

A303 Amesbury to Berwick Down

TR010025

Deadline 2

8.11 Draft Detailed Archaeological Mitigation Strategy (DAMS)

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

May 2019



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure)

Rules 2010

A303 Amesbury to Berwick Down

Development Consent Order 2019

Draft Detailed Archaeological Mitigation Strategy (DAMS)

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference	TR010025
Application Document Reference	8.11
Author:	A303 Amesbury to Berwick Down Project Team, Highways England

Version	Date	Status of Version
Rev 0	03.05.2019	Deadline 2 Issue

Table of contents

Chapter	Pages
Table of contents	3
Foreword	5
Executive Summary	6
PART ONE – DETAILED ARCHAEOLOGICAL MITIGATION STRATEGY	7
1 Introduction	7
1.1 Project Background	7
1.2 Purpose of the Strategy	8
1.3 Roles and Responsibilities	8
1.4 Scope of the Strategy	9
1.5 Structure of the DAMS and OWSI	10
2 Archaeological Research Strategy and Principles for Archaeological Mitigation	11
2.1 Introduction	11
2.2 General Principles	11
2.3 Detailed Principles	12
2.4 Archaeological Research Strategy	13
3 The Scheme, Previous Surveys and Studies	24
3.1 Introduction	24
3.2 Overview of evaluation fieldwork undertaken for the Scheme	24
3.3 Scheme proposals and description of archaeological resource	25
4 Strategy for Archaeological Mitigation	44
4.1 Introduction	44
4.2 Archaeological Mitigation Requirements	47
4.3 Archaeological Mitigation Measures	52
4.4 Public Archaeology and Community Engagement	57
PART TWO – OVERARCHING WRITTEN SCHEME OF INVESTIGATION	58
5 Approaches to Archaeological Mitigation	58
5.1 General	58
5.2 Preservation in situ	61
5.3 Archaeological Excavation and Recording	62
5.4 Strip, Map and Record	74
5.5 Archaeological Monitoring and Recording (AMR)	75
5.6 Trial Trench Evaluation	77
5.7 Strategy for Geo-archaeological Investigation	77
5.8 Archaeological Topographic Survey	79
5.9 Strategy for Digital Data	80
6 Programme	83
6.1 Introduction	83
6.2 Phasing – Preliminary Works	83
6.3 Phasing – Main Works	84

6.4	Artefact Assessment and Geo-archaeological Assessment	84
7	Monitoring, Communications and Sign-off of Archaeological Works	85
7.1	Access for Monitoring	85
7.2	Communications strategy	85
7.3	Progress Reporting	86
7.4	Monitoring of Off-site Works	86
7.5	Sign-off of Archaeological Works	87
8	Reporting, Publication and Dissemination	88
8.1	Outline Methodology for Reporting of Archaeological Investigation	88
8.2	Outline Publication and Dissemination Proposals	90
9	Archive Preparation and Deposition	91
9.1	Archive Security and Storage	91
9.2	Archive Consolidation	91
9.3	Digital Archive	91
	PART THREE – TABLES, FIGURES AND REFERENCES	93
10	Tables	93
10.1	Table 10.1 – Reconnaissance and evaluation surveys	93
10.2	Table 10.2 – Archaeological mitigation measures	94
11	Figures	96
	Abbreviations List	97
	Glossary	100
	References	103
	PART FOUR – APPENDICES	111
	Appendix A Flowcharts	112
	Appendix B Archaeological Standards and Guidance	122
	Appendix C OEMP requirements	132
	Appendix D Action Areas: Preservation in situ	134
	Appendix E Action Areas: Proposed archaeological fieldwork areas	189
	Appendix F Public Archaeology and Community Engagement Strategy	279

Table of Tables

Table 10-1: Reconnaissance and evaluation surveys

Table 10-2: Archaeological mitigation measures

Table of Figures

Figure 11-1 A-F: Archaeological Mitigation Areas

Foreword

The A303 Amesbury to Berwick Down scheme (“the Scheme”) forms part of a programme of improvements for upgrading the A303/A358 corridor, improving this vital connection between the South West and London and the South East and including the upgrade of remaining single carriageway sections on the route to dual carriageway. This investment is stated as a priority project in the National Infrastructure Plan and Government’s commitment is confirmed in the Road Investment Strategy (2015/16-2020/20 Road Period). Subject to achieving an approved Development Consent Order (“DCO”), preliminary works are planned to start in 2020 with the main construction works following in 2021, and the Scheme is due to open to traffic in 2026.

Objectives for the Scheme have been formulated both to address identified problems and to take advantage of the opportunities that new infrastructure would provide. The objectives are defined by the Department for Transport (“DfT”):

- Transport - To create a high quality reliable route between the South East and the South West that meets the future needs of traffic;
- Economic Growth - to enable growth in jobs and housing by providing a free flowing and reliable connection between the South East and the South West;
- Cultural Heritage - To help conserve and enhance the World Heritage Site and to make it easier to reach and explore; and
- Environment and Community - To improve biodiversity and provide a positive legacy for nearby communities.

The objectives would be achieved by providing a high quality, two-lane dual carriageway on the A303 trunk road between Amesbury and Berwick Down in Wiltshire. The Scheme would resolve traffic problems and, at the same time, protect and enhance the Stonehenge component of the Stonehenge, Avebury and Associated Sites World Heritage Site, hereafter referred to as “the WHS”. The Scheme would be approximately 8 miles (13km) long and comprise the following key components:

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

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) (within the WHS) and Wiltshire Council Archaeology Service (WCAS) (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 HMAG/ WCAS prior to work commencing in that site or area of archaeological interest.

In accordance with DMRB and National Planning Practice Guidance, the design of the Scheme has been developed to mitigate impact upon archaeological remains where feasible. 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 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 sets 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 Archaeology Service (WCAS) (outside the WHS), to develop a Detailed Archaeological Mitigation Strategy (DAMS) to be implemented as part of the Outline Environment Management Plan (OEMP) [APP-187] submitted as part of the DCO application. 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 This Draft for Examination has been prepared following review and comment by members of HMAG and WCAS, as informed by advice provided by the A303 Scientific Committee. The draft DAMS will be developed further in consultation with HMAG and WCAS during the examination period, to allow a final version of the DAMS to be submitted to the Examining Authority by the close of the Examination. It is intended that the DAMS will be a certified document, with its implementation secured by a DCO Requirement.

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 and ameliorate the loss of the archaeological resource impacted by the Scheme (either protection / preservation in situ wherever possible, or where remains cannot be preserved 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, 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 generic 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 and monitors. Further details are set out in sections 4.1 and 5.1 of this document.

Advisory Groups and Monitoring of Investigations

- 1.3.2 HMAG has been convened to advise Highways England, setting the requirements for evaluation, assessment and mitigation within the WHS. The group also advises and sets the scope and methodology of the historic environment assessments and associated fieldwork within the WHS. HMAG comprises representatives of Historic England and Wiltshire County Archaeology Service (WCAS) as statutory consultees and the National Trust and English Heritage Trust as major landowners and heritage managers in the WHS. HMAG is augmented by a Scientific Committee of independent specialists and experts.

- 1.3.3 For sections of the Scheme within the WHS, Historic England and WCAS have statutory responsibilities to advise, input to and monitor all archaeological fieldwork; other members of HMAG have an advisory role.
- 1.3.4 Outside the WHS, WCAS acts as lead curator on behalf of the Local Planning Authority. For proposals affecting scheduled monuments, Historic England acts as lead curator.
- 1.3.5 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. HMAG will be invited to attend site meetings to review the progress and results of the fieldwork within the WHS, and WCAS outside the WHS. These meetings will also be used to sign off sites prior to construction. In addition, site visits will also be arranged in order for the Scientific Committee to view the archaeological investigations in progress, where appropriate and feasible.
- 1.3.6 Further details of the arrangements and reporting lines for the implementation and monitoring of the Strategy are provided in the Communications Strategy at section 7.2 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 for agreement with WCAS (for areas outside the WHS) and HMAG (for areas within the WHS). In format and content this document conforms with current good practice and takes account of guidance outlined in:
- National Policy Statement for National Networks (NPSNN) (DfT, 2014);
 - National Planning Policy Framework (NPPF) (MHCLG, 2018a) and National Planning Practice Guidance (MHCLG, 2018b);
 - 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 in situ and archaeological conservation (see Appendix B).

1.4.2 The Strategy and later the individual SSWSIs will be prepared in consultation with the HMAG (in the WHS) and WCAS (outside the WHS), prior to fieldwork 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 in situ 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 11.1, building on the outline presented in the OAMS. Appendices C and 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 the Stonehenge and Avebury Archaeological Research Framework (SAARF) Agenda and Research Strategy (Leivers and Powell 2016).

1.5.3 **Part Two of this document comprises the Outline Written Scheme of Investigation.** The application strategy for each of the mitigation approaches is discussed and generic 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 Action Areas: Preservation in situ
- Appendix E Action Areas: Proposed Archaeological Fieldwork Areas
- Appendix F Community Engagement, Education and Outreach

2 Archaeological Research Strategy and Principles for Archaeological Mitigation

2.1 Introduction

- 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 mitigation work carried out across the entire Scheme. Those that are relevant to a site or area of interest will be specifically mentioned in the SSWSI.

2.2 General Principles

- 2.2.1 Archaeological mitigation (preservation by record and protection/ preservation in situ) is required where there will be an unavoidable impact on archaeological remains, including elements of historic landscape character. The sites of archaeological interest which will require archaeological mitigation have been identified in the ES [APP-044].
- 2.2.2 The Principles set out below seek to guide actions to ensure the conservation of heritage assets throughout the WHS and within the Scheme.
- 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.
 - 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.
 - Investigative works should be undertaken to a high standard that adequately reflects the significance of the World Heritage Site, in accord with Heritage Impact Assessment guidance produced by ICOMOS International (International Council for Monuments and Sites) for the UNESCO World Heritage Centre, the Chartered Institute for Archaeologists, HMAG and WCAS.
 - 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).
 - 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>).

2.2.3 The Principles set out above acknowledge that not all archaeological remains within the WHS contribute to its OUV. The attributes of OUV set out in the 2015 Management Plan (Simmonds and Thomas, 2015) and derived from the adopted Statement of Outstanding Universal Value (SoOUV) include, '*The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites*' (Attribute 2). The following principles have been applied in developing the Scheme proposals:

- 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.
- Archaeological remains related to funerary and ritual activity contribute to the OUV of the WHS.
- 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.
- Material of Neolithic or Early Bronze Age date has been identified at a number of sites, both within and adjacent to the WHS. These may contribute to the understanding of 'associated sites' in the context of OUV Attribute 2.

2.3 Detailed Principles

2.3.1 All those designing or undertaking archaeological work in the World Heritage Site and in connection with the Scheme should:

- Observe appropriate professional codes, guidance and standards.
- Review and assess the considerable information already available from prior investigations where appropriate and relevant before commissioning any new works.
- Assess and undertake any required confirmatory or more detailed archaeological investigation for such parts of the WHS subject to any impact, whether temporary or permanent.
- Consider archaeological and cultural heritage evidence from all periods and its contribution to the understanding of the historic landscape.
- Adopt a phased approach for archaeological assessment and mitigation, successive phases being complementary in their method and the presentation of results so that the results are integrated. Non-intrusive field work in appropriate areas should be undertaken where possible before intrusive investigations. Duplication of field work should be avoided.
- Only undertake extensive intrusive works in areas where it is probable that there will be a direct impact through development (as identified in the ES [APP-044]), or where there is a need to consider management issues.
- Utilise the information provided by other disciplines (for example, geotechnical investigations).

- Ensure that sufficient information is gathered on the presence, absence and significance of archaeological remains to ensure that the potential impact of the Scheme on that significance can be assessed.
- Do not harm the integrity or authenticity of the WHS or the assets that contribute to the OUV of the WHS.
- The results of archaeological investigation should be published within an appropriate period following assessment. It may be appropriate to combine the results of various fieldwork interventions into a single report.
- Ensure that the results of the investigations are (i) disseminated 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).
- All works will take account of all statutory designations.

2.3.2 All archaeological mitigation works will only proceed in accordance with this DAMS and the securing DCO Requirement.

2.4 Archaeological Research Strategy

2.4.1 The archaeological investigations will be conducted with full consideration of the Research Framework for the Stonehenge and Avebury and Associated Sites WHS ('SAARF', Leivers and Powell, 2016). Each SSWSI will ensure that research strategies become a visible theme running through the mitigation reports to demonstrate that they have been the basis for decision making, sample selection and justification for all stages of archaeological reporting.

2.4.2 This section 2.4 outlines the proposed Archaeological Research Strategy (ARS) for the mitigation programme. The archaeological evidence identified by the archaeological evaluation programme for the Scheme as completed to date, together with evidence of baseline conditions as set out in the ES [APP-044], are considered and relevant SAARF research themes 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.

2.4.3 Section 3 of the Strategy considers the archaeological resource across the Scheme and details the archaeological mitigation requirements. Appendices D and E consider the archaeological mitigation areas ('sites') and provide details of the archaeological assets affected, the Scheme impact to be mitigated and the relevant SAARF research themes and period-specific questions, as outlined in this section 2.4.

Mesolithic 10,000 to 4,000 BC

2.4.4 Small quantities of Mesolithic material were encountered in two locations, at the Eastern portal approach and on the realigned A360 north of Longbarrow Junction.

Eastern Portal

2.4.5 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 of the eastern portal location in 2018 (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.

2.4.6 Studies on Mesolithic material within colluvial deposits can throw light upon the earliest human activity in the Stonehenge area. The following SAARF research themes and period-specific questions may be relevant:

- F. Daily life
- 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?
- 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?
- 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?
- 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 River Avon: this will be a crucial tool to understanding of the landscapes of the Late Glacial and Early Post-Glacial periods.
- B.5. A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.
- B.6. Further refining the chronology of sites, lithic industries and change.
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Neolithic 4,000 to 2,200 BC

2.4.7 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

- 2.4.8 A focus of Neolithic and Early Bronze Age activity has been identified situated on a spur of high ground overlooking the River Till valley, north-west of Scotland Lodge Farm (Highways England, 2019d [REP1-049, 0050], Trenches 1068 and 1070). This site includes two non-designated ring ditches (UID 2035.01/ MWI6396, UID 2035.02/ MWI7206), together with two closely spaced sub-circular pits west of the ring ditches which contained red deer antlers and Middle Neolithic Peterborough Ware pottery. A possible rectilinear enclosure north of Scotland Lodge Farm appears to cut the possible Neolithic or Early Bronze Age ring ditch.
- 2.4.9 Two small possible prehistoric pits about 100m north of a small, ploughed-down non-designated round barrow cemetery on Winterbourne Stoke Hill (Highways England, 2019e [REP1-052, 053], Trench 754, approximate chainage 4700m) contained cattle bone, burnt and worked flint. The five ring ditches on Winterbourne Stoke Hill produced a flint assemblage consistent with a Late Neolithic/Early Bronze Age date and pottery (found only in secondary and tertiary contexts).

Longbarrow Junction (north)

- 2.4.10 At Longbarrow Junction, concentrations of flint along the realigned A360 north, 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 are present, however most of the evidence recovered from fieldwalking, trial trenching and artefact sample sieving (predominantly lithic material, with small amounts of pottery and faunal remains) indicates later Neolithic activity.

Western Portal approaches

- 2.4.11 Archaeological evaluation of the western portal and approach cutting identified limited Late Neolithic and Early Bronze Age activity (Highways England, 2019f [REP1-045, 046]). Finds recovered from systematic ploughsoil sampling indicate a focus of activity in the Later Neolithic/Early Bronze Age, with some earlier and later components. Worked and burnt flint densities were generally higher in the west of the site, towards the Winterbourne Stoke barrow group.
- 2.4.12 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 hengiform monument (Wessex Archaeology, 2018a, feature 10000), is the only ceremonial or funerary monument identified within the Scheme boundary.
- 2.4.13 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).

Eastern Portal approaches

- 2.4.14 Field walking and test pitting revealed an 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 2.4.5 above).

Countess East compound area

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

Relevant SAARF Research Themes and Period-specific questions

2.4.16 The possible Neolithic monuments at Scotland Lodge will not be directly impacted by the Scheme. The study of settlement, field systems and land divisions can offer insights into past landscape use and development. The following SAARF research themes and period-specific questions may be relevant:

- C. Burials and barrows
- F. Daily life
- 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?

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

2.4.17 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

2.4.18 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.

2.4.19 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).

2.4.20 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

2.4.21 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

2.4.22 Late Neolithic and Early Bronze Age activity identified in evaluation of the western portal and approach cutting includes a ceremonial or funerary monument, a Beaker inhumation, 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.

2.4.23 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.).

2.4.24 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.

Relevant SAARF Research Themes and Period-specific Questions

2.4.25 The possible Neolithic/ Early Bronze Age monuments at Scotland Lodge, Parsonage Down east and on Winterbourne Stoke Hill will not be directly impacted by the Scheme. The study of settlement, field systems and land divisions can offer insights into past landscape use and development. The following SAARF research themes and period-specific questions may be relevant:

- D. Human generations

- F. Daily Life
- J.4. What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- J. 7. [dating of] Cremation burials

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

- 2.4.26 Evidence dated to the Middle to 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

- 2.4.27 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) (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 depots which have potential to include and seal buried land surfaces and to preserve paleoenvironmental indicators.
- 2.4.28 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

- 2.4.29 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.
- 2.4.30 Sections of two later prehistoric long-distance land divisions ('Wessex linears') 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. 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.

Relevant SAARF Research Themes and Period-specific Questions

- 2.4.31 The study of settlement, field systems and land divisions can offer insights into past landscape use and development. The following SAARF research themes and period-specific questions may be relevant:

- D. Human generations
- F. Daily Life
- J.4. What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- 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?
- 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?
- K.6. How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

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

2.4.32 Iron Age and Romano-British evidence comprises likely continuing use of the extensive field systems thought to have been established from the Middle Bronze Age onwards, in the context of increasing settlement, including enclosed sites and hillforts. Colluvial sequences provide evidence for post-Roman agriculture. A stone-built Roman building is also present within the Countess East compound site.

Winterbourne Stoke Bypass

2.4.33 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.

2.4.34 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

2.4.35 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

2.4.36 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

2.4.37 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

2.4.38 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]).

Relevant SAARF Research Themes and Period-specific Questions

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

- C. Burials and barrows
- E. Landscape history and memory
- F. Daily life
- I.6. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- M.5. is there any relationship between the earlier monuments and the locations of Roman-British settlement patterns and land use, including burials and cemeteries?

Early Medieval 410 to 1066

2.4.40 Early medieval evidence comprises known Saxon structures at Countess East and a possible sunken featured building east of Winterbourne Stoke.

Winterbourne Stoke Bypass

2.4.41 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

2.4.42 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]).

Relevant SAARF Research Themes and Period-specific Questions

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

- 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?
- 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?
- 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?
- 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?
- 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?

Medieval 1066 to 1540

2.4.44 Elements of the extensive field systems established in the later prehistoric periods may have remained in use into the medieval period. Other fields of likely medieval date are represented by lynchets on the slopes north and east of Winterbourne Stoke.

Winterbourne Stoke Bypass

2.4.45 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.

2.4.46 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 are most likely 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.

Relevant SAARF Research Themes and Period-specific Questions

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

- F. Daily Life
- 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?
- 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?

Post-medieval 1540 to 1901

Winterbourne Stoke Bypass

2.4.48 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.

2.4.49 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, 2018 [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, 2002, 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

2.4.50 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.

Relevant SAARF Research Themes and Period-specific Questions

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

- 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.
- 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.
- 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.

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 plough zone 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 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 Rollestone 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;
 - Plough zone 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 13.1 (Section 13 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 Scheme proposals 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 (1m high) 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, suspected to be of Bronze Age date (UID 1008). Trial trenching here (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 (Site 7) 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 2m. Drainage of the filled area would be accommodated within the fill. The re-profiled filled area would be managed as chalk grassland with occasional area of shrub planting. Drainage Area One would be located within the central part of the filled area.
- 3.3.14 An existing aviation fuel 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 geoarchaeological 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 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 deposited 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 (3.3.7) (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 reprofiled 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 was 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, 2018) 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, 2002, 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 red line 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/ subrectangular 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 red line 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 red line 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 the 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, dated to the Early Bronze Age by a single sherd of grog-tempered ware.
- 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 [PREP1-042, 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 'saucepan pot' 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 red line 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 copse 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. 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]).
- 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 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

- 3.3.66 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.
- 3.3.67 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.

- 3.3.68** 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).
- 3.3.69** 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.
- 3.3.70** 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).
- 3.3.71** 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.
- 3.3.72** 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.

- 3.3.73** North of Stonehenge, the Greater Cursus runs parallel to the existing A303 at 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.
- 3.3.74** 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).
- 3.3.75** 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.
- 3.3.76** 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.
- 3.3.77** 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).
- 3.3.78** 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

- 3.3.79** 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.
- 3.3.80** 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 red line 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)).
- 3.3.81** 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 red line 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.
- 3.3.82** 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.
- 3.3.83** 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).
- 3.3.84** 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.

- 3.3.85** 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).
- 3.3.86** 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.
- 3.3.87** A buried soil identified by a geoarchaeological 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]).
- 3.3.88** 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

- 3.3.89** 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 a connect with an existing pipeline within Countess East.
- 3.3.90** 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).
- 3.3.91** 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.
- 3.3.92** 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).
- 3.3.93** 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.
- 3.3.94** 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]).

- 3.3.95** 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.
- 3.3.96** 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 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]).
- 3.3.97** 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

- 3.3.98** 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.
- 3.3.99** 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.

- 3.3.100** 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).
- 3.3.101** 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 Strategy for Archaeological Mitigation

4.1 Introduction

- 4.1.1 In accordance with DMRB and National Planning Practice Guidance, the design of the Scheme has been developed to mitigate impact upon archaeological remains where feasible: the impact of the Scheme upon archaeological resources has been minimised or avoided where possible. Where feasible, archaeological remains within the DCO boundary will be preserved in situ.
- 4.1.2 In respect of archaeological remains within the footprint of the Scheme, where preservation in situ is not feasible, 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 ARS 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.
- 4.1.3 The majority of the archaeological mitigation fieldwork will be undertaken during the PW stage of the construction programme as AAW. The archaeological mitigation programme is secured as part of the OEMP [APP-187] which forms part of the DCO application and through a requirement of the DCO [APP-020]. 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

- 4.1.4 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 and ecological mitigation works, remedial work in respect of any contamination or other adverse ground conditions, erection of temporary fencing, diversion and laying of underground apparatus, site clearance and two sections of highways works – completion of the Rollestone Crossroads highway improvement and minor highway works east of Solstice Park.
- 4.1.5 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.
- 4.1.6 Archaeological mitigation works anticipated to be completed during the PW stage are discussed further in section 5.1 below.

Main Works

- 4.1.7 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.
- 4.1.8 Archaeological mitigation works anticipated to be completed during the MW stage are discussed further in section 5.1 below.

Archaeological Contractor

- 4.1.9 An Archaeological Contractor will be appointed by the PW Contractor on behalf of Highways England. The 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 archaeological mitigation programme as set out in this DAMS, including all off site works and reporting, will remain with the PW Contractor. The MW Contractor shall retain an archaeological contractor to undertake any archaeological mitigation site works required at MW stage.

Technical Partner's Archaeologist

- 4.1.10 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 HMAG/ WCAS.
- 4.1.11 Appendix A.2 illustrates the phases and roles during the archaeological mitigation works.

Construction Environmental Management Plans

- 4.1.12 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 (APP-220) was included as Annex A.2 to the OEMP (APP-187).
- 4.1.13 The OEMP requires the relevant contractor to develop a Heritage Management Plan, Method Statements, and where appropriate, site specific written schemes of investigation.
- 4.1.14 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.

- 4.1.15 The procedure for dealing properly with any unexpected finds during the construction process will be agreed and recorded in the CEMP prepared by the MW Contractor for the construction stage.

Heritage Management Plans and Method Statements

- 4.1.16 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. Toolbox talks will be undertaken when necessary to inform construction supervision staff and site operatives of sensitive areas.
- 4.1.17 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 (APP-187; item PW-CH1 – see Appendix B.2).
- 4.1.18 In areas where archaeology or heritage assets are to be preserved in situ (protected by temporary perimeter fencing, or beneath fill materials), Method Statements (MSs) will be put in place at the start of the preliminary works and/ or construction works that describes specific protection measures to be applied to the site or area of interest, and following procedures outlined in the OEMP and the HMP. Method Statements will also be required in respect of temporary haul roads and temporary traffic management diversions where archaeological remains will be retained in situ.
- 4.1.19 HMPs and MSs will be prepared in consultation with HMAG (for sites within the WHS) and WCAS (for sites outside the WHS) (see section 5.1 and Appendix A of this document).
- 4.1.20 HMPs and MSs are discussed further in section 5.1 below.

Handover Environmental Management Plans

- 4.1.21 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 (APP-187, 1.1.12). In respect of cultural heritage and archaeology, the HEMP will identify heritage assets within land to be retained by Highways England and, where relevant, any restriction or constraint on maintenance regimes necessary to ensure the continued retention or preservation in situ of the asset: these assets will previously have been identified in HMPs and Method Statements. Where relevant, Cultural Heritage Asset Management Plans (CHAMPs) will be prepared in accordance with DMRB Vol 10 Section 6 Part 2 HA 117/08 (Highways Agency 2008) to ensure that heritage assets retained within the highway boundary are protected from maintenance and management activities.

4.2 Archaeological Mitigation Requirements

- 4.2.1 Different elements of the Scheme will require a different approach to archaeological mitigation, as summarised below; the mitigation approaches are outlined in section 4.3 below. Specific requirements for production of MSs are also identified here where these are required by the OEMP [APP-187].
- 4.2.2 SSWSIs will set out in detail the research aims and objectives and the relevant mitigation measures, 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.
- 4.2.3 SSWSIs will be prepared in consultation with HMAG (for sites within the WHS) and WCAS (for sites outside the WHS) (see section 5.1 and Appendix A of this document).

Main road line

- 4.2.4 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.
- 4.2.5 Archaeological mitigation will include archaeological excavation and recording, strip, map and record, ploughzone artefact collection, trial trench evaluation, archaeological topographic survey, as relevant. These approaches are outlined in section 4.3 below and discussed in more detail in Part Two of this document (Overarching Written Scheme of Investigation).

Tunnel movement monitoring stations

- 4.2.6 Tunnel movement monitoring stations would be placed on the surface above the 3.0km bored tunnel section. The requirement for these will be scoped to minimise the number of installations required. The locations of these installations will be selected to avoid known archaeological remains.
- 4.2.7 Targeted archaeological mitigation at these locations will include ploughzone artefact collection, archaeological excavation and recording and/ or archaeological topographic survey, as relevant.

Landscape fill and excavated material deposition areas

- 4.2.8 Landscape fill areas are proposed along the Winterbourne Stoke Bypass; excavated material disposition is proposed at Parsonage Down East, northwest of Winterbourne Stoke. In accordance with item MW-CH5 of the OEMP [APP-187], the MW contractor will prepare a Method Statement as described in 4.1 above, setting out how it intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil/ subsoil horizons (including no-dig solutions).
- 4.2.9 Preservation in situ will be the preferred mitigation option where the proposed fill depth is <2m and topsoil is to be retained in situ (subject to load calculations: see 4.3.11 and **Error! Reference source not found.** below). Where the fill depth is >2m, 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.

Rights of way: zero-impact construction methods

- 4.2.10 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 to ensure no archaeological impacts.
- 4.2.11 In accordance with item MW-CH5 of the OEMP [APP-187], the MW contractor will prepare a Method Statement as described in 4.1 above, setting out how it intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil/ subsoil horizons.

Existing roads

- 4.2.12 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.
- 4.2.13 Works to downgrade the existing A303 and A360 to restricted byways 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.

Site compounds and working areas

- 4.2.14 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 below-ground disturbance will be minimised with topsoil retained in situ and protected with imported stone to allow preservation in situ. Provision is made in the Strategy for certain archaeological monuments to be excluded for fill areas fenced off and protected in situ (see Appendix D). Installation of utility connections will require targeted archaeological monitoring and recording and/ or archaeological excavation and recording (AER) where topsoil is required to be stripped.
- 4.2.15 In accordance with item MW-CH5 of the OEMP [APP-187], the MW contractor will prepare a Method Statement as described in 4.1 above, setting out how it intends to preserve in situ 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).

Utility connections and service diversions

- 4.2.16 Utility connection and service diversions will include water and power connections, a fuel pipeline diversion, and diversion of existing fibre optic cables. 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. Proposed utility corridors are shown on Figure 11.1 and the proposed mitigation approach for each site is set out in Appendix E.

Temporary haul roads

- 4.2.17 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 routes are shown indicatively on Figures 2.7A-E of the ES [APP-061].
- 4.2.18 No haul roads are proposed within the WHS, other than those within the footprint of the proposed new road alignment. Paragraphs 2.4.17 – 2.4.20 of the Environmental Statement set out the Scheme's proposals for haul routes, and the routes are shown indicatively on Figures 2.7A-E of the ES [APP-061].
- 4.2.19 Two types of temporary haul roads will be required throughout the works, to allow access to all areas.
- 4.2.20 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. In general, no surface stone will be placed over these transient roads. The haul roads will be used all year including the winter months and will be maintained accordingly, however work will often cease if the weather is inclement.
- 4.2.21 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. 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 11.1). These roads will be between 4m and 6m wide, with passing places.
- 4.2.22 The all-weather road between the Main Civils Compound and Green Bridge No. 1 lies outside the earthworks trace and may cross archaeological sites which require protection and preservation in situ. In these 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.
- 4.2.23 All other temporary all-weather roads will run within the chalk cutting.
- 4.2.24 In accordance with item MW-CH5 of the OEMP [APP-187], the MW contractor will prepare a Method Statement as described in 4.1 above, setting out how it intends to preserve in situ 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 all-weather haul roads).

Temporary access crossing of the River Till

- 4.2.25 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 would be subject to temporary works design and approval, but 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.

- 4.2.26 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.

Permanent crossing of the River Till

- 4.2.27 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 with 900mm diameter piles. The bridge abutments would also be founded on 900mm diameter piles. 12 piles would be required in each of the four abutments and each of the 8 pier foundations. 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.
- 4.2.28 A working platform for the piling operation will be laid on each side of the floodplain; this will be subject to a temporary works design, but 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. Archaeological mitigation will include topographical survey of the floodplain prior to installation of the piling mats.
- 4.2.29 Abutment pile caps would each be 13.6m x 7.2m x 2m deep, the pier pile caps would each be 9.90m x 7.2m x 2m deep. Temporary works for the excavation and construction of the reinforced concrete pile caps could include battered excavations, or a piled cofferdam. Archaeological mitigation could include geoarchaeological investigations prior to and/ or during excavations.
- 4.2.30 The use of a non-displacement pile technique will cause little or no sediment displacement adjacent to the shaft of the pile but could impact archaeological remains in a number of ways (Historic England, 2019), including loss of archaeological material (if it is present) within the cross-section of the bore, introduction of new chemicals (such as an alkaline concrete mixture) which could damage archaeological deposits, and alteration of water levels. Relevant mitigation measures are set out in national guidance provided by Historic England 'Piling and Archaeology, Guidance and Good Practice' (Historic England, 2019). Archaeological mitigation measures would include (refer to section 5: Historic England, 2019):
- Collation of a robust evidence base (site specific assessment, including deposit modelling).
 - Field evaluation.
 - Hydrology assessment (in accordance with Historic England guidance on Preserving Archaeological Remains: Historic England, 2016c, Appendix 3).
 - Design of impact avoidance measures.

- 4.2.31 Geotechnical investigations accompanied by archaeological investigation and monitoring will be undertaken during 2019 to inform understanding of the required piling strategy.

Temporary roads

- 4.2.32 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 (dumbbell) junction (see Figures 2.7 A-E of the ES [APP-061]).
- 4.2.33 The alignment of this temporary route is outside the permanent earthworks outline and may cross archaeological sites which require protection and preservation in situ. 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 at detailed design stage, informed by bearing capacity tests.
- 4.2.34 Construction of the temporary road may require targeted archaeological monitoring and recording and/ or archaeological excavation and recording in respect of highway tie-ins, or any other location where topsoil may be required to be stripped.
- 4.2.35 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.
- 4.2.36 In accordance with item MW-CH5 of the OEMP [APP-187], the MW contractor will prepare a Method Statement as described in 4.1 above, setting out how it intends to preserve in situ 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.

Topsoil stockpiles

- 4.2.37 Topsoil to be stripped from the earthworks trace 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 Red Line Boundary and the 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.
- 4.2.38 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.
- 4.2.39 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.

4.3 Archaeological Mitigation Measures

4.3.1 A range of archaeological mitigation measures are proposed, appropriate to the form and significance (value) of archaeological remains or other heritage assets that would be impacted by the Scheme. The principal techniques are listed below; **Table 14-1** describes the scope of these measures and the works stage (PW or MW) at which they would be relevant.

- Preservation in situ
- Preservation by record:
 - 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 investigation
- Archaeological Topographic Survey
- Archaeological Photographic Recording
- Publication and dissemination

4.3.2 A total of 45 sites have been identified that require either preservation in situ or preservation by record (Sites 1 to 39 and Sites 46 to 51); for ease of description and to allow targeting of appropriate mitigation measures, some of these sites have been subdivided into individual action areas, giving a total of 80 sites for mitigation.

4.3.3 22 sites have been identified that require preservation in situ (Sites 1, 6-9, 10.2, 14, 17, 18, 20-23, 25, 27, 31, 32, 34, 36-39). Measures for preservation in situ comprise protective fencing, cover and fill, or a combination of both. Details for each of the action areas for preservation in situ are presented in Appendix D.

4.3.4 A total of 26 sites have been identified that require preservation by record (Sites 2-6, 10.1, 10.3, 11-13, 15, 16, 19, 24, 26, 28-30, 33, 35, 46 to 51). This number includes 5 sites that have been identified for preservation in situ but where preservation by record may be required if a no-dig solution is unfeasible (Sites 2, 10.1, 11). Mitigation measures will include, but will not be limited to, archaeological excavation and recording (AER), strip, map and record (SMR), and geo-archaeological investigation.

4.3.5 7 sites where access for detailed and/or confirmatory assessment was denied prior to Examination have been identified for archaeological evaluation, to ensure that any proposed detailed mitigation measures have been informed by an appropriate level of assessment, comprising the south side of Site 19 and Sites 40-45.

- 4.3.6 Details for each of the action areas for archaeological mitigation fieldwork are presented in Appendix E.

Preservation in situ

- 4.3.7 A total of 22 sites (56 individual action areas) will require protective fencing or burying/ sealing sites beneath fill material (to prevent unintended incursion/ damage by plant or other vehicles), or a combination of both (Appendix D). 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 in situ will be included in the CEMP which will also include arrangements for regular site inspections, maintenance and toolbox talks.
- 4.3.8 Archaeological photographic recording of sites will be undertaken by the Archaeological Contractor before protection measures are deployed and after their removal (see section 5.2 in Part 2 of this document).
- 4.3.9 Protective fencing (such as Heras fencing or post and wire fencing) will be erected around the sites to prevent accidental damage during the preliminary works and at construction. For each site a MS will be prepared in consultation with HMAG/ WCAS that describes the site-specific protective measures, 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, depending upon the sensitivity of the site. The requirements for an archaeological investigation would be contained within a SSWSI to be prepared in consultation with HMAG/ WCAS.
- 4.3.10 Typically, the fencing will include a c.10m buffer, where practicable, beyond the boundary of designated and non-designated heritage assets. 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 suitable buffer area wherever possible. Notices prohibiting works will be attached to the fencing. The protective fencing will be erected by the PW Contractor at the start of the PW stage under the supervision of the Archaeological Contractor and will be of a suitable form to adequately demarcate the protected area and prevent damage. Following construction, the protective fencing will be removed by the MW Contractor under the supervision of the Archaeological Contractor.
- 4.3.11 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. The TPA will consult with HMAG/ WCAS and the Historic England Science Advisor (South West). 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.
- 4.3.12 National guidance for preservation in situ sites 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 in situ sites; and
- carry out monitoring and remedial works to rectify any identified issues.

Preservation by record

- 4.3.13 A total of 26 sites identified in the ES following evaluation and baseline assessment), comprising 29 individual mitigation areas, require preservation by record (excluding Sites 2, 10.1, 11). These sites will be investigated by a range of measures during the PW stage (Appendix E). New sites may be added to the number of sites for preservation by record as a result of additional evaluation (see 4.3.9 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.
- 4.3.14 A SSWSI would be prepared in consultation with HMAG/ WCAS, 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 CEMP which will also include arrangements for regular site inspections, maintenance and toolbox talks.

Archaeological Excavation and Recording

- 4.3.15 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.
- 4.3.16 The approach to AER is set out in more detail in section 5.3 below.

Strip, Map and Record

- 4.3.17 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 may be particularly applicable in sections of the Scheme outside of the WHS.
- 4.3.18 The approach to SMR is set out in more detail in section 5.4 below.

Archaeological monitoring and recording

- 4.3.19 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. Either AMR or AER (for example, hand-excavated test pits) will be undertaken during the installation of monitoring points along the alignment of the proposed tunnel (Site 26). 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).

- 4.3.20 Sections of the Scheme may be subject to AMR during PW or MW stages, where remains have not been identified by assessment and evaluation but where there continues to be a low risk of archaeological discoveries. In this case the Contractor's preferred method of working would not be controlled for archaeological purposes, unless significant archaeological remains are discovered when the area would be redefined for AMR or AER.
- 4.3.21 The approach to AMR is set out in more detail in section 5.5 below.

Trial Trench Evaluation

- 4.3.22 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 11.1). The results of the evaluation will inform both the scope and type of archaeological mitigation in these areas (refer to Appendix E). 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 B3083 road. These sites are required for landscape fill: Site 40 and Site 41 (refer to Appendix E)
- 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).

Ploughzone Artefact Collection

Fieldwalking

- 4.3.23 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 Figure 11.1 and Appendix E.
- 4.3.24 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 at the earliest opportunity once access is taken. Opportunities for such preparation as part of voluntary access agreements will also be pursued to ensure timely completion of the survey.

Topsoil artefact sampling

4.3.25 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. This will be informed by further analysis of the material collected, in consultation with HMAG/ WCAS.

Geo-archaeological investigations

4.3.26 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 will also be required for geo-archaeological advice throughout the mitigation programme.

4.3.27 The approach to geo-archaeological investigations is set out in more detail in section 5.7 below.

Archaeological Topographic Survey

4.3.28 Topographic survey may be required in combination with preservation by record (AER, SMR or AMR), or in connection with preservation in situ. This will include production of feature profiles, contour and/ or hachure plans, and a photographic record where required.

4.3.29 Topographic survey will apply to extant land surfaces and features as identified in the relevant SSWSI. Where relevant, topographic survey will also apply to buried land surfaces that may be exposed in plan; this will be identified in the relevant SSWSI.

4.3.30 The approach to archaeological topographic survey is set out in more detail in section 5.8 below.

Publication and dissemination

4.3.31 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.

4.3.32 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 4.4 below).

- 4.3.33 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.
- 4.3.34 The approach to publication and dissemination is set out in more detail in section 9 below.

4.4 Public Archaeology and Community Engagement

- 4.4.1 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.
- 4.4.2 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.
- 4.4.3 The Public Archaeology and Community Engagement Strategy is set out in Appendix F.

PART TWO – OVERARCHING WRITTEN SCHEME OF INVESTIGATION

5 Approaches to Archaeological Mitigation

5.1 General

- 5.1.1 The final Strategy will be implemented in accordance with advice in DMRB Volume 10 Section 6 Part 1 (Highways Agency, 2001).
- 5.1.2 Sites that require investigation will include those identified in Appendix E: new areas for investigation may be identified as a result of emerging results and unexpected discoveries.

SSWSIs, Heritage Management Plans and Method Statements

- 5.1.3 Site Specific Written Schemes of Investigation (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 HMAG/ WCAS, prior to any Preliminary Works (PW) or Main Works (MW) commencing for the Scheme.
- 5.1.4 The specification for the archaeological works contained within the SSWSIs will be written in accordance with DMRB (Volume 10, Section 6, Part 1), and the Standard and Guidance for archaeological excavation prepared by the ClfA (ClfA, 2014a) and the ClfA Code of Conduct (ClfA, 2014f), and will adhere to all current and relevant best practice and standards and guidelines (see Appendix B).
- 5.1.5 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. Toolbox talks will be undertaken when necessary to inform construction supervision staff and site operatives of sensitive areas.
- 5.1.6 HMPs will be prepared by the PW or MW contractor (as relevant), 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.
- 5.1.7 The PW or MW Contractor (as relevant) will prepare and submit a Method Statement (MS) for activities requiring archaeological mitigation, prior to the commencement of the relevant archaeological intervention. In areas where archaeology or heritage assets are to be preserved in situ (protected by temporary perimeter fencing, or beneath fill materials), an MS will be put in place at the start of the PW stage and/ or MW stage that describes specific protection measures to be applied to the site or area of interest, and following procedures outlined in the OEMP and the HMP.
- 5.1.8 HMPs and Method Statements will be prepared in consultation with HMAG/ WCAS.
- 5.1.9 The reporting lines for sign-off of SSWSIs, HMPs and Method Statements are illustrated in the flowcharts at Appendices A.4 (PW) and A.7 (MW).

Archaeological Research Strategy and Research Framework

- 5.1.10 In accordance with advice in DMRB Volume 10 Section 6 Part 1, the archaeological mitigation programme will be undertaken with full regard to the Research Framework for the Stonehenge and Avebury and Associated Sites WHS (SAARF: Leivers and Powell 2016). The SAARF research themes and period-based questions will provide a framework for consideration of the results of the evaluation programme to support development of an Archaeological Research Strategy (ARS), an outline of which is presented at section 2.4 above.
- 5.1.11 The ARS will provide a framework for focusing archaeological recording work and will ensure that information collected is valid for meaningful archaeological research. Throughout the design, implementation and review of the ARS, 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

- 5.1.12 The archaeological mitigation works will be delivered by an Archaeological Project Team (APT) under a single leadership. The APT will include named, qualified 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):

- Project Manager
- Archaeological Clerk of Works
- Environmental archaeology co-ordinator
- Environmental archaeology supervisor
- Finds co-ordinator/ processing specialist
- Lithics specialist with relevant period expertise
- Ceramics specialist with relevant period expertise
- Geo-archaeologist
- Archaeological surveyor
- Digital data co-ordinator/ manager
- Osteo-archaeologist
- Animal bone specialist
- Scientific dating specialist
- Conservation specialist
- Metal-detectorist

- 5.1.13 The names and qualifications of the individuals fulfilling these roles will be provided to HMAG/ WCAS for information and comment prior to work commencing on site.]
- 5.1.14 The APT will be provided by one or more Archaeological Contractors, to be appointed by the PW and MW Contractors (except for the ACoW, who will form part of the TPA's (Employers Agent) site team). 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, public archaeology and community engagement; 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 HMAG/ WCAS is illustrated in the flowchart at Appendix A.2.

Unexpected finds

- 5.1.15 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, HMAG/ WCAS 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 HMAG/ WCAS.
- 5.1.16 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). This will involve temporary fencing where appropriate and clear notices on site fences. Toolbox talks will be provided by the ACoW and/ or the Archaeological Contractor when necessary to inform construction supervision staff and site operatives of sensitive areas/ site that must not be disturbed until investigation is completed and the site signed-off to construction or where long-term protection is required.
- 5.1.17 The procedure for dealing properly with any unexpected finds during the construction process will be agreed with the Employer and recorded in the CEMP (as required by the OEMP).

Interruptions and delays

- 5.1.18 Archaeological remains and the information that they contain or convey will be treated in an ethical manner, in accordance with ClfA standards (ClfA, 2014f). The mitigation works will likely cover 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 the 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. Under such circumstances the Archaeological Contractor and/ or ACoW will liaise directly with 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. The TPA will inform HMAG/ WCAS in such circumstances.

5.2 Preservation in situ

Photographic recording

- 5.2.1 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

- 5.2.2 In order to demarcate those sites that require preservation in situ 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.
- 5.2.3 The location and type of fencing that is appropriate to each site for preservation in situ will be set out in a Method Statement (it may be appropriate to combine various sites into a single Method Statement). It will also set out whether any preliminary archaeological investigative work is required (before or during the installation process). Requirements for archaeological investigation will be contained within a SSWSI. The Method Statement and SSWSI will be developed in consultation with HMAG/ WCAS (see section 5.1 above). If a SSWSI is required it will be written by the TPA in accordance with guidance set out in DMRB (Volume 10, Section 6, Part 1), and the ClfA Standard and Guidance for archaeological excavation and Code of Conduct (ClfA, 2014a) (Appendix B). The presence of each asset requiring protective fencing will be recorded in the Construction Environmental Management Plan (CEMP) and 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 fencing will be removed under archaeological supervision.

Preservation Beneath Fill

- 5.2.4 At a number of locations along the Scheme suitable fill material on top of a protective barrier membrane will be used to bury sensitive archaeological remains to ensure that they are not disturbed during construction and to preserve them for future generations.
- 5.2.5 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.
- 5.2.6 The PW or MW Contractor (as relevant) will describe in a Method Statement the 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. The Method Statement will be developed in consultation with HMAG/ WCAS (see Section 5.1 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). Toolbox talks will be undertaken to inform construction supervision staff and site operatives of procedures. 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

5.2.7 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) will carry out an initial condition survey. This survey will inform a Method Statement to be prepared in consultation with HMAG/ WCAS (see section 5.1 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).

5.2.8 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 and will be informed by an initial condition survey undertaken to inform the Method Statement.

5.3 Archaeological Excavation and Recording

General Approach

5.3.1 Archaeological excavation and recording (AER) is defined in paragraph 4.3.15 above and Table 10.2 (see section 10 below). The following general approach will apply for AER at the PW and MW stages.

5.3.2 Sites that require investigation will be those that are identified in Appendix E, but may also include new areas that arise as a result of emerging results and unexpected discoveries.

5.3.3 Sites designated for AER will be stripped with mechanical plant as set out in the SSWSI (refer to Appendix E), except in areas where further topsoil/ ploughsoil excavation is taking place.

- 5.3.4 For sites where machine stripping is required, topsoil, subsoil and other overburden will be removed to the correct archaeological horizon under the supervision of a qualified archaeologist. The SSWSI will identify the relevant horizon, informed by the evaluation results and the research questions. 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 5.1 above).
- 5.3.5 Sites stripped for AER, SMR or AMR will be subject to archaeological survey and mapping, resulting in a digital pre-excavation plan. In accordance with the research objectives to be identified in the SSWSI, the archaeological site will then be subject to hand excavation of key features designed 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. Features selected for hand excavation will be determined at site consultation meeting(s) between the Archaeological Contractor, HMAG/WCAS and the TPA.
- 5.3.6 The works will also include sampling of archaeological features for palaeoenvironmental and palaeoeconomic indicators (for example, charred plant remains, molluscs, pollen, etc.), in accordance with the SSWSI and the ARS. Artefact and environmental assessments will be carried out during the course of the fieldwork; selected key features/ structures may be subject to more detailed excavation and sample recovery to address the research objectives of the archaeological programme.
- 5.3.7 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.
- 5.3.8 The research objectives and excavation strategy will be kept under review during the investigation at each site. In order to facilitate this approach, appropriate 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.
- 5.3.9 Palaeoenvironmental sampling has 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 Environmental Co-ordinator or Environmental Supervisor will be contacted for advice in the first instance and HMAG/WCAS and the Historic England Science Advisor (South West), and the TPA will be notified.
- 5.3.10 Geo-archaeological investigations (see section 5.7) will focus on areas of particular interest as identified through previous and current archaeological evaluations and will be specifically designed to address particular research questions. HMAG/WCAS and

the Historic England Regional Scientific Advisor will be contacted by the Archaeological Contractor and consulted with regard to an appropriate sampling strategy and to comment on site retrieval methods.

Ploughzone Artefact Collection

- 5.3.11 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 11.1 and Appendix E).
- 5.3.12 Ploughzone artefact collection will also be undertaken through topsoil sieving incorporated into the trial trenching programme (see 5.7 above), in accordance with the approach adopted at the archaeological evaluation stage, and as set out in section 4.3 of the Archaeological Evaluation Strategy (Highways England, 2018a), and section 4.2 of the Overarching Written Scheme of Investigation for Archaeological Evaluation (Highways England, 2018b).
- 5.3.13 As noted in paragraph 4.3.25 above, the results of ploughzone artefact collection undertaken as part of the evaluation programme (as completed to date and as proposed in section 5.6 above) will be used to identify artefact distributions and concentrations that may indicate areas of activity warranting further detailed investigation. Areas for such detailed ploughzone artefact collection and the proposed approach and method will be developed with proposals for AER to be set out in the relevant SSWSIs (see section 5.1 above). This will be informed by further analysis of the material collected, in consultation with HMAG/ WCAS.

Machine Excavation

- 5.3.14 AER will be carried out at the locations identified in the SSWSI. Each AER area 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 as cleanly as possible 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. Machine excavation will proceed under direct archaeological supervision, in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered. 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.
- 5.3.15 The surface achieved through machine excavation will be inspected for archaeological remains. The resulting surface will be cleaned by hand, where required, for the acceptable definition of archaeological remains: 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 hand cleaning is required will be made on site by the Archaeological Contractor in consultation with HMAG/ WCAS and the TPA.

- 5.3.16 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. 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 by the TPA.
- 5.3.17 Topsoil will be subject to a rapid metal-detector scan prior to stripping, to identify and recover metal objects within the topsoil. 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. Specific circumstances under which metal-detecting may take place after topsoil stripping will include where significant metal objects are found at soil stripping, where burials are found or suspected to be present, or where there is evidence of later prehistoric/ Roman or later settlement.

Hand Excavated Trenches and Hand Excavated Test Pits

- 5.3.18 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, including artefact distributions, which could be damaged by the use of mechanical equipment, 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).
- 5.3.19 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 relevant SSWSI. 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 decision to employ spits will be set-out in the SSWSI and/ or will be discussed on-site during consultation meetings involving the Archaeological Contractor, HMAG/ WCAS and the TPA.

