A303 Amesbury to Berwick Down

TR010025

Additional submission
Heritage Impact Assessment – Addendum addressing 'new discovery' responding to Secretary of State letter dated 16 July 2020

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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Executive Summary

This Heritage Impact Assessment (HIA) Addendum, prepared to complement the Main HIA [APP-195], considers the significance of the Durrington Walls discovery and the distribution and potential significance of large pit-like geophysical anomalies identified within the WHS and its setting reported in the Stonehenge Hidden Landscapes Project (SHLP) 2020 paper (Gaffney et al. 2020). It assesses their contribution to Attributes expressing the Outstanding Universal Value (OUV), Integrity and Authenticity of the Stonehenge part of the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS). Impacts and effects are assessed in relation to the OUV, Integrity and Authenticity of the WHS.

The HIA Addendum demonstrates that the Scheme will not result in any physical impact on the fabric of the Durrington Walls discovery reported in the 2020 SHLP paper, or upon related sub-surface deposits or its setting. The Scheme will result in a Neutral effect on these subsurface features, which are assessed to be of potentially Very High value.

The HIA Addendum assesses that the Scheme will not give rise to any physical impacts upon the fabric of a further 35 discrete large pit-like geophysical anomalies reported in the 2020 SHLP paper. Those located within the Development Consent Order (DCO) boundary within the WHS will be preserved in situ within the DCO boundary in accordance with the Detailed Archaeological Mitigation Strategy (DAMS). A worst case Slight adverse effect is assessed with regard to the setting of two of these anomalies (Anomaly 29, within WHS boundary; Anomaly 033, outside WHS boundary but within its setting), derived from a Negligible impact on a potentially Very High value asset.

The effect of the Scheme on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity as assessed in the Main HIA [APP-195] submitted with the Application is unchanged and remains valid.

1 Introduction

1.1.1 The Secretary of State (SoS) has requested further information from Highways England (the Applicant) and other stakeholders following a recent archaeological publication of a discovery (the Durrington Walls discovery) by the Stonehenge Hidden Landscapes Project (SHLP; see Gaffney, V. *et al.* 2020, A Massive, Late Neolithic Pit Structure associated with Durrington Walls Henge, Internet Archaeology 55 https://doi.org/10.11141/ia.55.4) which lies partly within the Stonehenge part of the Stonehenge, Avebury and Associated Sites World Heritage Site (the WHS) in June 2020.

1.1.2 The 2020 SHLP paper describes a series of geophysical anomalies discovered south of the Durrington Walls Henge identified during fluxgate gradiometer survey undertaken by the Stonehenge Hidden Landscapes Project (SHLP) in 2012–13. The results are described as "preliminary" (Gaffney et al. 2020, 6. Conclusions). The paper describes these features for the first time and considers them in the context of known pit-like anomalies and excavation excavated sinkholes/ dolines/ solution features noted to the north, at Larkhill and Durrington.

1.1.3 A number of additional isolated or discrete anomalies over 5m in diameter are illustrated in the 2020 SHLP paper (figure 9) across the wider landscape. These may be purely natural sinkholes with no cultural material associated, form natural repositories for cultural material, or be deliberately modified, dug or exploited for some cultural purpose.

1.1.4 The SoS has received representations from the Consortium of Archaeologists ('the Consortium') and the Blick Mead Project Team dated 25 June 2020 [TR010025-001960] and also the Stonehenge Alliance dated 26 June 2020 [TR010025-001961], which cite the discovery.

1.1.5 The representations are based on the proposition that the Durrington Walls discovery have so changed understandings of the range of human activities and archaeological evidence of these, as to invalidate the assessments and related mitigation strategies submitted with Highways England's Application ('the Application') for a Development Consent Order (DCO) for the A303 Amesbury to Berwick Down scheme ('the Scheme').

1.1.6 The SoS has decided it would be appropriate to consult on the archaeological discovery and the representations received before determining the Application. He has requested that Highways England, Historic England, Wiltshire Council and other recipients respond on:

- "implications of the archaeological find for the Development and any harm it may cause to the World Heritage; and
- implications for the Applicant's Environmental Statement, including the Heritage Impact Assessment, and the proposed Detailed Archaeological Mitigation Strategy."

1.1.7 The Environmental Statement (ES) [APP-044] and accompanying Appendix 6.1 Heritage Impact Assessment [APP-195] (HIA, described as the 'Main

HIA' in this document), form part of the DCO Application documents. This HIA Addendum should be read alongside the Main ES and the Main HIA.

1.1.8 This HIA Addendum considers the implications of the Durrington Walls discovery and the discrete and isolated anomalies highlighted in the 2020 SHLP paper for the Development and any harm it may cause to the Stonehenge part of the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS), and implications of the new discovery for the HIA that was undertaken for the Scheme [APP-195].

1.1.9 This HIA Addendum focuses on the nature of the Durrington Walls discovery and the large pit-like anomalies identified within the WHS and its setting, their contribution to Attributes expressing the Outstanding Universal Value (OUV) of the WHS, relationship to known heritage assets, Asset Groups and the WHS landscape; and the distribution and potential significance.

1.1.10 This HIA Addendum assesses the impacts and effects of the Scheme on the Durrington Walls discovery, heritage assets potentially related to the discovery, and pit-like geophysical anomalies identified elsewhere in the WHS and within the DCO boundary. The HIA Addendum assesses the impact of the Scheme on the OUV of the WHS and the Attributes that convey OUV. Impacts and effects are assessed in relation to the OUV, Integrity and Authenticity of the WHS.

