups, organisations, and people.</p>	<p>A303 Project Team & Archaeological Contractor</p>	<p>Highways England</p>	<p>May - Jun 2020</p>	<p>July 2020</p>
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05-B	Prepare PACE Audience Mapping and Engagement Report	Structured report setting out the approaches to audience engagement Collating initial key contact characteristics of PACE audiences	A303 Project Team & Archaeological Contractor	PACE Steering Committee (consultee) Highways England (approver)	May - Jun 2020	July 2020
06	Develop engagement programme in collaboration with existing and ongoing heritage outreach and interpretation programmes					
06-A	Develop programme in partnership with existing public archaeology and community engagement programmes, heritage events, activities and open days, educational initiatives, museum programmes and local cultural festivals and events.	Secure effective engagement	A303 Project Team , Archaeological Contractor (PACE coordinator, community archaeologist(s))	Highways England	Jun – Jul 2020	Ongoing
06-B						
07	Link to Legacy Benefits					
07-A	Coordinate with legacy benefit priorities linked to WHS Management Plan and developing partnerships	Build on the pursuit of wider legacy benefit initiatives, continuing to develop partnerships	A303 Project Team Archaeological Contractor (PACE coordinator)	Highways England	Sep 2019	Continuing legacy
08	Agree and finalise PACE Method Statement					
08-A	Finalise and agree Method Statement Report on PACE approach, methodology and monitoring and evaluation methods, deliverables and timetable	Method statement informed by consultation and engagement. To include inputs from Archaeological Contractor PACE team (04 above), audience mapping (05), liaison with existing outreach & interpretation programmes (06) and legacy benefit inputs (07).	Archaeological Contractor (PACE coordinator)	PACE Steering Committee (consultee) Highways England (approver)	July 2020	Sep 2020

During Preliminary Works and Main Works						
09	Develop PACE activities (TBC, depending on outcomes of scoping, stakeholder and audience mapping & consultation)					
09-A	Develop programme of live, local and/or site-based activities. These could include: <ul style="list-style-type: none"> - Guided site tours and site open days where safe and practicable - Guided walks and talks - Participative and learning events - Display and interpretation materials - Public talks and lectures 		Archaeological Contractor	Highways England	TBC ⁱ	
10	Digital and social media					
10-A	Define linkage to A303 Project Communication Strategy and Plan	Ensure coordinated planning of PACE programme within wider communications strategy and plan.	A303 Project Team	Highways England	Oct - Dec 2019	Jan 2020
10-B	Apply data from Audience Mapping and Engagement Report [05-B above], ranging from local communities to international visitors and academics	Inform engagement requirements and formats, digital and social media communication strategy	A303 Project Team & Archaeological Contractor	Highways England	Jun 2020	Ongoing

10-C	Press releases to local, regional, national and international audiences on archaeological mitigation programme & PACE activities	Encouraging engagement with and appreciation of the exceptional significance of Stonehenge and its landscape Making the archaeological process more understandable to the public, particularly in relation to a major road scheme	A303 Project Team informed by Archaeological Contractor	Highways England	Jun 2020	Ongoing
10-D	Maintain and update information points in local public and community venues,.	Disseminating information about archaeology along the A303 Amesbury to Berwick Down scheme to the local community	A303 Project Team informed by Archaeological Contractor	Highways England	Jun 2020	Ongoing
10-E	Social media outreach including Twitter, Facebook, Instagram, YouTube	Advancing public understanding and stimulating public curiosity about archaeology. Encouraging digital public engagement.	A303 Project Team with content developed by Archaeological Contractor	Highways England	Jun 2020	Ongoing
11	Archaeological reporting and publication for a wide audience					
11-A	Publication activity could include developing, preparing and publishing <ul style="list-style-type: none"> - popular booklet for adults - popular booklet for children - oral history booklet 	Creating accessible learning opportunities Knowledge about archaeology along the Scheme corridor Engagement and appreciation Inclusive participation Knowledge about archaeology along the Scheme corridor	Archaeological Contractor (PACE coordinator, heritage interpreter, community archaeologist(s), oral historian)	PACE Steering Committee (consultee) Highways England (approver)	Oct – Nov 2020	Dec 2021