Artefact Recovery Strategy

- 5.3.20 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.
- 5.3.21 The Archaeological Contractor will consult the APT specialists during the preparation of the SSWSI, regarding the artefact recovery strategy. If changes are required during the course of the investigation at a site then these will be identified during site consultation meeting(s) involving the Archaeological Contractor, HMAG/ WCAS and the TPA.
- 5.3.22 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 (sieving) – the collection of surface and buried artefacts using pre-determined sampling interval and in accordance with a scalable strategy (initial 10mm and 4mm mesh for topsoil dry sieving) depending upon the number and significance of finds per excavated unit;
- Bulk sampling for finds (for example, microliths, small faunal remains and ecofacts). Mesh sizes will depend on the material to be recovered, e.g. 1-4mm mesh might be required for recovery of the smallest lithics. Consideration will be given to the recovery of multiple materials 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 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.

- 5.3.23 Each SSWSI will state the artefact collection and retention policy relevant to the aims and objectives of the investigation. All retained artefacts will be collected, stored and processed in accordance with standard methodologies and national guidelines (see Appendix B) and in line with the requirements of Salisbury Museum as the recipient museum for the project archive. Retained artefacts will be monitored by the Archaeological Contractor to minimise further deterioration. Finds may be recorded three dimensionally depending upon their significance. Bulk finds will be collected and recorded by context. Finds may also be recorded according to a pre-determined grid or by spit.
- 5.3.24 All recovered artefacts will be stabilised, conserved and stored in accordance with the current national conservation guidelines and standards (English Heritage, 2008a; English Heritage 2010; and Historic England 2018) (see also Appendix B). The APT conservation specialist will advise the site team on approaches to remedial conservation, conservation assessment, assessment of preservation conditions or potential, and will visit site when required to advise the fieldwork team and to undertake ‘first aid’ conservation treatment and lifting, for example where fragile or waterlogged objects are found (Historic England, 2018b).
- 5.3.25 Where it is relevant to the aims and objectives of the investigation metal finds will be x-rayed (including digital and computed radiography) as part of the post-excavation process, to assist in the identification and interpretation of the finds which will contribute to the understanding of a site (English Heritage, 2006a). X-radiographs or their digital equivalents will be deposited together with the rest of the archaeological project archive, in accordance with national guidelines (English Heritage, 2006a) and the requirements of Salisbury Museum.

Excavation Sampling Strategy

- 5.3.26 Archaeological remains 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. Machine assisted excavation of large deposits will only

be permitted at the discretion of the TPA, in consultation with HMAG/ WCAS. 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.

- 5.3.27 The excavation sampling strategy will be dictated by the significance of the remains, their stratigraphic complexity and their artefactual and palaeoenvironmental content. The Archaeological Contractor in consultation with HMAG/ WCAS will describe in their SSWSI's an appropriate sampling strategy as determined by the results of the archaeological evaluation and key research questions. 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). Changes to the strategy will only be made at consultee meeting(s) involving the Archaeological Contractor and HMAG/ WCAS and with the approval of the TPA.
- 5.3.28 Regular meetings with the TPA and HMAG/ WCAS will be held on site to ensure that the fieldwork strategy is able to develop during the course of the investigations.
- 5.3.29 The following minimum sampling requirements will be used as a generic standard, within the iterative excavation sampling strategy; these may be varied to suit the research value of the remains, subject to consultation with HMAG/ WCAS and the TPA: the SSWSI will identify the appropriate sample for excavation.

Linear features

- 5.3.30 Sufficient sections though 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. All ditch ends will be investigated.
- 5.3.31 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 will be considered for up to 100% excavation, 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.

Discrete features

- 5.3.32 Pits, post-holes and other isolated features (including natural features such as tree throws that have potential to contain archaeological remains) will normally be completely (100%) excavated. Half-sectioning of features may be adopted subject to the significance of the remains.

Buried ground surfaces, floor surfaces, hearths

5.3.33 These features 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. Grid sampling and bulk sampling may be adopted depending upon the significance of the remains. Hearths and areas of in situ burning will normally 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.

Animal Bone Groups or other structured deposits

5.3.34 Where structured deposits or animal bone groups are identified during excavation, the Archaeological Contractor will follow Historic England guidance (Appendix B) and will consult with HMAG/ WCAS and the Historic England Science Advisor (South West). The TPA will approve any changes to the sampling strategy as a result of the discovery of the material, in consultation with HMAG/ WCAS.

Structures

5.3.35 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. 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 Risk Assessment Method Statement (RAMS) to be prepared by the Archaeological Contractor. Preliminary 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 TPA will approve any changes to the excavation strategy, in consultation with HMAG/ WCAS.

Burials

5.3.36 Burials (including features suspected of being burials) will be investigated in accordance with the strategy for the recovery of human remains (see paragraphs 5.3.61 to 5.3.72 below).

Recording

5.3.37 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).

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

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

- 5.3.40 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 specialist 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, correct to two decimal places. The Archaeological Contractor will include in their SSWSI a statement that describes their recording procedures and the accuracy of their site mapping.
- 5.3.41 Site photography will be used to record all archaeological remains that are under investigation. In addition to records of archaeological remains, general site photographs will be taken to give an overview of the site, the progress of the investigations and site activities. Overhead (drone) photography may 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.
- 5.3.42 The Archaeological Contractor will also consider the use of 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). The use of SfM will be reviewed at the on-site meetings to discuss site strategy that will be held with HMAG/ WCAS (see section 7.3).
- 5.3.43 The Archaeological Contractor will contact Salisbury Museum when preparing the SSWSI's 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 a minimum standard for digital photography of 10 megapixels will apply.

Environmental Sampling Strategy

- 5.3.44 The APT Environmental Co-ordinator will develop the detailed environmental sampling strategy for the investigation, treatment, recovery and analysis of environmental remains, and will oversee the work at the fieldwork stage. The Environmental 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.
- 5.3.45 In addition to the APT Environmental Co-ordinator, an Environmental Supervisor will be nominated to take charge of the routine processing of samples and the supervision of routine sampling in connection with the investigations.
- 5.3.46 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). Specialists (such as a zooarchaeologist for animal bones), the Historic England Science Advisor (South West) and HMAG/ WCAS will be consulted regarding site specific requirements.

- 5.3.47 Environmental sampling will be carried out in accordance with national guidelines including Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation (English Heritage, 2011), Geoarchaeology, Using earth sciences to understand the archaeological record (Historic England, 2015c; see Appendix B), and ClfA's Standard and guidance for the collection, documentation, conservation and research of archaeological materials (ClfA, 2014e). Other relevant guidance is contained within Appendix B.
- 5.3.48 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 (refer to sections 5.3.6 and 5.3.22). Processing will be supervised by the Archaeological Contractor's finds co-ordinator/ processing specialist.
- 5.3.49 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.
- 5.3.50 In general terms the aims of the environmental strategy will be as follows:
- To put each site or group of sites into its geomorphological setting and to examine subsequent changes (investigate the contribution of colluvium and wind borne material to the landscape);
 - To characterise the vegetational history and landuse of each site;
 - To characterise the agricultural economy of each site.
- 5.3.51 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) buried beneath the modern cultivated soil this study 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 landuse, and will provide information on erosion and on the contribution of colluvium and wind borne material to the soil.
 - Pollen and diatom/phytolith analysis (sampling to be systematic and extensive).
 - 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, coleopteran, 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.
- 5.3.52 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).

- 5.3.53 All samples taken will come from suitably cleaned surfaces and will be collected with clean tools and placed in clean containers. 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 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.
- 5.3.54 If significant organic archaeological remains are encountered during the investigations, the Archaeological Contractor will inform the TPA immediately, who will then notify the Employer and the PW or MW Contractor (as relevant).
- 5.3.55 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 HMAG/ WCAS and Historic England Science Advisor (South West) 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 HMAG/ WCAS. Samples for radiocarbon dating will be identified from material sampled for environmental analyses.

Strategy for Scientific Dating

- 5.3.56 A comprehensive scientific dating programme will be undertaken, primarily during post-excavation analysis, to address the specific objectives identified for each site and for the overarching scheme. Samples for radiocarbon dating will be identified from materials sampled for environmental analyses (refer to section 5.3.55) or from recovered artefacts (refer to sections 5.3.22). 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).
- 5.3.57 Scientific dating will be utilised to provide spot dates, contribute to understanding of stratigraphic sequences, or to provide precision/resolution for statistical modelling. The Archaeological Contractor will set out their detailed strategy for dating in the SSWSI, which will take account of work done at the evaluation stage and the published research agendas (Leivers and Powell, 2016; Grove and Croft, 2012). The APT dating specialist will provide advice and guidance throughout the life-cycle of the project (preparation of the SSWSI, site investigations, and at the post-excavation assessment and analysis stages). HMAG/ WCAS and the Historic England Scientific Advisor (South West) will be consulted during preparation of the SSWSUIU and during the course of the project.
- 5.3.58 Scientific dating will be carried out in accordance with national guidelines including Dendrochronology Guidelines on producing and interpreting dendrochronological dates (currently under review) (English Heritage, 2004), Archaeomagnetic Dating (English Heritage, 2006b), and Luminescence Dating, Guidelines on using luminescence dating in archaeology (currently under review) (English Heritage, 2008b). Guidelines for the sampling of archaeological remains/deposits can be found in Environmental Archaeology: A guide to the theory and practice of methods, from sampling and

recovery to post-excavation (English Heritage, 2011), Geoarchaeology. Using earth sciences to understand the archaeological record (Historic England, 2015c), and A Guide to Sampling Archaeological Deposits for Environmental Analysis (Murphy and Wiltshire, 1994).

5.3.59 Scientific dating techniques will include the following:

- Radiocarbon (C14) 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 3.3.91), reliable and high-resolution dating will be essential and multiple methods should be employed;
- Luminescence dating (optically stimulated luminescence or OSL) for finds-poor 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.

5.3.60 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 project objectives, 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. 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 appropriate guidelines. The strategy will be devised in consultation with HMAG/ WCAS and Historic England's Science Advisor (South West) and will be approved by the TPA.

Strategy for the Recovery of Human Remains

5.3.61 Burials have been found at several locations at the evaluation stage (see Appendix E). 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.

- 5.3.62 The SSWSI will describe a detailed strategy for the investigation, treatment, recovery, and assessment/ analysis of human remains (inhumations, cremations, disarticulated / charnel remains) which will be developed by the APT osteoarchaeologist, including consideration of the use of SfM mapping to produce 3D models (see paragraph 5.3.42 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). 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.
- 5.3.63 In the event of the discovery of human remains the Archaeological Contractor will notify the TPA immediately. 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.
- 5.3.64 In general, excavation of human remains will not extend beyond the limits of the investigation work area; however, if the burial is osteologically or archaeologically important 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.
- 5.3.65 The APT human osteologist 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 SSWSI.
- 5.3.66 Where inhumation burials are encountered, it is good practice to take samples from the area of the head, torso and feet from the level of the inhumation and from the fill immediately beneath the level of the bones.
- 5.3.67 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.
- 5.3.68 Cremation deposits should be subject to sampling and assessment for charcoal, charred plant remains, artefacts and the recovery of human bone.
- 5.3.69 Where un-urned cremations are suspected or identified, these will be subject to 100% sampling. Where large deposits of pyre debris are identified the Archaeological Contractors osteoarchaeologist will be contacted to devise an appropriate strategy for excavation and sampling, in consultation with HMAG/ WCAS and Historic England Science Advisor (South West). The strategy will be approved by the TPA before it is implemented. 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.
- 5.3.70 Larger fragments of charcoal (>2cm diameter) will be individually sampled as specialist samples and the location of these samples recorded on the resulting plan and section drawing; it may be beneficial to survey in the location of specialist samples.

- 5.3.71 It is good practice to block lift cremation urns to allow for X-radiography and excavation under laboratory conditions. The team's conservator or field staff experienced in lifting cremation urns will be present in the field when lifting takes place. In the first instance, the conservator will be contacted for advice.
- 5.3.72 Osteological assessment will include consideration of the potential of biomolecular methodologies alongside traditional osteological recording (such as microscopic analysis of bone sections, chemical analyses for stable isotopes, trace elements and ancient DNA, as well as radiocarbon dating). Where there is a clear research question which could be addressed through biomolecular analysis, determined through the assessment of human remains, the Archaeological Contractor will consult with HMAG/WCAS and Historic England for further advice prior to analysis being undertaken. The TPA will approve the proposals for scientific study at the assessment and analysis stages.

Treasure

- 5.3.73 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. A list of finds that have been collected that fall under the Treasure Act and related legislation will be included in the fieldwork report.

5.4 Strip, Map and Record

General Approach

- 5.4.1 Strip, Map and Record (SMR) is defined in paragraph 4.3.17 above and Table 10.2 (see section 10 below). The following general approach will apply for SMR at the PW stage.
- 5.4.2 Sites designated for SMR will be stripped with mechanical plant as set out in the SSWSI (refer to Appendix E). Topsoil, subsoil or other overburden that does not contain datasets relevant to the research objectives will be removed to the correct archaeological horizon under the supervision of a qualified archaeologist. 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 5.1 above).
- 5.4.3 Following stripping, sites for SMR will be subject to archaeological survey and mapping, resulting in a digital pre-excavation plan. In accordance with the research objectives to be identified in the SSWSI, a strategy based on this plan will be developed in consultation with HMAG/WCAS 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. Features selected for hand excavation will be determined at site consultation meeting(s) between the Archaeological Contractor, HMAG/WCAS and the TPA.
- 5.4.4 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.

Machine Excavation

- 5.4.5 SMR will be carried out at the location(s) identified in the SSWSI. Each SMR area 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 as cleanly as possible the archaeological surface. Machine excavation will proceed under direct archaeological supervision in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered. 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.
- 5.4.6 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. 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

- 5.4.7 Archaeological remains will be surveyed using electronic survey 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 SSWSI. Machine assisted excavation may be permissible if large deposits are encountered, at the discretion of the TPA in consultation with HMAG/ WCAS. 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 on-site in consultation with HMAG/ WCAS and the TPA (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). 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 generic methodologies for mechanical excavation, hand excavation, sampling and recording for AER (see section 5.3above) will apply to each SMR area, as modified by the relevant SWSI.

5.5 Archaeological Monitoring and Recording (AMR)

General Approach

- 5.5.1 The following general approach will apply for Archaeological Monitoring and Recording (AMR) at the PW and MW stages.
- 5.5.2 Where AMR is proposed, the PW or MW Contractor's preferred method of working will be controlled. Topsoil, subsoil or other overburden that does not contain datasets relevant to the research objectives (as set out for each site, refer to Appendix E) will be

stripped by a mechanical excavator fitted with a toothless bucket to the correct archaeological horizon, under the supervision of a qualified, competent archaeologist.

- 5.5.3 The Main Contractor will allow sufficient time for the archaeological monitoring, recording and excavation of the archaeological remains. The TPA in consultation with HMAG\ WCAS and the ACoW will determine the scope of work and timetable for the completion of the investigation at each site. Dump trucks and other plant will not be permitted to track over areas that contain remains until archaeological investigations are complete, or until the Archaeological Contractor had given permission. The TPA in consultation with HMAG/ WCAS and the ACoW will determine when plant will be given access (dependent on the completion of the investigations and the ability to manage/ constrain access where access allowed to part of an area under ARM). 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 HMAG/ WCAS (see section 5.1 above).
- 5.5.4 A notification procedure will be developed by the TPA detailing procedures to be followed 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). In the event of an unexpected discovery, 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 HMAG/ WCAS.

Machine Excavation

- 5.5.5 The AMR will be carried out at the location proposed by the TPA in consultation with HMAG or WCAS.
- 5.5.6 Where the Contractor's preferred method of working is to be controlled, machine excavation will proceed under direct archaeological supervision in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered. 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.
- 5.5.7 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.
- 5.5.8 If appropriate to the research objectives, the AMR area will be subject to a rapid metal detector scan in advance of excavation to identify and recover metal artefacts within the topsoil/ subsoil. 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 HMAG/ WCAS.

Hand Excavation

- 5.5.9 Archaeological remains will be surveyed using electronic survey equipment to create a detailed pre-excavation drawing (extent of AMR 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 SSWSI. Machine assisted excavation may be permissible if large deposits are encountered at the discretion of the TPA. 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. The amount of excavation will be determined on-site in consultation with HMAG/ WCAS and the TPA (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). 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.
- 5.5.10 The same generic sampling and recording methodologies for AER will apply to each AMR area (see section 5.3above).

5.6 Trial Trench Evaluation

- 5.6.1 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 of remains, their extent, character and condition in order to inform the detailed mitigation requirements at these locations should it be required (see section 4.3.9 and Appendix E).
- 5.6.2 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).

5.7 Strategy for Geo-archaeological Investigation

General Approach

- 5.7.1 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 SSWSIs.
- 5.7.2 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.

- 5.7.3 The following general approach will apply for geo-archaeological investigations at the PW and MW stages.

Generic Methodology

- 5.7.4 Geo-archaeological investigation(s) will be carried out in accordance with a SSWSI(s) to be developed in consultation with HMAG/ WCAS.

- 5.7.5 The same generic strategies for environmental sampling and scientific dating as set out in section 5.2 (above) will apply to geo-archaeological investigation.

Location and Excavation of Geoarchaeological Interventions

- 5.7.6 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 HMAG/ WCAS and Historic England Science Advisor (South West).

- 5.7.7 Interventions will proceed under the direct archaeological supervision of the APT geoarchaeologist and will be excavated in level spits, to undisturbed natural deposits. Larger interventions will be stepped to ensure stability and safety. If significant archaeological remains are encountered, work will cease, and the ACoW and the TPA will be contacted immediately. 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.

- 5.7.8 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 meet the aims and objectives of the geo-archaeological investigation.

- 5.7.9 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 section 5.2 above).

- 5.7.10 If column samples are taken, their location will be accurately surveyed using electronic surveying equipment and their location drawn on the accompanying section drawing.

- 5.7.11 The same generic excavation strategy as set out in section 5.2 will apply to archaeological remains discovered during geo-archaeological investigations.

Recording

- 5.7.12 The location and extent of a 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).

- 5.7.13 Prior to the start of the investigations, the APT geo-archaeologist will review the geology and soil descriptions and the results of previous ground investigations and archaeological evaluation. If appropriate to the assessment the specialist will also prepare a site specific deposit model to better understand the deposit sequence and to inform the decision making process (Carey et al., 2018).
- 5.7.14 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.
- 5.7.15 Photographs will be taken during the course of the geo-archaeological investigations to record site activities, the deposit sequence and sample locations (see section 5.2.35).
- 5.7.16 The same generic methodologies for area for archaeological excavation and recording (AER) will apply (artefact recovery, human remains, treasure etc).

5.8 Archaeological Topographic Survey

General Approach

- 5.8.1 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. This non-intrusive archaeological recording technique will include production of feature profiles, contour and/ or hachure plans and a photographic record where appropriate.

Generic Methodology

- 5.8.2 The archaeological survey will be carried out in accordance with a specification (SSWSI) to be developed in consultation with HMAG/ WCAS (see section 5.1 above). It will be written in accordance with DMRB (Volumes 10 and 11), and Historic England guidance including Understanding the Archaeology of Landscapes (Historic England, 2017), Traversing the Past (Historic England, 2016b) and Metric Survey Specification for Cultural Heritage (Historic England, 2015b). It will also adhere to all current and relevant best practice and standards and guidelines (see Appendix B).
- 5.8.3 The survey will be undertaken at the locations proposed in the SSWSI during the PW or MW stages and will be carried out by the APT archaeological surveyor.
- 5.8.4 The survey output will comprise both 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 equipment. 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. The distance interval at which each reading would be taken 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.

- 5.8.5 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).
- 5.8.6 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 and be accurate to $\pm 50\text{mm}$.
- 5.8.7 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 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.
- 5.8.8 The topographical survey will have both digital and paper outputs as set out in the SSWSI. The survey outputs (both digital and paper hard-copy) will clearly reveal the surface topography, the nature, form and character of the earthworks, and the spatial inter-relationships of the different earthwork elements. A list of features identified during the survey and a feature description will also be provided. The digital output should be GIS compatible and have the feature list and descriptions embedded into it. Digital data in AutoCAD should also be provided.

5.9 Strategy for Digital Data

General Approach

- 5.9.1 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 may include complex datasets generated by reconnaissance surveys, trench evaluation, mitigation investigations, GIS, CAD and relational databases.
- 5.9.2 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 and at the end of the project they will ensure that the digital archive is transferred to the digital repository.
- 5.9.3 Existing and new digital data will be safeguarded and deposited in an appropriate digital archive that conforms to existing national standards and guidelines on how data will be structured, preserved and accessed (Brown, 2011b; English Heritage, 2012; ADS, 2013; and ClfA, 2014d) (Appendix B).
- 5.9.4 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 notify the TPA if the digital archive will be held in a location separate to the paper records that comprise the traditional project archive (Salisbury Museum). The Archaeological Contractor will in addition ensure thorough documentation of the data, 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.

- 5.9.5 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 not need to be digitised, except to provide a digital security copy or online access to the data. Paper originals will be retained within the traditional project archive.
- 5.9.6 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.
- 5.9.7 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

- 5.9.8 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/DAG 2013, 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 Video; and
 - Digital Audio.

- **C. Data Collection and Fieldwork (digital data collected as a result of remote sensing surveys, scientific studies and dating):**
 - Aerial survey/ UAV survey;
 - Digital photography/ close range photogrammetry/ structure from motion mapping;
 - 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.**

Digital Data Management Plan

5.9.9 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 sets. The DMP 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 Programme

6.1 Introduction

- 6.1.1 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 6.2 and 6.3 below.

6.2 Phasing – Preliminary Works

Phase 1

- 6.2.1 The mitigation programme is dependent upon land access requirements, prevailing ground conditions and related utility diversions. Mitigation works will be generally programmed as follows at Phase 1:
- a) Ploughzone artefact collection (fieldwalking);
 - b) Archaeological evaluation trenching;
 - c) Topographic surveys;
 - d) Small-scale investigation of historic landscape features and small archaeological sites;
 - e) 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 detailed Scheme design;
 - f) Protective fencing will be installed around selected sites to prevent damage (Appendix D);
 - g) Archaeological mitigation at selected sites to facilitate the installation of protective fencing will be carried out, including boundary fencing (Appendix D);
 - h) Heritage assets that require relocation will be moved.

Phase 2

- 6.2.2 At Phase 2 the following investigations will be carried out:
- a) Geo-archaeological investigations (Appendix E). 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.
 - b) Archaeological excavation and recording (AER) and strip, map and sample (SMR) will be undertaken during the PW stage (prior to construction) at archaeological sites requiring preservation by record (Appendix E).
 - c) Additional sites that require preservation in situ will be identified and measures implemented.

6.3 Phasing – Main Works

Phase 3

- 6.3.1 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. 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).
- 6.3.2 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. This mitigation may take the form of AER, SMR or AMR.
- 6.3.3 Archaeological mitigation will be undertaken in advance of the installation of tunnel movement monitoring stations above the tunnel section of the Scheme, where this has not been possible during the PW stage.

6.4 Artefact Assessment and Geo-archaeological Assessment

Phases 1 to 3

- 6.4.1 Artefactual, geo-archaeological and palaeoenvironmental assessment will be undertaken concurrent with the on-site archaeological works. This will facilitate the rapid spot-dating of archaeological remains as well as 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.
- 6.4.2 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.

7 Monitoring, Communications and Sign-off of Archaeological Works

7.1 Access for Monitoring

Phases 1 to 3

- 7.1.1 The archaeological mitigation works will be subject to regular monitoring visits by the ACoW, who will have unrestricted access to the sites, site records or any other information. 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.
- 7.1.2 Unrestricted access to the sites, site records and any other information will also be afforded to the TPA.
- 7.1.3 HMAG/ WCAS will be afforded access to the sites, site records and any other information through the regular site meetings (see 7.2 below); specific visits to access site records will be arranged as necessary through the TPA. The Regional Science Advisor (South West) will be afforded access to the sites, site records and any other information through regular consultation visits to be arranged by the TPA.

7.2 Communications strategy

Phases 1 to 3

- 7.2.1 During the PW and MW stages, regular progress meetings will be held between the ACoW, the TPA, the Designer's Engineers and Project Management Team, the Contractor's Project Management Team and Sub-contractors. It is anticipated that, as a minimum, 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, progress reports for the archaeological investigations (see section 7.2 below) can be conveyed and archaeological works and resources can be targeted and programmed effectively prior to advance works such as temporary utility diversions and structures or during construction itself. Regular communication (via email and telephone) will also be maintained throughout the archaeological mitigation programme to assist in the smooth running of the archaeological works.
- 7.2.2 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.
- 7.2.3 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 off-site works (at least quarterly, 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/ WCAS. Invitations will be issued to the whole Committee.
- 7.2.4 The relationships and reporting lines are illustrated in the flowcharts at Appendices A.3 (Phases 1 and 2) and A.8 (Phase 3).

7.2.5 Toolbox talks will be undertaken when necessary, to inform construction supervision staff and site operatives of 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.

7.3 Progress Reporting

7.3.1 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 HMAG/ WCAS, for information. In addition, progress meetings between the TPA, HMAG/ WCAS and the Archaeological Contractor will be held on site during the course of the investigations to review the progress and results of the investigations, review the site strategies, and to 'sign off' sites to construction (see 7.5.2 below). These meetings will be arranged by the TPA (see 6.4 above). The Archaeological Contractor will only accept instruction from the PW or MW Contractor and the TPA.

7.3.2 The progress reports will include, as a minimum:

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

7.4 Monitoring of Off-site Works

7.4.1 Following the completion of the fieldwork monitoring meetings will be held with the Archaeological Contractor, HMAG, WCAS and the TPA during the post-excavation phase of the archaeological mitigation programme. The Historic England Regional Science Advisor (South West) will also be invited to relevant meetings. The schedule for these meetings will be determined by the TPA prior to the commencement of the post-excavation programme.

7.4.2 The Archaeological Contractor will provide a programme of work and schedule for the completion of the Post-Excavation Assessment Report (PEAR; see section 10 below) and will send it to the TPA for approval.

7.4.3 The Archaeological Contractor will submit regular progress reports to the TPA (minimum of one every six weeks). Each report will identify the work that has been completed in that period, where there are issues / delays and proposed measures to rectify or mitigate these, and an updated schedule of work.

7.5 Sign-off of Archaeological Works

- 7.5.1** The TPA will inform the PW or MW Contractor (as relevant) upon completion of work at each site where investigations have been undertaken, or where sites have been protected.
- 7.5.2** Sites that have been completed (approved by the TPA in consultation with HMAG/WCAS) will be subject to a formal signing off procedure. The Archaeological Contractor will submit a completion statement to the TPA and the Main Contractor.
- 7.5.3** The reporting lines for sign-off of archaeological action area completion (i.e. site work completion) are illustrated in the flowcharts at Appendices A.5 (Phases 1 and 2) and A.8 (Phase 3).

8 Reporting, Publication and Dissemination

8.1 Outline Methodology for Reporting of Archaeological Investigation

8.1.1 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

8.1.2 An interim statement will be prepared and submitted to the TPA. The purpose of the 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; and
- A programme of work and schedule for the completion of the PEAR.

Post-Excavation Assessment Report (PEAR)

8.1.3 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.

8.1.4 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, if relevant to an understanding of the site. Following the completion of the post-excavation assessment, the original project objectives will be reviewed to determine the scope of any analysis and publication.

8.1.5 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 SSWSI 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 and agreed between the Archaeological Contractor and the TPA in consultation with HMAG/ WCAS.

8.1.6 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);
- 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 and national context according to the SAARF (Leivers and Powell 2016);
- Archaeological Research Design (ARD) for proposed further analysis;
- 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.

8.1.7 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 HMAG and WCAS for comment. In finalising the report, the Archaeological Contractor will take account of the comments of HMAG/ WCAS, as informed by the advice of the Scientific Committee.

8.1.8 The scope of the analysis and publication report will be dependent upon the assessment and future discussions to be held with the TPA, HMAG and WCAS. 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.

8.2 Outline Publication and Dissemination Proposals

- 8.2.1 A comprehensive publication and dissemination programme will be developed in parallel with the strategy for Public Archaeology and Community Engagement (see Appendix F).
- 8.2.2 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 HMAG and WCAS. It is envisaged that interim reporting related to archaeological evaluation and mitigation will be published on the Archaeology Data Service archive.
- 8.2.3 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.
- 8.2.4 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.
- 8.2.5 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.
- 8.2.6 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.

9 Archive Preparation and Deposition

9.1 Archive Security and Storage

- 9.1.1 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).
- 9.1.2 Agreement in principle has been obtained from the Salisbury Museum to accept the documentary, digital and photographic archive for long-term storage. The Archaeological Contractor shall be responsible for liaising with the 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 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.
- 9.1.3 At the request of the Technical Partner, 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.

9.2 Archive Consolidation

- 9.2.1 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) 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.
- 9.2.2 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.

9.3 Digital Archive

- 9.3.1 Requirements for the management and preservation of digital data created during the course of the project are outlined in the Digital Data Strategy at section 5.9 above.
- 9.3.2 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

10 Tables

10.1 Table 10.1 – Reconnaissance and evaluation surveys

Table 10.1: Reconnaissance and evaluation surveys

	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	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

10.2 Table 10.2 – Archaeological mitigation measures

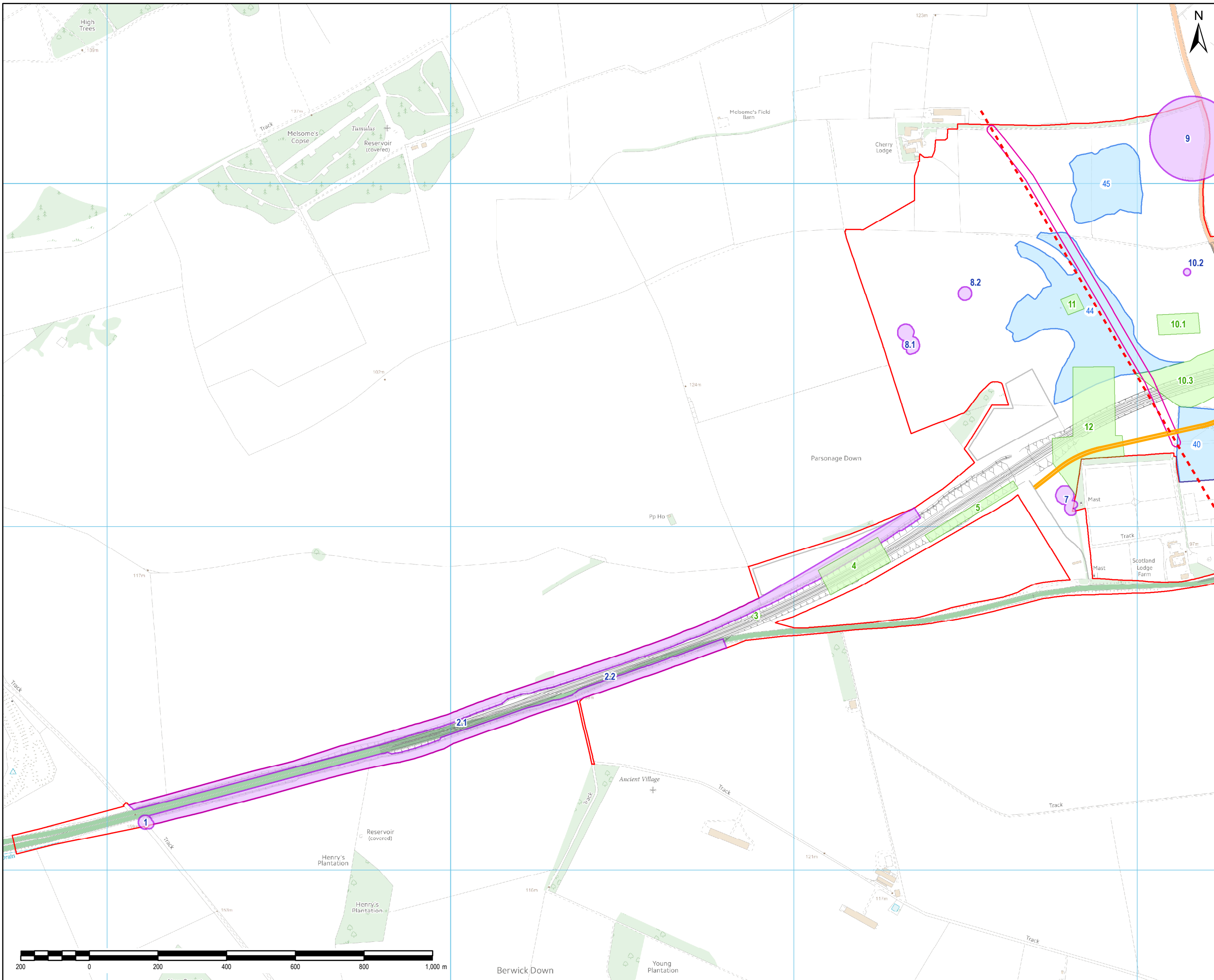
Table 10-2 Archaeological mitigation measures

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 where required), will be undertaken where significant archaeological remains are either known from assessment or evaluation works. AER may be targeted at specific sites, areas of interest or a sample range of locations. At each location where AER is required the extent of the investigation area and the excavation strategy will be identified in consultation with HMAG/ WCAS.
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. The technique may also be applicable to particular construction impacts, such as utility corridors. At each location where SMR is required the extent of the investigation area and the excavation strategy will be identified in consultation with HMAG/ WCAS.
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. 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.

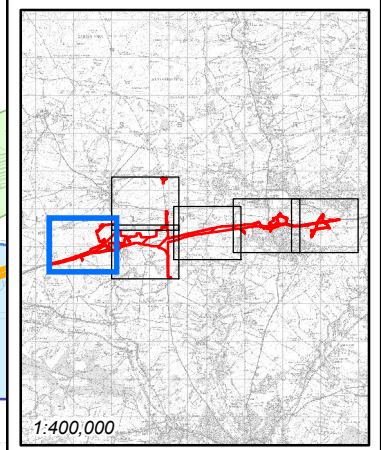
Recording Method/ Works stage	Description
Archaeological Monitoring and Recording (AMR) (PW and MW stages)	A programme of observation, investigation and recording of archaeological remains undertaken in specific areas where the presence of, or moderate potential for, archaeological remains has been demonstrated 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 to the required standard. Archaeological monitoring and recording may also occur where remains have either not been identified by assessment and evaluation but where there remains a low risk of archaeological discoveries. In these situations, the Contractor's preferred method of working would not be controlled for archaeological purposes, unless significant archaeological remains are discovered when the area would be redefined.
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 auger 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.
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 its setting.
Preservation in situ	An area of development that has been excluded to conserve archaeological remains, thereby preserving it for later generations. Measures for preservation in situ 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 Figures

Figure 11.1A-11.1F – Archaeological Mitigation Areas



- NOTES / LEGEND**
- Proposed route alignment
 - ▭ Proposed scheme boundary
 - ▭ Proposed archaeological mitigation area
 - ▭ Proposed mitigation area / preservation in situ
 - ▭ Additional evaluation area
 - ▭ Proposed utilities mitigation area
 - Proposed Electrical Cable - underground
 - - - Esso Petroleum Pipeline
 - ▭ Site Preparation and Compound Area
 - All-weather haul roads



© Crown copyright and database rights 2017 Ordnance Survey 100030649. Historic Environment Record (HER)
 © Wiltshire Council October 2017. Data reproduced from Wiltshire Council Archaeology Service.

Revision Details	By	Date	Suffix
	Check		

Purpose of issue
FOR INFORMATION

Client
 Highways England

Working on behalf of

Project Title
A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 11.1A
 ARCHAEOLOGICAL
 MITIGATION AREAS**

Designed	Drawn	Checked	Approved	Date
RM	KD	AP	WB	03/05/19

Internal Project No. 60541200
 Scale @ A3 1:10,000 Zone SW

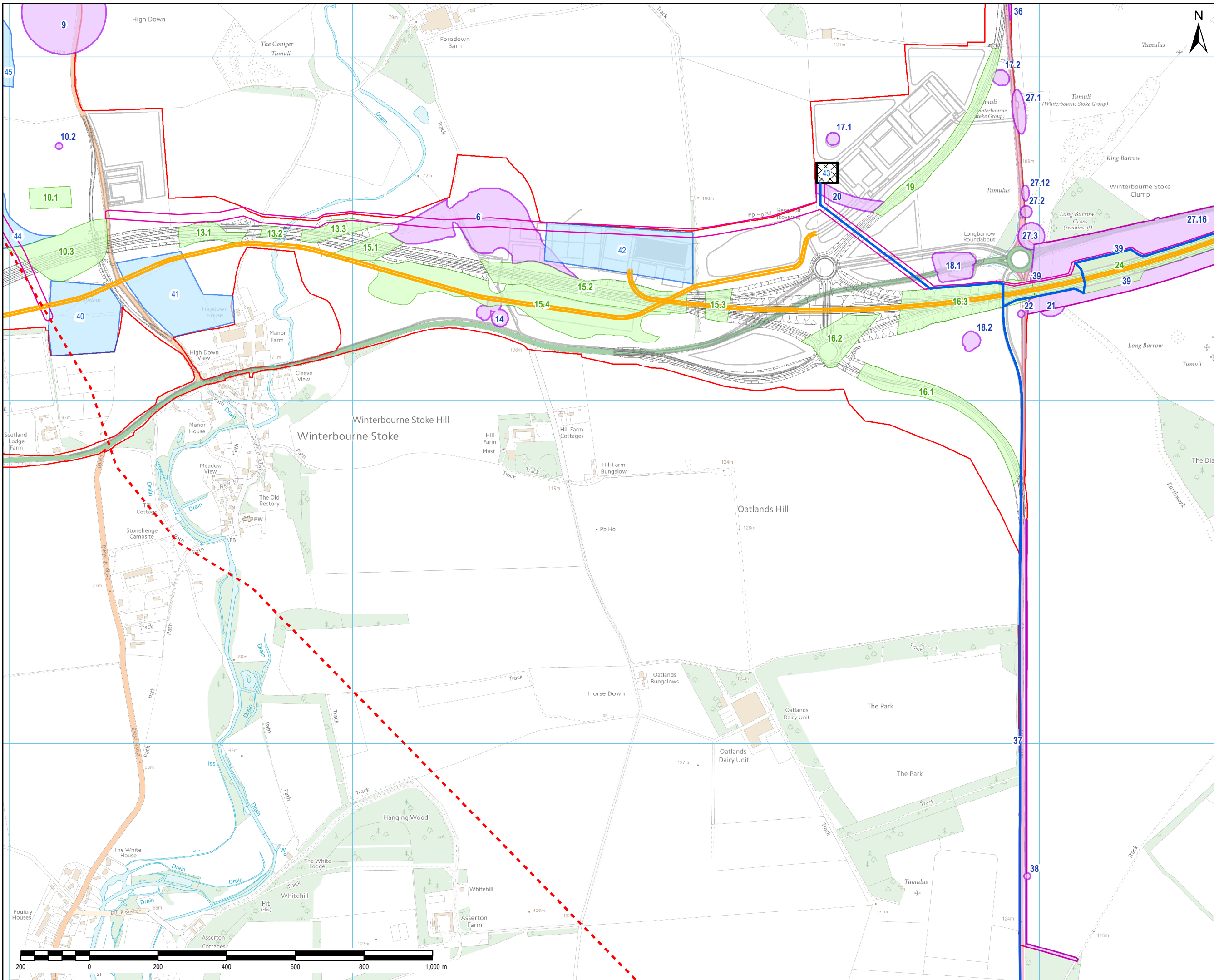
THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE. AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

Highways England
 Temple Quay House
 2 The Square, Temple Quay
 Bristol
 BS1 6HA

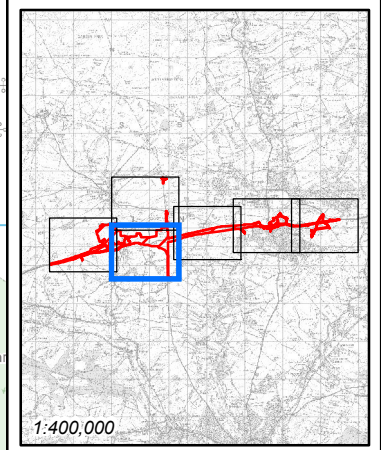
AECOM + mace + WSP

Drawing Number	Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	01	
SCHEME WIDE	DR	GI	00557	
Location	Type	Role	Number	





- NOTES / LEGEND**
- Proposed route alignment
 - Proposed scheme boundary
 - Proposed archaeological mitigation area
 - Proposed mitigation area / preservation in situ
 - Additional evaluation area
 - Proposed utilities mitigation area
 - Proposed Electrical Cable - underground
 - Esso Petroleum Pipeline
 - Site Preparation and Compound Area
 - All-weather haul roads



© Crown copyright and database rights 2017 Ordnance Survey 100030649. Historic Environment Record (HER)
 © Wiltshire Council October 2017. Data reproduced from Wiltshire Council Archaeology Service.

Revision Details	By	Date	Suffix

Purpose of issue
FOR INFORMATION

Client
 Highways England

Working on behalf of

Project Title
A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 11.1B
 ARCHAEOLOGICAL
 MITIGATION AREAS**

Designed	Drawn	Checked	Approved	Date
RM	KD	AP	WB	03/05/19

Internal Project No.
 60541200

Scale @ A3
 1:10,000 Zone
 SW

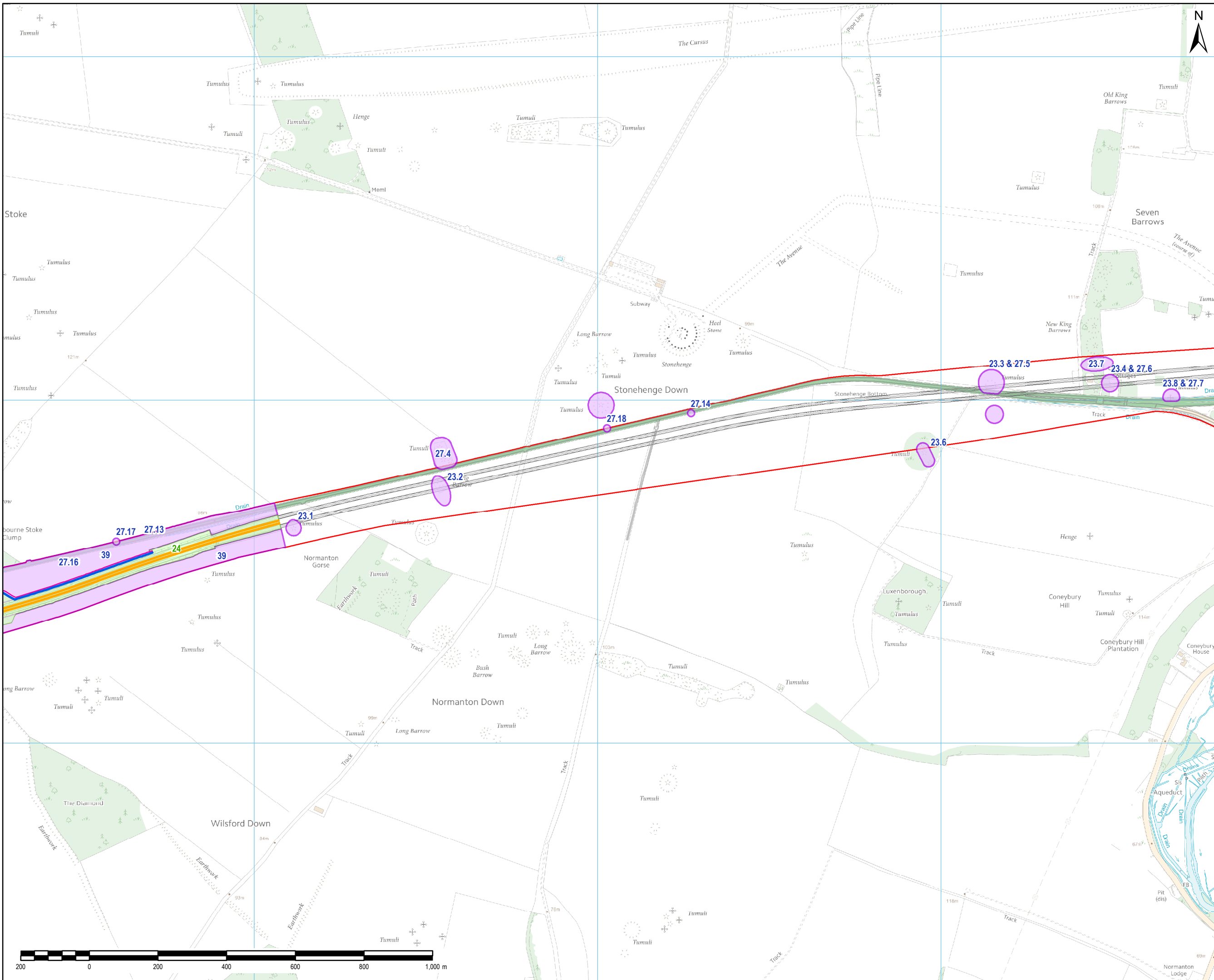
THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE, AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

Highways England
 Temple Quay House
 2 The Square, Temple Quay
 Bristol
 BS1 6HA

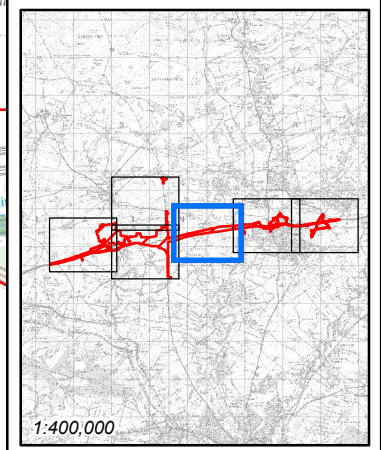
AECOM + mace + WSP

Drawing Number	Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	01	
SCHEME WIDE	DR	GI	00557	
Location	Type	Role	Number	





- NOTES / LEGEND**
- Proposed route alignment
 - Proposed scheme boundary
 - Proposed archaeological mitigation area
 - Proposed mitigation area / preservation in situ
 - Additional evaluation area
 - Proposed utilities mitigation area
 - Proposed Electrical Cable - underground
 - Esso Petroleum Pipeline
 - Site Preparation and Compound Area
 - All-weather haul roads



© Crown copyright and database rights 2017 Ordnance Survey 100030649. Historic Environment Record (HER)
 © Wiltshire Council October 2017. Data reproduced from Wiltshire Council Archaeology Service.

Revision Details	By	Date	Suffix

Purpose of issue
FOR INFORMATION

Client
 Highways England

Working on behalf of

Project Title
A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 11.1C
 ARCHAEOLOGICAL
 MITIGATION AREAS**

Designed	Drawn	Checked	Approved	Date
RM	KD	AP	WB	03/05/19

Internal Project No. 60541200

Scale @ A3 1:10,000 Zone SW

THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE. AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

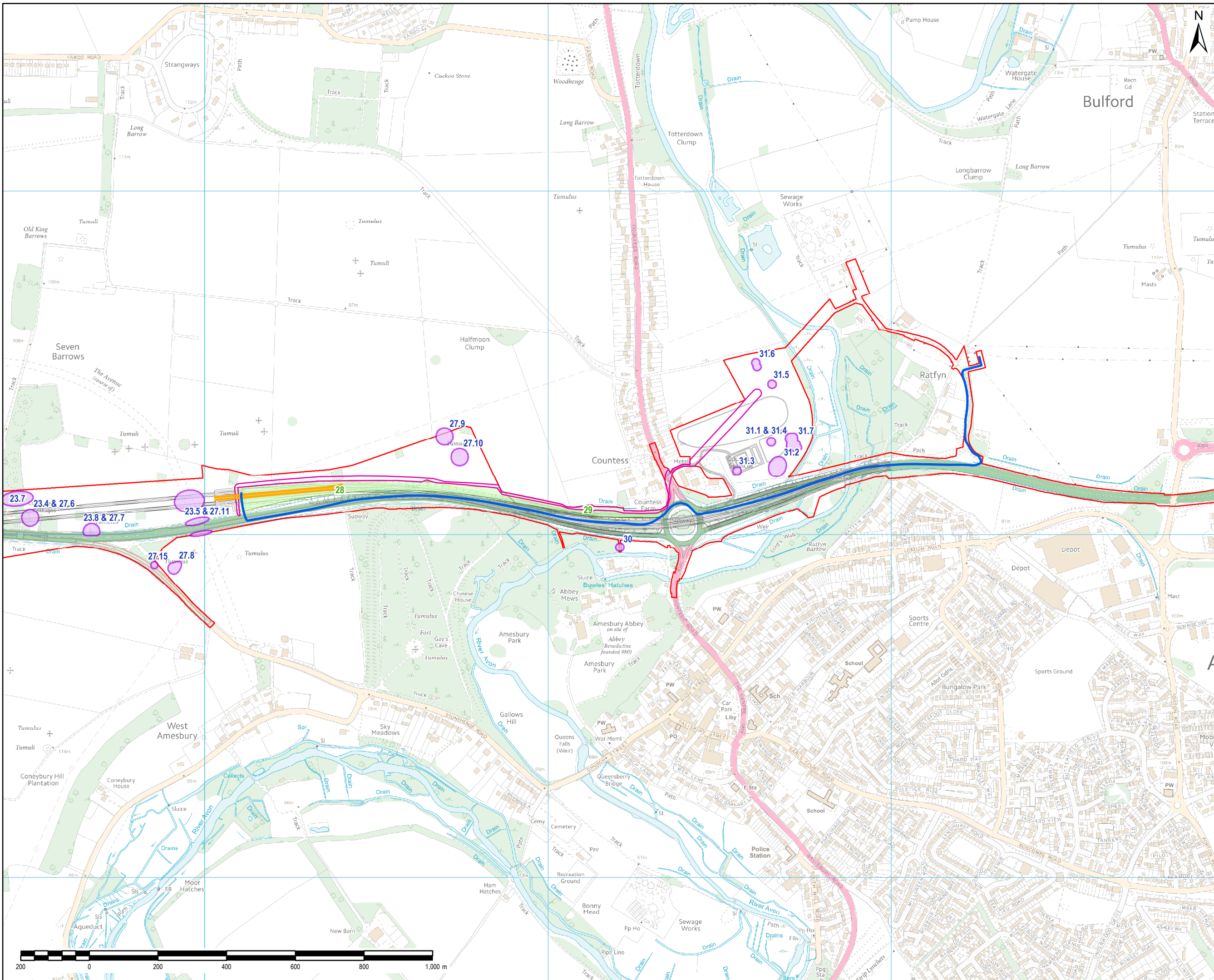
Highways England
 Temple Quay House
 2 The Square, Temple Quay
 Bristol
 BS1 6HA

AECOM + mace + WSP

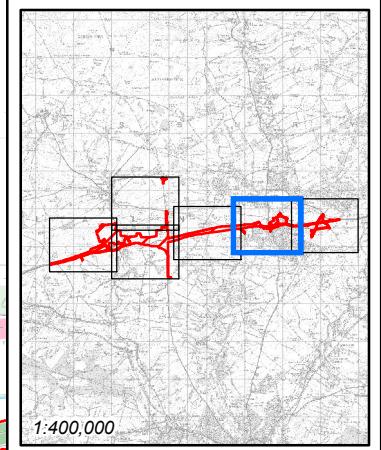
Drawing Number	Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	01	

SCHEME WIDE DR GI 00557

Location	Type	Role	Number



- NOTES / LEGEND
- Proposed route alignment
 - Proposed scheme boundary
 - Proposed archaeological mitigation area
 - Proposed mitigation area / preservation in situ
 - Additional evaluation area
 - Proposed utilities mitigation area
 - Proposed Electrical Cable - underground
 - Esso Petroleum Pipeline
 - Site Preparation and Compound Area
 - All-weather haul roads



© Crown copyright and database rights 2017 Ordnance Survey 100030649. Historic Environment Record (HER) © Wiltshire Council October 2017. Data reproduced from Wiltshire Council Archaeology Service.