1.1.11 The preparation of the ES and HIA Addenda addressing the Durrington Walls discovery and the pit-like anomalies responding to Secretary of State letter dated 16 July 2020 has been coordinated closely. Both reports draw upon the same historic environment datasets and should be read in parallel.

2 Heritage Impact Assessment method

2.1 Data sources

2.1.1 This HIA Addendum has been prepared in line with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS, the Advisory Body to the World Heritage Committee) in January 2011 (ICOMOS 2011) and follows the method set out in Section 5 of the Main HIA [APP-195].

2.1.2 This HIA Addendum makes reference to the 2019 Operational Guidelines for Implementation of the World Heritage Convention (UNESCO World Heritage Centre 2019), which update the 2017 Operational Guidelines used in preparing the Main HIA [APP-195]. The relevant sections of the Operational Guidelines remain unchanged from the 2017 version.

2.1.3 The Main HIA [APP-195] and ES [APP-044] contain the wider baseline information and descriptions of the development and context of the WHS, and of the Scheme. These documents were submitted to the Planning Inspectorate in October 2018 and published on their website.

2.1.4 The HIA Guidance (ICOMOS 2011) notes that data sources may be “in a state of flux” (ICOMOS 2011, para. 3-3) and that “Assessment processes can be very lengthy and data sources may require periodic “refreshment”. It says that “Collection of information during the HIA is an iterative process […].” (ICOMOS 2011, para. 4-4). It also notes that “There are no agreed minimum standards for inventories, data review or condition surveys […]. Such matters need to be proportionate to the property and its management needs. It is desirable that the HIA documentation stage is as comprehensive as possible, including developing an archive.” (ICOMOS 2011, para. 3-1). For this reason, an HIA Addendum has been prepared to complement the existing Main HIA, specifically addressing the Durrington Walls discovery and the large pit-like geophysical anomalies.

2.2 Published works

2.2.1 The HIA Scoping (Highways England 2018a), Main HIA [APP-195] state the sources used to compile data. This includes the SHLP’s published data, discussed in the Main HIA’s Annex 4 Previous archaeological and antiquarian investigations within the Stonehenge part of the World Heritage Site [APP-199] and noted in Appendix 6.3: Gazetteer of Archaeological Assets [APP-212].

2.2.2 The Main HIA notes that “Unpublished geophysical survey data for the Scheme and within a limited buffer was kindly released to the A303 project from the Stonehenge Hidden Landscapes Project team.” [APP-195, para. 5.36.17h]. This data and interpretation of the plots was provided for the Scheme corridor including the DCO boundary, but not for the wider areas beyond this, including the area in which the Durrington Walls discovery is

located. As such, the SHLP data relating to the Durrington Walls discovery was not released to the Scheme and has not yet been released.

2.2.3 This HIA Addendum focuses on the Durrington Walls discovery, updating the Main HIA to take account of the preliminary findings reported in a paper published online on 21 June 2020 (Gaffney et al. 2020); hereafter the "2020 SHLP paper". These features were first identified during geophysical survey in 2012–13 undertaken by the SHLP, and further surveyed in August 2019; three were core sampled in October 2019. This data for the area beyond the Scheme corridor was requested, but was not released by the SHLP to Highways England at the time the ES and HIA were being prepared, and the preliminary findings were not made available to include in the Examination discussions.

2.3 Assessment assumptions and limitations

2.3.1 The following assumptions and limitations apply:

- Due to timescales for submission to the Secretary of State and Covid-19 restrictions, the position of each anomaly, as identified in the 2020 SHLP paper, has not been revisited since the release of the 2020 SHLP paper.
- Data used in this HIA Addendum derives from the Main HIA; therefore, the assessment assumptions and limitations of the Main HIA [APP-195, para. 5.6.17] also apply to this HIA Addendum.
- The HIA is reliant on published and publicly available information.
- The HIA has been prepared in the absence of the full primary geophysical survey datasets and interpretations held by the SHLP, which have been requested but have not been released into the public domain.
- This is an Addendum to the main Scheme HIA [APP-195], not a standalone document.
- The HIA Addendum takes the preliminary interpretation of the Durrington Walls discovery, and stated interrelationships with other heritage assets, at face value. The Applicant notes that the interpretation and significance of this and other previous claimed discoveries are subject to ongoing critical review and debate.

2.3.2 This HIA Addendum takes the 2020 SHLP paper's interpretation of the Durrington Walls discovery, and the potential interrelationships with other heritage assets stated in the 2020 SHLP paper, at face value in order to carry out a precautionary, worst-case scenario impact assessment. This does not mean that this HIA Addendum, or the Applicant, endorses or agrees with the assertions, interpretations and theories presented in the SHLP 2020 paper. This HIA Addendum does not debate the significance or interpretation of the findings stated in the 2020 SHLP paper. The Applicant notes only that, given its very recent publication, it is likely that the 2020 SHLP paper and its findings will be the subject of academic review and debate in the future.

2.4 Scope of assessment

2.4.1 For analytical purposes, this HIA Addendum considers the following aspects reported in the 2020 SHLP paper:

- The 'southern arc' of geophysical anomalies and associated features;
- The northern and northeastern 'arc' geophysical anomalies, located along the course of a dry valley and interpreted as sinkholes/dolines, and associated features;
- Other pit-like anomalies located within the WHS; and
- Other pit-like anomalies located beyond the WHS boundary, but within the setting of the WHS.