11-B	Publish fieldwork updates annually in fieldwork roundups in appropriate local and period journals	Disseminating fieldwork information Sharing research	Archaeological Contractor	Highways England in consultation with Wiltshire Council, HMAG within WHS	Sep 2020 onwards	Annually until completion of all archaeological site works
11-C	Archaeological contractor to prepared and transfer digital fieldwork data to the Wiltshire and Swindon Historic Environment Record (WSHER) [see 03-C above]	Disseminating fieldwork information Sharing research, public record	Archaeological Contractor (Digital Data Co-ordinator/ Manager) WSHER	Highways England in consultation with Wiltshire Council, HMAG within WHS	Ongoing	Following completion of relevant archaeological site workstages
11-D	Prepare post-excavation assessment, updated project design	Disseminating preliminary fieldwork information	Archaeological Contractor	Highways England in consultation with Wiltshire Council, HMAG within WHS	Oct 2021	Following completion of relevant archaeological site workstages
11-E	Prepare interim analytical archaeological reporting	Disseminating preliminary fieldwork information	Archaeological Contractor	Highways England in consultation with Wiltshire Council, HMAG within WHS	Oct 2021	Following completion of relevant archaeological site workstages
11-F	Publish interim analytical reporting on Archaeology Data Service archive [see 03-C]	Disseminating fieldwork information Assuring stable online archiving Sharing research	Archaeological Contractor (Digital Data Co-ordinator/ Manager) Archaeology Data Service	Highways England in consultation with Wiltshire Council, HMAG within WHS	Oct 2021	Following completion of all archaeological site works

11-G	Prepare and publish synthetic print publication (multi-period monograph, a series of thematic or chronological monographs, and/or topic-, theme-, period-, or object-specific articles in appropriate journals)	Disseminating fieldwork information Sharing research	Archaeological Contractor	Highways England in consultation with Wiltshire Council, HMAG within WHS	Oct 2021	Following completion of all archaeological site works
11-H	Prepare and publish synthetic accessible online open-access publication(s) hosted by Archaeology Data Service archive [see 03-C]	Disseminating fieldwork information Assuring stable online archiving Sharing research	Archaeological Contractor (Digital Data Co-ordinator/ Manager) Archaeology Data Service	Highways England in consultation with Wiltshire Council, HMAG within WHS	Oct 2021	Following completion of all archaeological site works
11-I	Prepare and deposit archive digital data and digital finds data with Archaeology Data Service archive [see 03-C]	Disseminating fieldwork information Assuring stable online archiving Sharing research	Archaeological Contractor (Digital Data Co-ordinator/ Manager) Archaeology Data Service	Highways England in consultation with Wiltshire Council, HMAG within WHS	Oct 2021	Following completion of all archaeological site works
12	Monitoring and evaluation of programme outcomes					
12-A	Develop data collection strategy to assess impact of PACE activities, which will be developed in the PACE Outline Method Statement [03-D] and PACE Method Statement reports [08-A]	Ensure effective monitoring and evaluation of outcomes	Archaeological Contractor (PACE coordinator) A303 Project Team	PACE Steering Committee (consultee) Highways England (approver)	Dec 2019	Sep 2020

12-B	Collect ongoing qualitative and quantitative feedback during PACE programme	Ensure that appropriate data is collected throughout project, providing feedback to PACE Team and enabling early identification of any issues or concerns	Archaeological Contractor (PACE coordinator) A303 Project Team	Highways England	Oct 2020	3 years after completion of all archaeological site works
12-C	Collate survey and feedback information and prepare PACE Monitoring and Evaluation Report describing the intended and actual outcomes of the programme	Collate and analyse monitoring and evaluation data Present lessons learned Provide recommendations for future initiatives and partnerships	Archaeological Contractor (PACE coordinator) A303 Project Team	PACE Steering Committee (consultee) Highways England (approver)	Apr 2021	3 years after completion of all archaeological site works

ⁱ Dates will be confirmed during Stage 8, preparation of Method Statement, when a timetable will be developed alongside the archaeological mitigation works schedule.

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