Revision Details	By	Date	Suffix

Purpose of issue
FOR INFORMATION

Client
Highways England

Working on behalf of

Project Title
A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 11.1D
ARCHAEOLOGICAL
MITIGATION AREAS**

Designed	Drawn	Checked	Approved	Date
RM	KD	AP	WB	03/05/19

Internal Project No.
60541200

Scale @ A3
1:10,000

Zone
SW

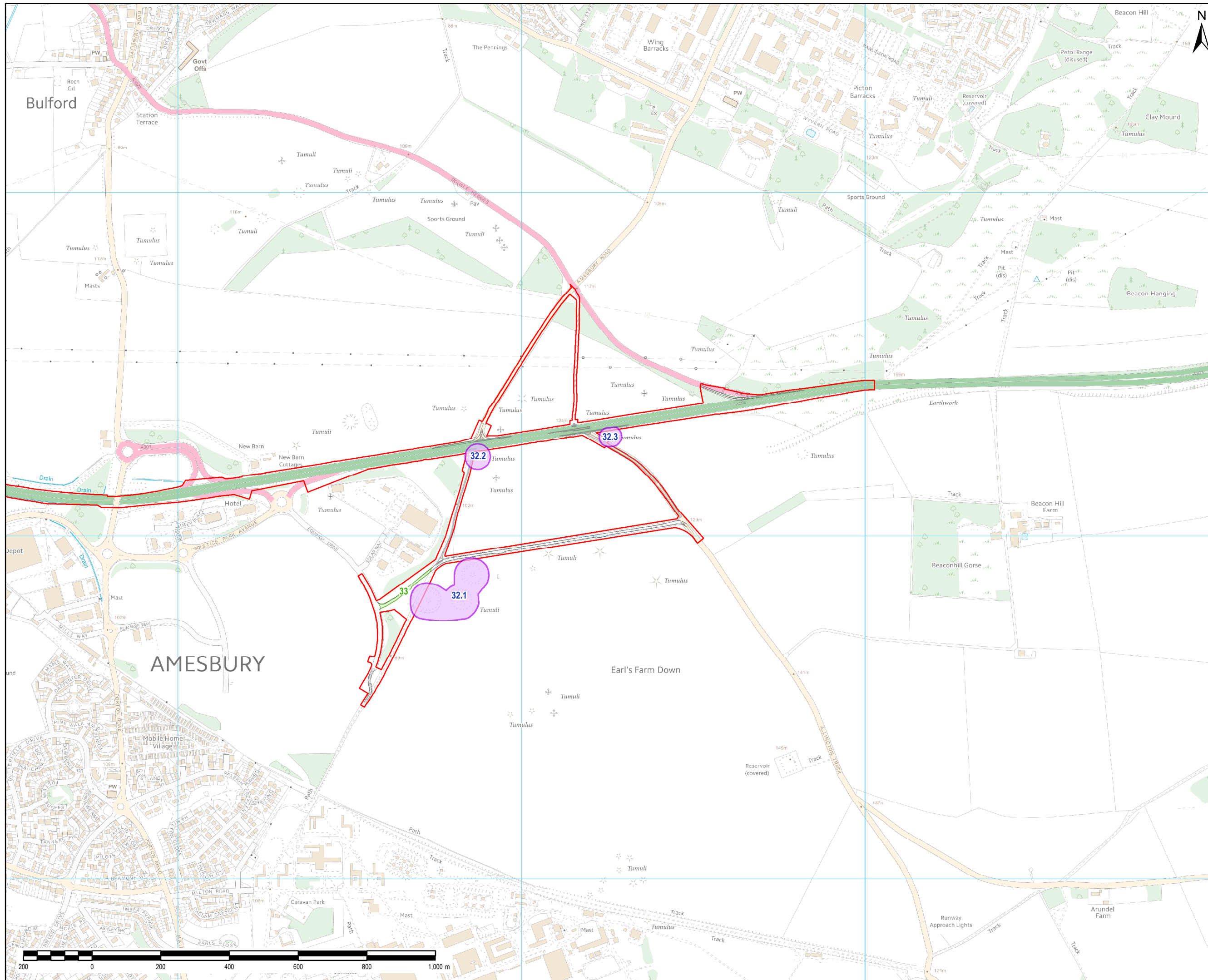
THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF ACOM'S APPOINTMENT BY ITS CLIENT. ACOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING ACOM'S EXPRESS AGREEMENT TO SUCH USE, AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

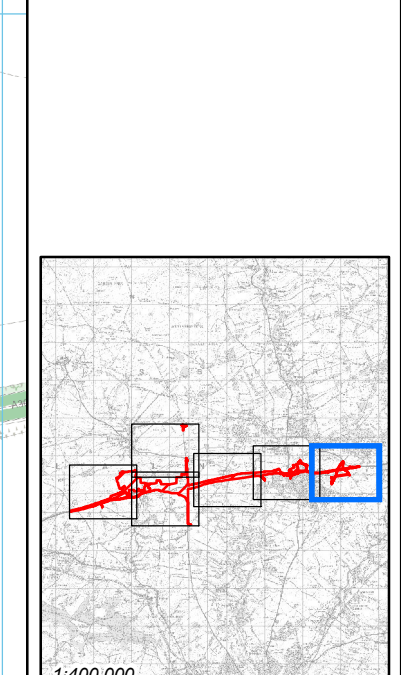
AECOM + mace + WSP

Drawing Number	Originator	Volume	Rev
HE551506	AMW	GEN	01
SCHEME WIDE	DR	GI	00557
Location	Type	Role	Number





- NOTES / LEGEND
- Proposed route alignment
 - Proposed scheme boundary
 - Proposed archaeological mitigation area
 - Proposed mitigation area / preservation in situ
 - Additional evaluation area
 - Proposed Electrical Cable - underground
 - Esso Petroleum Pipeline
 - Site Preparation and Compound Area
 - All-weather haul roads



© Crown copyright and database rights 2017 Ordnance Survey 100030649. Historic Environment Record (HER)
 © Wiltshire Council October 2017. Data reproduced from Wiltshire Council Archaeology Service.

Revision Details	By	Date	Suffix
	Check		

Purpose of issue
FOR INFORMATION

Client
 Highways England

Working on behalf of

Project Title
A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 11.1E
 ARCHAEOLOGICAL
 MITIGATION AREAS**

Designed	Drawn	Checked	Approved	Date
RM	KD	AP	WB	03/05/19

Internal Project No. 60541200
 Scale @ A3 1:10,000 Zone SW

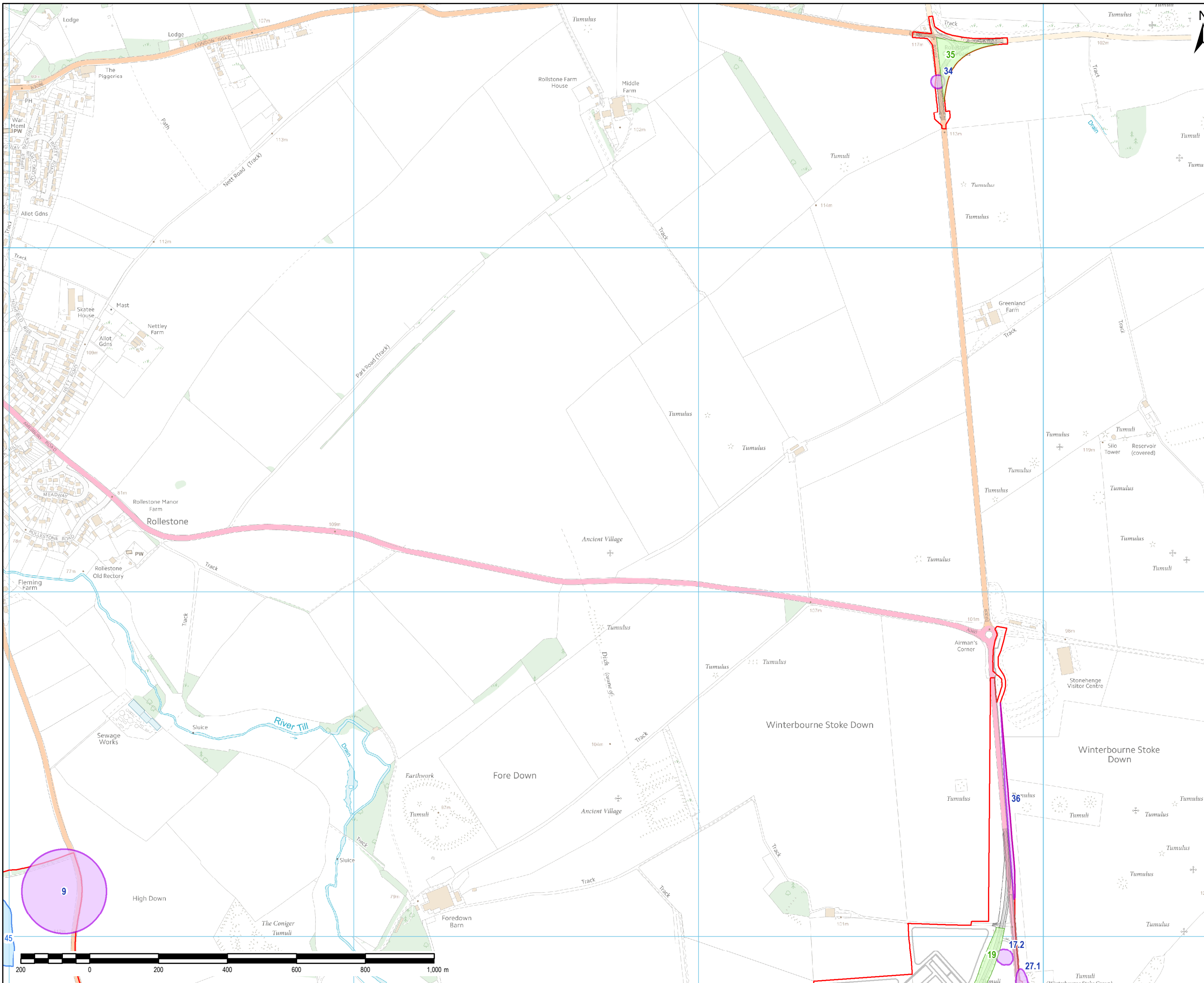
THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE, AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

Highways England
 Temple Quay House
 2 The Square, Temple Quay
 Bristol
 BS1 6HA

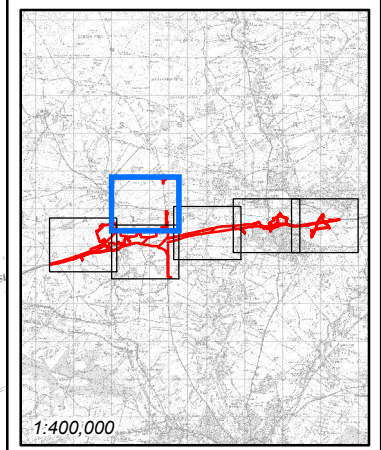
AECOM + mace + WSP

Drawing Number	Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	01	
SCHEME WIDE	DR	GI	00557	
Location	Type	Role	Number	





- NOTES / LEGEND
- Proposed route alignment
 - Proposed scheme boundary
 - Proposed archaeological mitigation area
 - Proposed mitigation area / preservation in situ
 - Additional evaluation area
 - Proposed Electrical Cable - underground
 - Esso Petroleum Pipeline
 - Site Preparation and Compound Area
 - All-weather haul roads



© Crown copyright and database rights 2017 Ordnance Survey 100030649. Historic Environment Record (HER)
 © Wiltshire Council October 2017. Data reproduced from Wiltshire Council Archaeology Service.

Revision Details	By	Date	Suffix

Purpose of issue
FOR INFORMATION

Client
 Highways England

Working on behalf of

Project Title
A303 AMESBURY TO BERWICK DOWN

Drawing Title
**FIGURE 11.1F
 ARCHAEOLOGICAL
 MITIGATION AREAS**

Designed	Drawn	Checked	Approved	Date
RM	KD	AP	WB	03/05/19

Internal Project No.
 60541200

Scale @ A3
 1:10,000

Zone
 SW

THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE, AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

Highways England
 Temple Quay House
 2 The Square, Temple Quay
 Bristol
 BS1 6HA

AECOM + mace + WSP

Drawing Number	Highways England PIN	Originator	Volume	Rev
HE551506	AMW	AMW	GEN	01
SCHEME WIDE		DR	GI	00557
Location	Type	Role	Number	

Abbreviations List

AAW	Advanced Archaeological Works
ACoW	Archaeological Clerk of Works
AER	Archaeological Excavation and Recording
AMS	Archaeological Mitigation Strategy
AMR	Archaeological Monitoring and Recording
AmW	AECOM, Mace and WSP Joint Venture
AOB	Any Other Business
APT	Archaeological Project Team
ARS	Archaeological Research Strategy
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
PEAR	Post-Excavation Assessment Report
PR	Public Relations
PW	Preliminary Works
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
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 Council 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.
English Heritage	Charity that cares for the National Heritage Collection of historic sites and buildings, including Stonehenge.
Geoarchaeology	Geoarchaeology 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.
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 in situ 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.
Preservation in situ	A term used to refer to the conservation of an archaeological asset in its original location.
World Heritage Site	A site inscribed by UNESCO because of its Outstanding Universal Value under the terms of the UNESCO World Heritage Convention.

Ploughzone Artefact Collection	A non-intrusive archaeological survey technique used to record the position and distribution of artefacts within the plough soil
Research Framework	Identifies what is important or significant and provides research questions and objectives to help co-ordinate and focus research effort
Method Statement	A statement that describes or details the way a task is to be completed
Written Scheme(s) of Investigation	A written design for archaeological investigation(s) that is often required in the planning process
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
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. 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.
Employer	The organisation responsible for a scheme i.e. Highways England.
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 .

References

- AC Archaeology, 2012. The excavation of seven ring ditches and other prehistoric features at Earl's Farm Down and New Barn Down, Amesbury, Wiltshire; GSB Prospection, 2001/02, Amesbury Business Park II, 2001.
- AmW, 2018a. A303 Stonehenge. Archaeological Evaluation Strategy. AECOM, Mace, WSP Report No. HE551506-AMW-HER-SW_GN_000_Z-MS-001.
- AmW, 2018b. A303 Stonehenge. Overarching Written Scheme of Investigation for Archaeological Evaluation. AECOM, Mace, WSP Report No. HE551506-AMW-HER-SW_GN_000_Z-SP-LH-0001.
- Anon., 1961. Excavation and Fieldwork in Wiltshire; Grinsell's Barrow no.1. Wiltshire Archaeological and Natural History Magazine, Volume 58, p. 30.
- Anon., 1968. Excavation and Fieldwork in Wiltshire, 1967. Wiltshire Archaeological and Natural History Magazine, Volume 63, pp. 108–9.
- Anon., 1995. Excavation and Fieldwork in Wiltshire 1993. Wiltshire Archaeological and Natural History Magazine, Volume 88, p. 147.
- APABE 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England. Second Edition. Advisory Panel for the Archaeology of Burials in England <http://www.babao.org.uk/assets/Uploads-to-Web/APABE-ToHREfCBG-FINAL-WEB.pdf>
- Ashbee, P., 1980. Amesbury Barrow 39: excavations 1960. Wiltshire Archaeological Magazine, Volume 74, Issue 5, pp. 3–34.
- Barber, M., 2014. Stonehenge World Heritage Site Landscape Project: 'Restoring' Stonehenge 1881-1939. English Heritage Research Report Series No. 06-2014.
- Barber, M., 2014. Stonehenge World Heritage Site Landscape Project Stonehenge Aerodrome and the Stonehenge Landscape. English Heritage Research Report Series no. 07-2014.
- Bayliss, A. 2009. Rolling out Revolution: using radiocarbon dating in archaeology. Radiocarbon, 51, p.123–47.
- Bax, S., Bowden, M., Komar, A. and Newsome, S., 2010. Stonehenge World Heritage Site Landscape Project – Winterbourne Stoke Crossroads: Archaeological Survey Report. English Heritage Research Report Series 107-2010.
- Bishop, S., 2011a. Stonehenge World Heritage Site Landscape Project Level 1 Field Investigations Archaeological Survey Report. English Heritage Research Report Series 82-2011.
- Bishop, S., 2011b. Stonehenge World Heritage Site Landscape Project King Barrow Ridge Archaeological Survey Report. English Heritage: Research Department Report Series 83-2011.
- British Geological Survey, Geology of Britain Viewer. Available at: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>.
- Brown, D.H., 2011a. Safeguarding Archaeological Information. Procedures for minimising risk to undeposited archaeological archives. English Heritage <https://www.historicengland.org.uk/images-books/publications/safeguarding-archaeological-information/>
- Brown, D.H., 2011b. Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation. 2nd edition. Institute of Field Archaeologists/Archaeological Archives Forum (Reading) http://www.archaeologyuk.org/archives/aaf_archaeological_archives_2011.pdf

Carey, C., Howard, A.J., Knight, D., Corcoran, J., and Heathcote, J., 2018. Deposit Modelling and Archaeology. University of Brighton. <https://www.brighton.ac.uk/pdf/research/set-groups/deposit-modelling-and-archaeology-volume.pdf>

ClfA, 2014a. Standard and guidance. Excavation. Chartered Institute for Archaeologists, Reading, December 2014. Available at: https://www.archaeologists.net/sites/default/files/ClfAS&GExcavation_1.pdf.

ClfA, 2014b. Standard and guidance. Archaeological watching brief. Chartered Institute for Archaeologists, Reading, December 2014. Available at: https://www.archaeologists.net/sites/default/files/ClfAS&GWatchingbrief_2.pdf.

ClfA, 2014c. Standard and guidance. Field evaluation. Chartered Institute for Archaeologists, Reading, December 2014. Available at: https://www.archaeologists.net/sites/default/files/ClfAS&GFieldevaluation_1.pdf.

ClfA, 2014d. Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives. Chartered Institute for Archaeologists, Reading, December 2014. Available at: https://www.archaeologists.net/sites/default/files/ClfAS&GArchives_2.pdf.

ClfA, 2014e. Standard and guidance for the collection, documentation, conservation and research of archaeological materials. Chartered Institute for Archaeologists, Reading, December 2014. Available at: https://www.archaeologists.net/sites/default/files/ClfAS&GFinds_1.pdf.

ClfA, 2014f. Code of Conduct. Chartered Institute for Archaeologists, Reading, December 2014. Available at: <https://www.archaeologists.net/sites/default/files/Code%20of%20Conduct.pdf>.

ClfA, 2017. Standard and guidance. Historic environment desk-based assessment. Chartered Institute for Archaeologists, Reading, January 2017. Available at: https://www.archaeologists.net/sites/default/files/ClfAS%26GDBA_3.pdf.

Clarke, A.J., 1996. Seeing Beneath the Soil. London, BT Batsford.

Cleal, R. and Allen, M., 1994. Investigation of tree-damaged barrows on King Barrow Ridge and Luxenborough Plantation, Amesbury. Wiltshire Archaeological and Natural History Magazine, Volume 87, pp. 54–84.

David, A. and Payne, A., 1997. Geophysical Surveys within the Stonehenge Landscape: A Review of Past Endeavour and Future Potential. In: B. Cunliffe and C. Renfrew eds Science and Stonehenge. Oxford: Oxford University Press, pp. 73–113. Available at: <https://www.britac.ac.uk/sites/default/files/92p073.pdf>.

DfT, 2014. National Networks National Policy Statement: Road and Rail Infrastructure. 17 December 2014. Department for Transport. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/387222/npsnn-print.pdf.

English Heritage, 2004. (Under Review) Dendrochronology. Guidelines on producing and interpreting dendrochronological dates. English Heritage, <https://www.historicengland.org.uk/images-books/publications/dendrochronology-guidelines/>.

English Heritage, 2006a. (Under Review) Guidelines on the X-radiography of Archaeological Metalwork. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/x-radiography-of-archaeological-metalwork/>.

English Heritage. 2006b. Archaeomagnetic Dating. English Heritage, Swindon <https://www.historicengland.org.uk/images-books/publications/archaeomagnetic-dating-guidelines/>.

English Heritage, 2008a. Investigative Conservation. Guidelines on how the detailed examination of artefacts from archaeological sites can shed light on their manufacture and use. English Heritage, Swindon <https://www.historicengland.org.uk/images-books/publications/investigative-conservation/>.

English Heritage. 2008b (under review). Luminescence Dating. Guidelines on using luminescence dating in archaeology. English Heritage, Swindon <http://historicengland.org.uk/images-books/publications/luminescence-dating/>.

English Heritage, 2010. Waterlogged Wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood. 3rd edition. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/waterlogged-wood/>.

English Heritage, 2011. Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. Second edition. English Heritage Centre for Archaeology Guidelines, London. Available at: <https://www.historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/>.

English Heritage, 2012. MIDAS: the UK Historic Environment Data Standard Version 1.1. Best practice guidelines. Forum on Information Standards in Heritage (FISH). http://heritage-standards.org.uk/wp-content/uploads/2015/10/MIDAS_Heritage_2012_update-v5.doc.

Field, D. and Pearson, T., 2011. Stonehenge World Heritage Site Landscape Project – Stonehenge Down and The Triangle: Archaeological Survey Report. English Heritage Research Report Series No. 105-2011.

Field, D., Bowden, M. and Soutar, S., 2012. Stonehenge World Heritage Site Landscape Project. The Avenue and Stonehenge Bottom. Archaeological Survey Report. Research Report Series No. 31-2012.

Gaffney, C. et al., 2012. The Stonehenge Hidden Landscapes Project. Archaeological Prospection, Volume 19, Issue 2, pp.147–155.

Green, S., Bevan, A. and Shapland, M. 2014. A Comparative Assessment of Structure from Motion Methods for Archaeological Research. Journal of Archaeological Science 46: 173–181.

Grove, J. and Croft, B. 2012. The Archaeology of South West England: South West Archaeological Research Framework Research Strategy 2012-2017. Somerset County Council, Taunton.

GSB Prospection Ltd., 1992. Geophysical Survey: A303 Amesbury to Berwick Down. Geophysical Surveys of Bradford Report No. 92/03.

GSB Prospection Ltd., 1993. Report on Geophysical Survey A303 Amesbury to Berwick Down Survey III Yellow and Grey Route Options. Geophysical Surveys of Bradford Report No. 93/128.

GSB Prospection Ltd., 1994. Report on Geophysical Survey: A303 IV Brown Route Options. GSB Prospection Report 94/67.

GSB Prospection Ltd, 1999. Geophysical Survey Report A303 Stonehenge V. Preferred Route Incorporating the Winterbourne Stoke Bypass. Site 38. GSB Prospection Report 99/139.

GSB Prospection Ltd, 2001a. Geophysical Survey Report Stonehenge VI. GSB Prospection Report 2001/82.

GSB Prospection Ltd, 2001b. Geophysical Survey Report A303 Stonehenge VII. GSB Prospection Report 2001/111.

Highways Agency, 2007. Design Manual for Roads and Bridges. Volume 11 Environmental Assessment. Section 3 Environmental Topics. Part 2 HA 208/07 Cultural Heritage. Available at: <http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/ha20807.pdf>.

Highways Agency, 2008. Design Manual for Roads and Bridges. Volume 10 Environmental Design and Management. Section 6 Archaeology. Part 2 HA 117/08 Cultural Heritage Asset Management Plans. Available at: <http://www.standardsforhighways.co.uk/ha/standards/dmr/vol10/section6/ha11708.pdf>.

Highways England, 2017a. A303 Stonehenge Amesbury to Berwick Down - Moving forward - the preferred route. Highways England, January 2017. Available at <https://highwaysengland.citizenspace.com/cip/a303-stonehenge/results/moving-forward---the-preferred-route.pdf>.

Highways England, 2017b. The Project Control Framework, Quick Reference Guide. Version 1, February 2017. Available at: <https://s3.eu-west-2.amazonaws.com/assets.highwaysengland.co.uk/roads/road-projects/A428+Black+Cat+to+Caxton+Gibbet/The+Project+Control+Framework+Quick+Reference+Guide+v1+February+2017.pdf>.

Highways England, 2019a. A303 Amesbury to Berwick Down. Geophysical Survey Report, Phase 4. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-SW-GN_000_Z-RP-LH-0001. [REP1-041]

Highways England, 2019b. A303 Amesbury to Berwick Down. Archaeological Evaluation Report: Eastern Portal – Part 1: Text and Part 2: Figures. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-Z4-GN_000_Z-RP-LH-0001. [REP1-047, 048]

Highways England, 2019c. A303 Amesbury to Berwick Down Geophysical Survey Report: Amesbury Road Diversion. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-SW_GN_000_Z-RP-LH-0002. [REP1-055]

Highways England, 2019d. A303 Amesbury to Berwick Down. Archaeological Evaluation Report: Winterbourne Stoke Bypass West, Parts 1 and 2. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-Z1_GN_000_Z-RP-LH-0003. [REP1-049, 050]

Highways England, 2019e. A303 Amesbury to Berwick Down. Archaeological Evaluation Report: Stage 4. Winterbourne Stoke Bypass East. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-Z1_GN_000_Z-RP-LH-0004. [REP1-052, 053]

Highways England, 2019f. A303 Amesbury to Berwick Down Archaeological Evaluation: Western Portal and Approach. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-Z2_ML_M00_Z-RP-LH-0001. [REP1-045, 046]

Highways England, 2019g. A303 Amesbury to Berwick Down. Ploughzone Artefact Sampling and Trial Trench Evaluation: Rollestone Corner. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-HER-Z2_SR_B20_Z-RP-LH-0001. [REP1-044]

Highways England, 2019h. A303 Amesbury to Berwick Down. Ploughzone Artefact Collection and Trial Trench Evaluation: Longbarrow Junction. Stage 4. AECOM, Mace, WSP Report No. HE551506-AMW-EHR-Z2_JN_L00_Z-RO-LH-0001. [REP1-042, 043]

Highways England, 2019j. A303 Amesbury to Berwick Down. Archaeological Investigations and Mitigation Report: Geotechnical Investigations Phase 6 and Advanced Phase 7. Highways England ref. HE551506-AMW-HER-SW_GN_000_Z-RP-EN-0003. [REP1-056]

Highways England, 2019k. A303 Amesbury to Berwick Down. Geophysical Survey Report: Countess East GPR Pilot Survey. Report No. HE551506-AMW-HER-Z4_GN_000_Z-RP-LH-0002. [REP1-054]

Highways England 2019m. A303 Stonehenge Amesbury to Berwick Down. Electrical Resistance Tomography and Borehole Survey Report. Highways England. HE551506-AMW-EHR-Z1_GN_000_Z-RP-LH-0005. [REP1-051]

Historic England, 2013. Science and the Dead. A Guideline for the Destructive Sampling of Archaeological Human Remains for Scientific Analysis. English Heritage/Advisory Panel on the Archaeology of Burials in England <https://www.historicengland.org.uk/images-books/publications/science-and-dead/>

Historic England, 2015a. Management of Research Projects in the Historic Environment. The MoRPHE Project Manager's Guide. Historic England, Swindon. Available online: <https://www.historicengland.org.uk/images-books/publications/morphe-project-managers-guide/>.

Historic England, 2015b. Metric Survey Specifications for Cultural Heritage. Third Edition, September 2015. Historic England, Swindon.

Historic England, 2015c. Geoarchaeology. Using earth sciences to understand the archaeological record. Historic England, Swindon. Available online: <https://historicengland.org.uk/images-books/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/>.

Historic England, 2016a. Understanding Historic Buildings. A Guide to Good Recording Practice. May 2016. Historic England, London. Available at: <https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/>.

Historic England, 2016b. Traversing the Past. The total station theodolite in archaeological landscape survey. Historic England, London. Available at: <https://historicengland.org.uk/images-books/publications/traversingthepast/>.

Historic England, 2016c. Preserving Archaeological Remains. Decision-taking for Sites under Development. Historic England, London <https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/>.

Historic England, 2017. Understanding the Archaeology of Landscapes. 2nd edition. Historic England, Swindon. Available at: <https://HistoricEngland.org.uk/advice/technical-advice/recording-heritage/>.

Historic England, 2018a. The Role of the Human Osteologist in an Archaeological Fieldwork Project. October 2018. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/role-of-human-osteologist-in-archaeological-fieldwork-project/>

Historic England, 2018b. Waterlogged Organic Artefacts. Guidelines on their Recovery, Analysis and Conservation. September 2018. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/waterlogged-organic-artefacts/>.

Historic England, 2019. Piling and Archaeology. March 2019. 2nd edition. Historic England, Swindon <https://historicengland.org.uk/images-books/publications/piling-and-archaeology/>.

Jacques, D., Phillips, T. and Clarke, M., 2010. A Reassessment of the Importance of Vespasian's Camp in the Stonehenge Landscape. PAST, The Newsletter of the Prehistoric Society, Volume 66, pp. 11–13.

Jacques, D. and Phillips, T., 2013. Discovery of a Mesolithic homebase at Blick Mead, to the north-east of Vespasian's Camp, Amesbury, Wiltshire. University of Buckingham Report 2013.132.

Jacques, D., Phillips, T., Hoare, P., Legge, B. T., Bishop, B. and Parfitt, S., 2014. Mesolithic settlement near Stonehenge: excavations at Blick Mead, Vespasian's Camp, Amesbury. Wiltshire Archaeological and Natural History Magazine. Volume 107, pp. 7–27.

Jacques, D., Phillips, T., Lyons, T. and Bishop, B., 2015. Excavations at Blick Mead, to the north-east of Vespasian's Camp, Amesbury, Wiltshire: 2014 fieldwork results. University of Buckingham Report 2015.110.

Jacques, D., Phillips, T. and Lyons, T., 2018. Blick Mead: Exploring the 'first place' in the Stonehenge landscape. Archaeological excavations at Blick Mead, Amesbury, Wiltshire 2005–2016. Studies in the British Mesolithic and Neolithic 1. Oxford: Peter Lang.

Leivers, M., and Moore, C., 2008. Archaeology on the A303 Stonehenge Improvement. Salisbury: Wessex Archaeology for Highways Agency, pp. 25–30.

Leivers, M., Bradley, P., Norcott, D., and Stevens, C., 2008. 'Late Mesolithic and Early Neolithic activity and Environment.' In *Archaeology on the A303 Stonehenge Improvement*, Salisbury, Wessex Archaeology, pp. 14–19.

Leivers, M., and Powell, A. 2016. *A Research Framework for the Stonehenge, Avebury and Associated Sites World Heritage Site - Research Agenda and Strategy*. Wessex Archaeology, Salisbury.

Linford, N., Linford, P. and Payne, A., 2015. *Stonehenge Southern WHS Survey: West Amesbury, Wiltshire Report on Geophysical Surveys*, October 2015. Research Report Series no. 95-2015.

McKinley, J.I., and Roberts, C., 1993. *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Institute of Field Archaeologists Technical Paper No. 13, Reading https://www.archaeologists.net/sites/default/files/13_Cremation.pdf

MHCLG, 2018a. *Revised National Planning Policy Framework (NPPF). Section 16: Conserving and enhancing the historic environment*. Ministry of Housing, Communities and Local Government. Available at: <https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment>.

MHCLG, 2018b. *Planning Practice Guidance*. Ministry of Housing, Communities and Local Government. Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>.

Murphy, P.L., and Wiltshire, P.E.J., 1994. *A Guide to Sampling Archaeological Deposits for Environmental Analysis*. English Heritage, London.

Parker Pearson, M. et al., 2008. *Stonehenge Riverside Project 2008. Interim Report*. Unpublished fieldwork report.

Pitts, M. W., 1982. *On the Road to Stonehenge: Report on Investigations beside the A3444 in 1968, 1979 and 1980*. *Proceedings of the Prehistoric Society*, Volume 48, pp.75–132.

Richards, J., 1990. *The Stonehenge Environs Project*. HBMCE Archaeological Report 16. English Heritage, London.

Roberts, D. et al., 2017. *The Early Field Systems of the Stonehenge Landscape*. In *Landscapes*, Volume 18, Issue 2, pp. 120–40.

Simmonds, S. and Thomas, B., 2015. *Stonehenge, Avebury and Associated Sites World Heritage Site Management Plan 2015*. Chippenham: World Heritage Site Coordination Unit on behalf of the Stonehenge and Avebury WHS Steering Committees. Available at: <http://www.stonehengeandaveburywhs.org/management-of-whs/stonehenge-and-avebury-whs-management-plan-2015/>.

Vatcher, F. de M. & Vatcher, H.L., 1968. 'Excavation and fieldwork in Wiltshire 1967: Winterbourne Stoke/ Wilsford', *Wiltshire Archaeological and Natural History Magazine*, vol. 63, pp. 108–9.

Wessex Archaeology, 1992. *Fieldwalking Survey and Environmental Sampling between Stonehenge Down and Parsonage Down, Wiltshire*. Wessex Archaeology Report 34852.

Wessex Archaeology, 1993. *A303 Amesbury to Berwick Down, Wiltshire. Alternative Routes*. Wessex Archaeology Report 35734/W580.

Wessex Archaeology, 1994. *A303 Amesbury to Berwick Down, Brown and Brown Alternative Routes. Fieldwalking Stage 1*. Wessex Archaeology Report 37874.1.

Wessex Archaeology, 1995. *Stonehenge Visitors Centre, Wiltshire, SVC- Countess Roundabout. Archaeological Evaluation*. Wessex Archaeology Report 38477.

Wessex Archaeology, 1999. *Global Crossing Communications Cable Trench, Near Stonehenge, Wiltshire: Archaeological Watching Brief*. Wessex Archaeology Report 46666.

Wessex Archaeology, 2001. A303 Stonehenge, Auger transect and test pitting in the Till Valley. Wessex Archaeology Report 50286.

Wessex Archaeology, 2002a. A303 Stonehenge, Geotechnical Site Investigation: Archaeological Watching Brief. Wessex Archaeology Report 48067.1.

Wessex Archaeology, 2002b. A303 Stonehenge Archaeological Surveys. Archaeological Evaluation Report, Area C1. Wessex Archaeology Report 50157.1.

Wessex Archaeology, 2002c. A303 Stonehenge Archaeological Surveys. Archaeological Evaluation Report: Areas L and O. Wessex Archaeology Report 50252.1a.

Wessex Archaeology, 2002d. A303 Stonehenge Archaeological Surveys. Archaeological Evaluation Report: Areas A, B, C and D. Wessex Archaeology Report 50252.1b.

Wessex Archaeology, 2002e. A303 (T) Amesbury Bypass, Wiltshire. Wessex Archaeology Report 50335.1.

Wessex Archaeology, 2002f. A303 Stonehenge Archaeological Surveys: Archaeological Evaluation Report: Areas L and O. Wessex Archaeology Report 50412.1a.

Wessex Archaeology, 2002g. A303 Stonehenge Archaeological Surveys: Archaeological Evaluation Report, Areas R and T. Wessex Archaeology Report 50527.1b.

Wessex Archaeology, 2002h. A303 Stonehenge Archaeological Surveys July 2002. Archaeological Evaluation Report: Area P. Wessex Archaeology Report 50538.

Wessex Archaeology, 2003a. A303 Stonehenge. Ground Investigation 2002, Archaeological Watching Brief. Wessex Archaeology Report 52246.1.

Wessex Archaeology, 2003b. A303 Stonehenge Archaeological Surveys. Archaeological Evaluation Report Areas 1, 2, 3 and 4. Wessex Archaeology Report No. 52524.1.

Wessex Archaeology, 2003c. Stonehenge Visitor Centre, Countess East, Amesbury, Wiltshire. Archaeological Evaluation: Results. Wessex Archaeology Report 53324.01.

Wessex Archaeology, 2003d. A303 Stonehenge Archaeological Surveys. Archaeological Evaluation Report, Drainage Treatment Areas 2 and 6. Wessex Archaeology Report 54379.01.

Wessex Archaeology, 2004. Stonehenge Visitor Centre, Countess East, Amesbury, Wiltshire. Further Archaeological Evaluation. Wessex Archaeology Report 54700.01a.

Wessex Archaeology, 2005. Stonehenge Tunnel 11kv Supply, Amesbury and Stapleford, Wiltshire: Archaeological Watching Brief Report. Wessex Archaeology Report. 58210.03.

Wessex Archaeology, 2014. Stonehenge Environmental Improvements Project, Longbarrow Crossroads, Winterbourne Stoke, Wiltshire. Archaeological Evaluation, Mitigation and Watching Brief. Wessex Archaeology Report 74252.01.

Wessex Archaeology, 2016. Stonehenge Environmental Improvements Project Assessment Report on Archaeological Mitigation. Wessex Archaeology Report 76862.04.

Wessex Archaeology, 2017a. A303 Amesbury to Berwick Down. Geophysical Survey Phase 1. Stage 2. Arup Atkins Joint Venture Document Reference HE551506-AA-EHR-SWI-RP-YE-000003.

Wessex Archaeology, 2017b. A303 Amesbury to Berwick Down. Geophysical Survey Report. Phase 2. Stage 2. Arup Atkins Joint Venture Document Reference No. 113223-07.

Wessex Archaeology, 2017c. A303 Amesbury to Berwick Down. Geophysical Survey Report. Phase 3. Stage 2. Arup Atkins Joint Venture Document Reference No. 113224-11.

Wessex Archaeology, 2017d. A303 Amesbury to Berwick Down. Archaeological Trial Trench Evaluation. Stage 2. Arup Atkins Joint Venture Document Reference No. 113221-01, Final Report dated 28 July 2017.

Wessex Archaeology, 2017e. A303 Amesbury to Berwick Down Archaeological Investigations and Mitigation during Ground Investigations. A303 AAJV (Wessex Archaeology) Report 113222-01 Final Report, dated 27 July 2017.

Wessex Archaeology, 2018a. A303 Amesbury to Berwick Down Geophysical Survey Report. Arup Atkins Joint Venture Document Reference No. 113225-03. A303 AAJV (Wessex Archaeology) Multi-channel GPR Survey Report 113225-03 AAJV, 2018. HE551506-AA-HER-SWI-RP-YE-000007.

PART FOUR – APPENDICES

Appendix A Flowcharts

- A.1 DAMS development and implementation process**
- A.2 Archaeological Mitigation: phases and roles**
- A.3 Reporting Lines for Implementation of DAMS fieldwork (Preliminary Works stage: Phases 1 and 2)**
- A.4 Reporting Lines for Sign-off of SSWSIs, HMPs and Method Statements (Preliminary Works stage: Phases 1 and 2)**
- A.5 Reporting Lines for Sign-off of Archaeological Action Area Completion (Preliminary Works stage: Phase 3)**
- A.6 Reporting Lines for Implementation of DAMS fieldwork (Main Works stage: Phase 3)**
- A.7 Reporting Lines for Sign-off of SSWSIs, HMPs and Method Statements (Main Works stage: Phase 3)**
- A.8 Reporting Lines for Sign-off of Archaeological Action Area Completion (Main Works stage: Phase 3)**
- A.9 Reporting Lines for Sign-off of Post Excavation Assessment Report and Updated Archaeological Research Strategy**

Appendix B Archaeological Standards and Guidance

- B.1 Historic England Standards and Guidance**
- B.2 Other Standards and Guidance**

Appendix C OEMP requirements

- C.1 Archaeological Clerk of Works: Responsibilities**
- C.2 Heritage Management Plans**

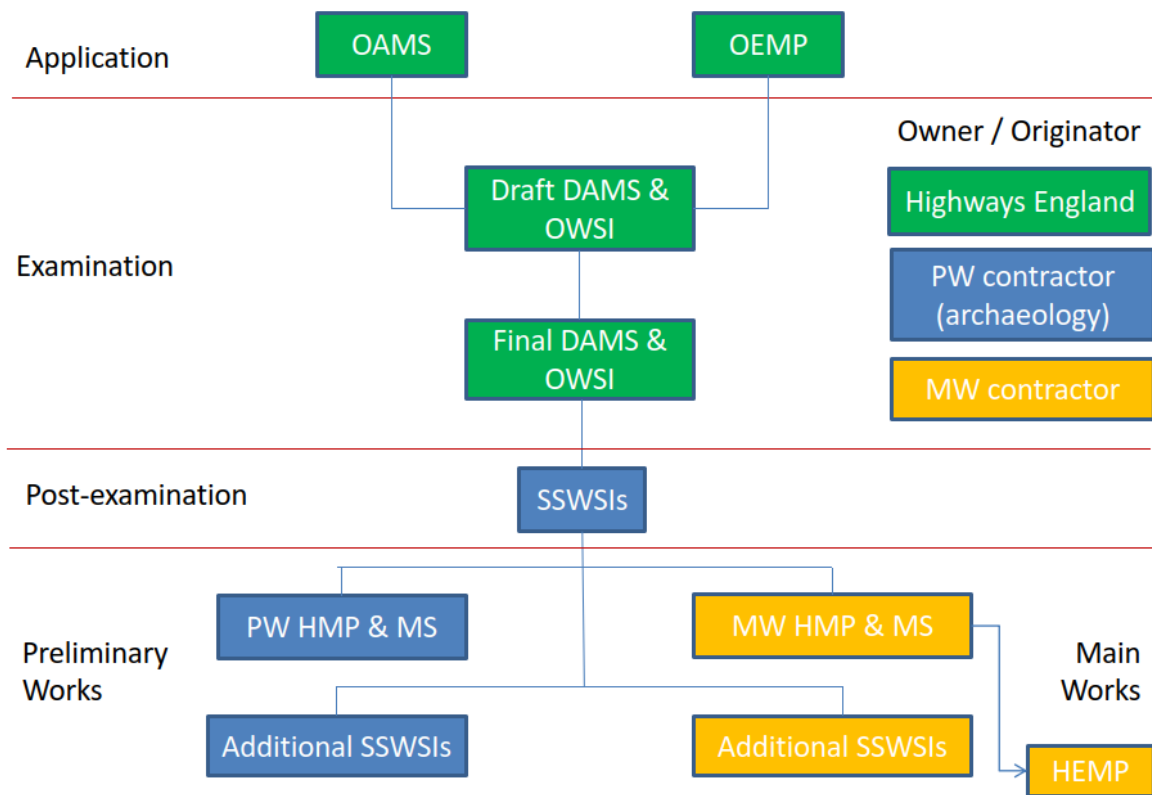
Appendix D Action Areas: Preservation in situ

Appendix E Action Areas: Proposed archaeological fieldwork areas

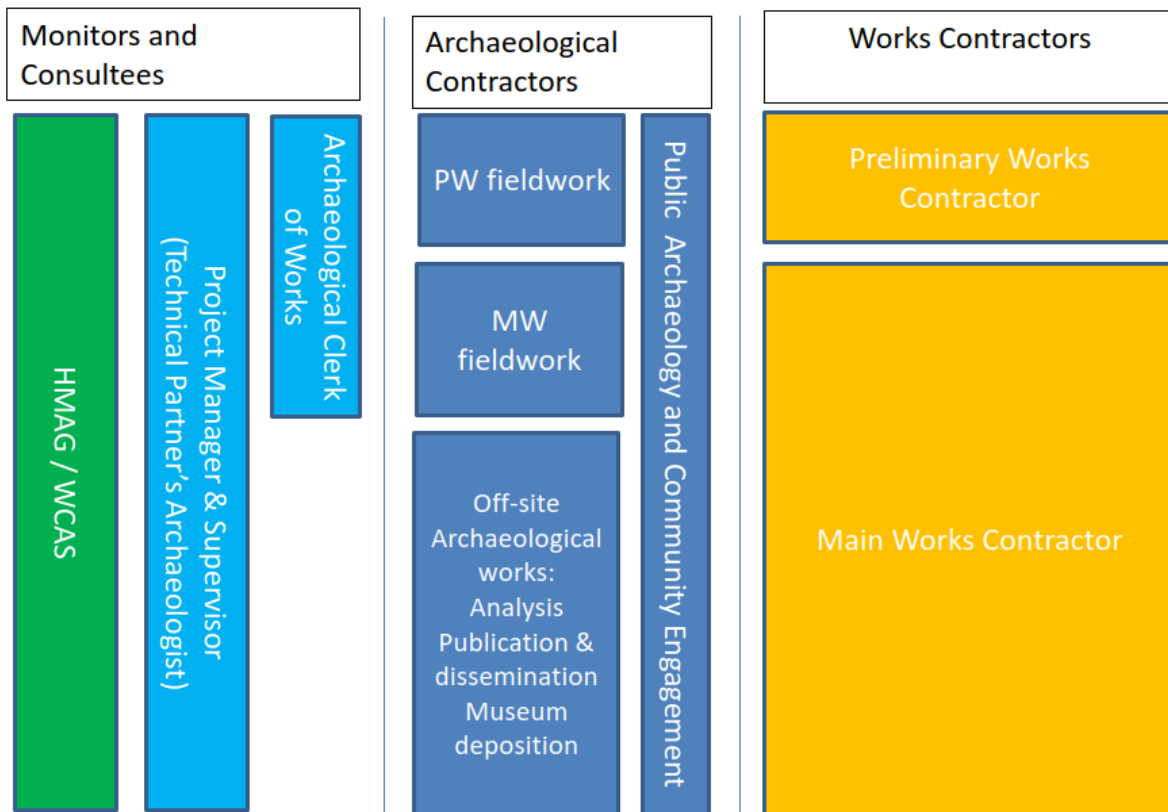
Appendix F Public Archaeology and Community Engagement Strategy

Appendix A Flowcharts

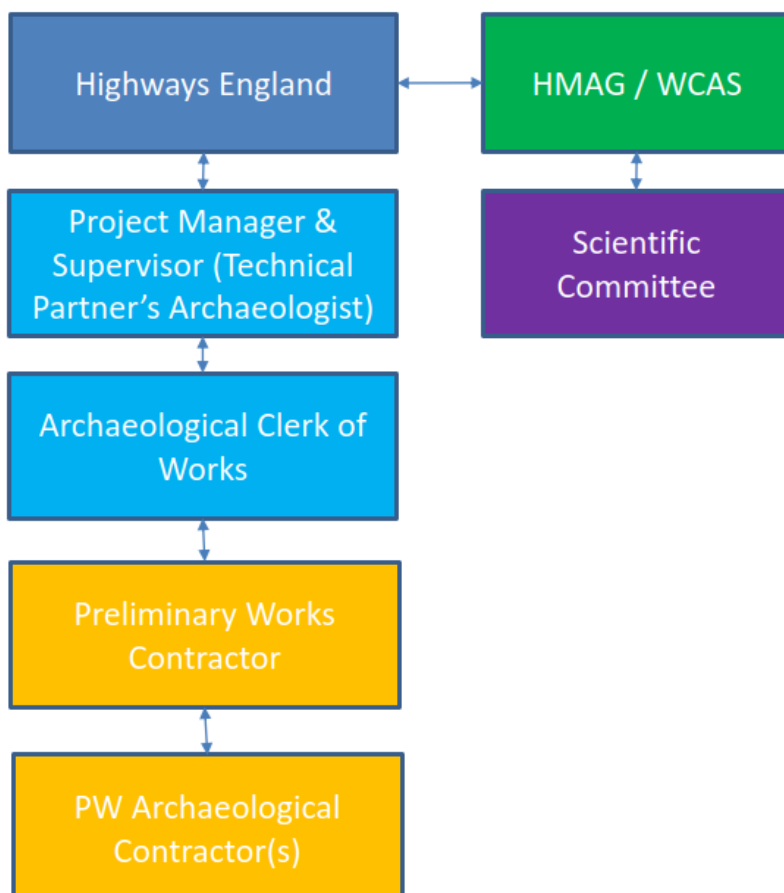
A.1 DAMS development and implementation process