Aspects of the Durrington Walls discovery

2.4.2 This HIA Addendum considers both the Durrington Walls discovery and the other pit-like anomalies as they are noted in the 2020 SHLP paper (Gaffney et al. 2020), and discussed in the late representation made on behalf of the Consortium of Archaeologists and the Blick Mead Project Team and accompanying statement of Paul Garwood (PINS Ref: TR010025-001960; Consortium of Archaeologists and the Blick Mead Project Team, 2020) and in a letter providing information in relation to the recent archaeological find within the World Heritage Site submitted to the Secretary of State for Transport by the Stonehenge Alliance (PINS Ref: TR010025-001961; Stonehenge Alliance, 2020).

2.4.3 This HIA Addendum focuses on the nature of the Durrington Walls discovery and the anomalies, its contribution to Attributes expressing the Outstanding Universal Value (OUV) of the WHS; its relationship to known heritage assets, Asset Groups and the WHS landscape; and the distribution and potential significance of discrete and isolated anomalies in the WHS landscape and beyond the WHS boundary.

2.4.4 This Addendum assesses the impacts of the Scheme and the resultant effects on the Durrington Walls discovery, heritage assets potentially related to the discovery, and discrete and isolated large pit-like geophysical anomalies identified elsewhere in the WHS and beyond the WHS boundary as highlighted in the 2020 SHLP paper (Gaffney et al. 2020). In accordance with the assessment conducted for the Main ES [APP-044] and Main HIA [APP-195], impacts are assessed, and the resultant effects noted in relation to the OUV, Integrity and Authenticity of the WHS.

Relevance of chronological periods represented by the Durrington Walls discovery

2.4.5 The Statement of Outstanding Universal Value (SoOUV; UNESCO 2013) clearly sets out that those sites that contribute to OUV relate to monuments built from c. 3700 to 1600 BC i.e. the **Early Neolithic to the Early Bronze Age (inclusive)**. As in the Main HIA [APP-195], Mesolithic sites and Middle Bronze Age and later sites are scoped out of this HIA Addendum as they do not convey the Attributes of OUV defined in the SoOUV.

2.4.6 The Durrington Walls discovery is claimed to add to the extensive corpus of known sites within and in the vicinity of the WHS landscape, adding information on the possible layout, visual and spatial relationships of features in the landscape. Small-scale preliminary core sampling has yielded five dates ranging from the Mesolithic (6080–5990 cal BC; 4710–4550 cal BC) to the Early Neolithic (3930–3690 cal BC), Later Neolithic (2460–2200 cal BC) and Middle Bronze Age (1390–1130 cal BC). Of these, only the two dated to the Early Neolithic and Later Neolithic, both recovered from the same feature, reflect the time periods that contribute to OUV of the WHS. However, the 2020 SHLP paper itself acknowledges that "results are preliminary" and "the lack of a full chronology for the Durrington pits remains problematic" (Gaffney et al. 2020, 38).

2.4.7 The 2020 SHLP paper implies that the current exclusion of Middle Bronze Age aspects of the WHS from Attributes of OUV should be revised, as they suggest that one of the pits – and therefore the 'monumental structure' was maintained into the Middle Bronze Age (Gaffney et al. 2020, 38). However, the Middle Bronze Age does not express OUV as currently defined. The WHS Management Plan 2015 notes that instead, these come under 'other values', which include "the archaeological and historical significance of other periods from the Mesolithic onwards, continually augmented by new discoveries, social value and local needs, educational resource, ecological value, tourism, agriculture and other economic activities." (Simmonds & Thomas 2015, 25). These other values are not pertinent to OUV, and therefore are beyond the remit of the Main HIA [APP-195] and this HIA Addendum.

2.4.8 It should be noted that OUV is defined at the time a World Heritage property is inscribed on the World Heritage List and cannot be changed without a re-nomination which goes through a full evaluation process (ICOMOS 2011, paras. 4–8).

Asset groups

2.4.9 This HIA Addendum refers to Asset Groups and discrete and isolated heritage assets that convey the Attributes of OUV of the WHS. Although these are not in themselves individually of OUV, they collectively express the Attributes that are the basis of the designation of the WHS as identified in the 2008 Statement of Significance (UNESCO 2008). Heritage assets have been grouped with reference to the Attributes of OUV in relation to their location (e.g. proximity and topography), date and inter-relationships (e.g. inter-visibility and grouping). This approach was endorsed in the 2015 Joint World Heritage Centre / ICOMOS Advisory Mission report (ICOMOS 2016, 10). Further details are set out in the Main HIA [APP-195, section 5.10).

2.5 Evaluation of heritage resource

2.5.1 The evaluation method used is that set out in appendix 3A of the ICOMOS HIA guidance (ICOMOS 2011).

World Heritage Site

2.5.2 The OUV of the WHS is already, by definition, a superlative of international significance. This is further detailed in the Main HIA [APP-195], in section 5.7, Evaluation of heritage resources. It is not considered that the Durrington Walls discovery can alter the value ascribed to the WHS, which is already a heritage asset of the highest significance (DfT 2014, National Policy Statement for National Networks (NPSNN) para. 5.131), defined in Environmental Impact Assessment (EIA) terms as being of **Very High** significance.