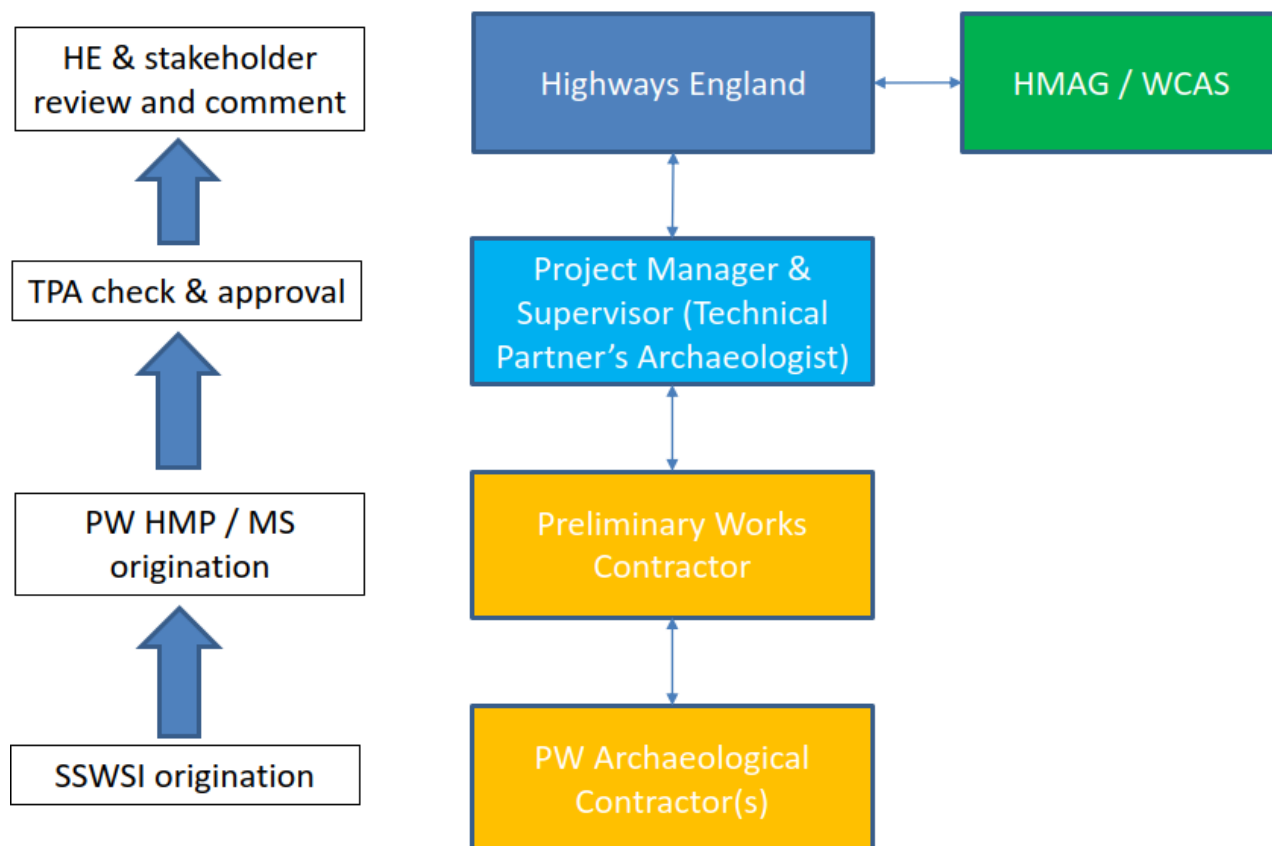
A.2 Archaeological Mitigation: phases and roles



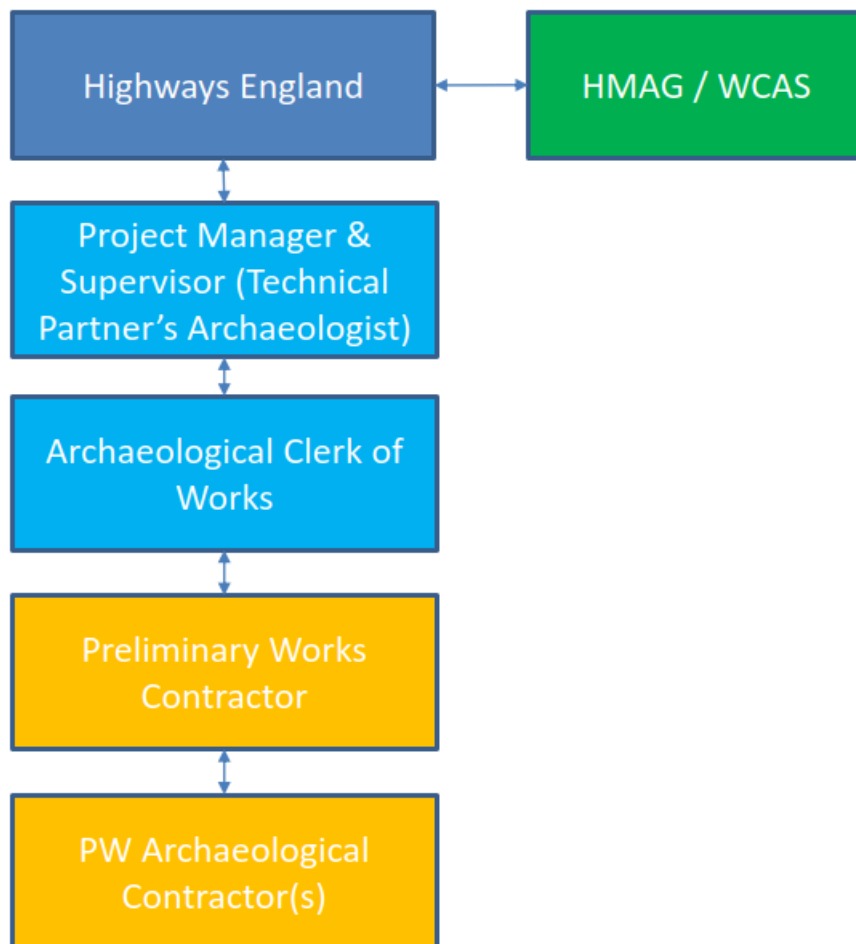
A.3 Reporting Lines for Implementation of DAMS fieldwork (Preliminary Works stage: Phases 1 and 2)



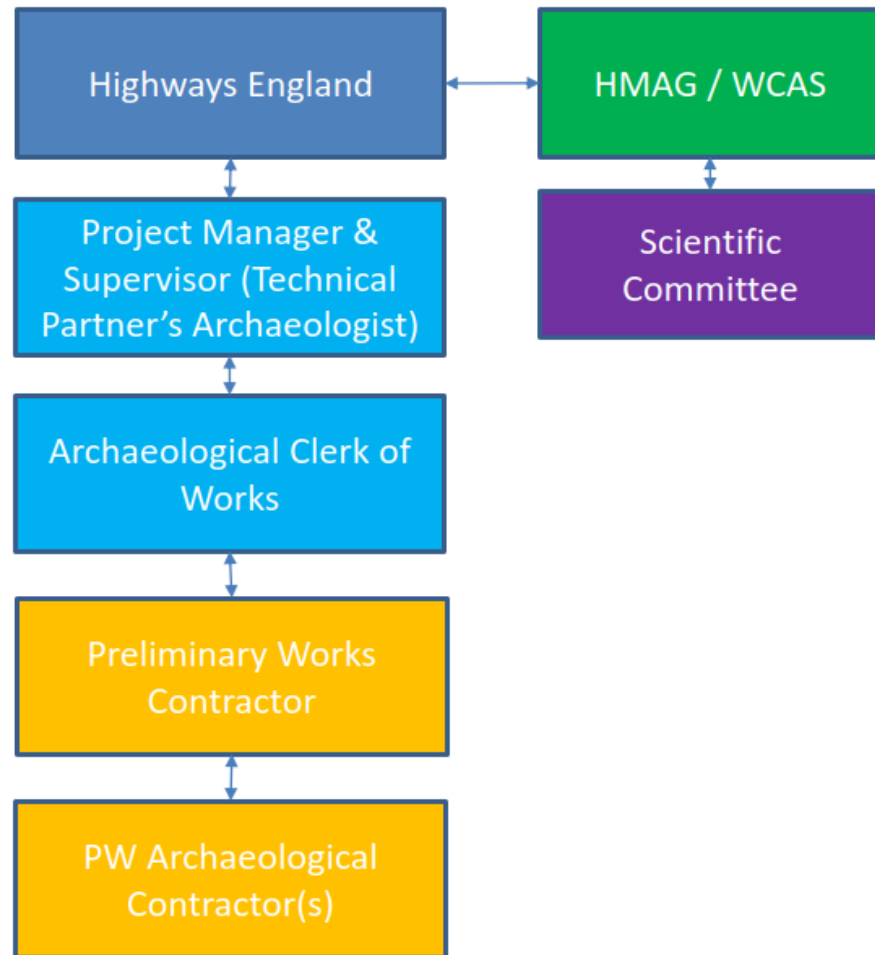
A.4 Reporting Lines for Sign-off of SSWSIs, HMPs and Method Statements (Preliminary Works stage: Phases 1 and 2)



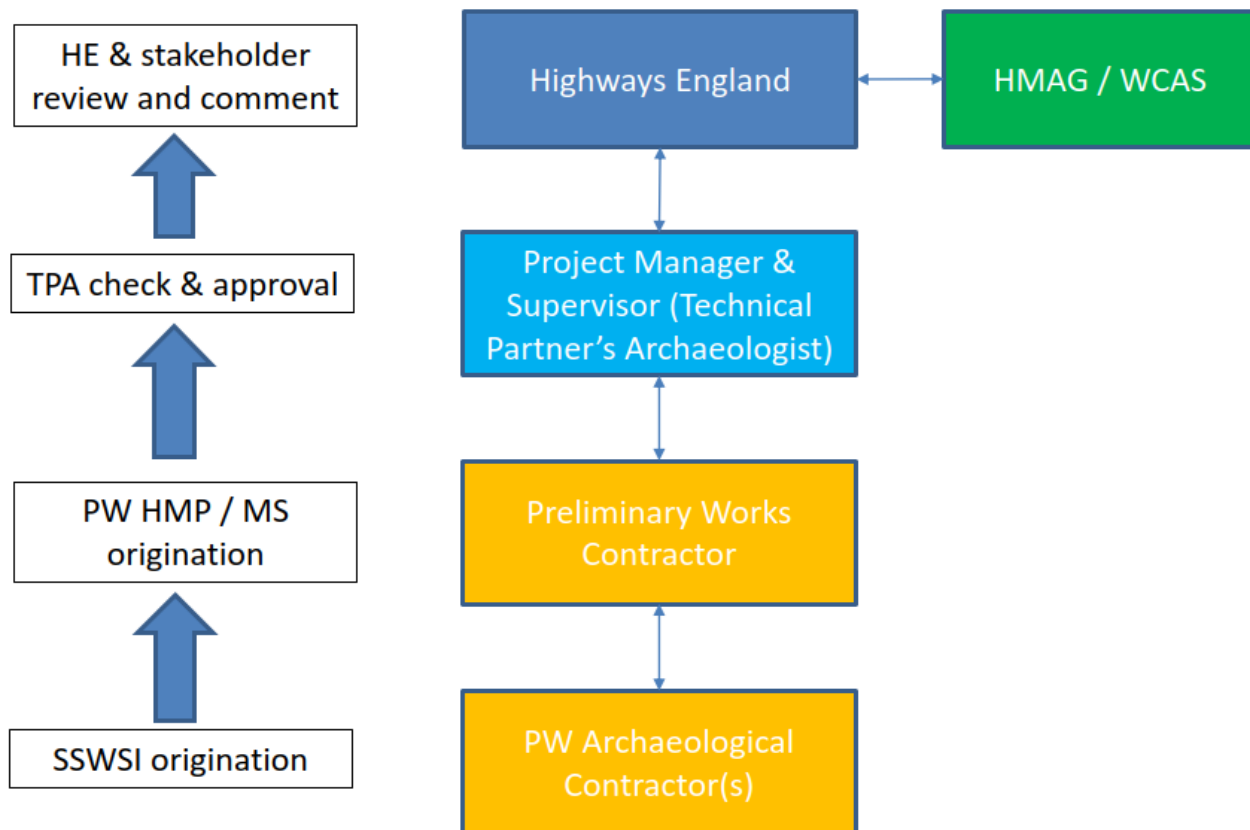
A.5 Reporting Lines for Sign-off of Archaeological Action Area Completion (Preliminary Works stage: Phase 3)



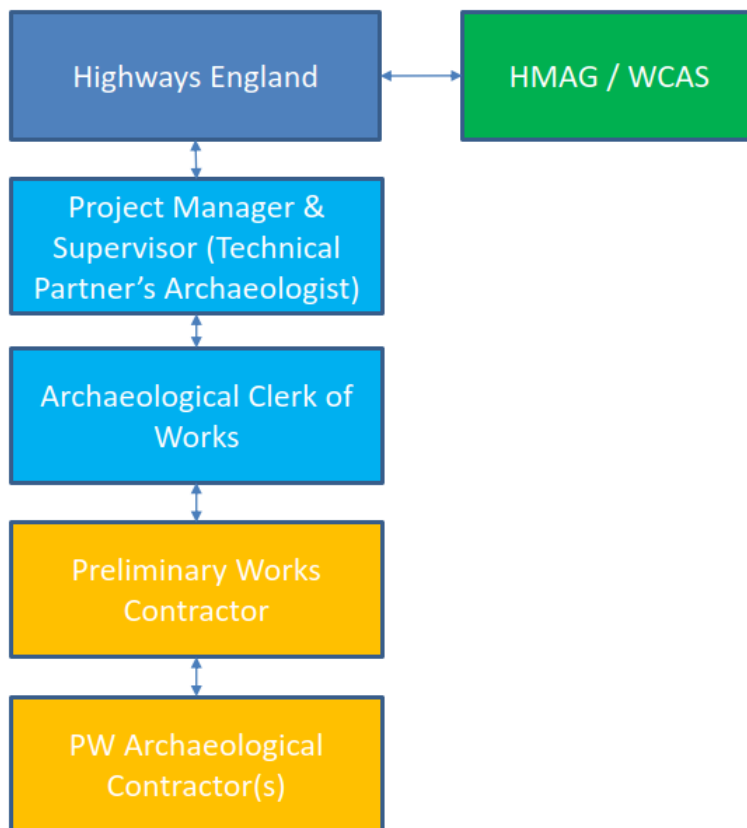
A.6 Reporting Lines for Implementation of DAMS fieldwork (Main Works stage: Phase 3)



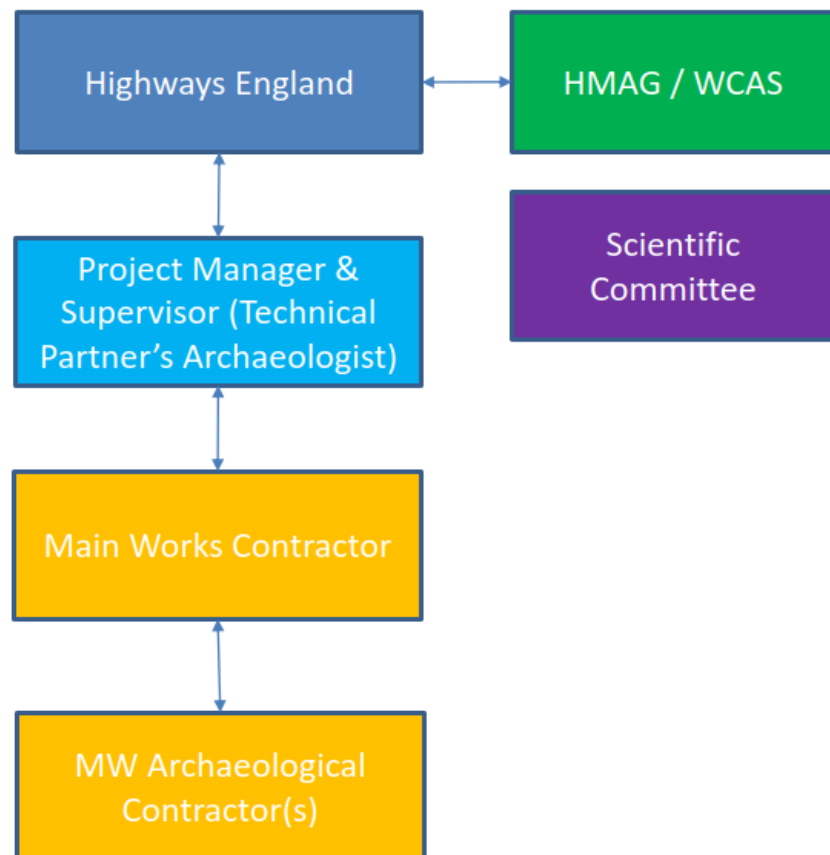
A.7 Reporting Lines for Sign-off of SSWSIs, HMPs and Method Statements (Main Works stage: Phase 3)



A.8 Reporting Lines for Sign-off of Archaeological Action Area Completion (Main Works stage: Phase 3)



A.9 Reporting Lines for Sign-off of Post Excavation Assessment Report and Updated Archaeological Research Strategy



Appendix B Archaeological Standards and Guidance

B.1 Historic England Standards and Guidance

B.1.1 Archaeological Science

English Heritage, 2004. (Under Review) Dendrochronology. Guidelines on producing and interpreting dendrochronological dates. English Heritage, <https://www.historicengland.org.uk/images-books/publications/dendrochronology-guidelines/>.

English Heritage, 2006. Guidelines on the X-radiography of Archaeological Metalwork. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/x-radiography-of-archaeological-metalwork/>

English Heritage, 2006. Archaeomagnetic Dating. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/archaeomagnetic-dating-guidelines/>.

English Heritage, 2008. (Under Review) Luminescence Dating. Guidelines on using luminescence dating in archaeology. English Heritage, Swindon <http://historicengland.org.uk/images-books/publications/luminescence-dating/>

English Heritage, 2008. Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/curation-of-waterlogged-macroscopic-plant-and-invertebrate-remains/>.

English Heritage, 2010. Waterlogged Wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood. 3rd edition. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/waterlogged-wood/>.

English Heritage, 2014. Animal Bones and Archaeology: Guidelines for Best Practice. English Heritage, Swindon <http://historicengland.org.uk/images-books/publications/animal-bones-and-archaeology/>.

Historic England, 2015 Archaeometallurgy. Historic England, Swindon <http://historicengland.org.uk/images-books/publications/archaeometallurgy-guidelines-best-practice/>.

Historic England, 2017. Organic Residue Analysis and Archaeology. Guidance for Good Practice. Historic England, London <https://historicengland.org.uk/images-books/publications/organic-residue-analysis-and-archaeology/>.

Historic England, 2018. Waterlogged Organic Artefacts. Guidelines on their Recovery, Analysis and Conservation. September 2018. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/waterlogged-organic-artefacts/>.

B.1.2 Conservation of Materials

AML, 1994. A Strategy for the Care and Investigation of Finds. Ancient Monuments Laboratory, English Heritage.

English Heritage, 2008. Investigative Conservation. Guidelines on how the detailed examination of artefacts from archaeological sites can shed light on their manufacture and use. English Heritage, Swindon <https://www.historicengland.org.uk/images-books/publications/investigative-conservation/>

B.1.3 Environmental Archaeology

English Heritage, 2011. Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. 2nd edition. English Heritage Centre for Archaeology

Guidelines, London. <https://www.historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/>.

Historic England, 2015. Ge archaeology. Using earth sciences to understand the archaeological record. English Heritage, London <https://historicengland.org.uk/images-books/publications/gearchaeology-earth-sciences-to-understand-archaeological-record/>.

Murphy, P.L. and Wiltshire, P.E.J., 1994. A Guide to Sampling Archaeological Deposits for Environmental Analysis. English Heritage, London.

B.1.4 Human Remains Advice

English Heritage, 2013. Science and the Dead. A Guideline for the Destructive Sampling of Archaeological Human Remains for Scientific Analysis. English Heritage/Advisory Panel on the Archaeology of Burials in England <https://www.historicengland.org.uk/images-books/publications/science-and-dead/>.

Historic England, 2018. The Role of the Human Osteologist in an Archaeological Fieldwork Project. October 2018. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/role-of-human-osteologist-in-archaeological-fieldwork-project/>.

B.1.5 Information Management

English Heritage, 1995. A Strategy for the Care and Investigation of Finds. English Heritage Ancient Monuments Laboratory, London.

English Heritage, 2012. MIDAS: the UK Historic Environment Data Standard Version 1.1. Best practice guidelines. Forum on Information Standards in Heritage (FISH). http://heritage-standards.org.uk/wp-content/uploads/2015/10/MIDAS_Heritage_2012_update-_v5.doc.

Historic England, 2015. Digital Image Capture and File Storage. Historic England, Swindon <http://historicengland.org.uk/images-books/publications/digital-image-capture-and-file-storage/>.

Brown, A. and Perrin, K., 2000. A Model for the Description of Archaeological Archives. Information Management & Collections. English Heritage Centre for Archaeology/Institute of Field Archaeologists, Reading <http://www.eng-h.gov.uk/archives/archdesc.pdf>.

Brown, D.H., 2011. Safeguarding Archaeological Information. Procedures for minimising risk to undeposited archaeological archives. English Heritage <https://www.historicengland.org.uk/images-books/publications/safeguarding-archaeological-information/>.

B.1.6 Land Contamination and Archaeology

Historic England, 2017. Land Contamination and Archaeology. Good Practice Guidance. Historic England, London <https://historicengland.org.uk/images-books/publications/land-contamination-and-archaeology/>.

B.1.7 Period / thematic studies

English Heritage, 2003. (Under Review) Twentieth-Century Military Sites. Current approaches to their recording and conservation English Heritage, Swindon <https://www.historicengland.org.uk/images-books/publications/twentieth-century-military-sites/>.

English Heritage, 1998. Identifying and Protecting Palaeolithic Remains. Archaeological guidance for planning authorities and developers. English Heritage, London.

English Heritage, 2000. Managing Lithic Scatters. Archaeological guidance for planning authorities and developers. English Heritage, London <https://www.historicengland.org.uk/images-books/publications/managing-lithic-scatters/>.

English Heritage, 2008. Research and Conservation Framework for the British Palaeolithic. English Heritage/Prehistoric Society, Swindon <https://www.historicengland.org.uk/images-books/publications/research-and-conservation-framework-for-british-palaeolithic/>.

English Heritage, 2014. Our Portable Past: a statement of English Heritage policy and good practice for portable antiquities/surface collected material in the context of field archaeology and survey programmes (including the use of metal detectors). Second revision. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/ourportablepast/>.

Historic England, 2016. Historic Military Aviation Sites. Conservation Guidance. Historic England, London <https://historicengland.org.uk/images-books/publications/historic-military-aviation-sites/>.

B.1.8 Piling and Archaeology

Historic England, 2019. Piling and Archaeology. March 2019. 2nd edition. Historic England, Swindon <https://historicengland.org.uk/images-books/publications/piling-and-archaeology/>.

B.1.9 Preserving Archaeological Remains

Historic England, 2016. Preserving Archaeological Remains. Decision-taking for Sites under Development. Historic England, London <https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/>.

B.1.10 Project Management

Historic England, 2015. Management of Research Projects in the Historic Environment. The MoRPHE Project Manager's Guide. Historic England, Swindon. <https://www.historicengland.org.uk/images-books/publications/morphe-project-managers-guide/>.

B.1.11 Surveying and Recording Heritage

English Heritage, 2011. 3D Laser Scanning for Heritage (Second Edition). Advice and guidance to users on laser scanning in archaeology and architecture. English Heritage, Swindon. <https://historicengland.org.uk/images-books/publications/3d-laser-scanning-heritage2/>.

Historic England, 2015. Where on Earth Are We? The Role of Global Navigation Satellite Systems (GNSS) in Archaeological Field Survey. Historic England, Swindon <https://historicengland.org.uk/images-books/publications/where-on-earth-gnss-archaeological-field-survey/>.

Historic England, 2016. Traversing the Past. The total station theodolite in archaeological landscape survey. Historic England, London <https://historicengland.org.uk/images-books/publications/traversingthepast/>.

Historic England, 2017. Photogrammetric Applications for Cultural Heritage Guidance for Good Practice. Historic England, London <https://content.historicengland.org.uk/images-books/publications/photogrammetric-applications-for-cultural-heritage/heag066-photogrammetric-applications-cultural-heritage.pdf/>.

Historic England, 2017. Understanding the Archaeology of Landscapes. 2nd edition. Historic England, Swindon <https://HistoricEngland.org.uk/advice/technical-advice/recording-heritage/>.

Historic England, 2018. 3D Laser Scanning for Heritage. Advice and guidance on the use of laser scanning in archaeology and architecture. February 2018. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/3d-laser-scanning-heritage/>.

Historic England, 2018. Graphical and Plane Table Survey of Archaeological Earthworks. Good Practice Guide. October 2018. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/graphical-and-plane-table-survey-archaeological-earthworks/>.

Historic England 2018. Using Airborne Lidar in Archaeological Survey. The Light Fantastic. Historic England, Swindon. <https://historicengland.org.uk/images-books/publications/using-airborne-lidar-in-archaeological-survey/>.

Historic England, 2019. Piling and Archaeology. March 2019. 2nd edition. Historic England, Swindon <https://historicengland.org.uk/images-books/publications/piling-and-archaeology/>.

B.1.12 Understanding Historic Buildings

Historic England, 2016. Drawing for Understanding: Creating Interpretive Drawings of Historic Buildings. Historic England, London <https://historicengland.org.uk/images-books/publications/drawing-for-understanding/>.

Historic England, 2016. Understanding Historic Buildings. A Guide to Good Recording Practice. May 2016. Historic England, London <https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/> .

Cole, S., 2017. Photographing Historic Buildings. Historic England, Swindon.

B.2 Other Standards and Guidance

AAF, 2007. Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum.

AAI&S, 1988. The Illustration of Lithic Artefacts: a guide to drawing stone tools for specialist reports. Association of Archaeological Illustrators and Surveyors Technical Paper 9.

AAI&S, 1994. The Illustration of Wooden Artefacts: an introduction to the depiction of wooden objects from archaeological excavations. Association of Archaeological Illustrators and Surveyors Technical Paper 11.

AAI&S, 1995. The Survey and Recording of Historic Buildings. Association of Archaeological Illustrators and Surveyors Technical Paper 12.

AAI&S, 1997. Aspects of Illustration: prehistoric pottery. Association of Archaeological Illustrators and Surveyors Technical Paper 13.

AAI&S, n.d. Introduction to Drawing Archaeological Pottery. Association of Archaeological Illustrators and Surveyors, Graphic Archaeology Occasional Papers 1.

ACBMG, 2004. Draft Minimum Standards for the Recovery, Analysis and Publication of Ceramic Building Material. 3rd edition. Archaeological Ceramic Building Materials Group
<http://www.tegula.freeserve.co.uk/acbmg/CBMGDE3.htm>.

ADCA, 2004. Archaeological requirements for works on churches and churchyards. Association of Diocesan and Cathedral Archaeologists Guidance Note 1
<http://www.archaeologyuk.org/adca/documents/ADCAGuidanceNote1.pdf>.

ADCA, 2010. Archaeology and Burial Vaults. A guidance note for churches. Association of Diocesan and Cathedral Archaeologists Guidance Note 2/Advisory Panel on the Archaeology of Burials in England (APABE) <http://www.archaeologyuk.org/adca/documents/ADCAGuidanceNote2.pdf>.

ADCA, 2010. Dealing with architectural fragments. Association of Diocesan and Cathedral Archaeologists Guidance Note 3
<http://www.archaeologyuk.org/adca/documents/ADCAGuidanceNote3.pdf>.

ADCA, 2014. Fabric recording in Churches and Cathedrals. Association of Diocesan and Cathedral Archaeologists
<http://www.archaeologyuk.org/adca/documents/FabricRecordConsultationDraftJuly12.doc>.

ADS, 2011. Archaeology Data Service/ Digital Antiquity Guides to Good Practice. Archaeology Data Service, University of York <http://guides.archaeologydataservice.ac.uk/g2gp/Main>.

AEA, 1995. Environmental Archaeology and Archaeological Evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England. Working Papers of the Association for Environmental Archaeology No 2.

Aitchison, K. 2004. Disaster management planning for archaeological archives. IFA Professional Practice Paper 8, Institute of Field Archaeologists, Reading.

ALGAO, 2015. Advice Note for Post-Excavation Assessment. Association of Local Government Archaeological Officers, October 2015.

APABE, 2015. Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects. Advisory Panel on the Archaeology of Burials in England, July 2015
http://www.archaeologyuk.org/apabe/Large_Burial_Grounds.pdf?bcsi_scan_e956bcbe8adbc89f=0&bcsi_scan_filename=Large_Burial_Grounds.pdf.

APABE, 2017. Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England. 2nd Edition. Advisory Panel for the Archaeology of Burials in England <http://www.babao.org.uk/assets/Uploads-to-Web/APABE-ToHREfCBG-FINAL-WEB.pdf>

BABAO, 2012. BABAO position statement on methods of reburial of human remains. British Association of Biological Anthropology and Osteoarchaeology.

Barnes, A 2011 'Close-Range Photogrammetry: a guide to good practice', in Archaeology Data Service/ Digital Antiquity Guides to Good Practice. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/Photogram_Toc

Bayliss, A. 2009. Rolling out Revolution: using radiocarbon dating in archaeology. Radiocarbon, 51, p.123–47.

Behre, K.E., 1981. The interpretation of anthropogenic indicators in pollen diagrams. Pollen et Spores 23, pp. 225–45.

Bewley, B, Donoghue, D, Gaffney, V, van Leusen, M and Wise, A (rev. Bewley, B and Niven, K) 2011. 'Aerial Survey for Archaeology', in Archaeology Data Service/ Digital Antiquity Guides to Good Practice. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/AerialPht_Toc.

Brewer, P. and Jansma, E. 2016. Dendrochronological Data in Archaeology: A Guide to Good Practice. V1.1. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/Dendro_Toc.

Brickley, M. and McKinley, J.I. 2004. Guidelines to the Standards for Recording Human Remains. IFA Professional Practice Paper No. 7, British Association for Biological Anthropology and Osteoarchaeology and Institute of Field Archaeologists, Reading <http://www.babao.org.uk/HumanremainsFINAL.pdf>.

Brickstock, R.J. 2004. The Production, Analysis and Standardisation of Romano-British Coin Reports. English Heritage, Swindon. <https://www.historicengland.org.uk/images-books/publications/production-analysis-and-standardisation-of-romano-british-coin/>.

Brown, D.H., 2011a. Safeguarding Archaeological Information. Procedures for minimising risk to undeposited archaeological archives. English Heritage <https://www.historicengland.org.uk/images-books/publications/safeguarding-archaeological-information/>

Brown, D.H., 2011b. Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation. 2nd edition. Institute of Field Archaeologists/Archaeological Archives Forum (Reading) http://www.archaeologyuk.org/archives/aaf_archaeological_archives_2011.pdf Buikstra, J.E. and Ubelaker D.H., (eds) 1994. Standards for Data Collection from Human Skeletal Remains. Arkansas Archaeological Survey Research Series 44, Fayetteville, Arkansas.

Carey, C., Howard, A.J., Knight, D., Corcoran, J., and Heathcote, J., 2018. Deposit Modelling and Archaeology. University of Brighton. https://www.brighton.ac.uk/_pdf/research/set-groups/deposit-modelling-and-archaeology-volume.pdf

ClfA, 2014. Code of Conduct. Chartered Institute for Archaeologists, Reading, December 2014 <https://www.archaeologists.net/sites/default/files/Code%20of%20Conduct.pdf>.

ClfA, 2014. Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives. Chartered Institute for Archaeologists, Reading, December 2014 https://www.archaeologists.net/sites/default/files/CIFAS&GArchives_2.pdf.

ClfA, 2014. Standard and guidance for the archaeological investigation and recording of standing buildings or structures. Chartered Institute for Archaeologists, Reading, December 2014 https://www.archaeologists.net/sites/default/files/ClfAS&GBuildings_1.pdf.

ClfA, 2014. Standard and guidance for the collection, documentation, conservation and research of archaeological materials. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GFinds_1.pdf.

ClfA, 2014. Standard and guidance for commissioning work on, or providing consultancy advice on, archaeology and the historic environment. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GCommissioning_1.pdf.

ClfA, 2014. Standard and guidance. Excavation. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GExcavation_1.pdf.

ClfA, 2014. Standard and guidance. Field evaluation. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GFieldevaluation_1.pdf.

ClfA, 2014. Standard and guidance. Forensic archaeologists. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GForensics_2.pdf.

ClfA, 2014. Standard and guidance. Geophysical survey. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS%26GGeophysics_2.pdf.

ClfA, 2014. Standard and guidance. Stewardship of the historic environment. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS%26GStewardship_2.pdf.

ClfA, 2014. Standard and guidance. Archaeological watching brief. Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GWatchingbrief_2.pdf.

ClfA, 2014. Standard and guidance. Appendices (Glossary; Preparation of specification; Contents of project design; Post-excavation project design; Copyright; Selected bibliography; Selected contact addresses). Chartered Institute for Archaeologists, Reading, December 2014
https://www.archaeologists.net/sites/default/files/ClfAS&GAppendices_0.pdf.

ClfA, 2014. An introduction to providing career entry training in your organisation. ClfA Professional Practice Paper No. 11, Chartered Institute for Archaeologists, Reading
http://www.archaeologists.net/sites/default/files/node-files/2014.PPP_.Training-toolkit-web_0.pdf.

ClfA, 2017. Standard and guidance. Historic environment desk-based assessment. Chartered Institute for Archaeologists, Reading, January 2017
https://www.archaeologists.net/sites/default/files/ClfAS%26GDBA_3.pdf.

ClfA, 2018. Policy statements (Equal opportunities in archaeology; Health and safety; The use of volunteers and students on archaeological projects; Environmental protection; Self-employment and the use of self-employed sub-contractors; The use of training posts on archaeological project). Revised August 2018. Chartered Institute for Archaeologists, Reading
<https://www.archaeologists.net/sites/default/files/Policy%20statements%20revised%20Aug%202018.pdf>.

CIRIA, 2015. Environmental good practice on site (fourth edition). CIRIA C741. Construction Industry Research and Information Association.

Collett, L., 2012. An introduction to drawing archaeological pottery. IfA Professional Practice Paper No. 10, Institute for Archaeologists, Reading.

Conyers, L.B. & Goodman D., 1997. Ground Penetrating Radar, an Introduction for Archaeologists. Altamira Press, London.

Corfield, M., Hinton, P, Nixon, T and Pollard, M (eds) 1998, Preserving Archaeological Remains in situ: Proceedings of the Conference of 1st –3rd April 1996. Museum of London Archaeology Service, London

Davey, P.J. 1981. Guidelines for the processing and publication of clay pipes from excavations. *Medieval and Later Pottery in Wales IV*, pp. 65–87.

Davis, M.J., Gdaniec, K.L.A., Bryce, M. and White, L. 2004. *Study of the Mitigation of Construction Impacts on Archaeological Remains*. Museum of London Archaeology Service, London.

Dawson, A. and Hillhouse, S., 2011. *SPECTRUM 4.0: the UK Collections Management Standard*. Collections Trust <http://www.collectionslink.org.uk/programmes/spectrum>.

DCC. (2013). *Checklist for a Data Management Plan. v.4.0*. Edinburgh: Digital Curation Centre. Available online: <http://www.dcc.ac.uk/resources/data-management-plans>

DCMS, 2008. *Treasure Act 1996 Code of Practice (2nd Revision) England and Wales*. <https://www.gov.uk/government/publications/treasure-act-1996-code-of-practice-2nd-revision-england-and-wales>.

DCMS, 2005. *Guidance for the Care of Human Remains in Museums*. Department for Culture, Media & Sport <http://www.babao.org.uk/assets/Uploads-to-Web/dcmguide-oct-2005.pdf>.

Eiteljorg, H., Fernie, K., Huggett, J. and Robinson, D. with Thomason, B., 2011. 'CAD: A Guide to Good Practice', in *Archaeology Data Service/ Digital Antiquity Guides to Good Practice*. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/Cad_Toc.

FAME, 2006. *Health and Safety in Field Archaeology Manual*. Federation of Archaeological Managers and Employers.

Ferguson, L. and Murray, D., 1997. *Archaeological Documentary Archives*. IFA Professional Practice Paper 1, Institute of Field Archaeologists, Reading.

Gaffney, C. and Gater, J. with Ovenden, S., 2002. *The Use of Geophysical Techniques in Archaeological Evaluations*. IFA Professional Practice Paper 6, Institute of Field Archaeologists, Reading.

Gillings, M. and Wise, A., 2011. 'GIS Guide to Good Practice', in *Archaeology Data Service/ Digital Antiquity Guides to Good Practice*. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/Gis_Toc.

Gray, S., 2014. *UAV Survey: A Guide to Good Practice*. Archaeology Data Service/ Digital Antiquity Guides to Good Practice. http://guides.archaeologydataservice.ac.uk/g2gp/AerialPht_UAV.

Gurney, D.A., 1985. *Phosphate Analysis of Soils: A Guide for the Field Archaeologist*. IFA Technical Paper 3, Institute of Field Archaeologists, Reading.

Hayfield, C. (ed.) 1980. *Fieldwalking as a Method of Archaeological Research*. DoE, Directorate of Ancient Monuments and Historic Buildings, Occasional Papers No. 2, 1980.

Haselgrove, C., 1985. Inference from ploughsoil artefact samples, in C Haselgrove, M Millett & I Smith (eds) *Archaeology from the Ploughsoil*. Sheffield University, pp. 7–30.

Icon, 2014. *Icon Professional Standards: The professional standards of the Institute of Conservation (Icon)*. Institute of Conservation, London <http://icon.org.uk/system/files/documents/professional-standards-2016.pdf>.

McKinley, J.I. and Roberts, C., 1993. *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Institute of Field Archaeologists Technical Paper No. 13, Reading.

MGC, 1992. *Standards in the Museum Care of Archaeological Collections*. Museums and Galleries Commission <http://www.collectionslink.org.uk/discover/site-information/484-standards-in-the-museum-care-of-archaeological-collections>.

Mitchell, P.D. and Brickley, M., 2017. Updated guidelines to the standards for recording human remains. ClfA Professional Practice Paper, British Association for Biological Anthropology and Osteoarchaeology and Chartered Institute for Archaeologists, Reading http://www.archaeologists.net/sites/default/files/14_Updated%20Guidelines%20to%20the%20Standards%20for%20Recording%20Human%20Remains%20digital.pdf.

MPRG, 2000. A Guide to the Classification of Medieval Ceramics. Medieval Pottery Research Group Occasional Papers No. 1.

MPRG, 2001. Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics. Medieval Pottery Research Group Occasional Paper No. 2 <http://www.medievalpottery.org.uk/docs/Standards.pdf>.

Nixon, T. (ed.) 2004. Preserving Archaeological Remains in situ. Proceedings of the 2nd Conference, 12–14 September 2001. Museum of London Archaeology Service, London.

Owen, J., 1995. Towards an Accessible Archaeological Archive. The Transfer of archaeological archives to museums. Guidelines for use in England, Northern Ireland, Scotland and Wales. Society of Museum Archaeologists <http://www.socmusarch.org.uk/docs/towardsaccessiblearchive.pdf>.

Payne, A., 2011. 'Laser Scanning for Archaeology: a guide to good practice', in Archaeology Data Service/ Digital Antiquity Guides to Good Practice. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/LaserScan_Toc.

PCRG, 2010. The Study of Later Prehistoric Pottery: General policies and guidelines for analysis and publication (3rd edition). Prehistoric Ceramics Research Group Occasional Papers 1 & 2.

PCRG, SGRP and MPRG, 2016. A Standard for Pottery Studies in Archaeology. Prehistoric Ceramics Research Group, Study Group for Roman Pottery, Medieval Pottery Research Group & Historic England, June 2016 http://romanpotterystudy.org/new/wp-content/uploads/2016/06/Standard_for_Pottery_Studies_in_Archaeology.pdf.

Phillips, T. and Creighton, J., 2010. Employing people with disabilities: good practice guidance for archaeologists. IfA Professional Practice Papers No 9, Institute for Archaeologists, Reading.

Philo, C and Swann, A., 1992. Preparation of Artwork for Publication. Institute of Field Archaeologists Technical Paper No. 10, Reading.

RFG and FRG, 1993. Guidelines for the Preparation of Site and Assessments for all Finds other than Fired Clay Vessels. Roman Finds Group and Finds Research Group.

Schmidt, A., Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A. & Fassbinder, J., 2016. EAC Guidelines for the Use of Geophysics in Archaeology. Questions to Ask and Points to Consider. Europae Archaeologia Consilium (EAC), Belgium <https://www.europae-archaeologiae-consilium.org/eac-guidelines>.

Schofield, A.J. (ed.) 1998. Interpreting Artefact Scatters. Oxbow Monograph 4, Oxford.

SGRP, 1994. Guidelines for the Archiving of Roman Pottery. Study Group for Roman Pottery <http://www.romanpotterystudy.org/SGRPPublications/GuidelinesArchivingRomanPot.pdf>.

Schmidt, A. and Ernenwein, E., 2011. 'Guide to Good Practice: geophysical data in archaeology (2nd Edition)', in Archaeology Data Service/ Digital Antiquity Guides to Good Practice. Archaeology Data Service, York http://guides.archaeologydataservice.ac.uk/g2gp/Geophysics_Toc#section-Geophysics_Toc-ByArminSchmidtAndEileenErnenwein.

SMA, 1997. Selection, Retention, Dispersal of Archaeological Finds. Guidelines for use in England, Wales and Northern Ireland (Revised). Society of Museum Archaeologists <http://www.socmusarch.org.uk/docs/selectionretentiondispersalofcollections1.pdf>.

UKIC, 1983. Packaging and Storage of Freshly Excavated Artefacts from Archaeological Sites. (United Kingdom Institute for Conservation, Conservation Guidelines No 2).

UKIC, 1984. Environmental Standards for Permanent Storage of Excavated material from Archaeological Sites. (United Kingdom Institute for Conservation, Conservation Guidelines No 3).

UKIC, 1990. Guidance for Conservation Practice. United Kingdom Institute for Conservation.

UKIC, 1990. Guidelines for the Preparation of Excavation Archives for Long-term Storage. United Kingdom Institute for Conservation Archaeology Section.

UKIC, 2001. Excavated Artefacts and Conservation. (United Kingdom Institute for Conservation, Conservation Guidelines No 1, revised).

University of Birmingham, "Stonehenge Hidden Landscapes: geophysical survey report (field seasons 2010-2015, abridged results Highways Agency area of interest 2017-18," unpublished provisional report for the Highways Agency, 2018.

WAC, 1989. The Vermillion Accord – Human Remains. Motion Approved at the First Inter-Congress on the Disposal of the Dead. World Archaeology Congress, Vermillion, South Dakota.

Watkinson, D.E. and Neal, V. 2001. First Aid for Finds. RESCUE/United Kingdom Institute for Conservation.

Wiseman, J. & El-Baz, F., 2007. Remote Sensing in Archaeology. Interdisciplinary Contributions To Archaeology. Springer. New York.

Young C., 1980. Guidelines for the Processing and Publication of Roman Pottery. Department of the Environment.

Appendix C OEMP requirements

C.1 Archaeological Clerk of Works: Responsibilities

The responsibilities of the proposed Archaeological Clerk of works position as set out in the OEMP (APP-187) are as follows:

<p>Archaeological Clerk of Works (ACoW): (main works contractor)</p>	<p>CEMP responsibilities:</p> <p>Review of relevant sections of the CEMP, when prepared by the EM.</p> <p>Responsible for ensuring that all archaeological elements of the CEMP are complied with during construction.</p> <p>Prepares the Heritage Management Plan (HMP).</p> <p>Overall responsibilities:</p> <p>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.</p> <p>The ACoW will be required to:</p> <p>Monitor and ensure compliance with the HMP.</p> <p>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 ensuring that these are put in place and complied with.</p> <p>Monitor construction works to ensure that the CEMP, the HMP and any requirements of the DAMS are carried out.</p> <p>Monitor protection measures to ensure these are in place and maintained appropriately throughout the construction period in compliance with the HMP.</p> <p>Liaise and consult closely with The Authority on an ongoing basis throughout the construction works and the handover to the operation phase to ensure compliance with all measures set out in the CEMP, HMP and the DAMS.</p>
--	---

C.2 Heritage Management Plans

The requirements for Heritage Management Plans as set in PW-CH1 of the OEMP (APP-187) are as follows:

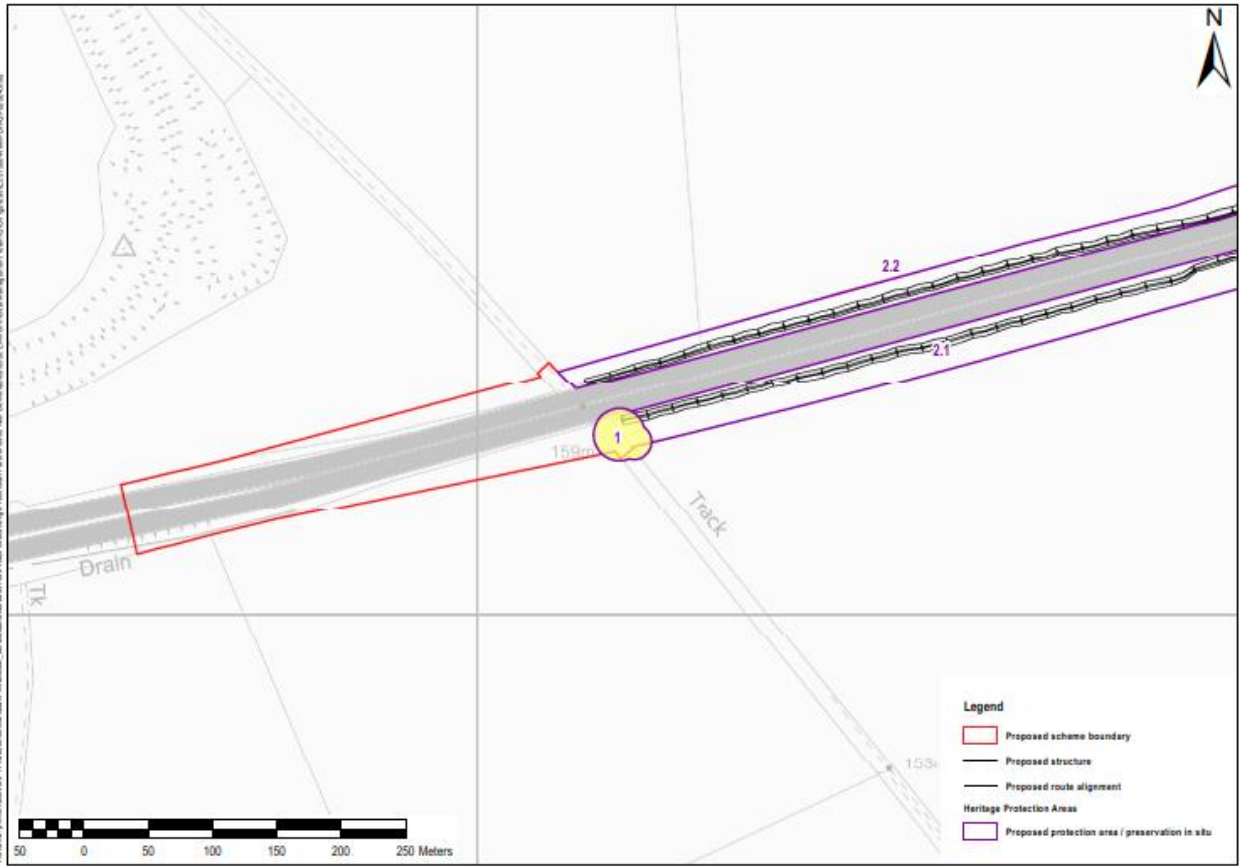
Heritage Management Plan (HMP):

The preliminary works contractor (archaeology) shall produce a HMP based on the Detailed Archaeological Mitigation Strategy, 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 be prepared in consultation with Heritage Monitoring and Advisory Group (HMAG) and Wiltshire Council Archaeological Services (WCAS) and shall address:

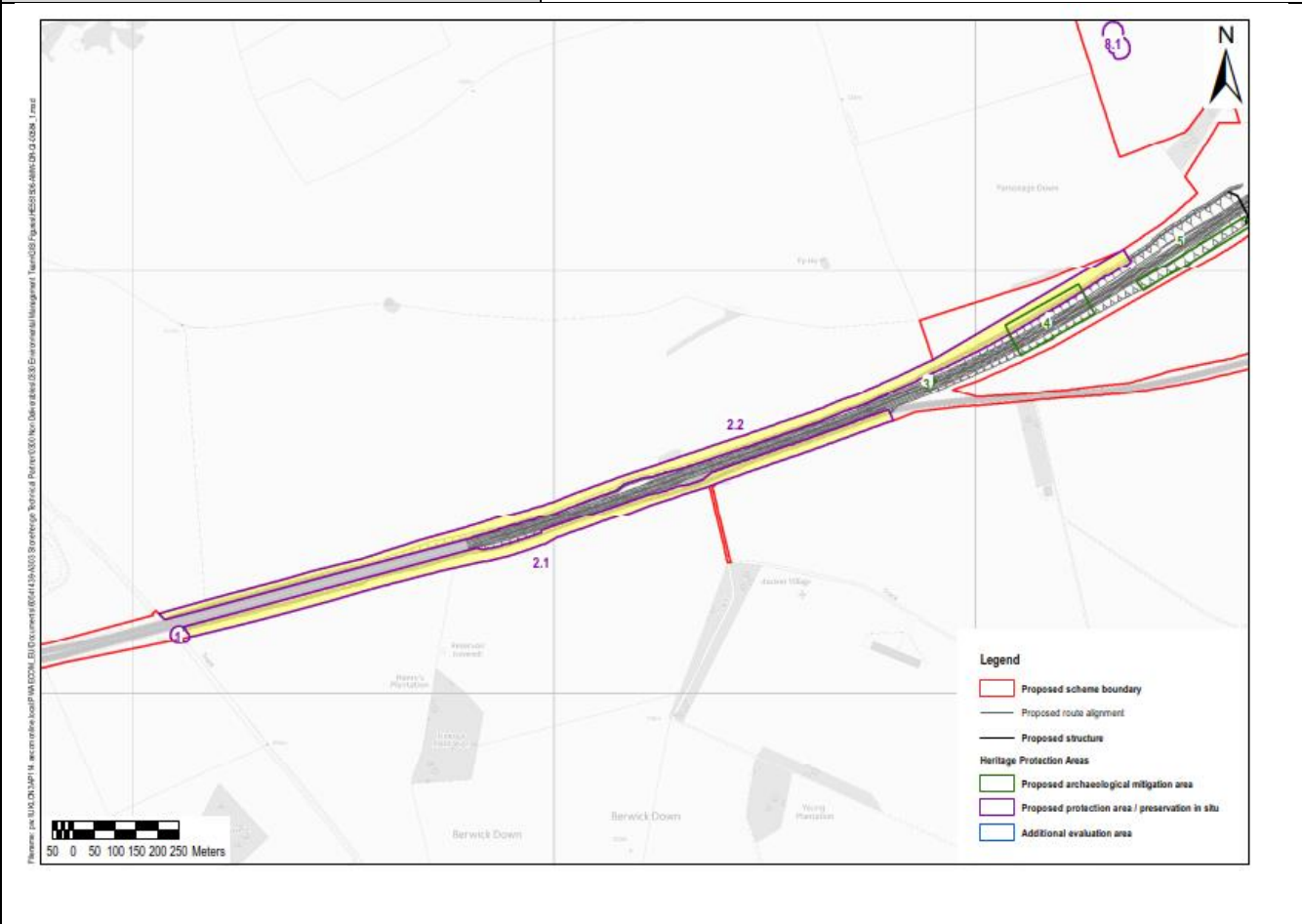
- a) all temporary and permanent works, which may include, as relevant, boundary fencing, vegetation clearance, ground investigations, demolition, utility diversions, access routes / haul roads and works compounds.
- b) potential indirect impacts on heritage assets both inside and outside the World Heritage 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 adverse ground conditions caused by weather events (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 unexpected archaeological discoveries.