Heritage assets including the Durrington Walls discovery and other pit-like anomalies in the landscape

2.5.3 The value attributed to heritage assets is based on relevant legislation and policy, as described in the Main HIA [APP-195], in section 5.7, Evaluation of heritage resource.

'Southern arc' of geophysical anomalies and associated features: the 'Durrington Anomalies'

2.5.4 The 'southern arc' of geophysical pit-like anomalies ('Durrington Anomalies' 1A-9A) and associated possible alignment of smaller posts/pits has been subject to very limited ground truthing. Coring undertaken on three of the 'Durrington Anomalies' indicates that one pit may have been open during the Neolithic, and another possibly recut during the Middle Bronze Age. The features are intact and extant, with some disturbance of uppermost horizons but broadly good Integrity.

2.5.5 The 2015 WHS Management Plan expands upon the 2013 SoOUV Statement on Authenticity, relating Authenticity to each of the seven Attributes of OUV. With regard to the siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape, it notes: "Relationships between the surviving Neolithic and Bronze Age funerary and ceremonial sites and monuments and the landscape remain at least as clear as they were in 1986. Archaeological work such as Stonehenge Landscape and the Stonehenge Riverside Project has increased our understanding of these relationships. Analysis of the extensive data arising from the recent Stonehenge Hidden Landscapes project will also add to our understanding. […] Extensive geophysical survey across the WHS including recent results from the Stonehenge Hidden Landscapes project is also improving our understanding." (Simmonds and Thomas 2015, 36, cited in [APP-195, p.154]. The character, nature, meaning(s), use(s) and date ranges of the 'Durrington Anomalies' are uncertain and speculative at present, so it is assessed that their Authenticity is not presently proven.

2.5.6 If the 2020 SHLP paper's interpretation is justified, the 'southern arc' and associated post-line would express individual Attributes that convey the OUV of the WHS, and relationships with other sites expressing Attributes of OUV, including AG33 Durrington Walls Henge and AG39 Larkhill

Causewayed Enclosure. The significance of the 'southern arc' elements of the Durrington Walls discovery is, for the purposes of this assessment as set out in 2.3.2 above, assessed as **potentially Very High**.

Northern and northeastern 'arc' of previously excavated features

2.5.7 The northern (10D to 13D) and northeastern features (14D & 15D) are located along the course of a dry valley to the north of the WHS. These were subject to geophysical survey followed by professional excavation undertaken in advance of development. The features were interpreted by their excavators as geological solution hollows/ sinkholes/ dolines, containing some cultural material as they act as 'traps', and associated with archaeological deposits and activity. Post-hole alignments may have been built adjacent to some.

2.5.8 Of the ten anomalies eight of them (10D, 11D, 12D, 13D, 14D, 15D, (iii) and (iv)) are located in areas that have been developed by the Ministry of Defence since 2010. Six of these were identified by geophysical survey and partially excavated and two were identified in areas being archaeologically monitored during machine stripping, but were not subject to further sample excavation due to engineering and safety constraints. Of the two other features, one was previously known (ii) and was identified from aerial photographic evidence in the National Mapping Programme, while (v) is 'new' information and was identified as a cropmark in an arable field recently by Paul Garwood.

2.5.9 The 'northern arc' of anomalies is new information, which was not included in the Main HIA [APP-195], as most of the features are located beyond the WHS boundary and are between c. 1.6 and 2.3 km distant from the Scheme.

2.5.10 The 2020 SHLP paper relates these features to AG39 Larkhill Causewayed Enclosure and the 'southern arc', suggesting that the southerly pits were solution hollows/ sinkholes/ dolines that were enhanced or constructed to mirror the northern pits to form a 'massive pit circle', perhaps a sacred boundary, around AG33 Durrington Henge, opening onto the River Avon to the east.

2.5.11 The excavated northern and northeastern features are located outside the WHS boundary. Any relation to Attributes conveying the OUV of the WHS is speculative, based on the theory that they may be an underlying geological source for the wider 'massive circle'. Most have been excavated and the land is now developed: sites 10D–15D and (iii) have no surviving archaeological interest or evidential potential, and no remaining Integrity. Their identified significance is assessed as **Negligible**, as they are assets with little or no surviving archaeological interest.

Other pit-like anomalies located within the WHS & pit-like anomalies located outside the WHS and in the vicinity of the Scheme

2.5.12 The 2020 SHLP paper notes “Some 18.4km² of landscape has been subject to geophysical survey for archaeological purposes over many years. There are a number of substantial pit-like anomalies within these datasets, including individual features that may be comparable in size to the Durrington pits and which have also been interpreted as solution features (Highways Agency 2019a, 5.1.9 [REP1-041]; 2019b, 203 [REP2 -038]). Despite this, no comparable group of features have been reported from this extensive dataset, and currently the alignment of features at Durrington is unique. The character and significance of the remaining features, and their distribution, awaits detailed investigation.” Figure 9 in the 2020 SHLP paper illustrates the location of probable and potential features over 5m in diameter; these are illustrated on Figures 2–8 in this HIA Addendum.

2.5.13 The Main HIA [APP-195] describes the process for assigning significance to non-designated isolated and discrete assets including isolated possible barrows and burials, settlement and occupation sites, isolated pits and pit groups, and a range of features identified in the course of archaeological evaluation fieldwork.