The preliminary works shall be carried out in accordance with the Heritage Management Plan.

Appendix D Action Areas: Preservation in situ

Site 1: Milestone on track, south of A303, close to Yarnbury Camp.	
Designation:	Scheduled
Reference IDs:	UID 6001; NHLE 1005621
Location (NGR):	404122, 140134
Site area (approximate):	n/a
	
Description	
<p>Milestone on a track, south of the A303 close to Yarnbury Camp (the former Stapleford Road, now a green lane). The guidepost survives as a standing earthfast pillar which is 1m high, 0.4m wide and 0.3m thick and is inscribed 'IX Miles to SARUM XXVII Miles to BATH' and dates to 1750.</p>	
Scheme impact	
<p>The construction of the Private Means of Access (PMA) on the south side of the A303 (Site 2.1) has the potential to damage the milestone which is close to the Scheme boundary.</p>	
Mitigation	
<p>The boundary marker will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed, leaving the milestone in situ.</p>	

Sites 2.1 and 2.2: Field systems east of Yarnbury Camp which are located either side of the A303, and an undated oval enclosure.	
Designation:	Non-designated
Reference IDs:	UID 1004.01/ MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 UID 1006/ MWI7223, MWI7261
Location (NGR):	Site 2.1: 404975,140365 Site 2.2: 405327, 140555
Site area (approximate):	6.7ha



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 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. Possible linear features have been identified by geophysical survey within this area (GSB Prospection Ltd, 2001a; GSB Prospection Ltd, 2001b; Wessex Archaeology, 2017a), although subsequent trial trenching did not identify any remains (Wessex Archaeology, 2002d). On the south side of the A303 an undated but possibly later prehistoric oval enclosure has been identified from aerial photography (UID 1006). The northern end of the enclosure appears to have been destroyed during widening of the A303. A ditch observed during the works may have been related to the enclosure.

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).

Mitigation

Preservation in situ will be the preferred method of archaeological mitigation rather than archaeological excavation and recording (AER). Where feasible, the existing topsoil will be retained and covered with an appropriate membrane 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.

Two small prehistoric pits (possibly of Late Neolithic date) were found in Trench 754 together with a small finds assemblage.

Scheme impact

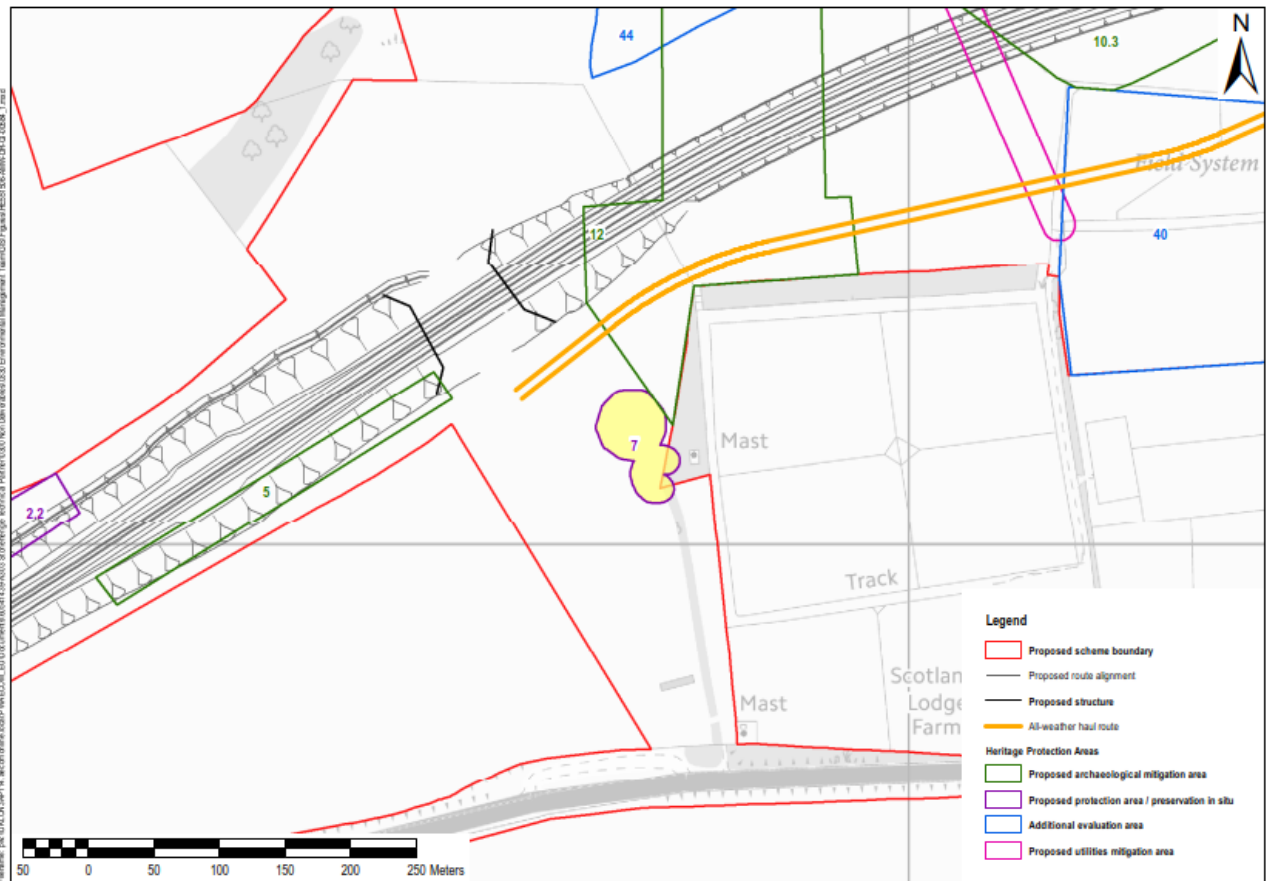
Landscape fill will be placed in the area of Site 6. The water connection route (Site 47). to the Main Civils Compound also passes through Site 6. Archaeological remains in this area will either be rendered inaccessible due to the depth of the fill (where >2m deep) or may be exposed or damaged if topsoil is stripped prior to deposition of fill material.

Mitigation

Preservation in situ will be the preferred method of archaeological mitigation rather than archaeological excavation and recording. Where feasible, the existing topsoil will be retained and covered with an appropriate membrane and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction. Where this is not feasible, strip, map and record (SMR) will be the preferred method of mitigation.

Site 7: Non-designated barrows east of Scotland Lodge Iron Age site.

Designation:	Non-designated
Reference IDs:	UID 2035.01 UID 2035.02
Location (NGR):	406790, 141086
Site area (approximate):	0.3ha



Description

Site 7 lies west of Scotland Lodge Farm. The line of the NMU/PMA route to Green Bridge No. 1 has been designed to avoid Site 7.

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. The remains were detected by geophysical survey (GSB Propection 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.

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.

Mitigation

Site 7 will be protected during construction by protective fencing incorporating a 10m buffer beyond the extent of the remains mapped by the evaluation surveys. Following construction, the protective fencing will be removed and the ground prepared for chalk grassland reversion under archaeological supervision.

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.

Scheme impact

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

Mitigation

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 an appropriate membrane, 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.

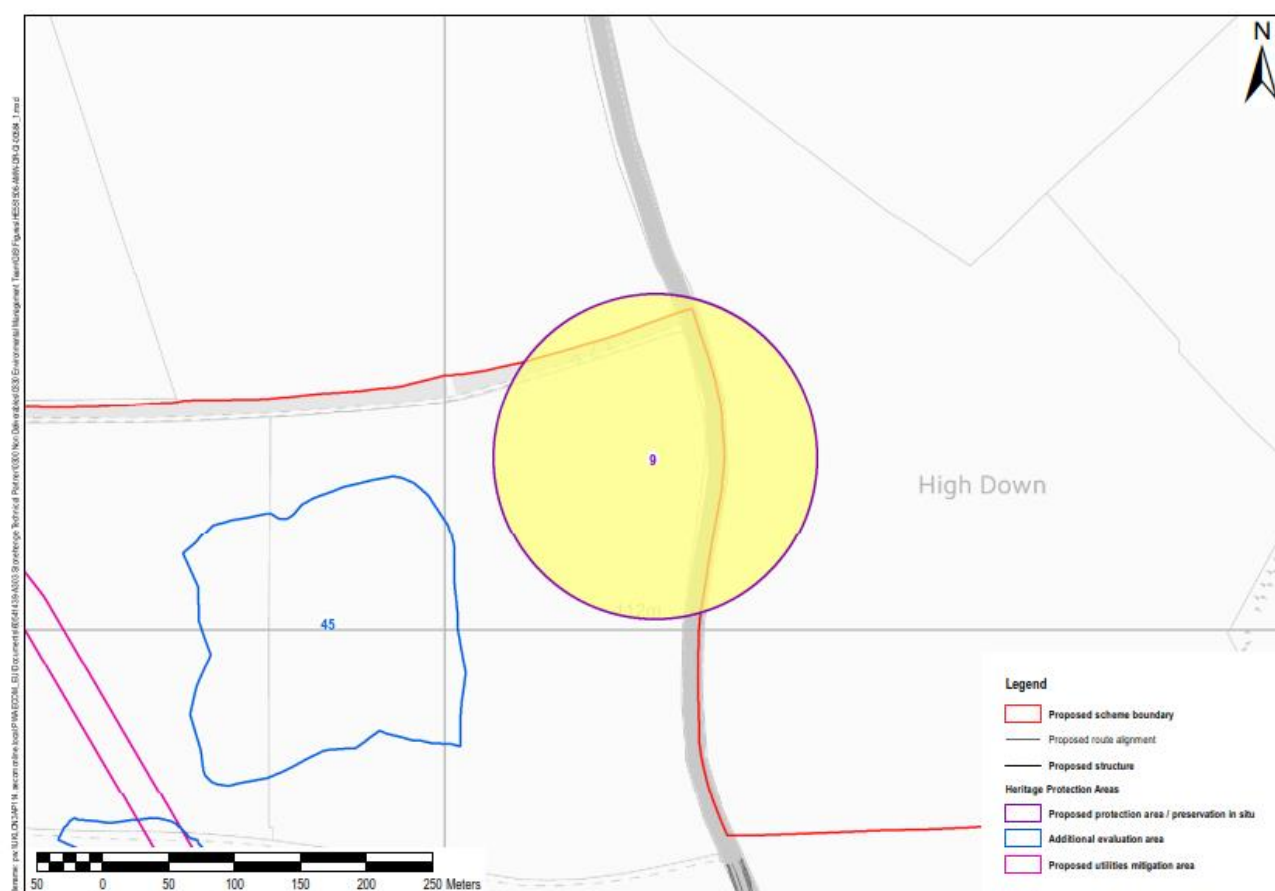
Site 9: Possible settlement associated with an Iron Age/Romano-British enclosure north of Winterbourne Stoke.

Designation: Non-designated

Reference IDs: UID 1004.01/ MWI7130
UID 2039/ MWI7098

Location (NGR): 407122, 142126

Site area (approximate): 4.7ha


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 with WCAS and Natural England; the location of the deposited material will be mapped using GPS and the locational data provided to the WSHER.

Mitigation

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.

Sites 10.1 and 10.2: Dispersed unenclosed settlement of possible Bronze Age date (Parsonage Down excavated material deposition area).

Designation:	Non-designated
Reference IDs:	UID 2036/ MWI74874 UID 2038/ MWI74875
Location (NGR):	Site 10.1 – 407118, 141585 Site 10.2 – 407146, 141735
Site area (approximate):	Site 10.1: 0.7ha Site 10.2: 0.03ha Site 10.3: 2.96ha


Description

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

Background

UID 1004.01: An extensive series of 'Celtic field systems' extend across Parsonage Down, east of Yarnbury Camp is known largely from aerial photographs. 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.

UID 2036: An oval enclosure of unknown date identified by geophysical survey.

UID 2038: Possible pits of an unknown date 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)).

Scheme impact

Sites 10.1 and 10.2 are required for the permanent deposition of material to be excavated from the tunnel (shallow fill <2m 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).

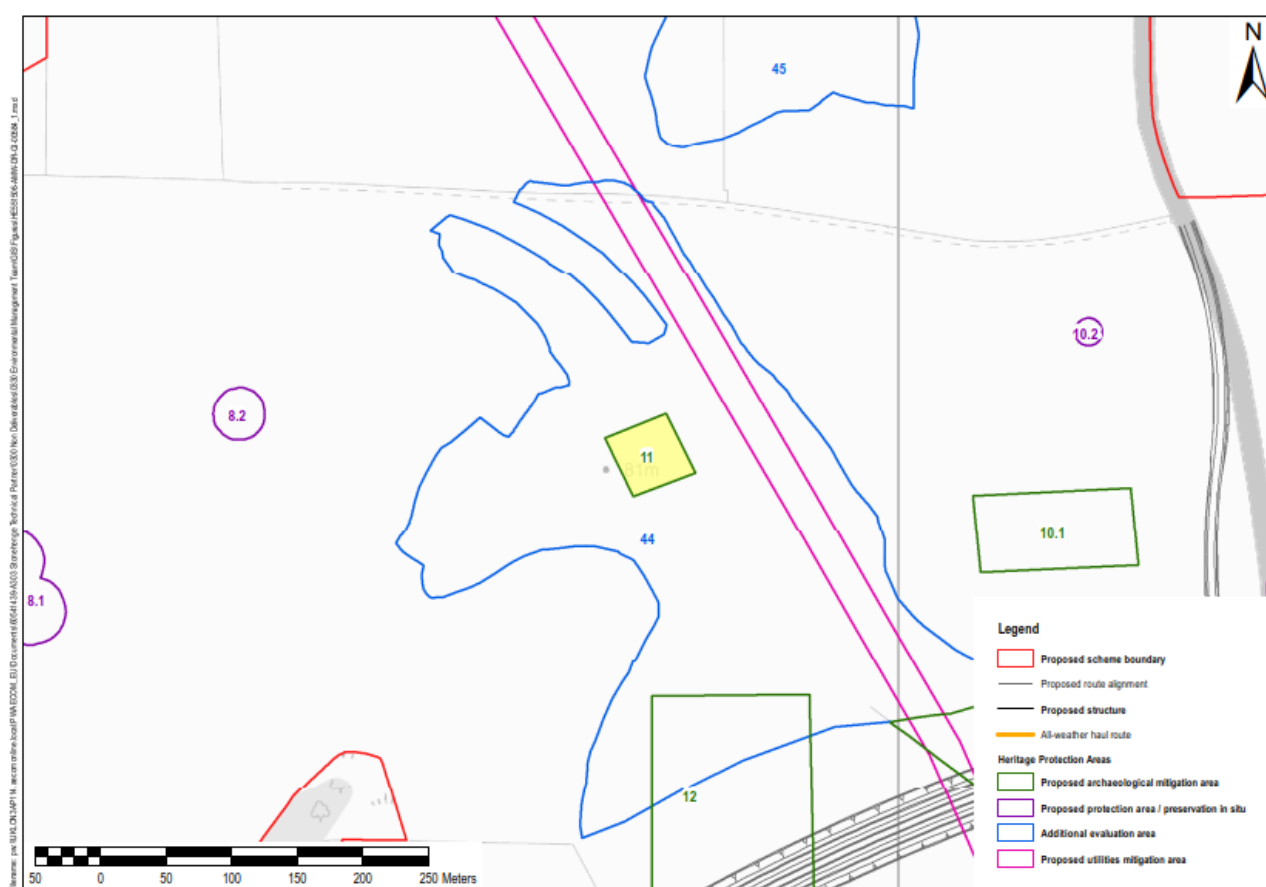
Mitigation

Preservation in situ will be the preferred method of archaeological mitigation rather than archaeological excavation and recording (AER) at Sites 10.1 and 10.2.

At both sites where feasible the topsoil will be retained and covered with an appropriate membrane, and fill material will be placed onto the membrane to ensure that the archaeological remains are protected at construction (fill depth in this part of the deposition area is proposed to be 1m to 2m deep, increasing in depth towards the west).

Site 11: Linear boundary, extensive field systems, enclosures and possible trackways of possible Iron Age/ Romano-British date (Parsonage Down excavated material deposition area).

Designation:	Non-designated
Reference IDs:	UID 1004.01 – MWI6094, MWI6232, MWI6930, MWI6943, MWI6994, MWI6996, MWI6997, MWI7001, MWI7095, MWI7112, MWI7130, MWI7235, MWI7267 UID 1005/ MWI7159, MWI7245, MWI7262
Location (NGR):	406778, 141492
Site area (approximate):	0.249ha


Description

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). Also a boundary feature visible on aerial photographs as a soil/ cropmark (UID 1005) that is on 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]). Trial trenching has 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]). Colluvium was also present in a coombe that is present in the central part of the area. Trench 985 contained an Early Bronze Age urned cremation in a Food Vessel (damaged by plough), there is some indication that the location at the junction of a series of coombes was deliberately selected.

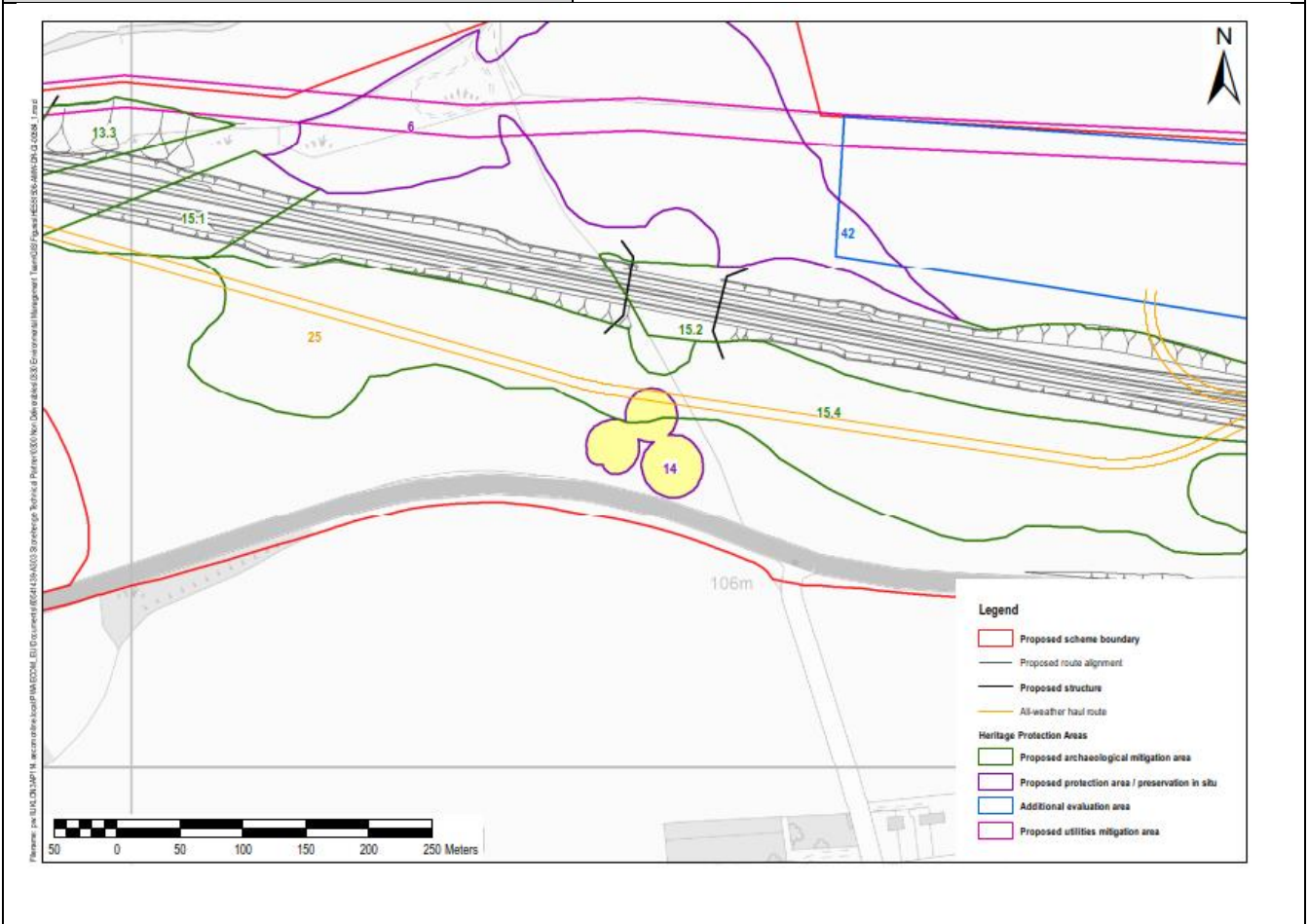
Scheme impact

Site 11 covers an area that is required for the deposition and storage of material to be excavated from the tunnel. The site contains the known remains of Late Neolithic/ Beaker burial activity which may extend across the coombe.

Mitigation

Preservation *in situ* will be the preferred method of archaeological mitigation rather than archaeological excavation and recording (AER). Where feasible, the topsoil will be retained and covered with an appropriate membrane, fill material will be placed onto the membrane to ensure that the archaeological remains are protected at construction.

Site 14: Non-designated barrows on the top of 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):	0.46ha



Description

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]).

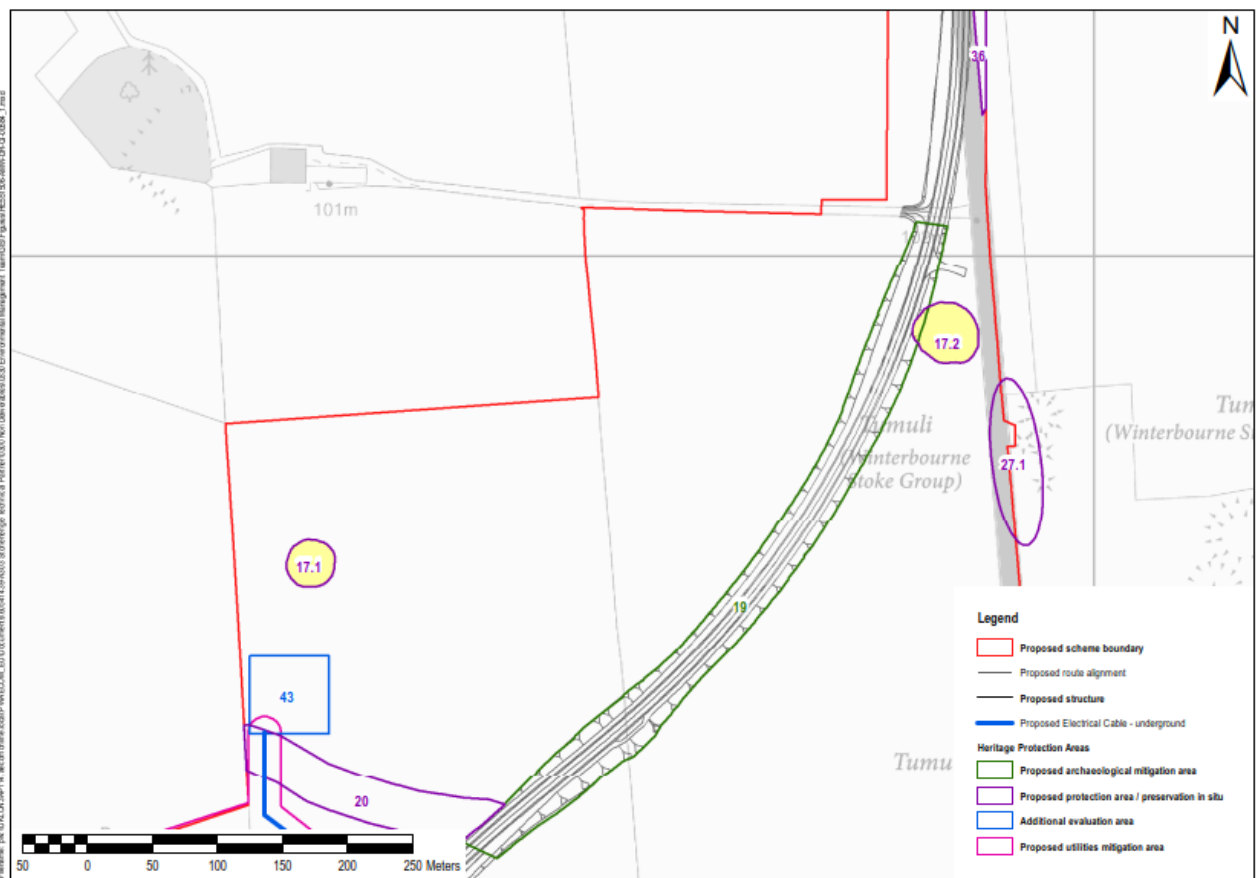
Scheme impact

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.

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.

Site 17: Non-designated barrow within the Main Civils Compound and a pair of solution hollows just east of the A360 north link road.	
Designation:	Non-designated
Reference IDs:	UID 2077/ MWI6402 (Site 17.2) 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 area (approximately):	Site 17.1: 0.11ha Site 17.2: 0.18ha



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 located. 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 geoarchaeological 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.

Scheme impact

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. Site 17.2 will be located adjacent to the realigned A360 and will require to be protected at the construction stage.

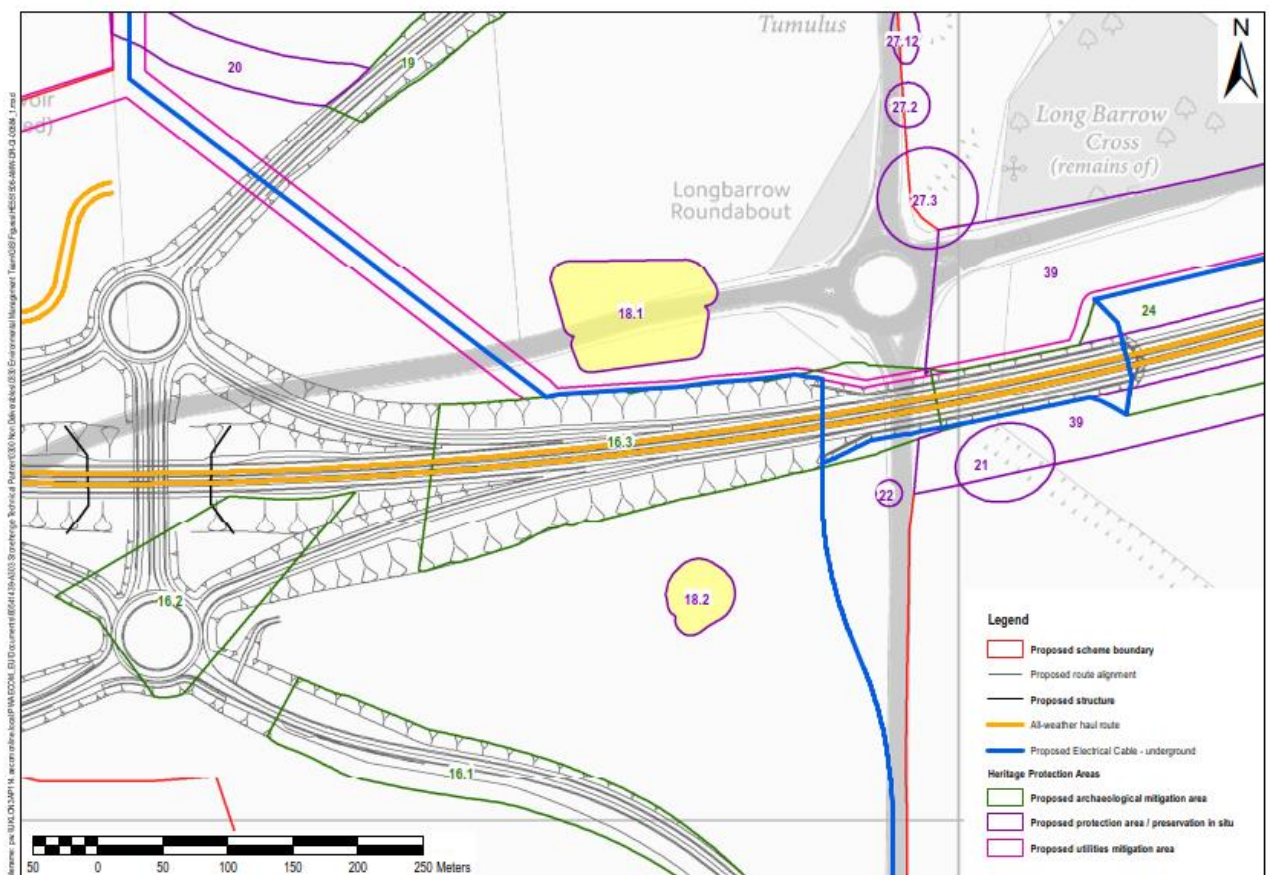
Mitigation

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.

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.

Site 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).

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.

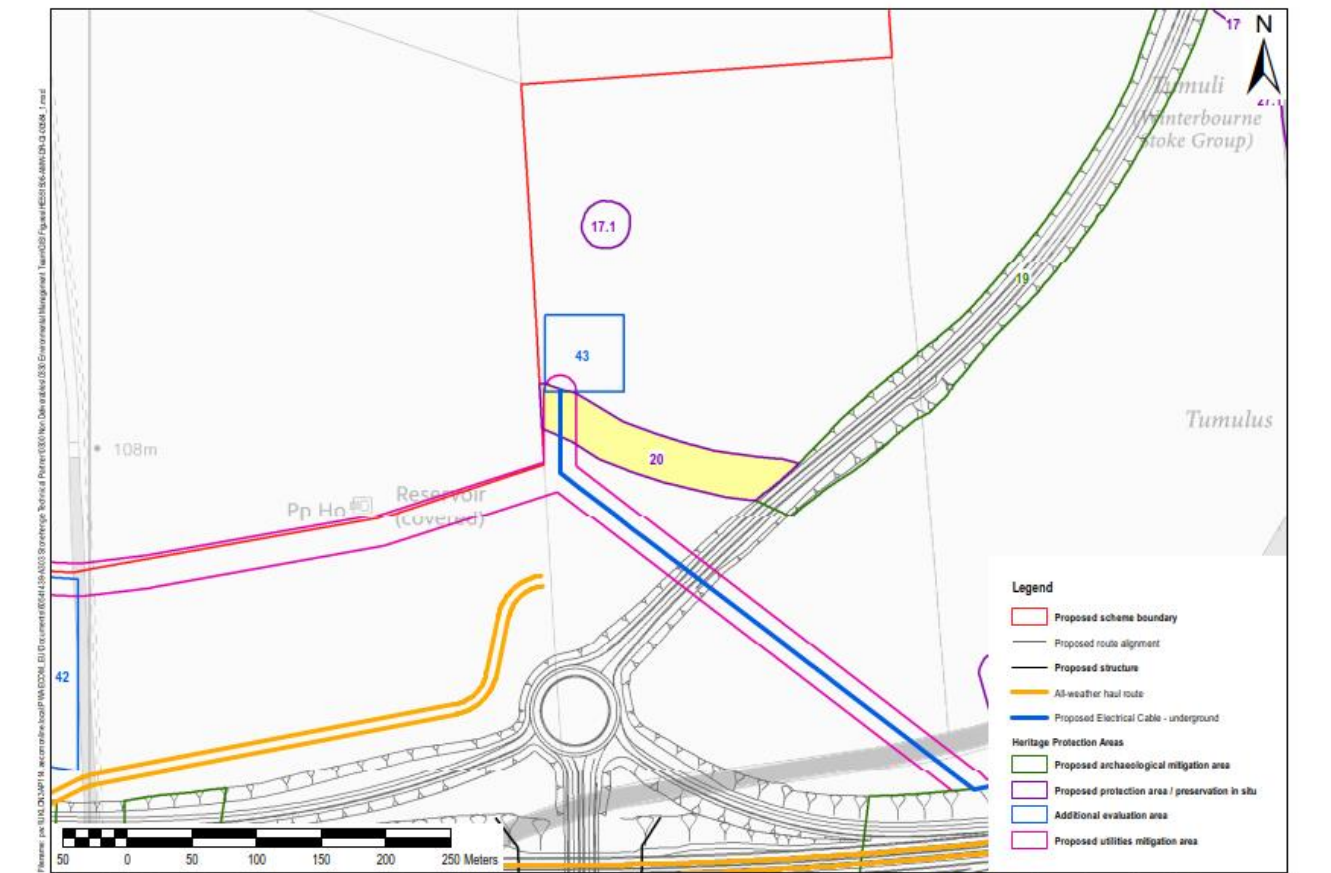
Site 18.1 comprises an enclosure that is no longer visible and a levelled bowl barrow which survives as a buried feature of 20m overall diameter in the north-west part of the enclosure (UID 2001, NHLE 1011048). The enclosure is visible on aerial photographs and was confirmed by geophysical survey (GSB 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., 1992; 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
<p>The existing A303 as it runs alongside the bisected remains of the Bronze Age bowl barrow and the enclosure (Site 18.1) will be de-trunked and removed from the road network. The enclosure and barrow will be retained in situ.</p> <p>Site 18.2 is within the DCO boundary and c.44m south of the Scheme mainline.</p>
Mitigation
<p>Sites 18.1 and 18.2 will be protected by fencing incorporating a 10m buffer beyond the extent of the remains as mapped by the geophysical surveys. Following completion of construction, the protective fencing will be removed prior to the land being returned to agriculture.</p>

Site 20: Bronze Age land boundary (Wessex Linear) crossing the Main Civils Compound, linear features and an enclosure north of Winterbourne Stoke roundabout.

Designation:	Non-designated
Reference IDs:	UID 2014.02/ MWI6406 UID 2076 & 2078/ MWI7201
Location (NGR):	409446, 141577
Site area (approximate):	0.65ha



Description

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 roundabout (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).

Scheme impact

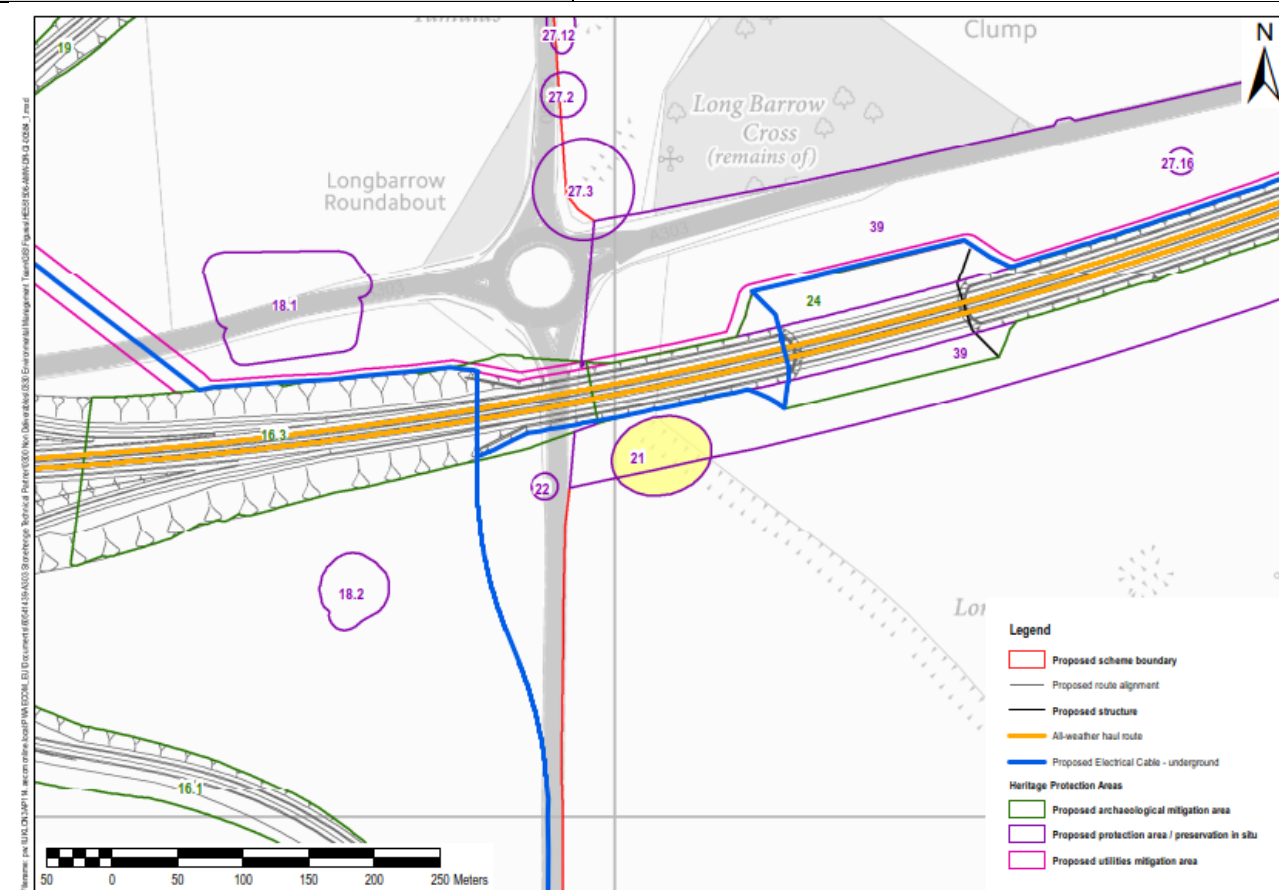
The linear boundary lies within the Main Civils Compound area. The compound will be laid out above existing levels with topsoil retained in situ and protected with imported stone to allow preservation in situ.

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: Bronze Age land boundary (Wessex Linear) western approaches to Longbarrow Roundabout.

Designation:	Scheduled
Reference IDs:	UID 2014.01/ NHLE 1010837
Location (NGR):	410036, 141280
Site area (approximate):	TBC



Description

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).

Scheme impact

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.

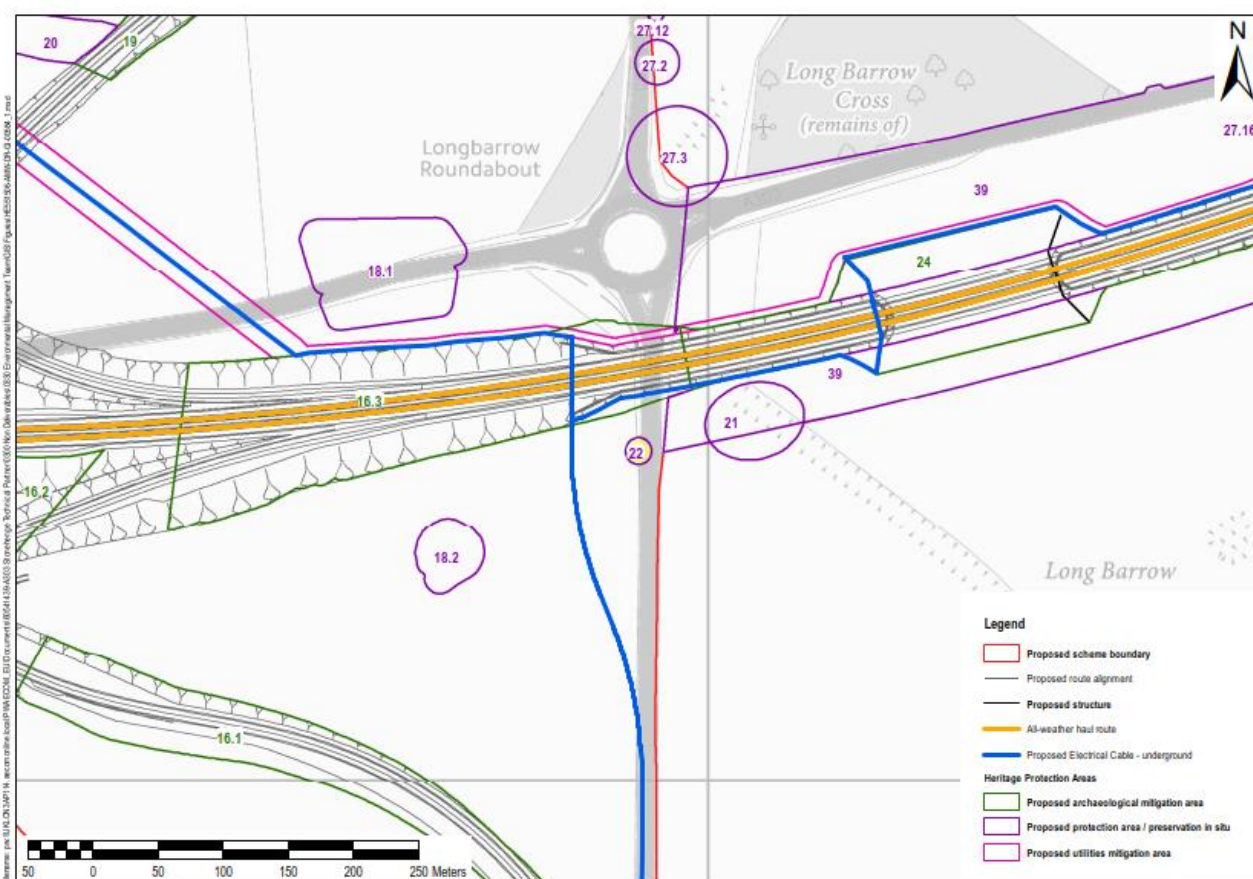
Mitigation

The scheduled monument will be photographed and protected during construction works by fencing within the DCO boundary (up to the edge of Site 24). The 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 22: Milestone on A360.

Designation:	Listed (Grade II)
Reference IDs:	UID 6027/ NHLE 1130972
Location (NGR):	409947, 141252
Site area (approximate):	n/a


Description

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).

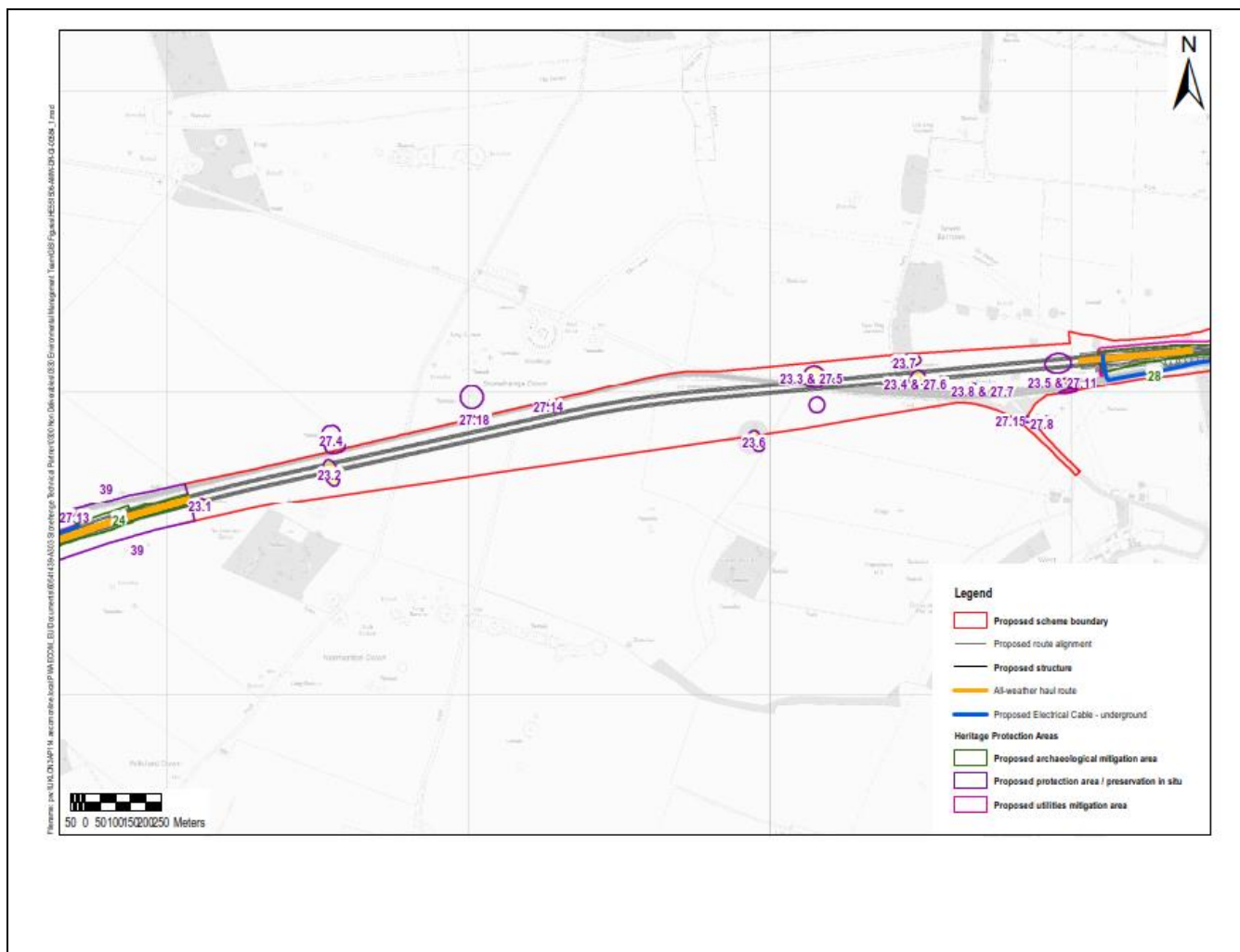
Scheme impact

It 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.

Mitigation

The listed milestone will be photographed and protected during construction works by fencing. Following construction, the protective fencing will be removed once works to prepare the restricted byway are complete, leaving the milestone in situ.

Site 23: 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: 0.15ha 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: 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: 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: 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: 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: 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, 2016), 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: 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, 2011).

Site 23.7: 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, 2011).

Site 23.8: 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

Site 23.1 – 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 – 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 – 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 – 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 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 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 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 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

Site 23.1 – The ploughed-down scheduled monument will be 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 23.2 – The scheduled monument will be photographed and protected during construction works by fencing incorporating a 10m buffer beyond the extent of the scheduled area or the extent of remains as mapped by geophysical survey, whichever is the greater. Following construction, the protective fencing will be removed and the land returned to agriculture.

Site 23.3 – 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 23.4 – 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; the land will remain within retained woodland as part of the grounds of Stonehenge Cottages.

Site 23.5 – 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 23.6 – The scheduled monument will be photographed and protected during construction works by fencing incorporating a 10m buffer beyond the extent of the scheduled area (that part that lies within the DCO area). Following construction, the protective fencing will be removed and the land returned to agriculture.

Site 23.7 – The scheduled monument will be photographed and protected during construction works by fencing incorporating a 10m buffer beyond the extent of the scheduled area (that part that lies within the DCO area). Following construction, the protective fencing will be removed and the land will remain within retained woodland as part of the grounds of Stonehenge Cottages.

Site 23.8 – 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 25: Archaeological remains along or close to an all-weather temporary haul road from Green Bridge No.1 to Longbarrow North construction compound	
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):	TBC
Site area (approximate):	TBC
[IMAGE PENDING]	
Description	
Possible pits were identified by geophysical survey, suspected to be of Bronze Age date (UID 1008), although trial trenching (AmW 2019d, Trenches 663-672) did not identify extensive surviving remains.	

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.

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 (AmW 2019d, Trenches 678-690, approximate chainage 2400-2800).

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 (AmW 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.

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).

Trial trenching in this area has confirmed the presence of colluvial deposits within and on the sides of the coombe (also identified by electrical resistance tomography combined with geoarchaeological boreholes) (AmW 2019k).

Two shallow circular pits in the east of the Parsonage Down contained Beaker pottery (AmW 2019d, Trench 717, approximate chainage 3500) and Trench 985 produced an Early Bronze Age Food Vessel containing a cremation burial. 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 (AmW 2019d).

The Romano-British settlement on Winterbourne Stoke Down (NHLE 1015222 lies within an extensive rectilinear field system that is also of likely Roman date (UID 2038).

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 Propection 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.

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 Propection, 2001; Wessex Archaeology, 2018) 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, 2002, p. 9).

Two small possible prehistoric pits north of Winterbourne Stoke Hill (AmW 2019e, Trench 754, approximate chainage 4700m) lay about 100m north of a small, ploughed-down non-designated round barrow cemetery on Winterbourne Stoke Hill. Trial trenching confirmed the survival of five ring ditches.

A large oval/subrectangular shallow possible pit (possibly a Saxon sunken-featured building) was recorded in Trench 1322 (AmW 2019e, approximate chainage 4200m).

A linear ditch (Trenches 740, 1327, 1329) identified from geophysical survey (AmW 2019e, approximate chainage 4250m) is of likely later prehistoric/ Roman date. A further possible rectilinear enclosure (Trench 1338) is also undated (approximate chainage 4625m). North of the mainline, a slightly curving north-west to south-east aligned boundary ditch equating with a geophysical anomaly may be a further later prehistoric/Roman feature.

Trial trenching confirmed the survival of a series of lynchets visible in aerial photographs, which regularly

divide up the landscape on the east side of the River Till valley and north of the existing A303.

On the west side of the present A360 a complex, dense array of linear and curvilinear features has been detected by geophysical survey and from aerial photography. Excavation in 1967 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).

On the northern flanks of Oatlands Hill there is evidence of 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 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).

Scheme impact

The construction of an all-weather road between Green Bridge No.1 and the Main Civils Compound at Longbarrow North will impact a range of buried archaeological remains belonging to the later prehistoric, Roman, Saxon, Medieval and Post-medieval periods.