2.5.14 It notes that “extant sites or monuments of proven Early Neolithic to Early Bronze Age date, and located within the WHS [are] assessed to be of Very High value as these assets convey Attributes of OUV […]. It is problematic to assess the value of geophysical anomalies and sites plotted from aerial photographs, such as [small] pits, where the date and character of sites are not proven. Where the date is unknown and the form of monuments is not diagnostic, the value is assessed as unknown.” [APP-195, 478].

2.5.15 In the Main HIA, all possible large circular features identified by geophysical survey and on aerial photographs were cautiously assessed to be of Very High value as they may convey Attributes of OUV [APP-195, 477–8].

2.5.16 For the purposes of this assessment as set out in para. 2.3.2 above, discrete and isolated large pit-like anomalies assessed in this HIA Addendum are assessed as **potentially Very High** value.

2.6 Assessment of scale of specific impact and change

2.6.1 The scale of impact is assessed based on Guidance on HIAs for Cultural World Heritage Properties (ICOMOS 2011, appendix 3A). This is set out in the Main HIA [APP-195], section 5.8. No updated guidance has been published since the publication of the Main HIA [APP-195] or Main ES [APP-044] in October 2018.

2.7 Evaluation of overall impact

2.7.1 The method for the evaluation of overall impact is set out in the Main HIA [APP-195], section 5.9.

2.8 Matters considered in this HIA Addendum

2.8.1 This HIA Addendum considers and assesses the impact of the Scheme on Attributes of the OUV of the WHS including the newly-published features. This includes assessment of the setting and relationships between the monuments within the visual envelope of the WHS.

2.8.2 This HIA Addendum:

- Assesses the significance of the Durrington Walls discovery, the theory of a 'monumental structure' or 'massive, Later Neolithic' 'circle' of pits surrounding Durrington Walls Henge described in the 2020 SHLP paper (Gaffney et al. 2020), in terms of its contribution to Attributes expressing the Outstanding Universal Value (OUV) of the WHS, Authenticity and Integrity, and assesses potential Scheme impacts upon their fabric and setting, in accordance with ICOMOS Guidance on HIA (ICOMOS 2011);
- Considers the temporal and spatial relationships of the Durrington Walls discovery with known archaeological assets and Asset Groups, visual relationships and inter-visibility, geological and topographical aspects, landscape layout and astronomical alignments of the WHS;
- Considers the character, interpretation and distribution of other large pit-like anomalies in the Stonehenge landscape, illustrated in the 2020 SHLP paper (Gaffney et al. 2020, figure 9), in relation to geology and topography, addressing:
    - Natural features with evidence for human use and presence of material culture and material dated to the Neolithic and Bronze Age.
    - The interplay between geology, topography, the development of the prehistoric landscape and the distribution of monuments.
    - Potential visual relationships and inter-visibility of these areas with each other.

2.8.3 This HIA Addendum also considers the contribution of the Durrington Walls discovery to other aspects of the WHS, including tourism and the visitor experience; public understanding of OUV; public visibility of monuments from the current A303; archaeoastronomical aspects; and intangible cultural heritage, including spiritual aspects and cultural influences.

2.8.4 This analysis enables a reasoned assessment of potential Scheme effects on the Durrington Walls discovery, and has not identified any implications for the Heritage Impact Assessment presented in the Main HIA [APP-195].

2.9 Natural and cultural features

2.9.1 There is a continuum between natural features and human activity in the landscape. Natural geological and topographic features are fundamental in structuring landscapes. These blurred boundaries are common and not unexpected in the Stonehenge landscape, which demonstrates cultural development related to natural features, and the influence of 'natural' aspects – from the underlying geology to horizon views and astronomical alignments – on the layout, distribution, density, organisation, sequence

and inter-relationships of monuments and each other, and monuments and the landscape.

2.9.2 Solution features are common in this Chalk landscape. The Report on the Geology of Sheet 298 Salisbury and its adjacent area (Hopson et al. 2006) describe their formation, context and distribution in detail:

> "[…] 'buried' and 'subsidence' sinkholes are common on the Chalk. The term sinkhole is interchangeable with the term doline, and can also be applied to surface features where a stream wholly or partially disappears underground.
>
> Buried [sinkholes] are typified by 'pipe' or cone-like cavities within the chalk […], infilled by the overlying deposits that have subsided into the cavity as a result of dissolution. Most are circular or oval in plan and can be many metres deep, often bifurcating into several smaller 'pipes' at depth. They often have *no surface expression* and are commonly infilled with flinty gravelly clay derived from the superficial cover, usually clay-with-flints.
>
> Subsidence sinkholes are closed surface depressions, usually either bowl, pipe or cone-like in shape. They can occur as isolated examples or as groups, often coalescing into large composite dolines. They can form rapidly as a dropout failure following the washing out of pre-existing infilled pipes. Most occur in covers of unconsolidated sediment between 1-10 m thick, such as the clay-with-flints and older head." (Hopson et al. 2006, 212).

2.9.3 These features are often associated with dry valleys:

> "Topography and drainage patterns affect the distribution of solution features. Dissolution is enhanced where underground drainage routes are concentrated such as along valley floors and at spring lines. Typically the chalk is far more weathered under valley floors than under interfluves." (Hopson et al. 2006, 214).

2.9.4 Regarding the distribution of solution features, the Geological Survey Report notes:

> "Many sinkholes have been ploughed in or landscaped so the distribution of solution features marked on the updated geological maps is certain to be an underestimate of the true density. Others have been worked as chalk pits and some 'dolines' may simply be small, degraded marl pits. Furthermore, many solution features such as the infilled 'pipes' often have no surface expression and cannot be identified by surface mapping." (Hopson et al. 2006, 215).
>
> Minor solution features occur widely throughout the area, especially where there is a thin superficial cover, although many

> of these are likely to have been ploughed in and obliterated or worked as [marl] pits. Solution features ('bourne holes') can be expected to occur along the middle and upper reaches of the Bourne, Till and Chitterne Brook where significant recharge into the aquifer occurs. These may act as either sinks or springs depending on relative groundwater levels." (Hopson et al. 2006, 216)

2.9.5 These sinkholes often become 'traps' for cultural material, whether deliberate deposits, discarded waste, or material accidentally incorporated through erosion, ploughing and soil formation processes.

2.9.6 This continuum and the mutual influence of nature and culture are particularly important in understanding prehistoric places and in assessing impacts upon archaeological landscapes. "The fact that some of the pits in the Durrington structure were formed by geological processes does not preclude them from being part of a coherent meaningful monument." (Darvill 2020).

2.9.7 As the Main HIA notes, "intentional references to topographical variations and/ or other aspects of the natural landscape may also have motivated the siting of […] monuments." "The siting of monuments may have played a role in expressions of territoriality or the construction and maintenance of identities, or may have been intended to create or reinforce associations with aspects of the natural landscape that were imbued with meaning by prehistoric communities" [APP-195, 172–3].

2.10 Referencing of heritage assets

2.10.1 Referencing of the Durrington Walls discovery: the southern and the northern 'arcs' of previously excavated features follows that in the 2020 SHLP paper. These are illustrated on Figures 2–8 in this Addendum.

2.10.2 Numerous other large pit-like anomalies within and beyond the WHS are illustrated in the 2020 SHLP paper (Gaffney et al. 2020, figure 9), but not numbered. For clarity and to enable comparison with existing project data, existing A303 Scheme unique identification numbers, National Heritage List Entry (NHLE) numbers and Wiltshire and Swindon Historic Environment Record (WSHER) numbers, have been cross-referenced to these. These are illustrated on Figures 2–8 in this Addendum.

2.10.3 Reference is also made to Asset Groups; the rationale for the definition of Asset Groups is set out in the Main HIA [APP-195], section 5.10. Asset Groups are described in the Main HIA, section 6.9 and discrete and isolated assets, in section 6.10. These are illustrated on Figures 4– 7 in this Addendum.

2.10.4 Known assets are tabulated in the Main HIA, annex 2 – Inventory with summary descriptions of Asset Groups, individual sites and elements [APP-197]. Main HIA annex 4 [APP-199] sets out previous archaeological and antiquarian investigations within the Stonehenge part of the WHS.

Astronomical relationships are addressed in Main HIA annex 5 [APP-200]. Main HIA annex 6 [APP-201] considers influences on architects, historians and archaeologists, including the development of archaeological prospection methods and analytical technologies.

2.10.5 A glossary and list of abbreviations are provided in the Main HIA [APP-195], in section 14, Glossary of terms used and section 15, Abbreviations.

3 Baseline information: the Durrington Walls discovery

3.1 WHS history and description

3.1.1 The site history and description related to previously known and published heritage assets is set out in the Main HIA [APP-195], Asset Groups (section 5.10) and discrete and isolated assets (section 6.10).

3.2 Description of new discovery associated with Durrington Walls Henge

3.2.1 A series of geophysical anomalies has been discovered south of the Durrington Walls Henge (Asset Group AG33 – Durrington Walls, Woodhenge and Associated Sites in the Main HIA [APP-195]). They were identified during fluxgate gradiometer survey undertaken by the SHLP in 2012–13. The paper describes these features, and considers them in the context of known pit-like anomalies and excavation sinkholes/dolines/ solution features notes to the north, at Larkhill and Durrington. These are illustrated on Figures 2–8.

'Southern arc' (1A – 9A)

3.2.2 Nine similarly sized, circular magnetic anomalies (**Anomalies 1A – 9A**) were mapped between 812-979m south of the Durrington Walls Henge, an arc over 1.5km long, from approximately National Grid Reference (NGR) 414170 14306 to 415460 142708 . The anomalies "comprise a disc of enhanced magnetic readings, 15-20m in diameter, and surrounded by a slightly less magnetic 'halo'." (Gaffney et al. 2020, 3). A tenth anomaly (Anomaly **(i)**) is tentatively included within this group.

3.2.3 Six of these anomalies **1A**, **2A**, **3A**, **5A**, **8A** and **(i)** are new information identified through the SHLP geophysical surveys and not previously recorded in national or local heritage records. These were therefore not part of the baseline assessed in the Main ES [APP-044] and the Main HIA [APP-195].

3.2.4 Four anomalies were previously known and were assessed as part of the Main ES [APP-044] and the Main HIA [[APP-195, 382–390, 473 and 474–475]. Three anomalies correspond to previously known features, scheduled monuments previously interpreted as levelled round barrows (**Anomalies 4A, 6A, and 9A**), and one coincides with a possible barrow previously recorded on aerial photographs (**Anomaly 7A**).

- **Anomaly 4A** corresponds to the scheduled remains of a bowl barrow 400m north of the A303 on Countess Farm (NHLE 1009138; HER MWI12963; ES UID 4011; Site Amesbury 151 (RCHME 1979)). Noted as a cropmark on aerial photographs during the National Mapping Programme (Crutchley 2002).
- **Anomaly 6A** corresponds to the scheduled remains of a bowl barrow 450m north of the A303, on Countess Farm (NHLE 1009137; HER MWI12962; ES UID 4008;

Site Amesbury 146 (RCHME 1979)). Noted as a cropmark during the National Mapping Programme (Crutchley 2002).