Mitigation

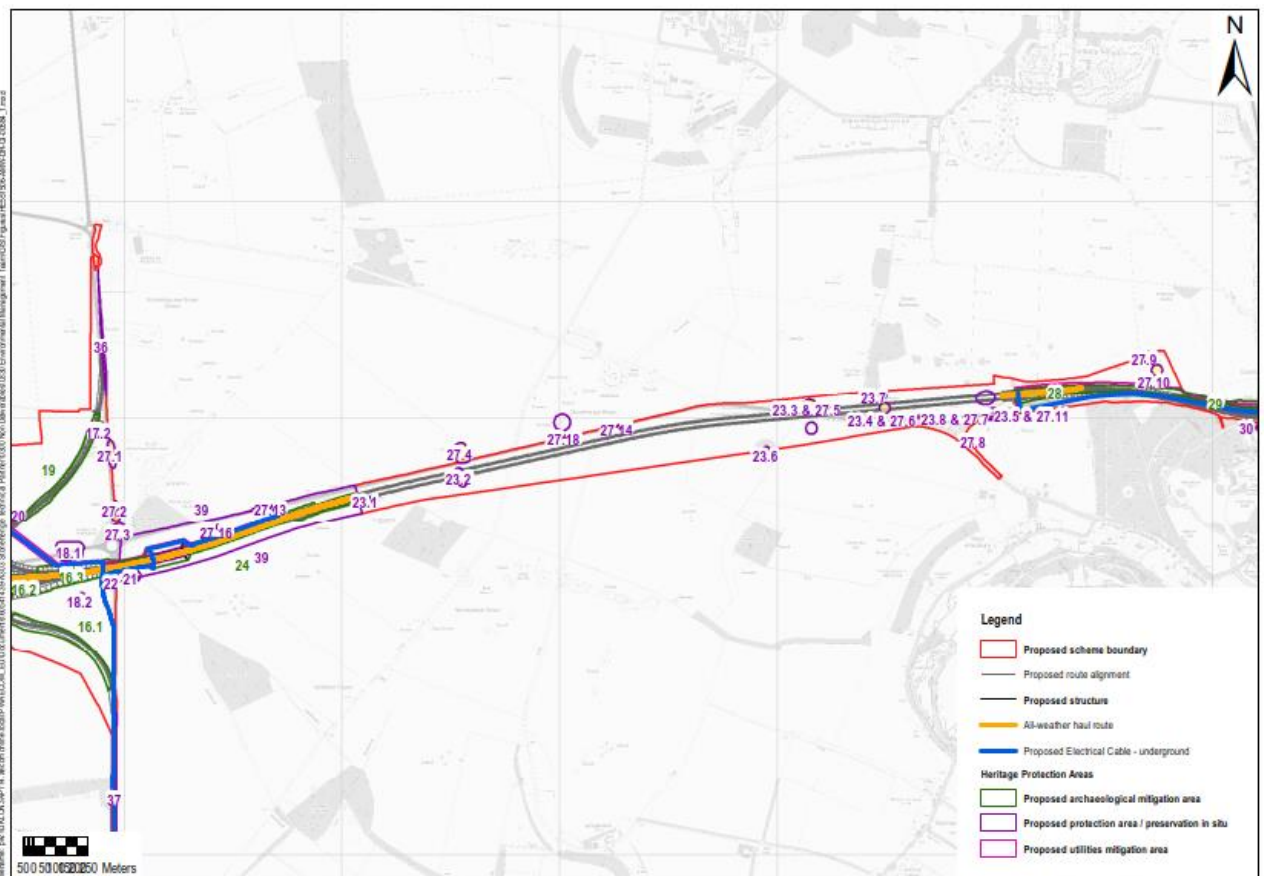
The transect for the temporary haul road is outside of the WHS. Preservation in situ will be the preferred method of archaeological mitigation rather than archaeological excavation and recording. Where feasible, the existing topsoil will be retained and covered with an appropriate membrane and imported fill material will be placed onto the membrane to ensure that archaeological remains are protected at construction.

Site 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”).

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 3014/ NHLE 1008947 (Site 27.5)</p> <p>UID 3018/ NHLE 1012420 (Site 27.6)</p> <p>UID 3020/ NHLE 1012129 (Site 27.7)</p> <p>UID 3021/ NHLE 1012130 (Site 27.8)</p> <p>UID 4009/ NHLE 1009142 (Site 27.9)</p> <p>UID 4010/ NHLE 1012128 (Site 27.10)</p> <p>UID 3010.02/ NHLE 1010140 (Site 27.11)</p> <p>UID 2005/ NHLE 1011843 (Site 27.12)</p> <p>Listed milestones</p> <p>UID 6031/ NHLE 1130999 (Site 27.13)</p> <p>UID 6040/ NHLE 1131085 (Site 27.14)</p> <p>UID 6042/ NHLE 1131071 (Site 27.15)</p> <p>Unscheduled</p> <p>UID 2177 (Site 27.16)</p> <p>Boundary marker AM1 (Site 27.17)</p> <p>Boundary marker AM12 (Site 27.18)</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 – 413146, 142054</p> <p>Site 27.6 – 413452, 142028</p> <p>Site 27.7 – 413670, 142015</p> <p>Site 27.8 – 413914, 141899</p> <p>Site 27.9 – 414698, 142286</p> <p>Site 27.10 – 414742, 142226</p> <p>Site 27.11 – from 413922, 142158 to 413973, 142042</p> <p>Site 27.12 – 409979, 141612</p> <p>Site 27.13 – 410680, 141594</p> <p>Site 27.14 – 412272, 141961</p> <p>Site 27.15 – 413862, 141901</p> <p>Site 27.16 – 410431, 141498</p> <p>Site 27.17 – 410603, 141590</p> <p>Site 27.18 – 412032, 141923</p>

Site area (approximate):

- Site 27.1: 0.385ha
- Site 27.2: 0.09ha
- Site 27.3: 0.46ha
- Site 27.4: 0.53ha
- Site 27.5: 0.42ha
- Site 27.6: 0.19ha
- Site 27.7: 0.14ha
- Site 27.8: 0.11ha
- Site 27.9: 0.19ha
- Site 27.10: 0.19ha
- Site 27.11: 0.10ha
- Site 27.12: 0.077ha
- Site 27.13: n/a
- Site 27.14: n/a
- Site 27.15: n/a
- Site 27.16: 0.03ha
- Site 27.17: n/a
- Site 27.18: n/a



Description

The following assets will require protection measures as they 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 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, 1980). 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 27.6: 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 27.7: 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).

Site 27.8: A levelled bowl barrow located 70m south of the A303, just west of the Avenue (UID 3021). The barrow is difficult to identify on the ground but is surrounded by an infilled ditch. The overall diameter of the barrow is calculated to be 26m. The bowl barrow was excavated in 1924 and has been mapped by both RCHME's Salisbury Plain Training Area NMP and English Heritage's Stonehenge WHS Mapping Project. Geophysical surveys carried out during the Stonehenge Hidden Landscapes Project detected a weakly defined ring ditch in this location. The barrow has also been detected by recent geophysical survey (Wessex Archaeology, 2017a). The monument extends beyond the Scheduled Monument boundary to encompass the area identified by the relevant HER entries and recent geophysical survey.

Site 27.9: 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 other is Site 27.10). 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 27.10: 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 27.11: 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, 2016), 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 27.12: 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 27.13: 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 27.14: 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 27.15: 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 27.16: 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 27.17: 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 27.18: 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 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 27.3 - 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, site traffic may access the land above the tunnel to install monitoring equipment or for other reasons.

Site 27.5 - 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 27.6 - The monument lies outside the main works area. 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 27.7 - 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 27.8 - The barrow lies close 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 27.9 - The barrow lies outside the main works area, however, site traffic may access the land during construction.

Site 27.10 - The barrow lies outside the main works area, however, site traffic may access the land during construction.

Site 27.11 - The monument lies outside the main works area, with the eastern portal bored tunnel face situated some 25m to the east. 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 27.12 – 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 27.13 – 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 27.14 - 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 27.15 – 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 27.16 - 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 27.17 – 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 27.18 – 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 scheduled monument will be photographed and protected during construction works by fencing within the DCO boundary. The protective fencing will incorporate a suitable buffer (up to 10m) around the extent of the site as mapped by the geophysical surveys. Following construction, the protective fencing will be removed once works to prepare the restricted byway surfacing are complete.

Site 27.2 – The scheduled monument will be photographed and protected during construction works by fencing within the DCO boundary. The protective fencing will incorporate a suitable buffer (up to 10m) around the extent of the site as mapped by the geophysical surveys. Following construction, the protective fencing will be removed once works to prepare the restricted byway surfacing are complete.

Site 27.3 - The scheduled monument will be photographed and protected during construction works by fencing within the DCO boundary. The protective fencing will incorporate a suitable buffer (up to 10m) around the extent of the site as mapped by the geophysical surveys. Following construction, the protective fencing will be removed once works to prepare the restricted byway surfacing are complete.

Site 27.4 - 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 27.5 - 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 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 27.8 - 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 27.9 - 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 27.10 - 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 27.11 - 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 27.12 - The scheduled monument will be photographed and protected during construction works by fencing within the DCO boundary. The protective fencing will incorporate a suitable buffer (up to 10m) around the extent of the site as mapped by the geophysical surveys. Following construction, the protective fencing will be removed once works to prepare the restricted byway surfacing are complete.

Site 27.13 - 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 27.14 - 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 27.15 - 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 27.16 - 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 27.17 - 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 27.18 - 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 31: 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 area (approximate):	Site 31.1: 0.049ha Site 31.2: 0.23ha Site 31.3: 0.455ha Site 31.4: 0.49ha Site 31.5: 0.046ha Site 31.6: 0.074ha Site 31.7: 0.19ha

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 in 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, 2018c). 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).

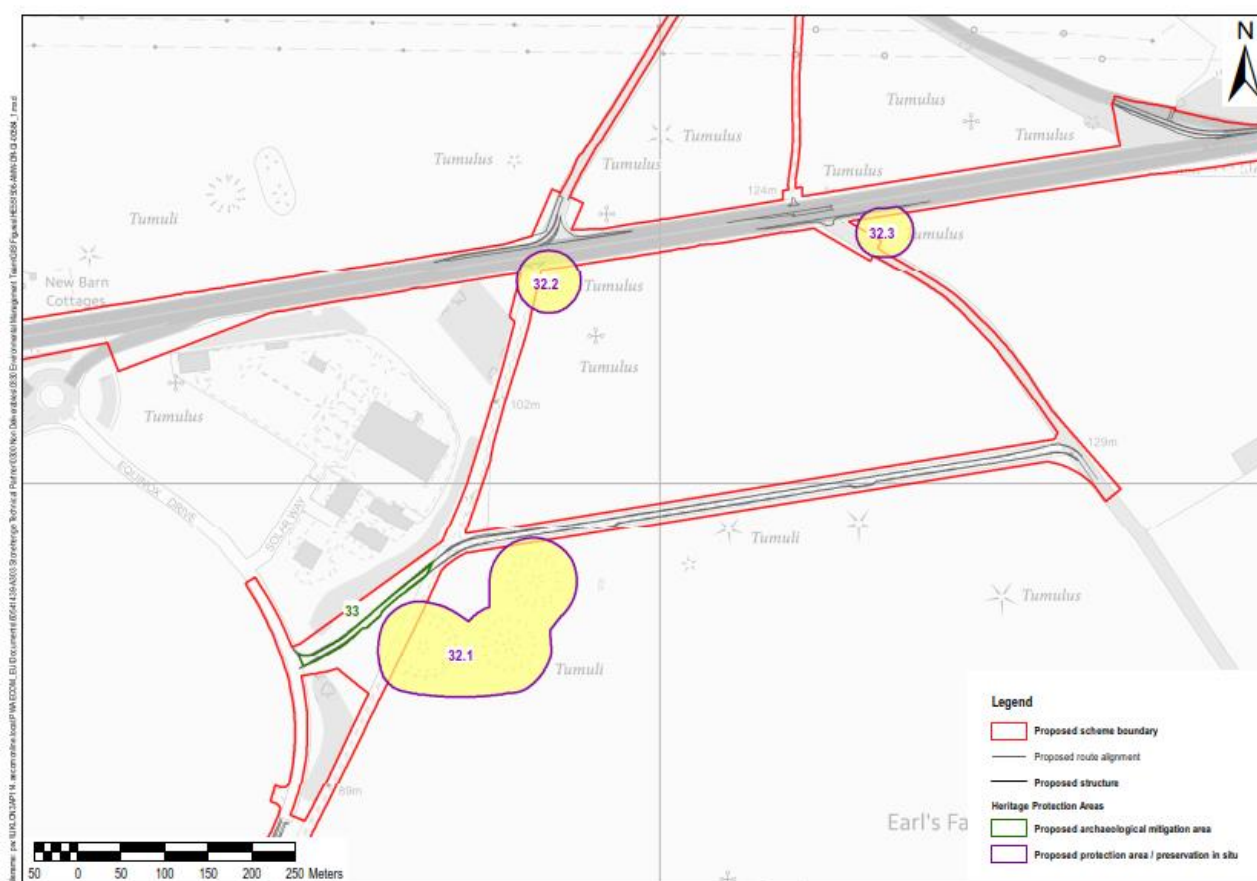
Scheme impact

This area is required for a construction compound and working area. The construction compound is to be formed above the existing ground level using imported stone.

Mitigation

At each of the seven sites identified within the compound area the topsoil will be retained and 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 the end of construction the fencing and fill material will be removed and the site returned to agricultural use.

Site 32: 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 and Allington Track and the A303 will be stopped up.

Mitigation

All three sites 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 scheduled area as mapped by Historic England. Following construction, the protective fencing will be removed and the land returned to agriculture

Site 34: Listed milestone at Rolleston Corner.	
Designation:	Listed (Grade II)
Reference IDs:	UID 6122/ NHLE 1284782
Location (NGR):	409694, 144482
Site area (approximate):	n/a
Description	
<p>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’.</p>	
Scheme impact	
<p>The milestone will require protection from construction during highway improvements along the B3086.</p>	
Mitigation	
<p>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.</p>	

Site 36: Area of archaeological interest north from A360 North Link Road to Druids Lodge.

Designation:	Non-designated
Reference IDs:	n/a
Location (NGR):	409913, 142105 to 409872, 142677 (approx.)
Site area (approximate):	0.37ha



Description

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.


Scheme impact

North of Countess Roundabout and within the WHS there will be a NMU route along the eastern side of the A360 as far as roundabout for the visitor centre which 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 amounts of imported fill material, separated by an appropriate barrier membrane to ensure that any buried archaeological remains are protected at construction. Protective fencing will be installed alongside the NMU route to ensure that

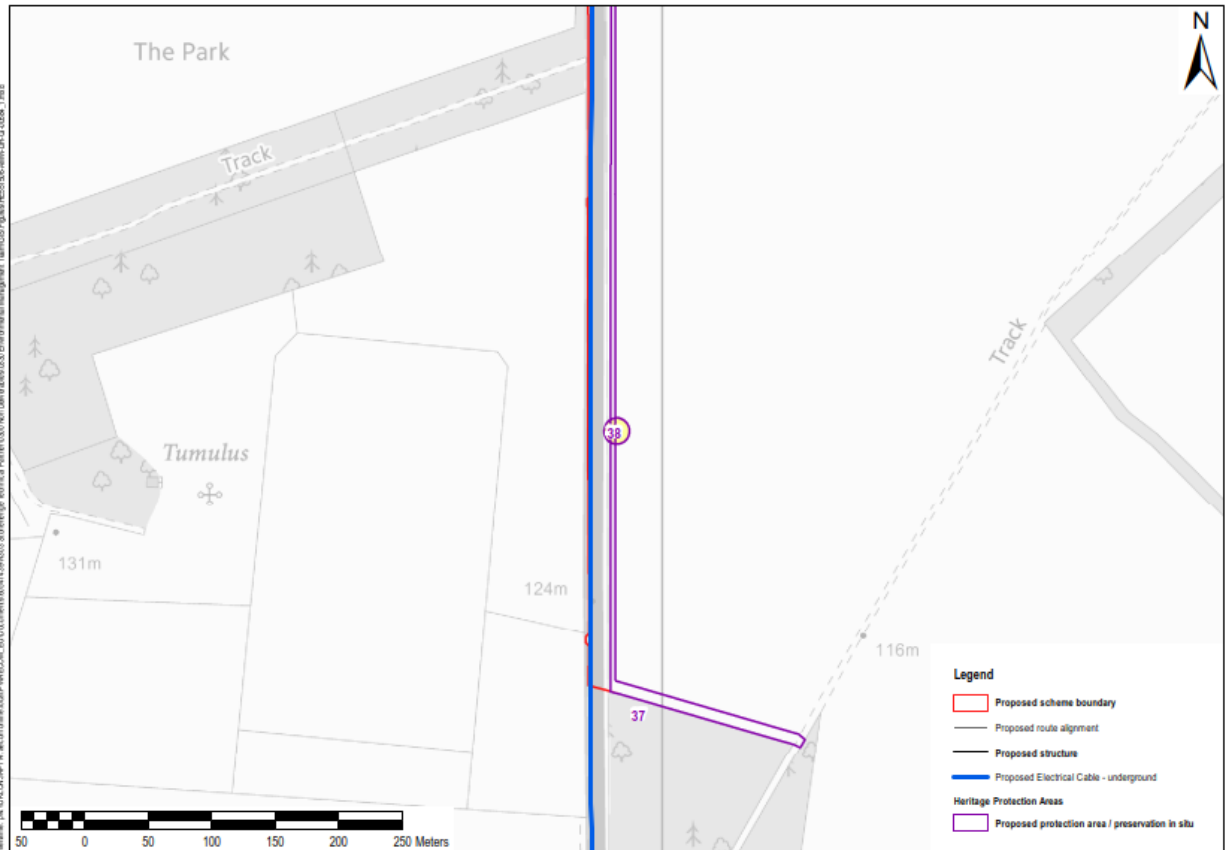
construction traffic does not stray outside of the NMU route and to prevent damage to the WHS. The fencing will be long-term, demarcating land to the east of the NMU route from users and remain post-construction.

Site 37: Area of archaeological interest south from A360 North 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	
<p>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.</p>	
Scheme impact	
<p>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.</p>	
Mitigation	

The NMU route will be constructed on the existing topsoil and shallow imported fill material, separated by an appropriate barrier membrane 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:	1318705
Location (NGR):	409952, 139634
Site area (approximate):	n/a



Description

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’.

Scheme impact

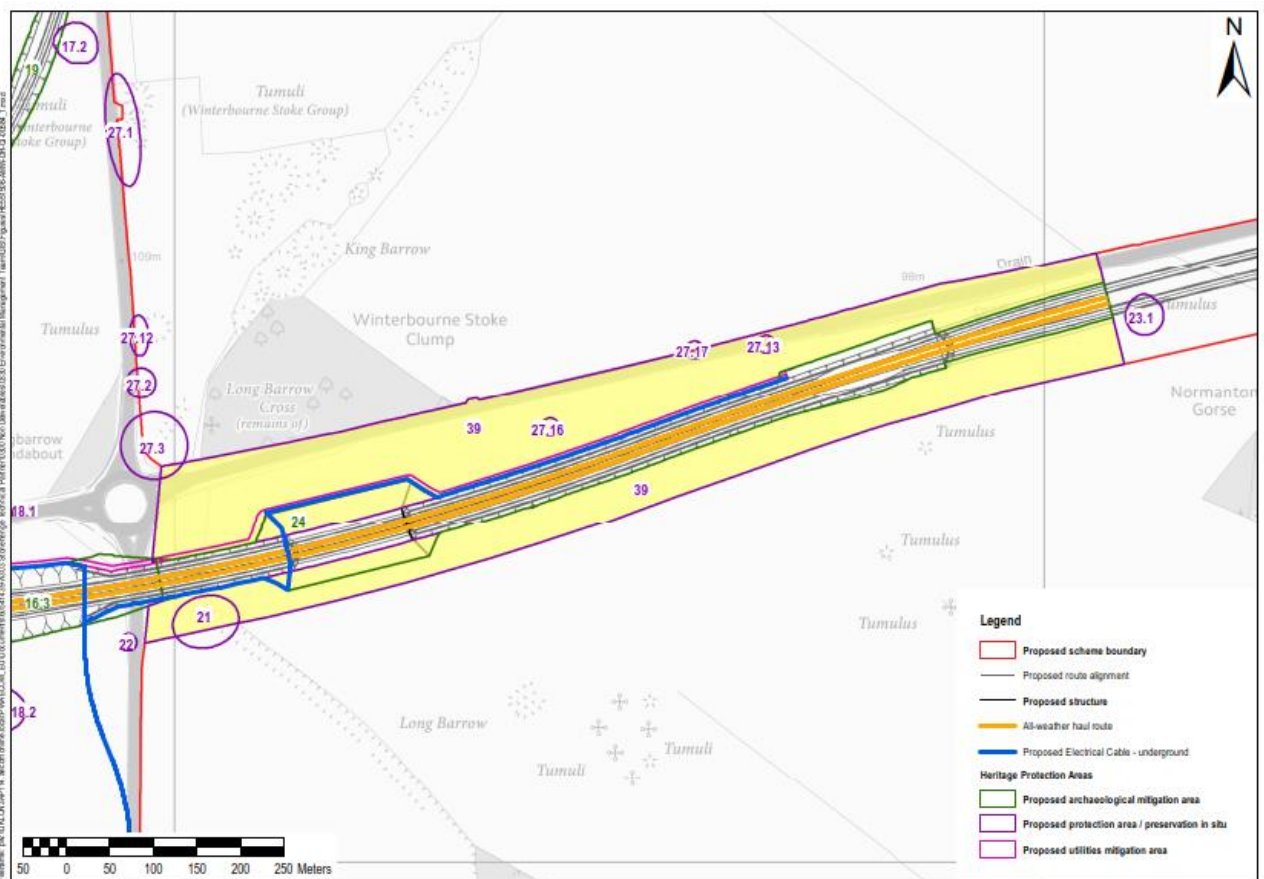
South of Longbarrow Roundabout and within the WHS construction of the NMU route along the eastern side of the A360 could impact a historic milestone (listed building) that is located alongside the existing road.

Mitigation

The listed milestone will be photographed and protected during construction works by fencing. Following construction of the NMU route, the protective fencing will be removed, leaving the milestone in situ.

Site 39: A360 to Western Portal, land within DCO boundary excluding Site 24.

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):	13.53ha



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.

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 and therefore the 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 27.13, Site 27.16 and Site 27.17). Elsewhere at Site 39, the topsoil will be retained and will be covered with an appropriate membrane, 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.

Appendix E Action Areas: Proposed archaeological fieldwork areas

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: 6.75ha



Description

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

Site 2 comprises the construction of a new Private Means of Access (PMA) on the south side of the new A303 (Site 2.1) and a new restricted byway on the north side of the new A303 (Site 2.2). Both the PMA and the restricted byway are proposed to be constructed above existing levels, subject to detailed design. However, if a no-dig construction solution is not feasible then surviving archaeological remains may be impacted.


Mitigation

Preservation in situ will be the preferred method of archaeological mitigation 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). However, strip, map and record (SMR) will be required if a no-dig construction solution is not feasible.

Relevant research objectives

If required, SMR of surviving elements of these field systems may provide insights into how the landscape has evolved over the millennia, in response to changing economic, cultural and social factors. The following SAARF research themes and period-specific research questions may be relevant, depending on the surviving remains:

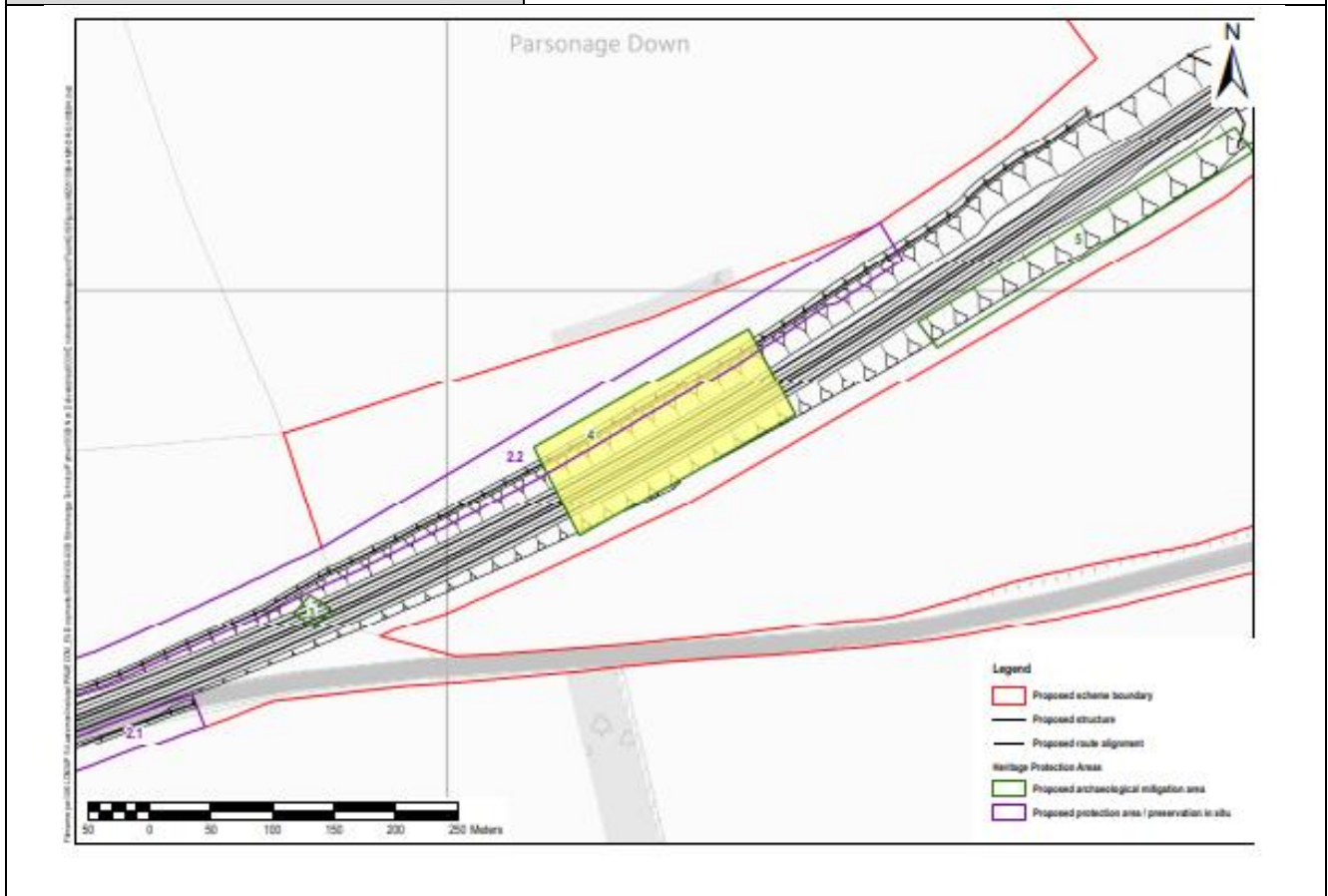
- D. Human generations
- E. Landscape history and memory
- F. Daily Life
- K.4. What is the significance of the later Bronze Age field boundaries being either deliberately sighted on pre-existing barrows, or actively avoiding them?
- K.5. What is the chronology of various elements of the field systems? When did they originate? Over what time-scale were they laid out?
- K.6. How are the settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?

Site 3: Possible ring ditch on mainline, west of Scotland Lodge.	
Designation:	Non-designated
Reference IDs:	UID 2025/ MWI74873
Location (NGR):	405864, 140719
Site area (approximate):	0.04ha
	
Description	
<p>Site 3 comprises a possible ring ditch (ploughed-out barrow) identified from aerial photographs and geophysical survey (GSB Propection 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.</p> <p>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.</p> <p>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).</p>	

Scheme impact
Site 3 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.
Mitigation
Archaeological excavation and recording (AER) of an area 20m x 20m at Site 3 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.
Relevant research objectives
<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 SAARF research themes and period-specific research questions may be relevant, depending on the surviving remains:</p> <ul style="list-style-type: none"> • C. Burials and barrows • E. Landscape history and memory • F. Daily Life • 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? • K.5. What is the chronology of the various elements of the field systems? When did they originate? Over what time-scale were they laid out?

Site 4: Enclosures, field systems and isolated burials (Iron Age) north-west and north of Scotland Lodge. Iron Age settlement on the Scheme mainline.

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

UID 1004.01: Extensive field systems east of Yarnbury Camp north and south of the existing A303 are known largely from aerial photographs. 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 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.

UID 2027: 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 2029: Two possible rectilinear enclosures of unknown date were mapped from aerial photographs and confirmed by geophysical survey (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.

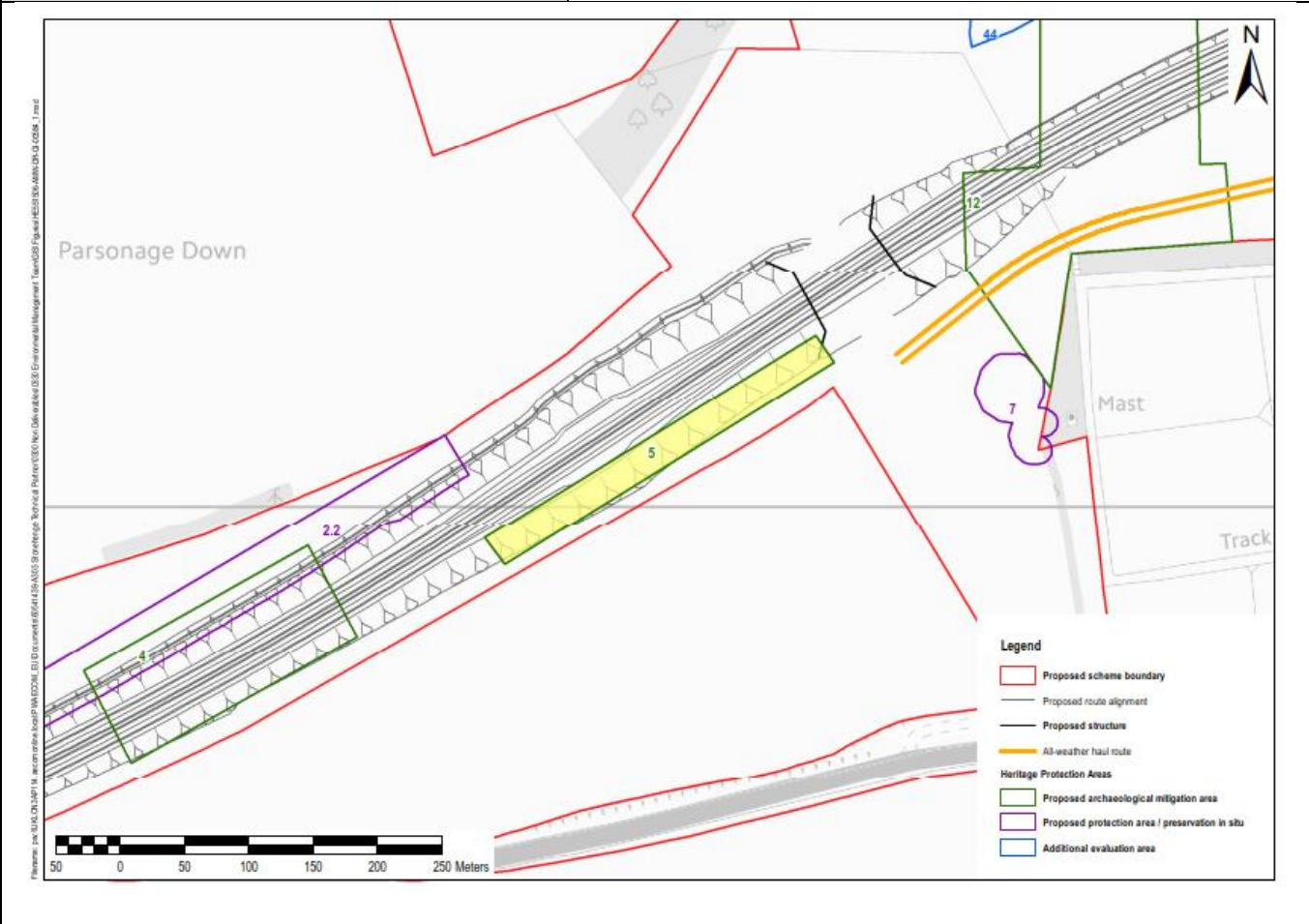
Relevant research objectives

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

- C. Burials and barrows
- E. Landscape history and memory

- F. Daily life
- 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?
- 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?
- K.6. How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- I.6. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- 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 5: Northern edge of Iron Age settlement at Scotland Lodge impacted by Scheme mainline.	
Designation:	Non-designated
Reference IDs:	UID 1004.01/ MWI6943 UID 2033/ MWI6959
Location (NGR):	406503, 141017
Site area (approximate):	0.77ha



Description

Background

UID 1004.01: An extensive series of ‘Celtic field systems’ to the east of Yarnbury Camp, known largely from aerial photographs. 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

UID 2033: 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. 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, 2002b; Wessex Archaeology, 2002a). 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 offset from the southern red line 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.

Relevant research objectives

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.

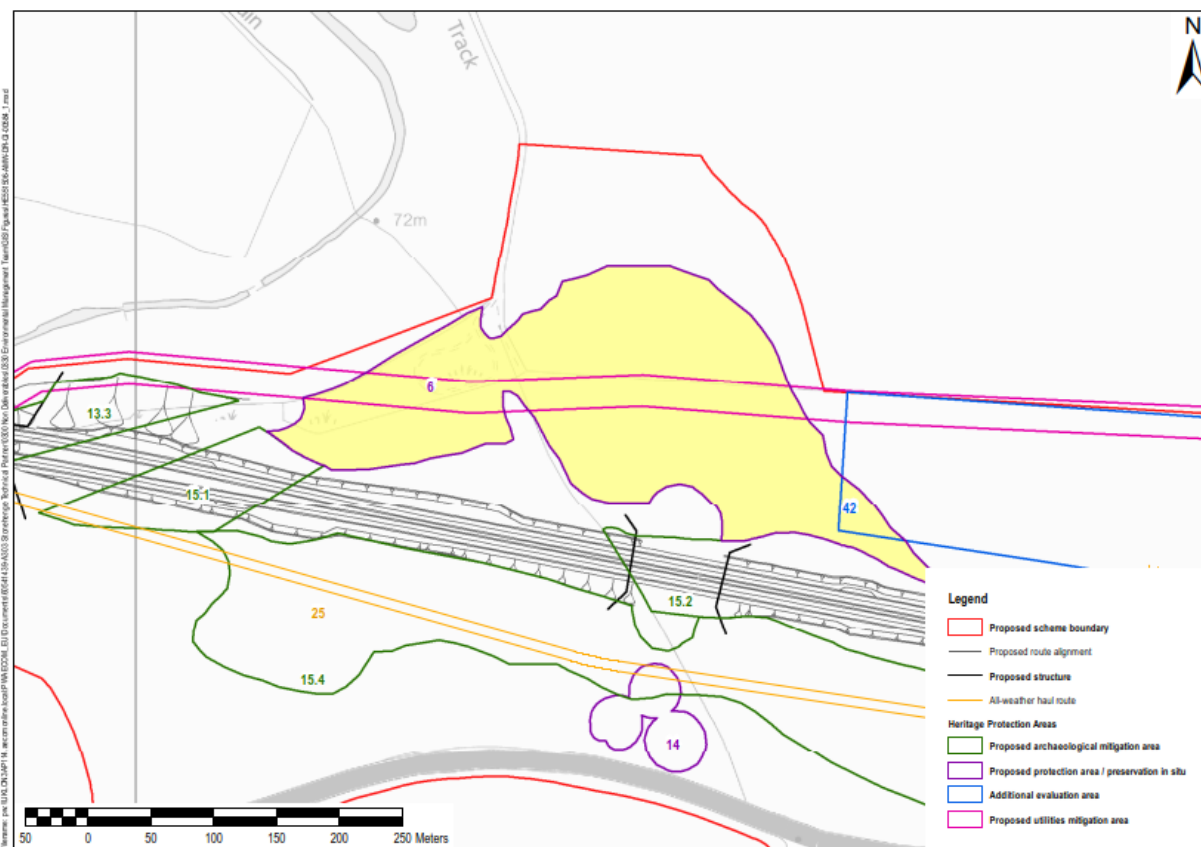
The following SAARF research themes and period-specific research questions may be relevant, depending on the surviving remains:

- E. Landscape History and Memory
- F. Daily Life
- 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?
- I. 5. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.

- 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?
- 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 6: Pit digging activity of possible Late Neolithic date, field systems and enclosures, lynchets, and colluvium within a dry valley.

Designation:	Non-designated
Reference IDs:	UID 2053
Location (NGR):	408401, 141530
Site area (approximate):	TBC


Description

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; AmW, 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 NW6; and AmW 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, 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.

Scheme impact

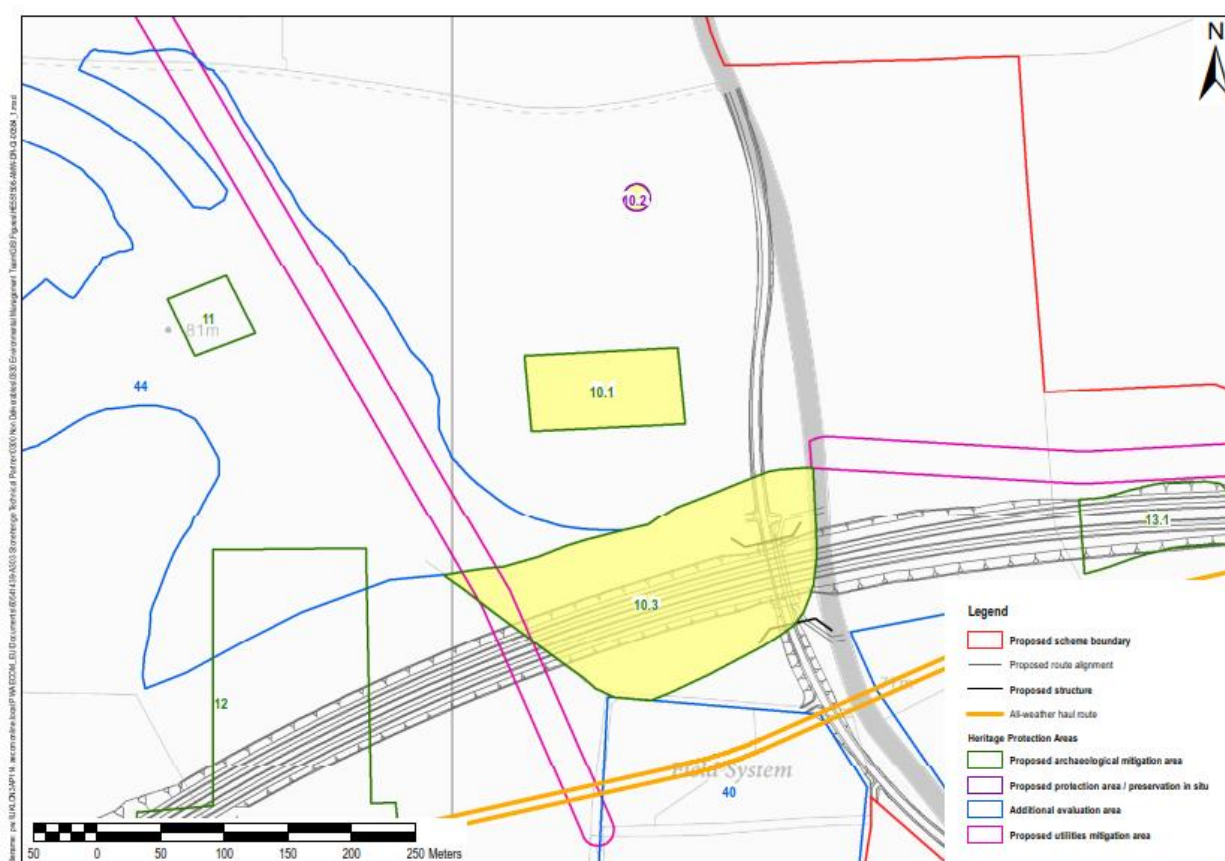
Landscape fill will be placed in the area of Site 6. The water connection route (Site 47). to the Main Civils Compound also passes through Site 6. Archaeological remains in this area will either be rendered inaccessible due to the depth of the fill (where >2m deep) or may be exposed or damaged if topsoil is stripped prior to deposition of fill material.

Mitigation

Preservation in situ will be the preferred method of archaeological mitigation rather than archaeological excavation and recording. Where this is not feasible, strip, map and record (SMR) will be the preferred method of mitigation for Site 6.

Site 10.1 and 10.3: Dispersed unenclosed settlement of possible Bronze Age date (Parsonage Down excavated material deposition area).

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


Description

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

Background

UID 1004.01: An extensive series of 'Celtic field systems' extend across Parsonage Down east of Yarnbury Camp, known largely from aerial photographs. 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.

UID 2036: An oval enclosure of unknown date identified by geophysical survey.

UID 2038: Possible pits of an unknown date 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 10.3: 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.

Scheme impact

Site 10.1 lies north of the new A303 main line in an area proposed for deposition of excavated material. The deposited material is likely to be less than 2m deep in this area and preservation in situ with existing topsoil retained may therefore be feasible. However, the sensitivity of the remains associated with the possible ring ditch or enclosure suggests that preservation in situ is not an appropriate form of mitigation here.

Site 10.3 is within an area that includes a deep cutting for the Scheme mainline and an adjacent embankment and the re-aligned B3083. Archaeological excavation and recording (AER) is required to mitigate the impact of the Scheme that contains evidence of Beaker pit digging activity and a possible Bronze Age barrow or solution hole that contains archaeological remains.

Mitigation

Preservation in situ will be the preferred method of archaeological mitigation for Site 10.1. However, detailed excavation will be required if a no-dig solution is not feasible, to identify and record remains dating to the penannular enclosure or ring ditch and the possible lynchet.

Mitigation at Site 10.3 will comprise an area of archaeological excavation and recording (AER) to investigate and record remains discovered at evaluation.

Relevant research objectives

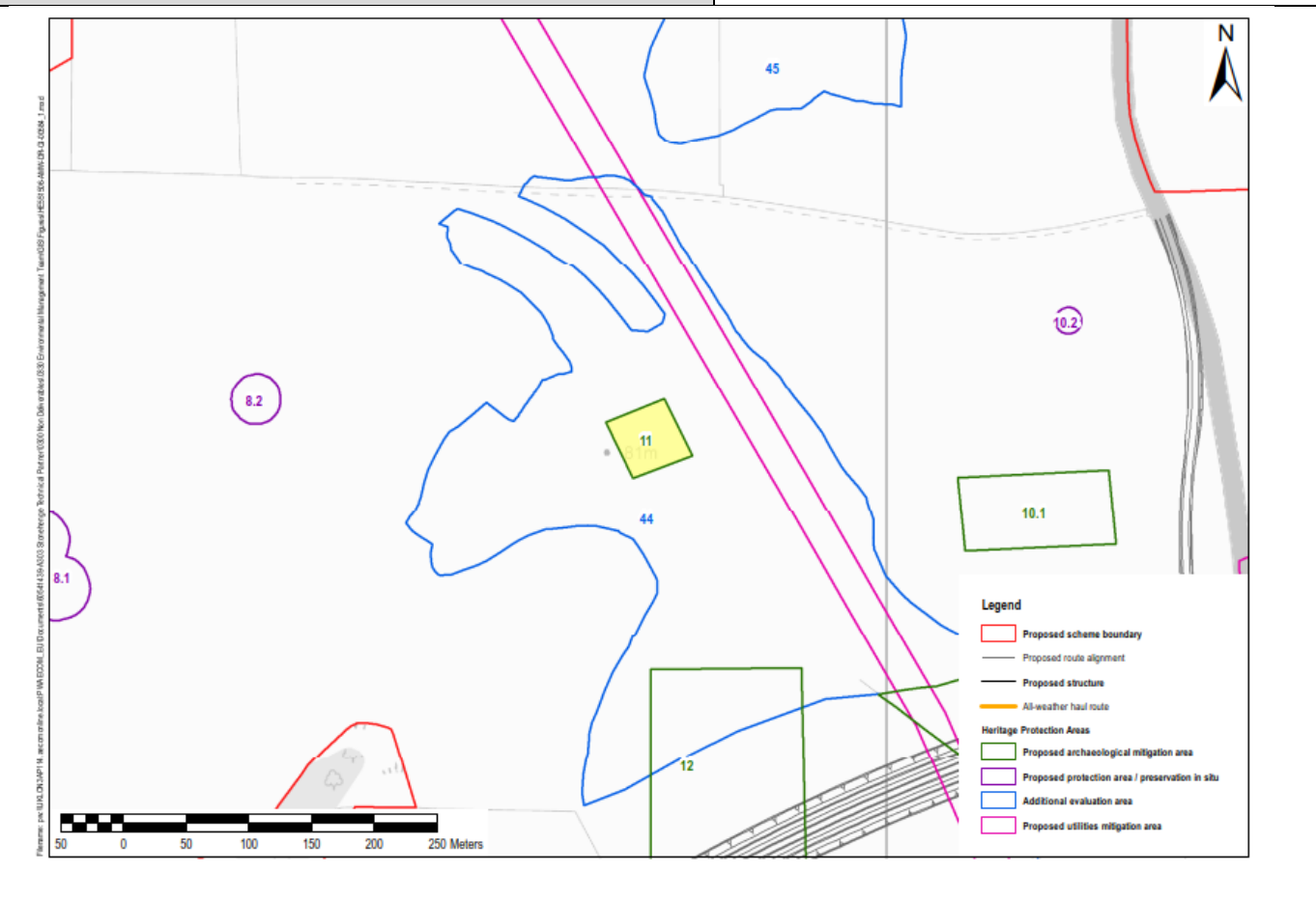
The undated penannular ring ditch or enclosure and the features associated with it, along with a series of undated lynchets and possible pits, illustrate prehistoric settlement activity in the wider landscape west of the WHS. The following SAARF research themes and period-specific research questions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

- C. Burials and barrows

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

Site 11: Linear boundary, extensive field systems, enclosures and possible trackways of possible Iron Age/ Romano-British date (Parsonage Down excavated material deposition area).

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

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

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

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. This will impact archaeological deposits in this area and the depth of fill will likely preclude future archaeological investigation. 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

Archaeological excavation and recording (AER) of Site 11 is proposed in order to identify any additional burials, in what may be a significant location within the dry valleys. This will include appropriate geo-archaeological assessment of the colluvial sequence in this location.

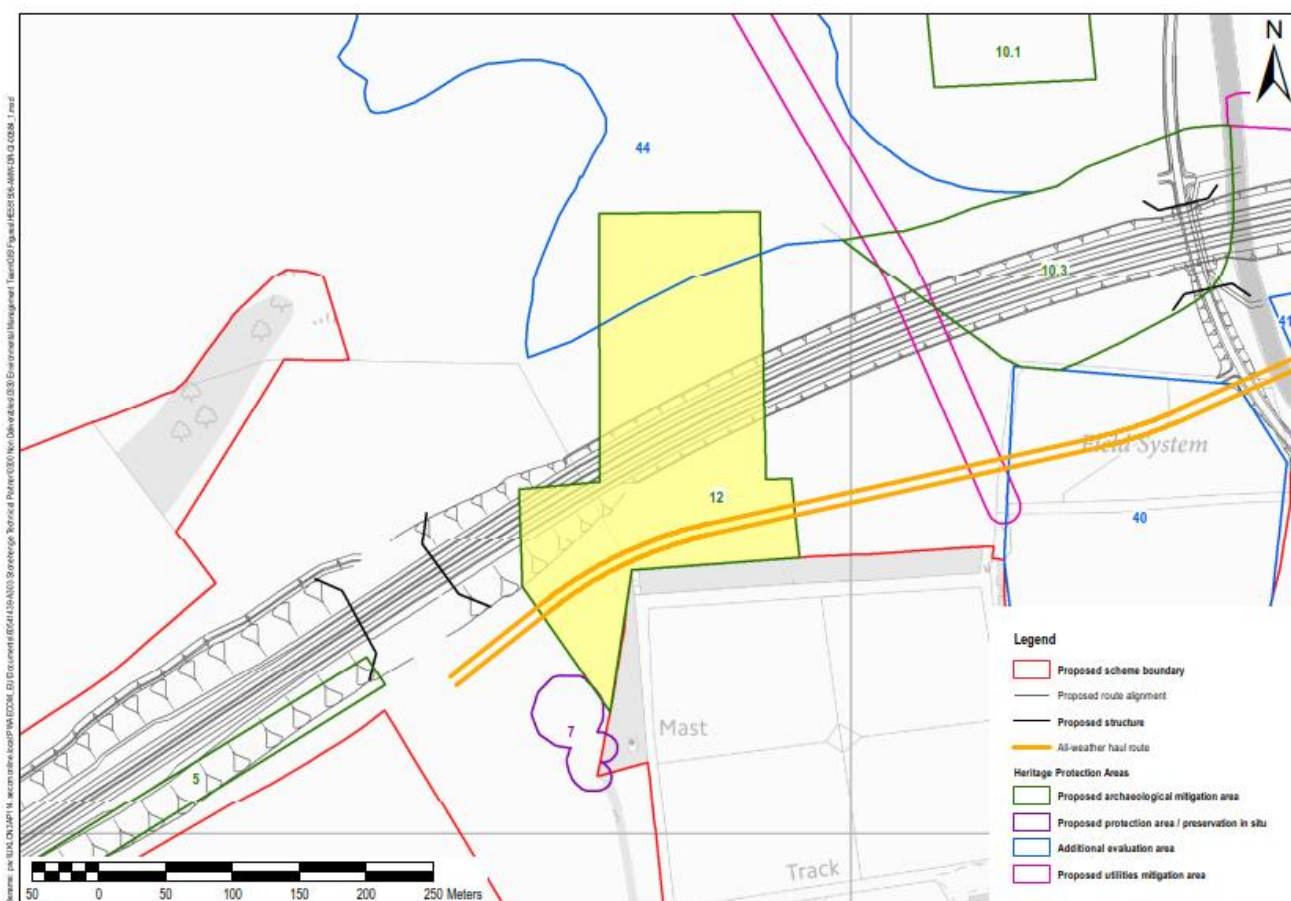
Relevant research objectives

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

- C. Burials and barrows
- D. Human generations
- E. Landscape history and memory
- J. 6. There is scope for further dating cremation burials now that cremated bone is directly datable (and from very small samples).
- 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?
- 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?
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Site 12: Possible area of undated lynchets and field systems at Parsonage Down; Area of 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):	4.23ha


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

Strip, map and record (SMR) 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.

Relevant research objectives

SMR 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

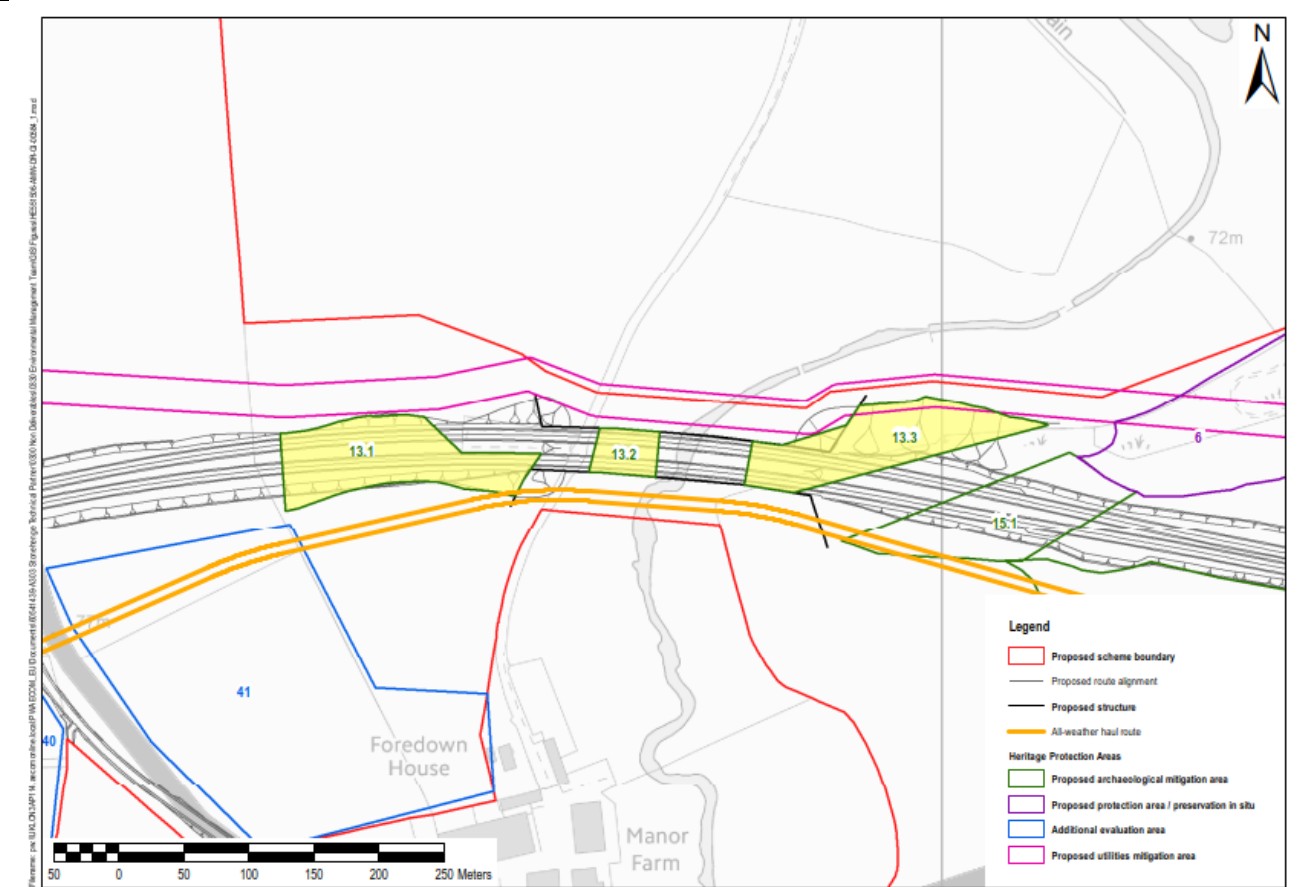
ceramics and flintwork, as well as Roman ceramics, can illustrate past lifeways. The situation and proximity of the possible enclosure to the Iron Age – Romano-British settlement site to the west (Site 5) and the Neolithic/ Early Bronze Age ring ditches to the south (Site 7) is also of interest.

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

- E. Landscape history and memory
- F. Daily Life
- J. 4. What was the nature of the local environment, contemporary land-uses and other activity in the landscape?
- 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?
- 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?
- K.6. How are settlements, whether open or enclosed, distributed in relation to field systems, and what was their chronological relationship?
- 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?
- 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?

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

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: 0.17ha Site 13.3: 0.80ha



Description

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]).

Site 13.2 and 13.3

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

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

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, 2002, 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, 2002, 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, 2002, 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.

Geoarchaeological 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 13.2).

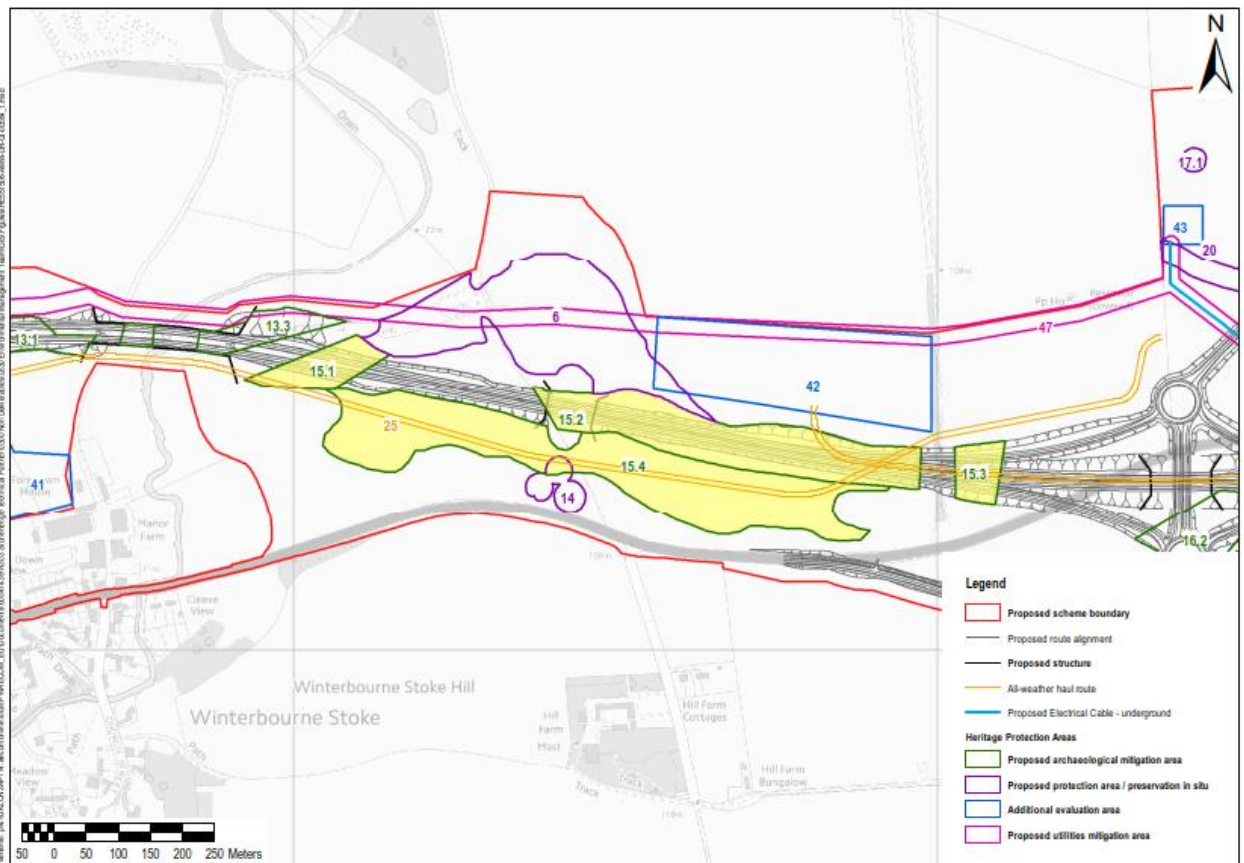
Relevant research objectives

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

- C. Burials and barrows
- E. Landscape history and memory
- F. Daily life
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- L. 1. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- 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?
- 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?

Sites 15.1, 15.2, 15.3 and 15.4: 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:	UID 2048/ MWI7009, MWI73341, MWI73343 (land boundary) UID 2052/ MWI74877 (ridge and furrow) UID 2053/ MWI7009, MWI7111 (field system) UID 2056/ MWI73338 (field system) UID 2068/ MWI6407, MWI12690 (land boundary)
Location (NGR):	Site 15.1: 408055, 141441 Site 15.2: 408727, 141306 Site 15.3: 409060, 141273 Site 15.4: TBC
Site area (approximate):	Site 15.1: 0.92ha Site 15.2: 3.99ha Site 15.3: 0.63ha Site 15.4: TBC



Description
<p>UID 2048: An extensive north-west to south-east aligned ditch that crosses Site 15.1 which is thought to be a probable later Prehistoric land division. 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.</p>
<p>UID 2052: 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 (GSB Prospection Ltd 2001a).</p> <p>UID 2053: An extensive complex of linear features identified from aerial photographs and geophysical surveys that crosses Sites 15.1 and 15.2 (GSB Prospection Ltd, 1999; GSB Prospection 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, 2017d) 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.</p> <p>UID 2056: Several possible incomplete conjoined rectilinear enclosures and a number of other ditches mapped to the west of Site 15.2 from aerial photographs as part of English Heritage's Stonehenge World Heritage Site Mapping Project. The enclosures may represent part of a later Prehistoric settlement, and it is possible that they may cross into the site.</p> <p>UID 2068: 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. 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. 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).</p>
<p><u>Site 15.1</u></p> <p>Ditched boundaries of uncertain date</p> <p>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.</p>

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 (AmW, 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.

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 >2m 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.

Mitigation

A combination of geo-archaeological assessment followed by strip, map and record (SMR) is required at Site 15. Geo-archaeological assessment will target soil and colluvial deposits within the dry valley that crosses Sites 15.2, 15.3 and 15.4. 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.

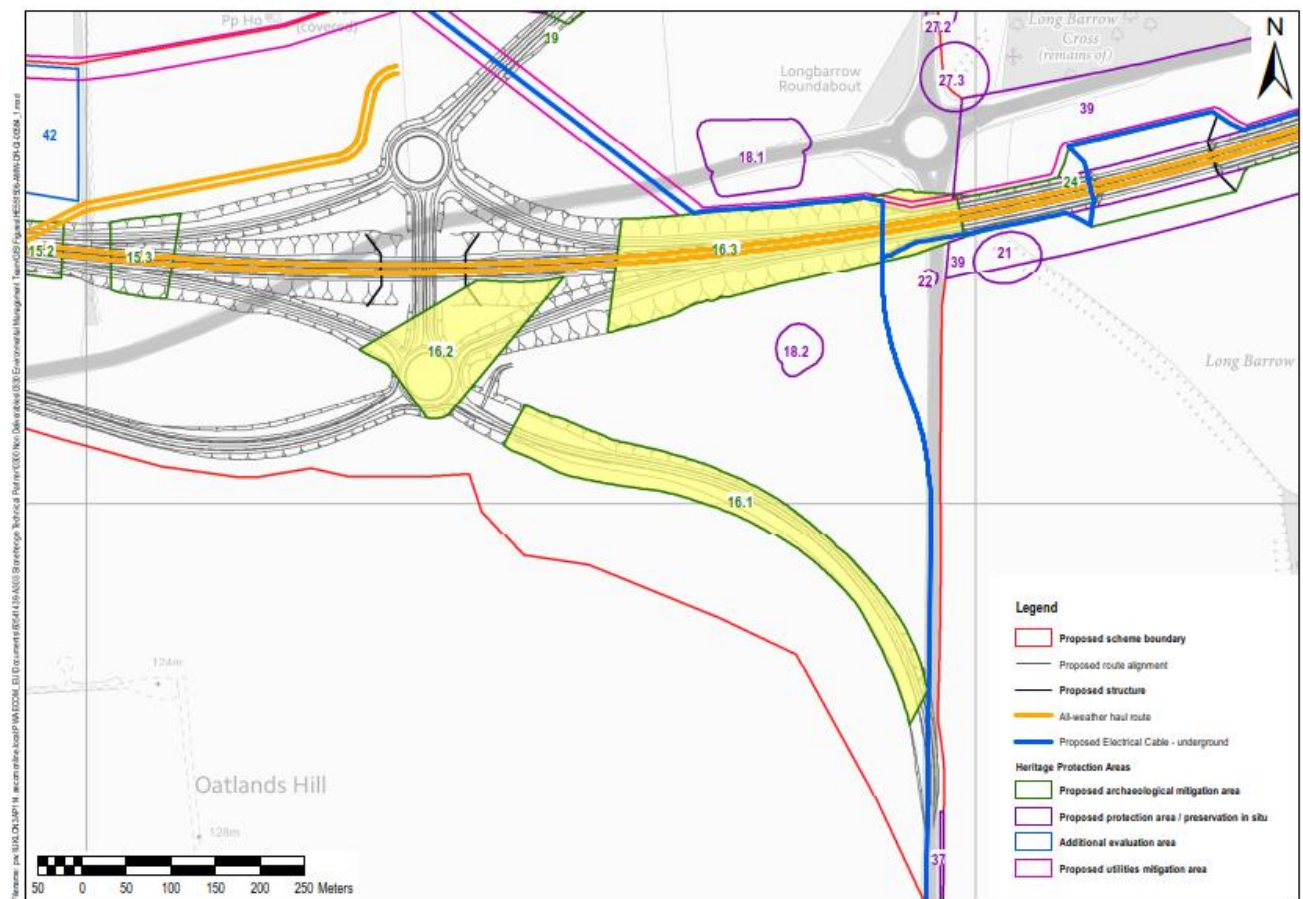
Relevant research objectives

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 SAARF research themes and period-specific questions may be relevant;

- E. Landscape history and memory
- F. Daily life
- 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?
- 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?
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- L. 1. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- M. 5. Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- 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?

Sites 16.1, 16.2 and 16.3: Longbarrow Junction (south), mainline to the A360 and the realigned A360 south - C-shaped enclosure at Longbarrow Junction (southern dumbbell), scattered pits, Wessex linear and two sides of a possible enclosure.

Designation:	Non-designated
Reference IDs:	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)
Location (NGR):	Site 16.1: 409765, 140984 Site 16.2: 409422, 141189 Site 16.3: 409760, 141287
Site area (approximate):	Site 16.1: 2.33ha Site 16.2: 1.62ha Site 16.3: 3.46ha



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.

Baseline

UID 2068: 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. 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).

UID 2072: 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. 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).

UID 2073: 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. 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

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.

A short section of the SSEN Southern Power Cable (Site 48) passes through the eastern end of the site.

Mitigation

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).

A short section of the SSEN Southern Power Cable (Site 48) at eastern end of the site will be investigated as part of Site 16.1 (area for archaeological excavation and recording (AER)).

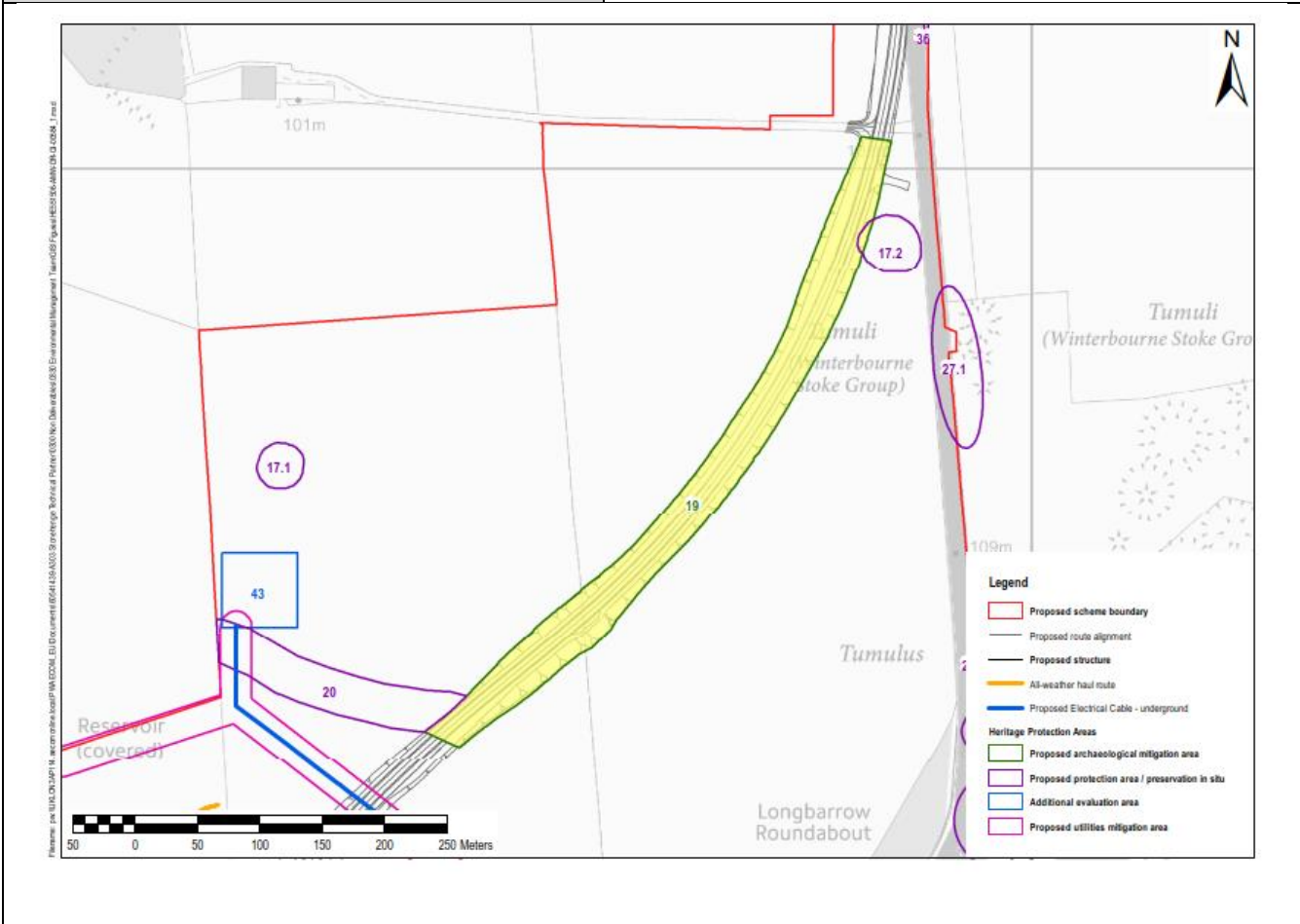
Relevant research objectives

The study of field systems, enclosures, and land divisions, as well as burial sites, offers insights into past landscape use and development.

- D. Human generations
- E. Landscape history and memory
- F. Daily life
- 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?

- 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?
- 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?
- L. 1. Establishing the types of Iron Age sites present in and close to the WHS, and their dates.
- M. 5. Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- 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 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):	1.98ha



Description

Site 19 comprises the realigned A360 northern link to the new Longbarrow Junction.

Baseline

UID 2014.02: Part of a non-designated linear boundary visible as a cropmark on aerial photographs that crosses the south end of Site 19. 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).

UID 2073: 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). It 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. 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).

UID 2076: 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. the anomalies cover a large area south-east of Site 19, with elements extending into the site. 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).

UID 2078: Possible rectangular enclosure and associated linear features identified by aerial photographs and geophysical survey that are present within the middle of Site 19 and at the north end (GSB 1999) 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, 2014b. 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 83 flakes and the tip of a bifacially-thinned implement (flint dagger or possibly a sickle); and Trench 438 76 flakes, one retouched. To the north Trench 443 produced 31 flakes and an unfinished transverse arrowhead.

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

Additional ploughzone artefact sampling (fieldwalking) combined with additional trial trench evaluation 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 (an Early Bronze Age burial in Trench 441 was not recognised in geophysical survey).

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.

Relevant research objectives

The study of settlement, field systems and land divisions can offer insights into past landscape use and development. The following SAARF research themes and period-specific questions may be relevant:

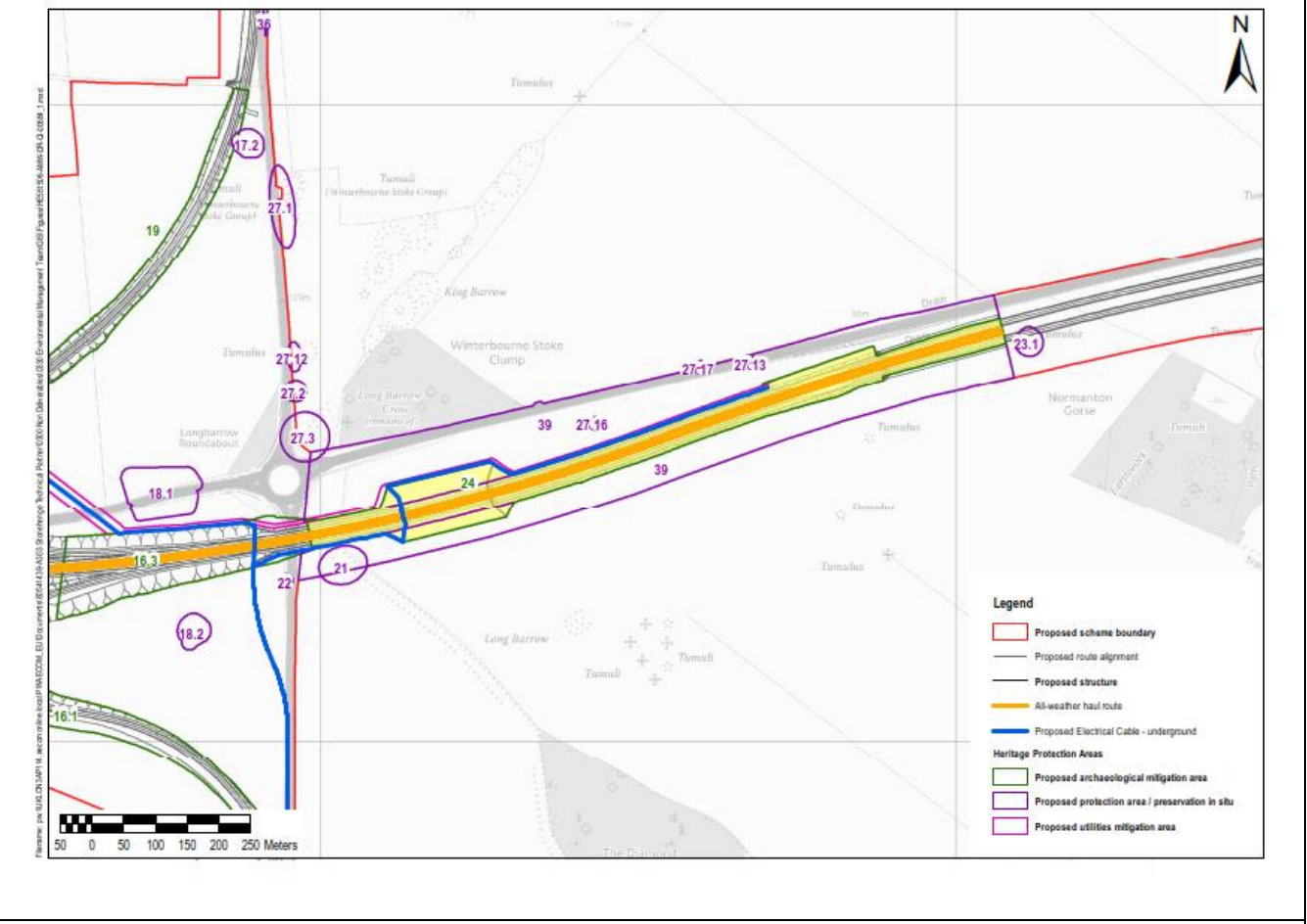
- C. Burials and barrows
- E. Landscape history and memory
- F. Daily life
- C. 2. While flint scatters offer our best evidence for where people were living and engaging in various productive activities during the period, their value has not been fully realised. Using scatter

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?

- C. 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?
- 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?
- 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?
- M. 5. Is there any relationship between the earlier monuments and the locations of Romano-British settlements and land use, including burials and cemeteries?

Site 24: Main line A360 to Western Portal – flint scatters, occasional scattered pits and post holes, 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):	4.90ha



Description

Site 24 comprises the western portal approach cutting.

Baseline

UID 2001: An enclosure situated to the south-west of the Winterbourne Stoke Crossroads barrow cemetery and an associated Bronze Age settlement approximately 50m north of the west end of Site 24. 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.

UID 2014: 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. 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).

UID 2018: The plough-levelled bowl barrow NHLE 1010832 (Wilsford G1 lies approximately 15m east of the eastern limit of Site 24. The monument will be unaffected by the Scheme and will be protected in situ (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).

UID 2088: Approximately 45m north of Site 24 two Middle Bronze Age pits were identified during a trial trench evaluation in 2001 (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.

UID 2089: 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. 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.

UID 2098: 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. 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.

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

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 southern boundary of Site 24 west of Green Bridge No. 4 will respect the scheduled area of boundary earthwork UID 2014 (NHLE 1010837).

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)).

Relevant research objectives

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 SAARF research themes and period-specific questions may be relevant:

- C. Burials and barrows
- D. Human generations
- E. Landscape history and memory
- F. Daily life
- 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?
- C. 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?
- C. 22. What potential exists to better understand diet, health and mortality among later Neolithic/ Early Bronze Age populations within the WHS?
- 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?
- 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?
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- 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 26: 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
[IMAGE PENDING]	
Description	
<p>Site 26a 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 5 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, 23.3/27.5, 23.4/27.6 and 23.5/27.11. 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) (chainage 9000m).</p> <p><u>Chainage 9000m to 9900m</u></p>	

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 for 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, 2011; 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/ 27.5). 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/ 27.6), 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, however, the impacts cannot be determined at this stage since the location, number and size of the holes are not known.

Mitigation

Archaeological excavation and recording (AER) (test pit mitigation) is proposed at each of the monitoring locations. The size of the test pits and the depth of each intervention will be determined by the amount of ground disturbance required for the installation, monitoring and removal of the equipment.

Relevant research objectives

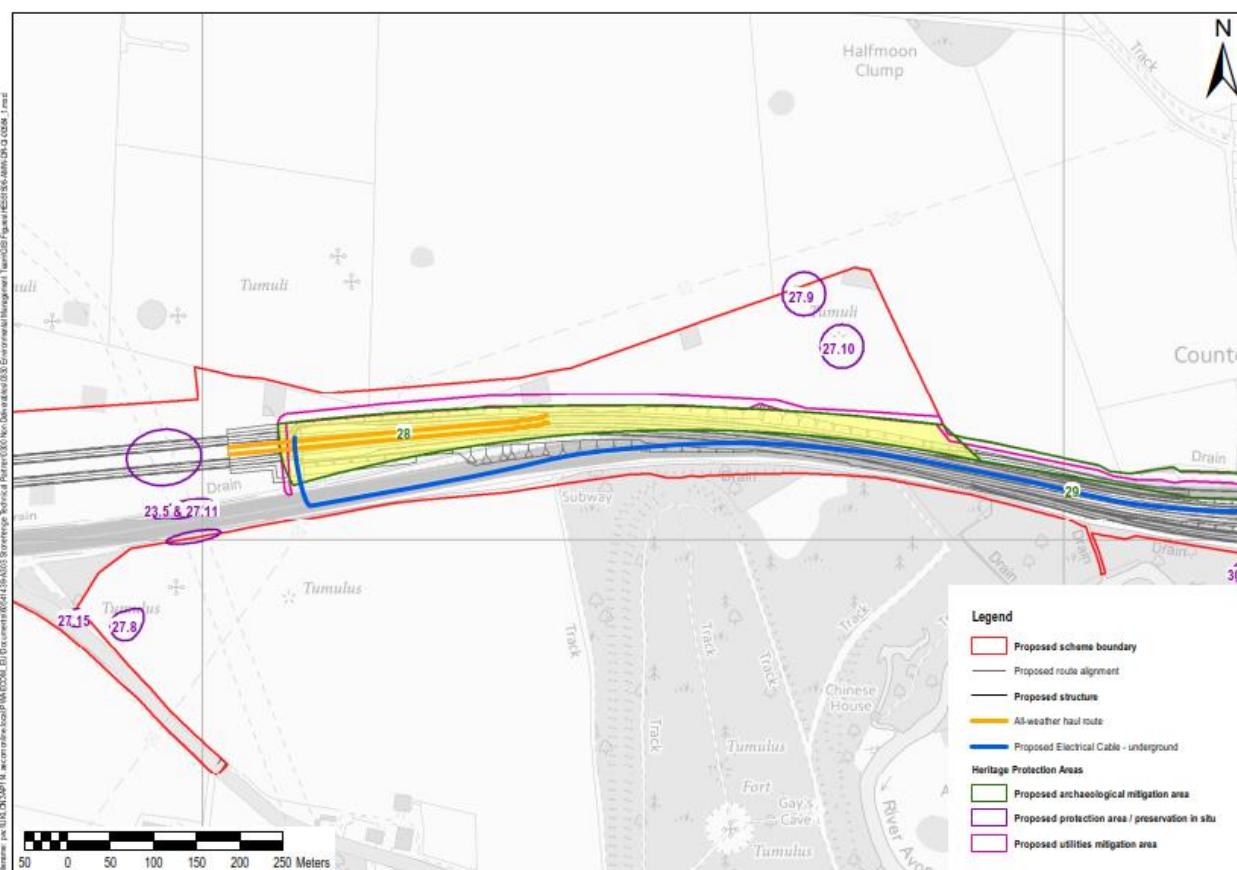
The study of occasional scattered pits and post holes, field systems, land divisions, including possible medieval lynchets, offers insights into past landscape use and development. Research on burials and barrows throws light upon past mortuary practices, belief systems, and human demographics, diet, health and mobility. The following SAARF research themes and period-specific questions may be relevant:

- C. Burials and barrows
- D. Human generations
- E. Landscape history and memory
- F. Daily life
- 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?
- C. 22. What potential exists to better understand diet, health and mortality among later populations within the WHS?
- 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?
- 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?
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

- 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?
- P. 2. The planting dates for the prominent tree clumps ('hedgehogs') which are so characteristic of the modern landscape, are not well established; these are often sited on round barrows and so are intimately associated with the monuments of the WHS.
- P. 8. How was the military presence in the WHS developed?
- P. 9. What physical and social impacts has the military had on the monuments, landscape, airspace and audio/ auralscapes of the WHS?
- P. 14. What archaeological remains survive from the removal of buildings (such as the First World War aerodrome) and other features in order to create the modern interpretation of prehistoric landscapes; and what were the underlying theoretical, cultural and social influences that led to the creation of the resulting (and other) earthworks?

Site 28: Buried soil horizon and double ditch, undated ditch, flint scatters, in situ flint knapping in stony hollow.

Designation:	Unscheduled
Reference IDs:	n/a
Location (NGR):	414029, 142103 414874, 142107
Site area (approximate):	2.97ha


Description

Site 28 comprises the eastern portal approach cutting and adjacent land, extending between approximate chainages 10200m and 11300m.

Baseline

UID 3010.02: 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. 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.

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.

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.

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.

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

In the central part of the Site (crossed by a NNW–SSE aligned dry valley) a calcareous colluvial sequence was recorded in Trench 504. 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 geoarchaeological 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) 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 geo-archaeological investigation and archaeological excavation and recording (AER) is required at Site 28.

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.

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).

Relevant research objectives

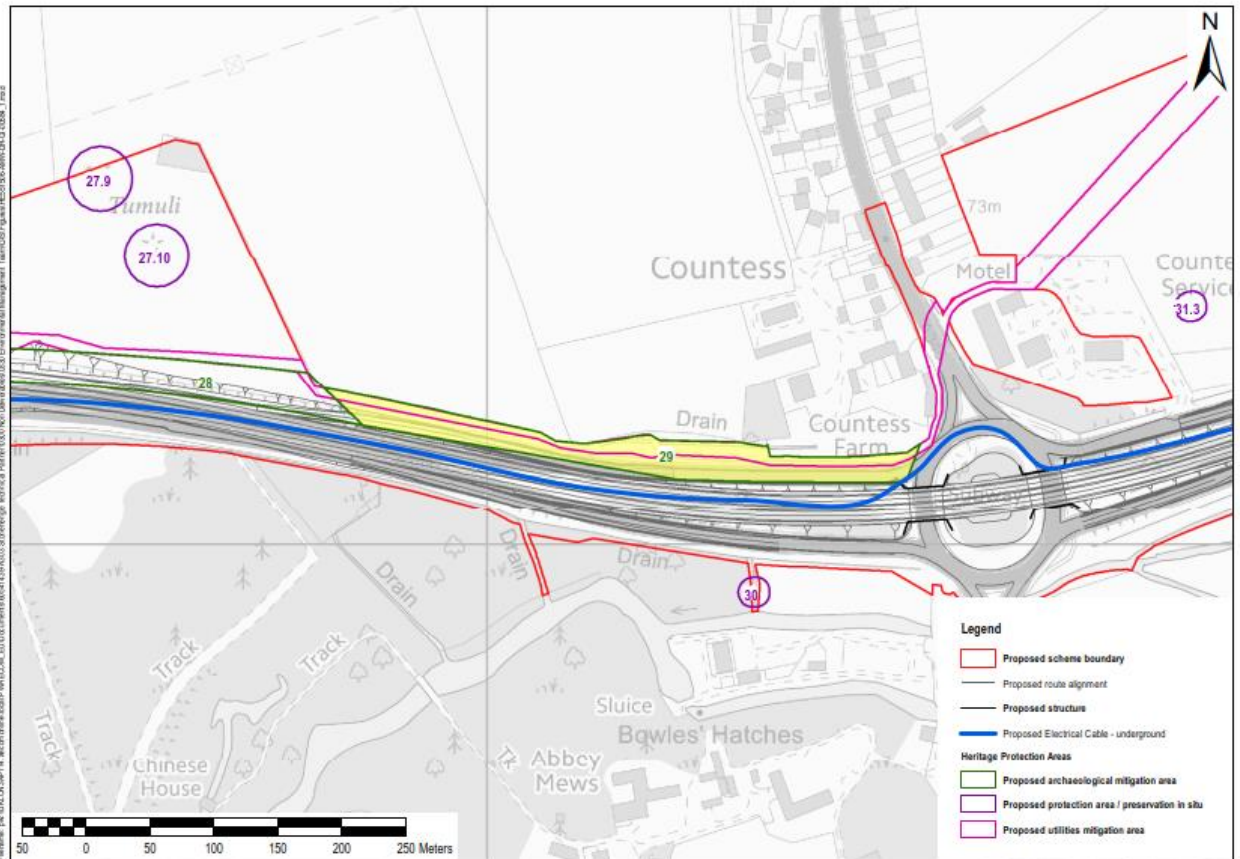
The study of buried soil horizons, land divisions, flint scatters and in-situ flint knapping can provide insights into past land use, settlement patterns and lithics manufacture. The following SAARF research themes and period-specific questions may be relevant:

- D. Human generations
- E. Landscape history and memory
- F. Daily life
- 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?

- 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?
- 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?
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?
- M. 5. Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?
- 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 29: 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/ MWI11874
Location (NGR):	414874, 142107 415331, 142065
Site area (approximate):	0.99ha



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.

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 red line boundary may be impacted by peripheral construction working areas and 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

Preliminary topsoil artefact sampling, followed by targeted sieving as appropriate, 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).

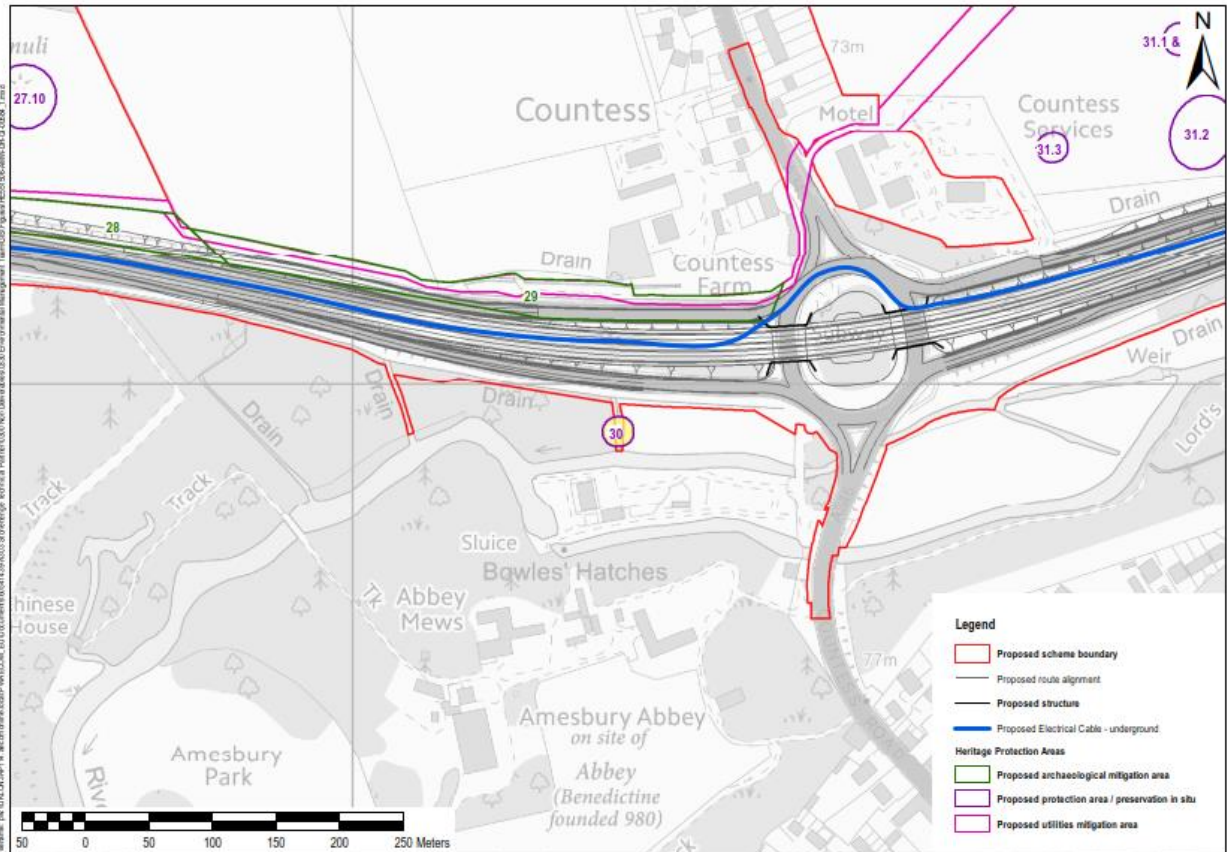
Relevant research objectives

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 SAARF research themes and period-specific research questions may be relevant:

- E. Landscape history and memory
- F. Daily life
- 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?
- 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?
- 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?
- 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 River Avon: this will be a crucial tool to understanding of the landscapes of the Late Glacial and Early Post-Glacial periods.
- B.5. A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.
- B.6. Further refining the chronology of sites, lithic industries and change.
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Site 30: Channel cleaning of existing highway drainage ditches and construction of new attenuation features and associated infrastructure next to Blick Mead.

Designation:	Non-designated
Reference IDs:	No UID
Location (NGR):	415119, 141995
Site area (approximate):	n/a



Description

Site 30 comprises existing drainage channels and new attenuation features 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 Blix 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 (246pprox..) new attenuation features are required either side of the road at the foot of the embankment. The indicative design drawings indicate that these features will be constructed east of the known extent of Blick Mead Mesolithic site. The attenuation features will be constructed by digging out floodplain deposits. On the south side of the carriageway (adjacent to Blick Mead Mesolithic site) an existing drainage channel and two outfalls that flow into the River Avon will be re-profiled.

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 topsoil artefact sampling, followed by targeted sieving as appropriate, and archaeological excavation and recording (AER) to the level of construction (including a combination of targeted hand excavated trenching, test pitting involving sample sieving of deposit sequences and sample excavation). Depending upon the significance of the remains, geo-archaeological investigation may be appropriate to record palaeoenvironmental sequences (pollen and/ soil micromorphology) within buried soils that will be present within the coombe and dry valley or within the river floodplain deposits.

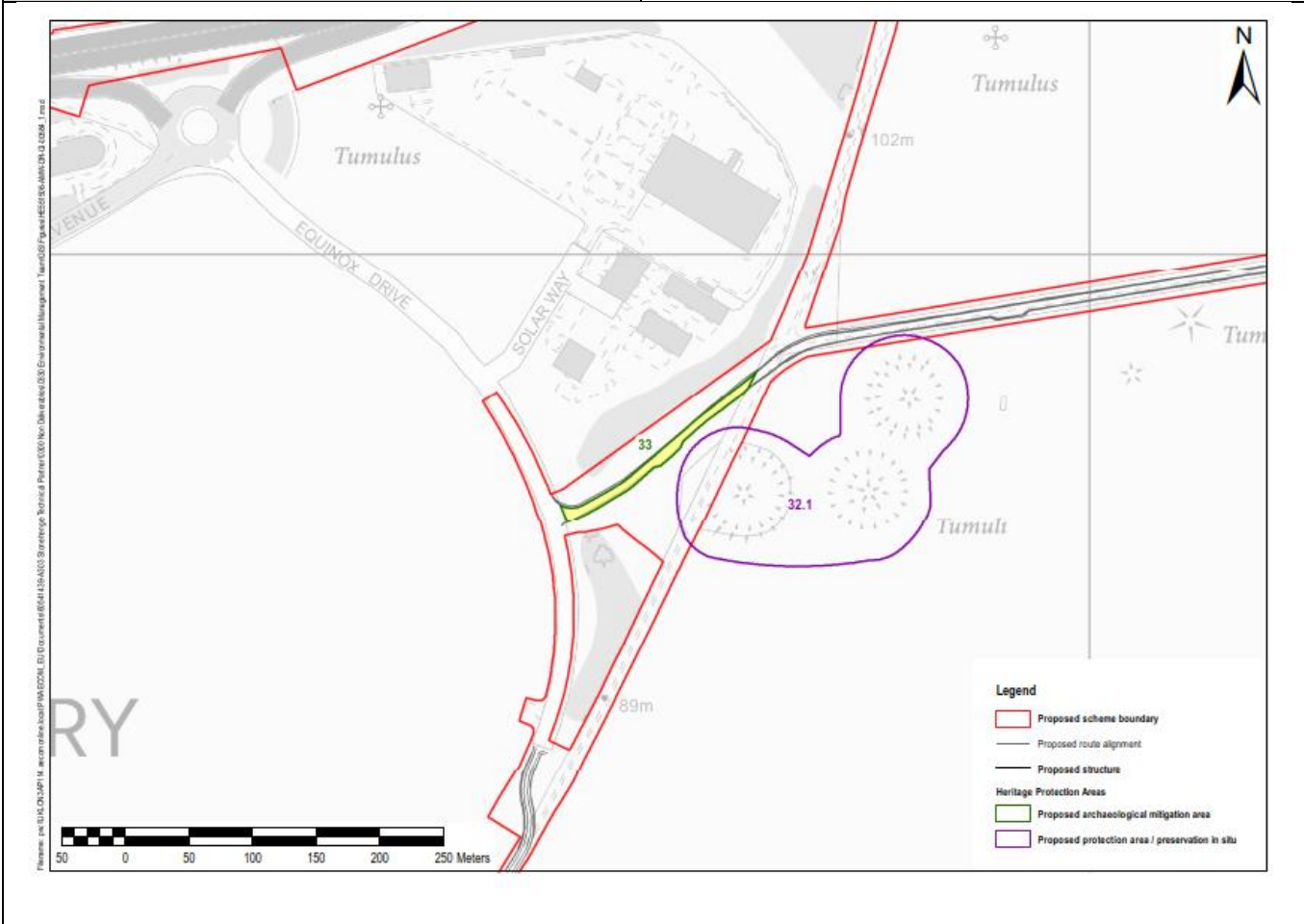
The existing drainage ditches that will be re-profiled (south side of new carriageway) will be subject to AMR as material is being dug-out of the existing channels formed within the embankment (made ground).

Relevant research objectives

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 SAARF research themes and period-specific questions may be relevant:

- E. Landscape history and memory
- F. Daily life
- 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?
- 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?
- 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?
- 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 River Avon: this will be a crucial tool to understanding of the landscapes of the Late Glacial and Early Post-Glacial periods.
- B.5. A better understanding of the nature of Late Upper Palaeolithic and Mesolithic activity.
- B.6. Further refining the chronology of sites, lithic industries and change.
- K. 8. Can episodes of colluviation and alluviation be dated, and if so can they be linked to changes in land use?

Site 33: Area of archaeological interest east of Solstice Park (west of a group of scheduled barrows).	
Designation:	Non-designated
Reference IDs:	n/a
Location (NGR):	417665, 141842
Site area (approximate):	0.45ha



Description

Site 33 comprises the realignment of byway AMES001, known as Amesbury Road, a roughly surfaced track extending north-east to south-west between Amesbury and Bulford. 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. The realignment at Site 33 will provide a link to Solstice Park.

Baseline

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 red line boundary (Site 33.1). 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 in situ Site 33).

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 red line 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.

Mitigation

Strip, map and record (SMR) is proposed along the alignment of the diverted Amesbury Road 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.

Relevant research objectives

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 SAARF research themes and period-specific questions may be relevant:

- C. Burials and barrows
- D. Human generations
- E. Landscape history and memory
- F. Daily life
- J. 1. Establish the chronology of individual barrows, and the phasing of their structures.
- J. 2. Establish the dates and development of barrow cemeteries.
- 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.
- 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?
- 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?
- M. 5. Is there any relationship between the earlier monuments and the locations of Roman-British settlements and land use, including burials and cemeteries?

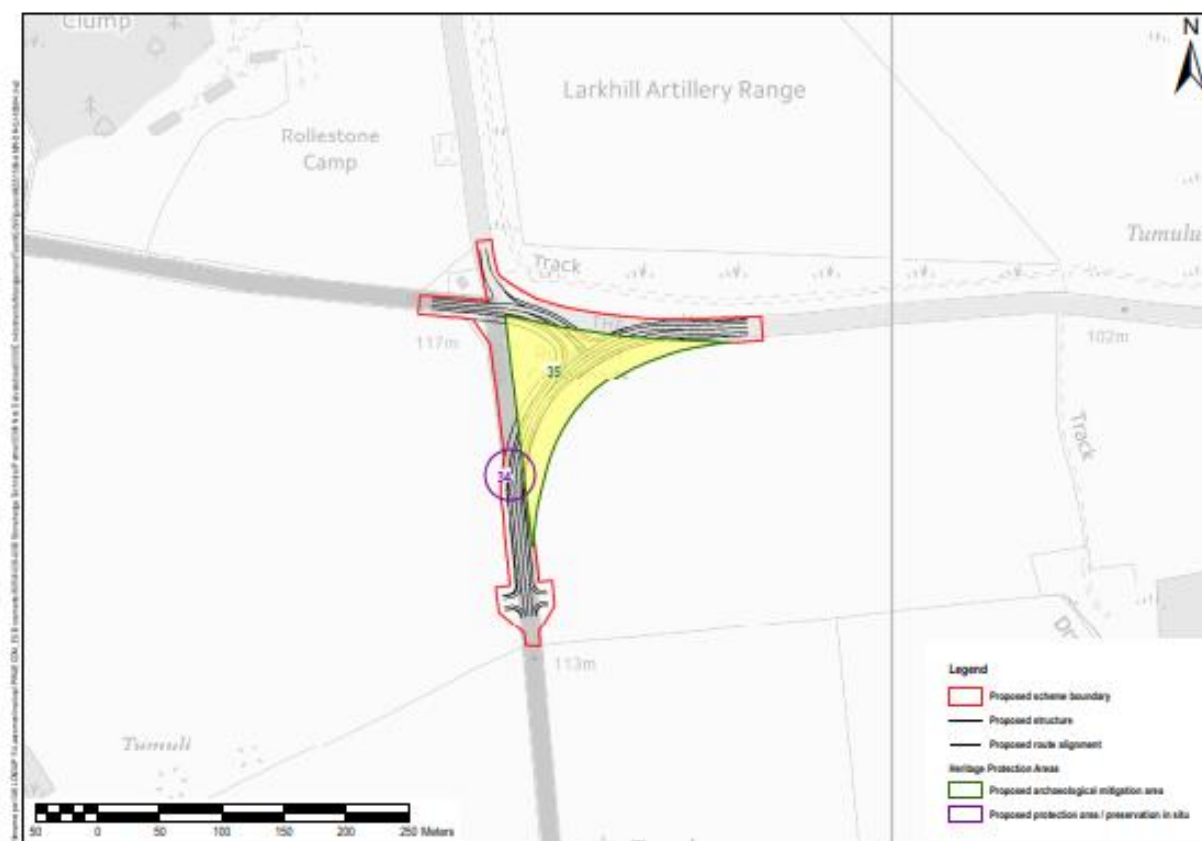
Site 35: Rollestone Corner – occasional tree throws that contained material that could broadly be of Neolithic date.

Designation: Non-designated

Reference IDs: No UID

Location (NGR): 409720, 144570

Site area (approximate): 0.85ha



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 Rolleston 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 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).

Mitigation

Strip, map and record (SMR) is proposed within the footprint of the realigned road junction to investigate the features containing lithic material and to determine the extent of contextually-secure Late Neolithic flint knapping activity. The area to be impacted by the road junction improvement will be stripped under archaeological supervision, features mapped and recorded. 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; at this stage it is envisaged that a sample of 10-20% of tree-throw features would be appropriate. Features that are considered to be anthropogenic would be completely excavated and recorded.