- **Anomaly 7A** is noted as a cropmark during the National Mapping Programme (Crutchley 2002). These are recorded in the WSHER as “possible barrows northeast of the Avenue on Countess Farm” (HER MWI72763; ES UID 4077.02).
- **Anomaly 9A** corresponds to the scheduled remains of a bowl barrow 170m south east of Strangways on Countess Farm (NHLE 1009145; HER MWI12957). Noted as a cropmark during the National Mapping Programme (Crutchley 2002).

3.2.5 A separate set of potentially, related features is associated with these large anomalies: an alignment of smaller posts/pits runs parallel to features 6A to 9A.

3.2.6 Further geophysical survey was undertaken by SHLP on some of the anomalies in August 2019, with ground penetrating radar (GPR) survey on 1A, 7A and 8A, and electromagnetic conductivity survey on Anomalies 7A and 8A. Additional GPR survey was undertaken on features 5A and 7A in October 2019.

3.2.7 The 2020 SHLP paper’s interpretation of GPR profiles maintains that Anomalies 1A, 5A, 7A, 8A had vertical sides; at the same time, suggesting that the large surface diameter was interpreted as representing the effect of weathering cones, and any central shafts may be smaller in diameter. Time-slices indicated a depth of at least 3m for Anomalies 7A and 8A.

3.2.8 In October 2019, Anomalies 5A, 7A and 8A were subject to percussive coring “to assess the stratigraphy of the features and to assess whether they may have been the result of natural processes”. This investigation found:

- **Anomaly 5A** was at least 7m deep.

  The sequence comprised reddish-brown, yellowish-brown and brown clay silts including occasional flint and clay clasts. Charcoal and bone fragments throughout the sediments between 4.5m to c. 5.25m. The core was fragmentary between 5.25m to 6m and, below this significant break, the sediments were characterised by firm and cohesive, yellowish-brown clay silts with small chalk clasts. These were bedded with very weakly defined darker brown horizons.

  Neither visual inspection of the core, nor radar data, could provide certain evidence for a base to this feature. Geologically, this pit sits within an area mapped by the British Geological Survey as containing 'Head', a solifluction deposit that locally can achieve thicknesses of up to 6m, and it is likely that the feature is cut into these sediments.

  Luminescence dating (OSL) BH3 indicated that the upper unit accumulated gradually over time, then age-related accumulation of rapidly deposited sediments occurred, with either a clear stratigraphic break, or a prolonged chronology to deposition of sediment.

  Middle Bronze Age radiocarbon date at 95% probability: 1340 cal BC (13%) or 1310–1160 cal BC (79%) or 1150–1130 cal BC (3%).

- **Anomaly 7A** reached bedrock at c. 4.8m BGL.

  Upper fills characterised by yellowish brown clay silts and chalk rich silts. The lower layers have variously unconsolidated clay silts within chalk and flint clasts. Base of feature sharply defined and characterised by white fractured chalk bedrock.

  Sampled shell yielded a Mesolithic radiocarbon date at 95% probability: 6080–5990 cal BC.

- **Anomaly 8A** reached bedrock at c. 4.8m BGL.

  Upper fills were characterised by yellowish brown clay silts and chalk rich silts. The lower layers have variously unconsolidated clay silts within chalk and flint clasts. Bone fragments and a struck flint in lower layers between 4.65m and 4.76m BGL. Base of feature sharply defined and characterised by white fractured chalk bedrock.

  Luminescence dating (OSL) BH2 indicated redeposition at 1.35 to 4.52m BGL.

  Radiocarbon dates at 95% probability: Late Neolithic/Early Bronze Age, 2460–2270 cal BC (78%) or 2260–2200 cal BC (17%).

'Northern arc' of geophysical anomalies (10D–15D)

3.2.9 A series of large pit-like features have previously been investigated by Wessex Archaeology north of Durrington Walls as part of the Army Basing Programme. They were recorded during geophysical survey and trial trench evaluation at the Larkhill (East Site) (Features 10D – 13D), and at the site of the former Ministry of Defence Headquarters building (Features 14D and 15D).

3.2.10 The 2020 SHLP paper notes that "The general presumption, therefore, in respect of this group of features was that, while the features were certainly associated with significant archaeological deposits and activity, they were likely to be of natural origin and probably related to a series of solution features following the dry valley."

3.2.11 Four features, 10D to 13D, were mapped through geophysical survey at Larkhill (East Site) (Thompson and Powell 2018; Schmidt and Crabb 2017; Urmston 2014):

- **Feature 10D** (Anomaly 4008, Urmston 2014) "was partially excavated by Leivers and Thompson (2015) when the feature was identified as a sinkhole, and a machine slot was excavated to a depth of 2m across the hollow. Middle Bronze Age ceramics were recovered from this feature (Leivers and Thomson 2015)."
- **Feature 11D** (Anomaly 4007, Urmston 2014; Anomaly 6014, Schmidt and Crabb 2017). Interpreted as a solution hollow on the basis of the similarity of magnetic response and the results of partial excavation. "trenched by Leivers and Thompson (2015) as feature 11207, in trench 112. This records that the feature was 'at least 18m in diameter and

over 1.5m deep [2.7 metres below current ground surface]: the base of the sinkhole was not revealed due to health and safety concerns. The feature had a moderately steep (c. 40°) edge and was filled with a homogenous loose pale yellow brown silty clay.' (Leivers and Thompson 2015, 66). The presence of Bronze Age ceramics is also noted from within this feature (Schmidt and Crabb 2017, 4; Leivers and Thompson 2015, 11–12).