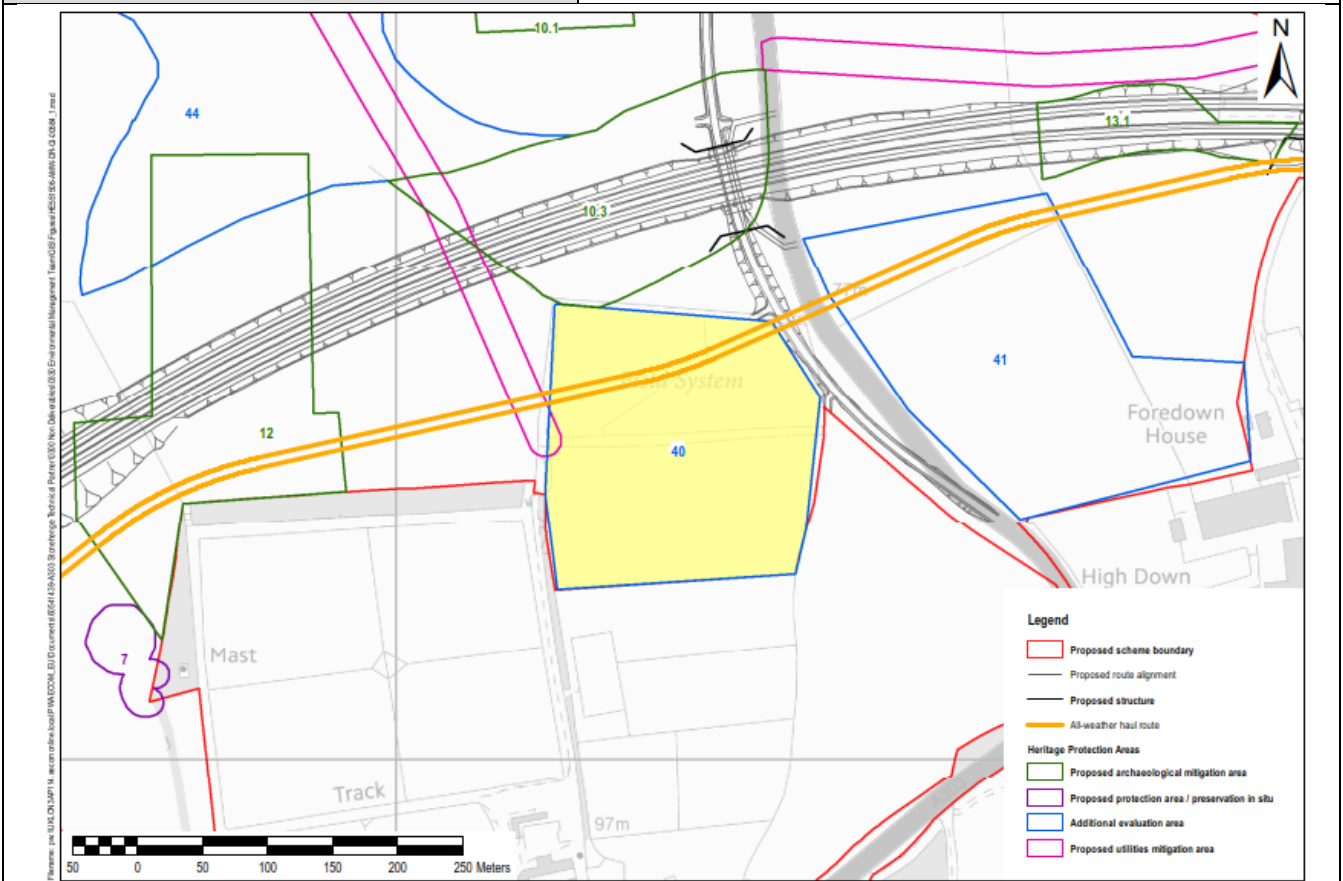
Relevant research objectives

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 SAARF research themes and period-specific questions may be relevant:

- E. Landscape history and memory
- F. Daily life

- 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?
- P. 8. How was the military presence in the WHS developed?
- P. 9. What physical and social impacts has the military had on the monuments, landscape, airescape and audio/ auralscapes of the WHS?

Site 40: Evaluation north of Winterbourne Stoke, northeast of Scotland Lodge Farm.	
Designation:	Non-designated
Reference IDs:	UID 1004.01
Location (NGR):	407215, 141244
Site area (approximate):	4.04ha



Description

Site 40 is a rectangular shaped survey area of 254pprox.. 4.04ha., that is located 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 21019, 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

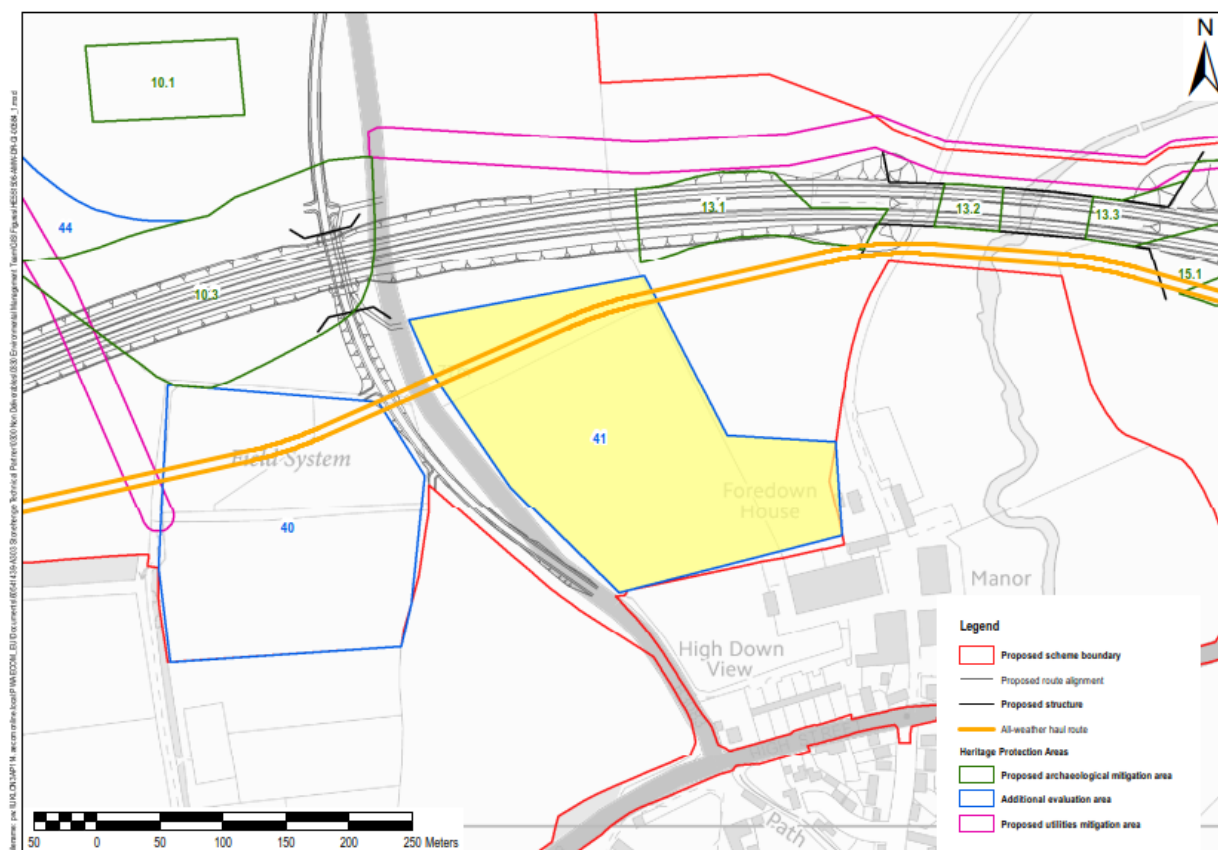
This area will be used for landscape fill to help integrate the new bypass (north of Site 41) into the landscape. Works will involve vehicle movement and the loading of the existing ground surface with imported fill material. Topsoil will be left in situ and fill will be deposited in a controlled manner to a depth of <2m thickness.

Mitigation

The trial trenching as proposed in the previously approved SSWSI 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.

Site 41: Evaluation north of Winterbourne Stoke, northwest of Manor Farm.

Designation:	Non-designated.
Reference IDs:	UID 1004.01
Location (NGR):	407471, 141324
Site area (approximate):	4.77ha


Description

Site 41 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 SSWSIs.

Scheme impact

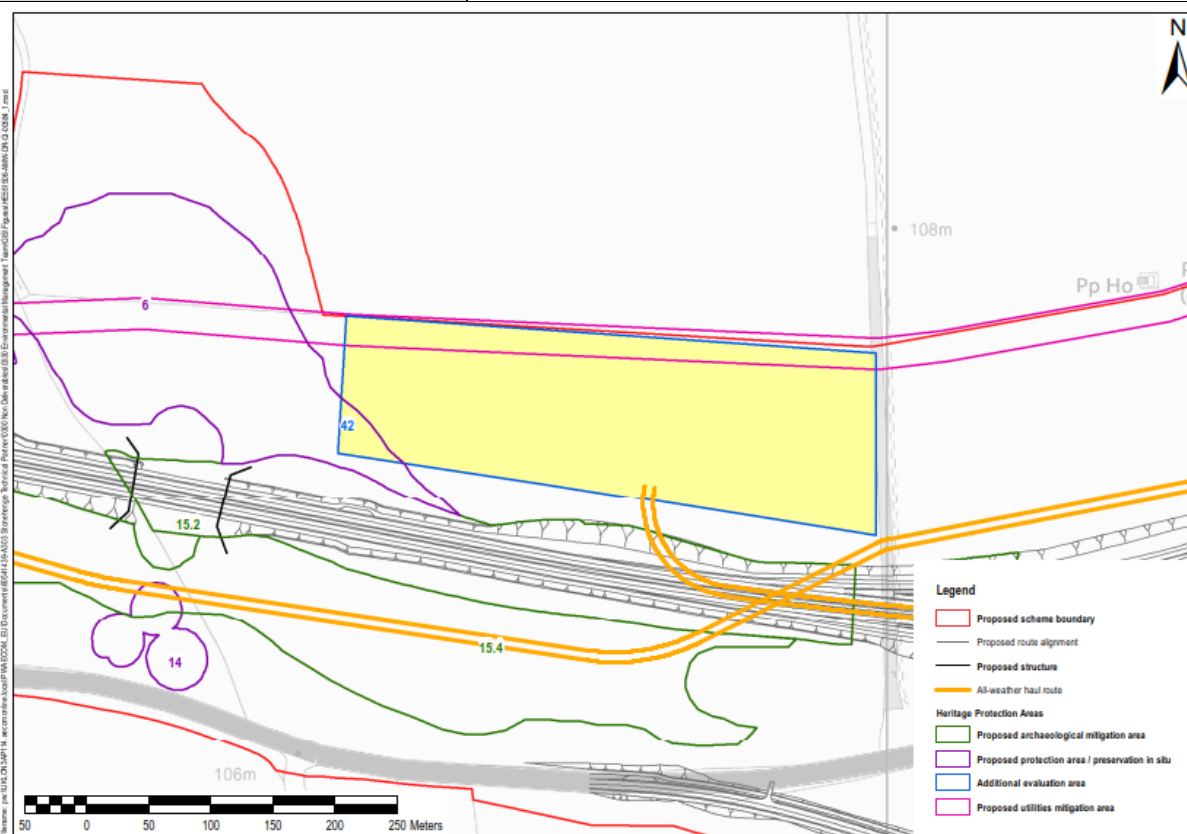
This area will be used for landscape fill to help integrate the new bypass (north of Site 41) into the landscape. Works will involve vehicle movement and the loading of the existing ground surface with imported fill material. Topsoil will be left in situ and fill will be deposited in a controlled manner to a depth of <2m thickness.

Mitigation

Site 41 was not included in the previous trial trench evaluation programme. The scheme impact and any requirement for surface artefact collection (fieldwalking) and/or trial trench evaluation and topsoil sample sieving will be reviewed in consultation with WCAS.

Site 42: Evaluation west of Longbarrow Roundabout.

Designation:	Non-designated
Reference IDs:	UID 2053
Location (NGR):	408821, 141433
Site area (approximate):	5.54ha



Description

Site 42 is a rectangular area of 258pprox.. 5.54ha. 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 (within an area that has been previously earmarked for 'preservation in situ') 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 Post-medieval or 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 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.

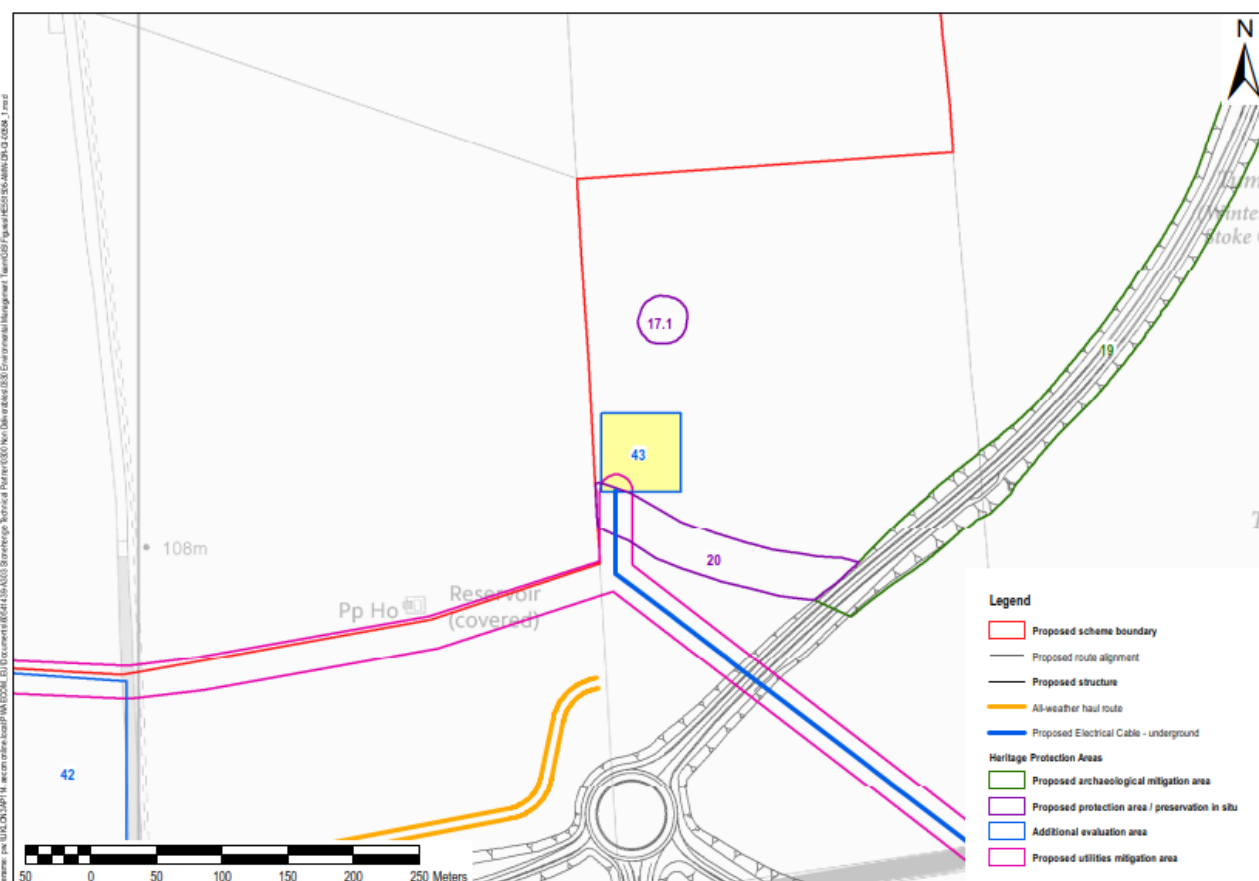
Mitigation

Archaeological evaluation of the tunnel production site will comprise trial trenching (including topsoil sample sieving during trenching) and will be carried out 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 evaluation 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.

Site 43: Evaluation northwest of Longbarrow Roundabout.

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 (within an area that has been previously earmarked for 'preservation in situ') 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.

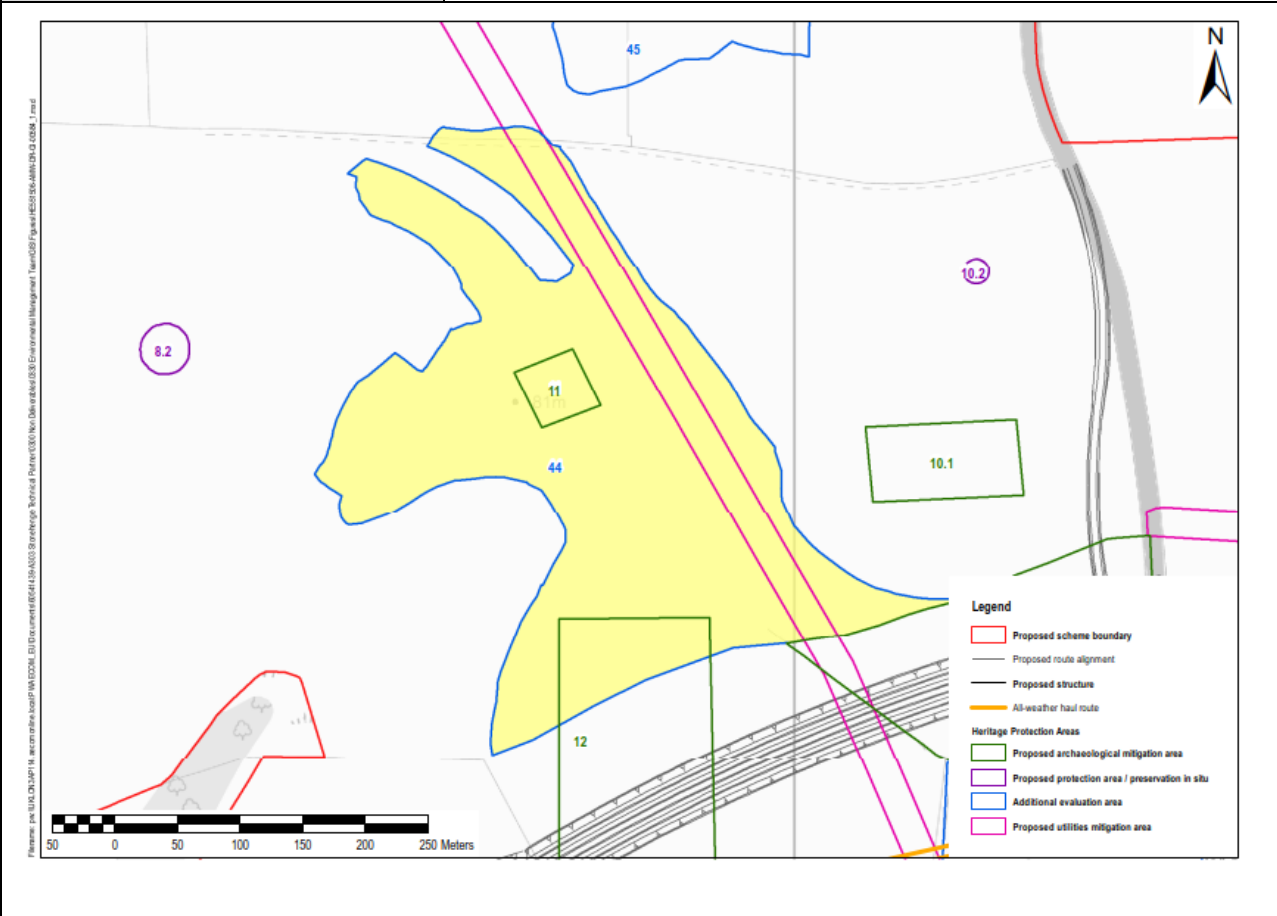
Scheme impact

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

Archaeological evaluation will comprise trial trenching (including topsoil sample sieving during trenching) and will be carried out 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.

Site 44: Evaluation at Parsonage Down (South).	
Designation:	Unscheduled
Reference IDs:	UID 1000 UID 1004 UID 1004.01 UID 1005
Location (NGR):	406859, 141607
Site area (approximate):	9.73ha



Description

Site 44 is a large irregular area at Parsonage Down, (262pprox..9.73ha. in size) that contains within it an area for archaeological excavation and recording (AER) (Site 11) and part of the Realigned Esso Pipeline (Site 46) 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]). 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).

Scheme impact

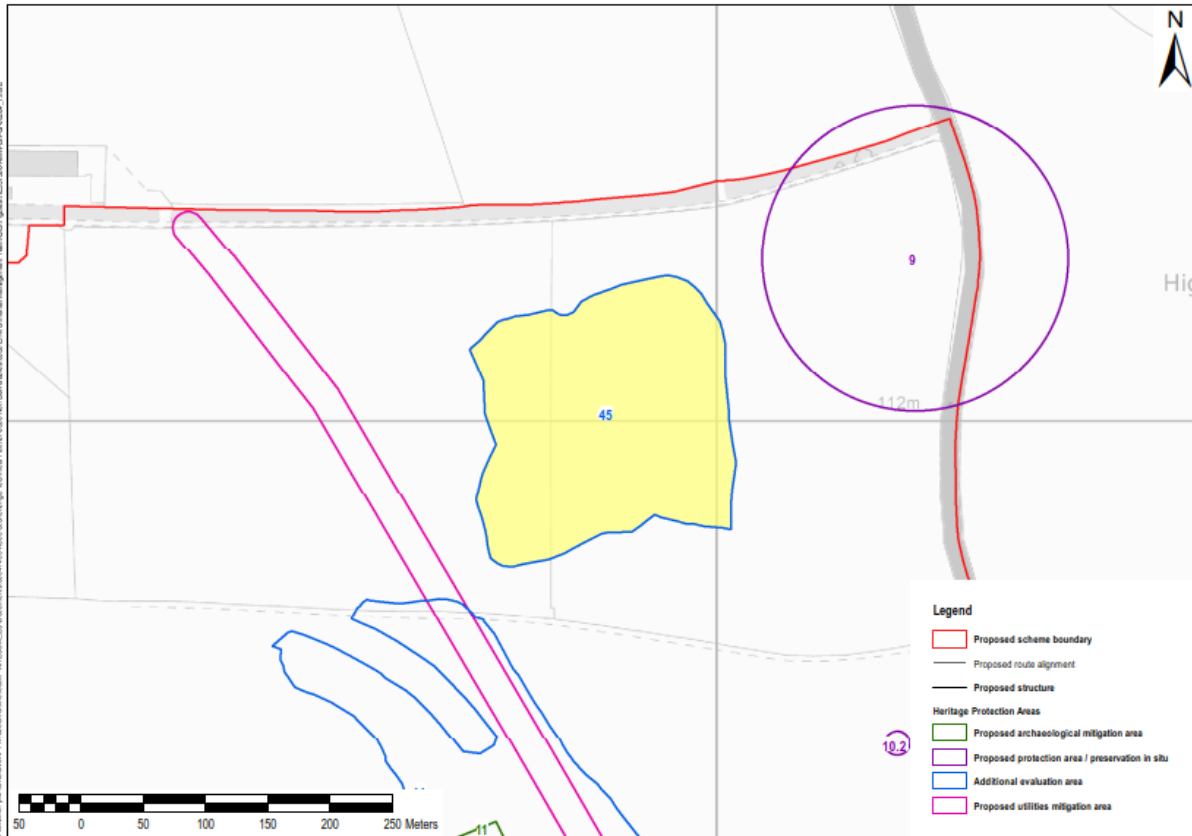
The site lies north of the new A303 main line in an area proposed for the deposition of excavated material and landscaping. The deposited material is likely to be greater than 2m deep in this area, consequently it will be topsoil stripped before excavated material is dumped onto it. Additional evaluation is required at Site 44 to determine the presence/ absence, character, condition and extent of any remains that may be present and to refine/ confirm the results of earlier evaluation.

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

Archaeological evaluation will comprise trial trenching (including topsoil sample sieving during trenching) and will be carried out before or at the start of 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 surveys will inform any detailed mitigation requirements here.

An area along the eastern side of the evaluation site will be excluded from trial trenching as it is within a utility diversion – Realigned Esso Pipeline at Parsonage Down (Site 46) where it will be investigated through archaeological monitoring and recording (AMR) at Preliminary Works stage.

Site 45: Evaluation at Parsonage Down (North).	
Designation:	Unscheduled
Reference IDs:	UID 1004 UID 1005 UID 2039
Location (NGR):	406915, 142007
Site area (approximate):	3.80ha
	
Description	
<p>Site 45 is a square area at Parsonage Down located between Site 9 and Site 44 (264 approx. 3.80ha in size).</p> <p>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]). Trial trenching has 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</p>	

[REP1-049, 050]). 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]).

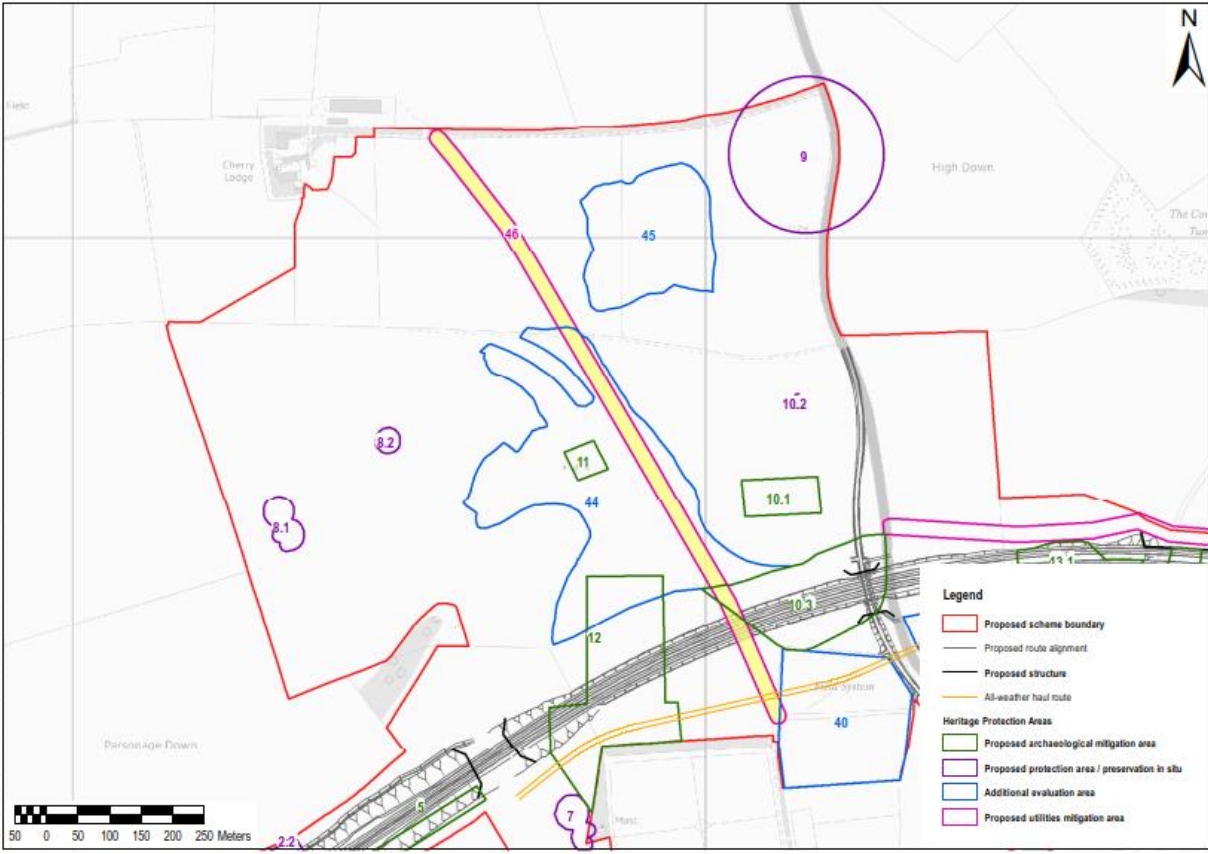
Scheme impact

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. Additional evaluation is required at Site 45 to determine the presence/ absence, character, condition and extent of any remains that may be present and to refine/ confirm the results of earlier evaluation.

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

Archaeological evaluation will comprise additional trial trenching (including topsoil sample sieving during trenching) which will be carried out before or at the start of 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 surveys will inform any detailed mitigation requirements here.

Site 46: Utility Diversion – Realigned Esso Pipeline at Parsonage Down.	
Designation:	Unscheduled
Reference IDs:	UID 1004.01 UID 1005
Location (NGR):	Start: 407114, 141239 End: 406568, 142169
Site area (approximate):	3.0ha
	
Description	
<p>Site 46 comprises the preferred option for 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).</p> <p>Archaeological remains that have been recorded in this area comprise:</p> <ul style="list-style-type: none"> • 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

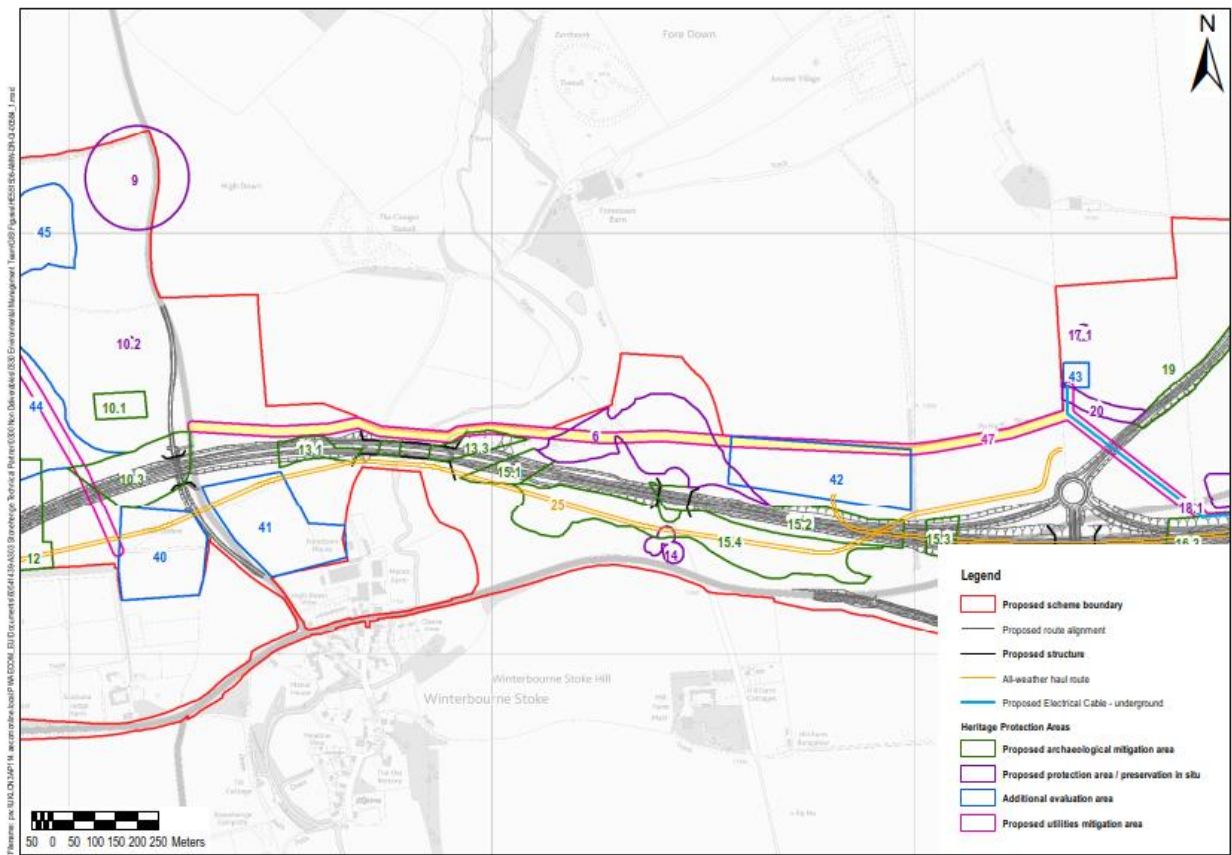
The proposed pipeline diversion route lies parallel to and approximately 25m east of the existing pipeline. The construction easement for the utility corridor will be up to 25m wide, including topsoil storage. The corridor will impact part of more extensive field systems which are likely to be later 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.

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Archaeological monitoring and recording (AMR) will be carried out along the utility corridor, but excluding the section within Site 10.3 which will be investigated as part of the area for archaeological excavation and recording. The results of the AMR will help to inform any detailed mitigation requirements at Site 44.

Site 47: Utility Corridor – Wessex Water Pipeline (Part 1).	
Designation:	Unscheduled
Reference IDs:	UID 2050/ MWI6987 UID 2061/ MWI7173 UID 2014.02/ MWI6406 UID 2076 & 2078/ MWI7201
Location (NGR):	Start: 407181, 142236 End: 109363, 141637
Site area (approximate):	TBC



Description

Site 47 comprises 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).

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 in situ designed to protect a part of a ditch (Wessex linear) 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, comprises:

- 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).

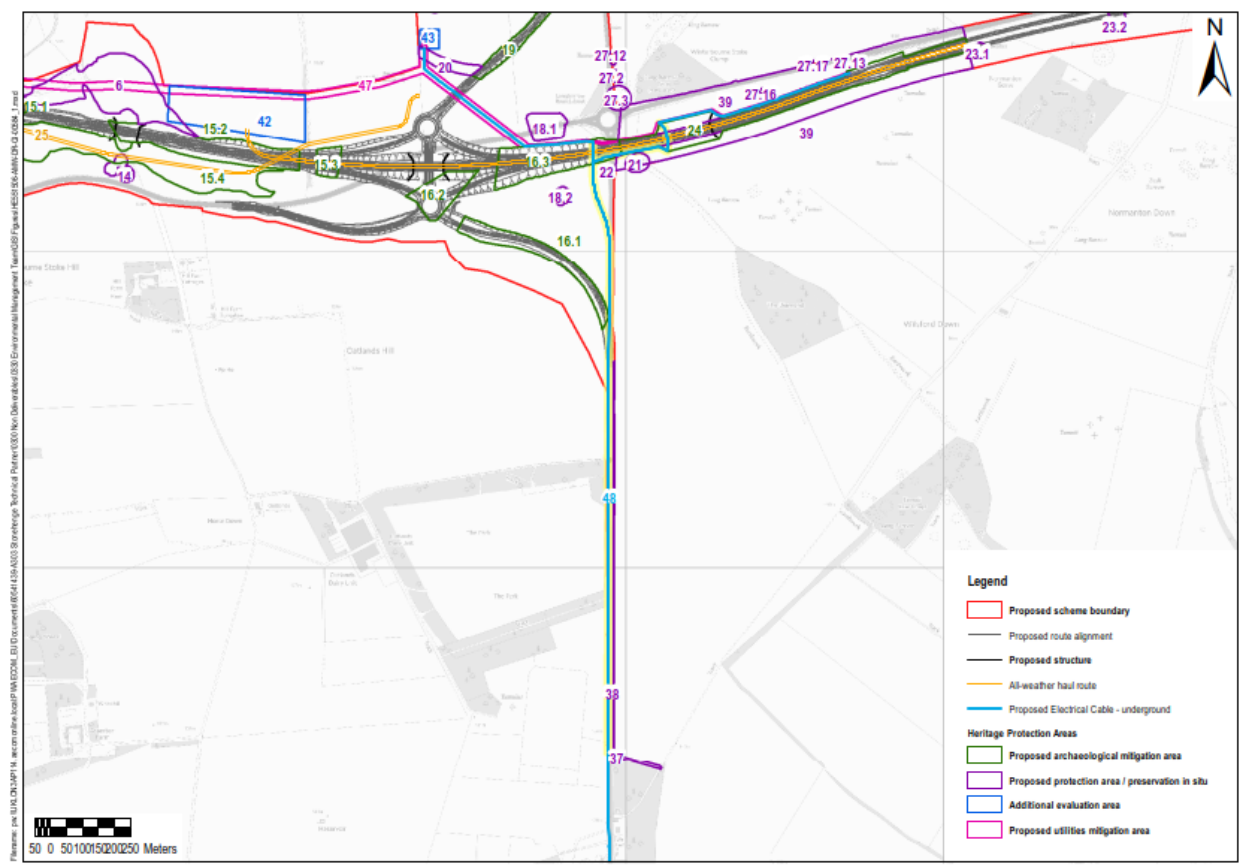
Scheme impact

The easement for the utility corridor 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 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 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 the stripping of the topsoil within the utility corridor. Archaeological monitoring and recording (AMR) 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.

Site 48: Utility Corridor - SSEN Southern Power Cable.	
Designation:	Scheduled; Listed; Unscheduled
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):	TBC



Description

Site 48 comprises the route of the proposed temporary and permanent power connections 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.

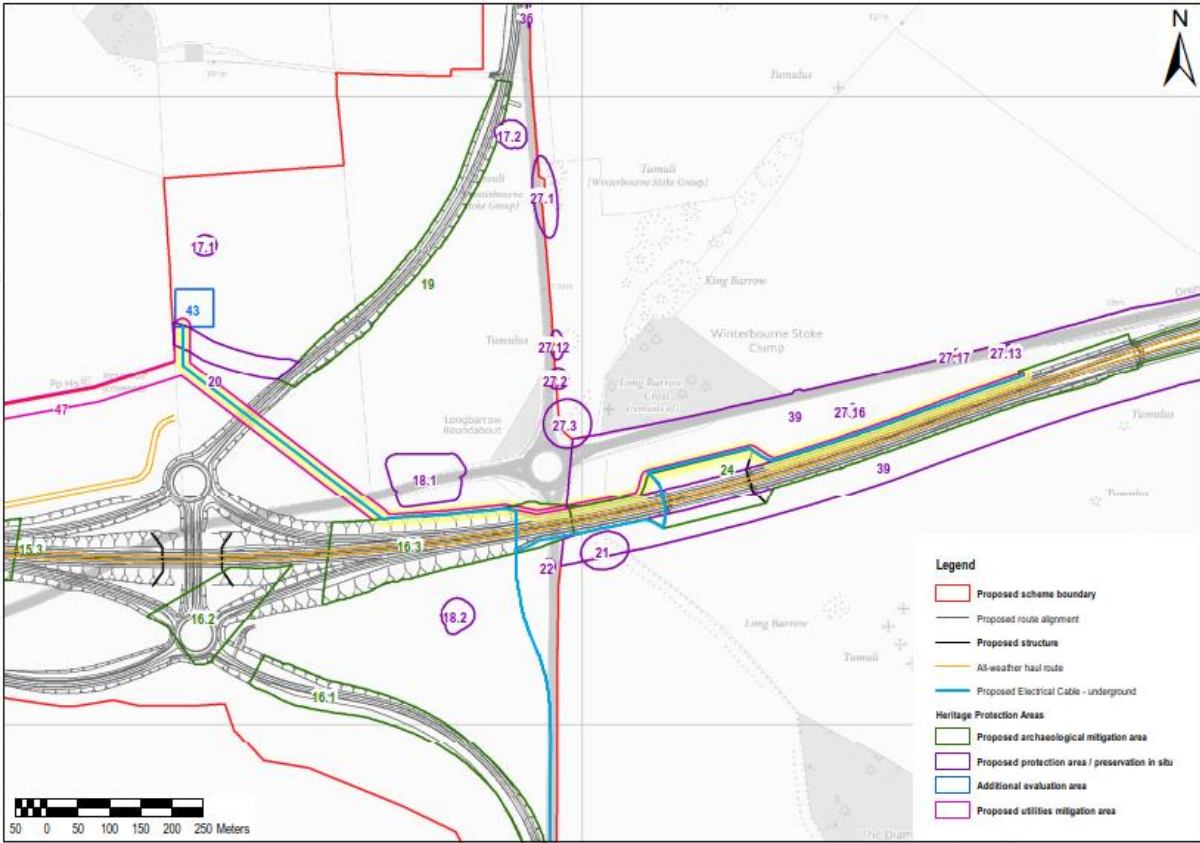
Scheme impact

The 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 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. Targeted archaeological monitoring and recording (AMR) will be the carried out along the utility corridor.

Site 49: Utility Corridor - Wessex Water Pipeline (Part 2) and SSEN Western Power Cable.	
Designation:	Scheduled; Unscheduled
Reference IDs:	MWI6984 UID 2073 UID 2093 UID 2014.01
Location (NGR):	Start: 409363, 141637 End: 410713, 141562
Site area (approximate):	TBC
	
Description	
<p>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.</p> <p>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.</p> <ul style="list-style-type: none"> • 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, 2017). 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 & 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 (NHLE1-11-48) 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).

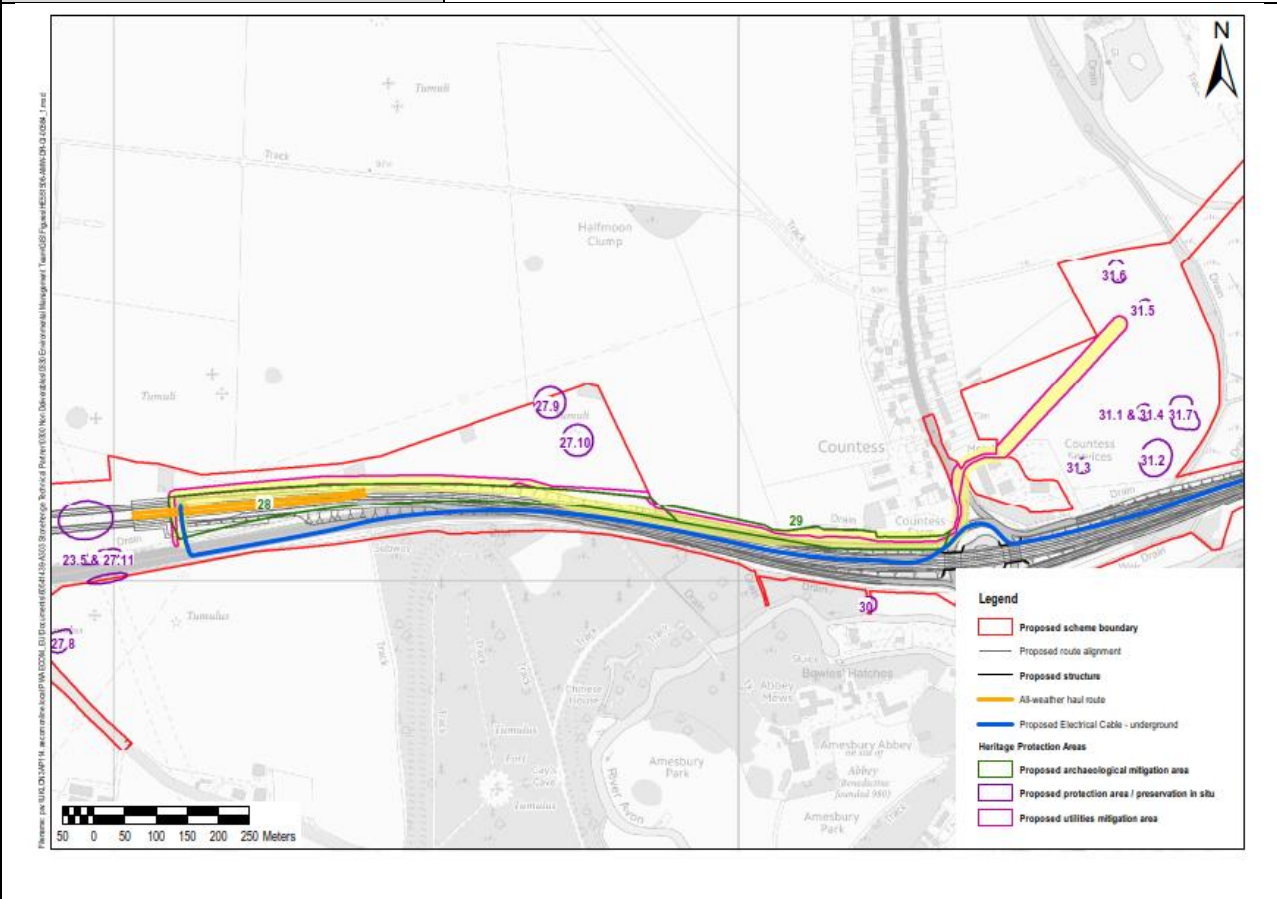
Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Targeted archaeological monitoring and recording (AMR) 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).

Site 50: Utility Corridor - Wessex Water Pipeline (Part 3).

Designation:	Listed; Unscheduled
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):	TBC



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 southwesterly direction through Countess Services and below the A345 towards Countess Farm. 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 274 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.

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).
- A group of Grade II listed buildings at Countess Farm (including the stables and barn at Countess Farm: NHLE 1131055).
- 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 red line boundary and/or where it 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).

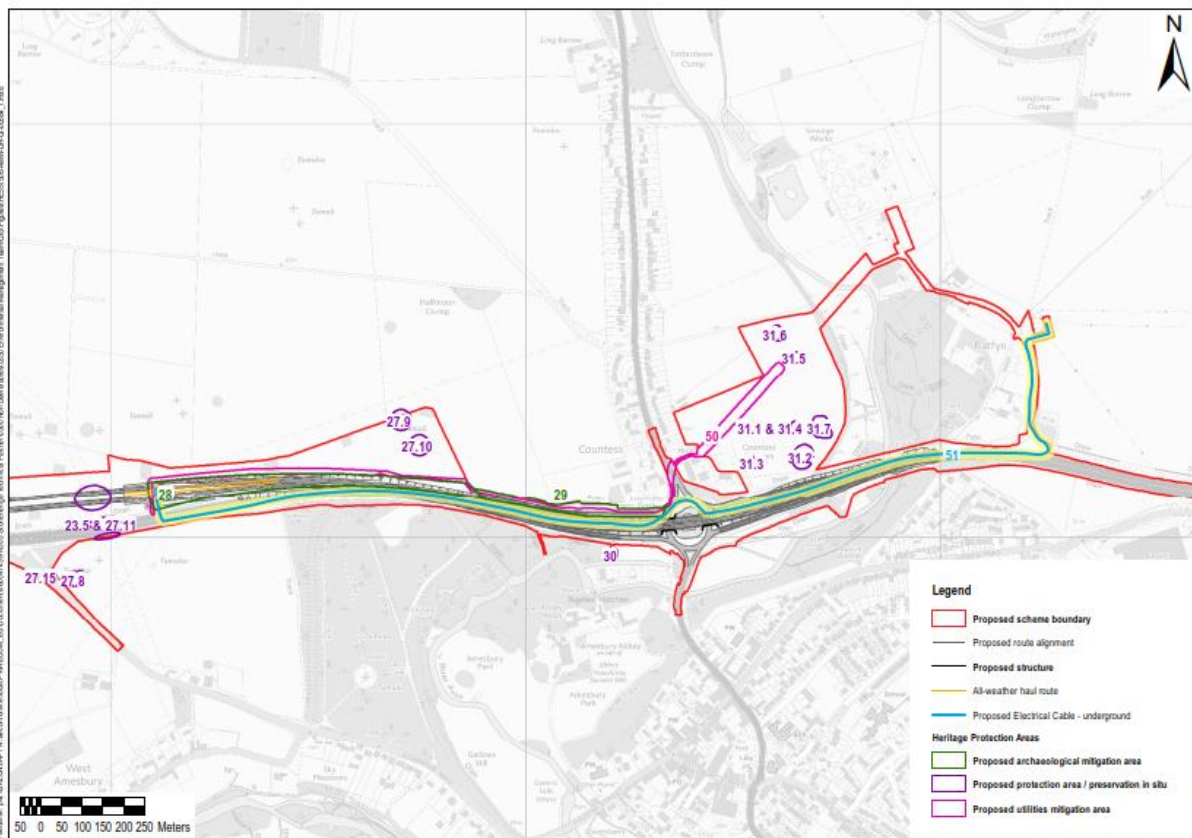
The utility corridor could impact remains associated with Early to Middle Saxon settlement at Site 31.5 and with Neolithic pit digging activity and struck flint distributions (UID 4040-41) northeast of Countess Roundabout.

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.

Mitigation

Archaeological mitigation works will be carried out at the Preliminary Works stage.

Targeted archaeological monitoring and recording (AMR) will be carried out along the utility corridor, excluding where it enters Site 29 and Site 28 which will be investigated as part of the areas for archaeological excavation and recording (AER).

Site 51: Utility Corridor – SSEN Eastern Power Cable.	
Designation:	Listed; Unscheduled
Reference IDs:	UID 4012/ NHLE 1012126 MWI12477
Location (NGR):	Start: 416253, 142527 End: 414103, 142107
Site area (approximate):	TBC
	
Description	
<p>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).</p> <p>Archaeological remains that have been recorded in this area (inside and outside of the WHS) comprises:</p> <ul style="list-style-type: none"> • 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 (MW112477).

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 (MW112603) 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.

Targeted archaeological monitoring and recording (AMR) will be the carried out along the utility corridor.

Appendix F Public Archaeology and Community Engagement Strategy

F.14.1 Summary

- F.14.1.1 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.
- F.14.1.2 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.

F.14.2 Introduction

- F.14.2.1 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.
- F.14.2.2 The PACE strategy may incorporate site-based activities, initiatives undertaken during ongoing excavations, and activities to be undertaken throughout the post-excavation phase.

F.14.3 Planning policy, public archaeology and community engagement

- F.14.3.1 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.
- F.14.3.2 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).
- F.14.3.3 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).

F.14.4 Aims and objectives

F.14.4.1 The aim of the PACE Strategy will be to 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.

F.14.4.2 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 proposed scheme corridor: Advancing public understanding and stimulating public curiosity about archaeology along the proposed scheme corridor;
- 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.

F.14.4.3 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, 2011) and the 2015 Stonehenge and Avebury WHS Management Plan (Simmonds and Thomas, 2015).

F.14.4.4 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.

- F.14.4.5 The PACE programme will link to the work of Highways England's A303 Benefits and Legacy Forum and Benefits Steering Group, which will look to work with partner organisations to develop the Scheme legacy and benefits as the Scheme develops, tying in to the priorities set out within the 2015 WHS Management Plan.

F.14.5 Project location

- F.14.5.1 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.

F.14.6 Methodology

- F.14.6.1 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.
- F.14.6.2 An inception meeting will be held between the Project Team and the client to confirm the project timetable and discuss and clarify any issues relating to the proposed approach, methodology and schedule.
- F.14.6.3 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.
- F.14.6.4 A range of activities will be developed, selected based on advice from consultees and community groups.
- F.14.6.5 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.
- F.14.6.6 Monitoring and evaluation of PACE programme outcomes will be undertaken and reported upon.

F.14.7 Audiences and participation

- F.14.7.1 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.
- F.14.7.2 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.

F.14.8 Outline of activities

- F.14.8.1 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.
- F.14.8.2 Opportunities for engagement and outreach could involve local, regional and national talks to school pupils and university students, community heritage groups, environmental interest groups, learned societies and parish councils, as well as an oral history project and an artist in residence.
- F.14.8.3 A professional specialist heritage interpreter could 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.
- F.14.8.4 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.
- F.14.8.5 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 the production of 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.
 - It will be important for the professional filming of archaeological fieldwork to be integrated into the fieldwork programme at the earliest possible opportunity.

F.14.9 Archaeological reporting and publication

- F.14.9.1 The archaeological reporting and publication requirements will be developed in consultation with HMAG/ WCAS, 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.
- F.14.9.2 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.
- F.14.9.3 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.

F.14.9.4 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.

F.14.10 Partnership and collaboration

F.14.10.1 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.

F.14.10.2 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.

F.14.11 Media and communications

F.14.11.1 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.

F.14.11.2 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 programme, newspaper or magazine features, as well as national outlets. Information would be provided in local public and community venues, including libraries.

F.14.11.3 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.

F.14.11.4 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, visualisations and quizzes.
- This website may include 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.

F.14.11.5 In addition to the website, the PACE programme will engage audiences through social media platforms, for example Twitter, Facebook and Instagram. Appropriate social media guidelines would be developed and applied.

F.14.12 Monitoring and evaluation of programme outcomes

F.14.12.1 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.

F.14.12.2 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.

F.14.12.3 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.

F.14.12.4 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.

F.14.12.5 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.