- **Feature 12D** (Anomaly 4006, Urmston 2014; Anomaly 6015, Schmidt and Crabb 2017). Interpreted as a solution hollow by the excavators on the basis of the similarity of magnetic response and the results of partial excavation.
- **Feature 13D** (Anomaly 6016, Schmidt and Crabb 2017). Interpreted as a solution hollow by the excavators on the basis of the similarity of magnetic response and the results of partial excavation.

3.2.12 A further alignment of 17 post-holes of varying sizes was recorded over some 260m, south of the line of large pits 11D to 13D (Leivers et al. 2020). The only readily datable material recovered from these features was Late Neolithic/Early Bronze Age pottery from one feature. The entire group is, however, considered likely to be of Late Neolithic date based upon a presumed connection with a similarly aligned group of post-holes at the former Ministry of Defence Headquarters at Durrington, described below, which if projected westwards could feasibly join to this group.

3.2.13 Two features, 14D and 15D, were partially excavated at the site of the former Ministry of Defence Headquarters building in Durrington (Thompson and Powell 2018, 40–41). Associated post-hole alignments were also recorded.

- **Feature 14D** (Feature 6257; Thompson & Powell 2018). Excavated to 3.1m depth where its shaft was presumed to contain natural sediments (Thompson and Powell 2018, 15-16). Believed to have a narrower central [solution] shaft. Produced an early Middle Bronze Age date of 1690–1520 cal BC (95% probability; SUERC-50628, 3327±31 BP). Interpreted as a solution hollow by the excavators on the basis of the similarity of magnetic response and the results of partial excavation.
- **Feature 15D** (Feature 6513; Thompson & Powell 2018). Interpreted as a solution hollow by the excavators on the basis of the similarity of magnetic response and the results of partial excavation. Only excavated to 1.2m depth, although its (assumed) central shaft was machine-augered to a depth of 6m (Thompson and Powell 2018, 40–41).

3.2.14 Two intersecting post-hole alignments were located south of features 14D and 15D over a distance of 240m (Thompson and Powell 2018, fig.3.1). Radiocarbon dates from these features provided a construction date for the post alignments between 2670–2550 cal BC (87% probability; earliest sapwood) and a date for the decommissioning of the alignments within the range of 2575–2470 cal BC (at 95% probability; earliest bone; Thompson and Powell 2018, 111).

Potential features associated with 'southern arc' and northern sinkholes

3.2.15 The paper notes a further series of features, potentially forming part of the 'arcs', as follows:

- **Feature ii**: noted during National Mapping Programme (Crutchley 2002), coincides with a dip noticeable in LiDAR data on a projected line between the 'southern' and 'northern arcs'. Similar to cropmarks associated with Anomalies 4A, 6A, 7A and 9A.
- **Features iii & iv**: "originally marked on the planning constraints map for the Army Basing plan at Larkhill (DIO 2017, 20; Daw 2018). These circular/ovoid features were identified following an area strip and fluxgate gradiometer survey […] Unexcavated, they demonstrate a strong similarity, in dimensions and shape, to features 10D to 15D, and are also on the alignment of a larger group of features as the newly discovered Larkhill Causewayed enclosure is approached." Feature (iv) appears to coincide with a Prehistoric Ring Ditch, Larkhill Artillery Range noted in the HER (MWI76661), derived from Larkhill East and West SFA Progress Plan, 2018 (Wessex Archaeology 2018).
- **Feature v**: a "distinctive circular crop mark […] identified by Paul Garwood in 2018, was located in open fields between Wessex Archaeology sites at Larkhill and Durrington. This feature is included here as, potentially, a fifth related feature on the basis of its similarity in size and form to excavated features north of Durrington, and its relationship to the arc of known features to the north of Durrington."

3.3 Assessment of significance of the Durrington Walls discovery

Description

3.3.1 The constituent elements of the Durrington Walls discovery include a 'southern arc' of geophysical pit-like anomalies and associated fence-line (Anomalies 1A-9A and post alignments, noting that it is only Anomalies 1A, 2A, 5A, 8A and (i) that are 'new' discoveries. Although some of these features may be of natural origin, the paper claims evidence for human use and modification, interpreting a 'geometric' patterning, a 'monumental circle' centred on the area of the Durrington Walls Henge.

3.3.2 In contrast, although the features to the north of the henge (10D-15D & intersecting post alignments) appear to form a linear sequence, this reflects their location along the course of a dry valley. The professional archaeologists from Wessex Archaeology who investigated these northern pits, via both geophysical survey and excavation prior to development, have interpreted these as naturally occurring sinkholes/dolines, which are common in this landscape context. In such hollows created by natural solutions, the upper fills often become compacted, trapping archaeological material in the accumulating matrix of soil and stone. As noted above, there

is a continuum between the natural and the cultural, and features can be both/and rather than either/or.

3.3.3 There is currently very limited information in the public domain regarding a number of anomalies or features that are said to form part of the Durrington Walls discovery, i.e. (i), (ii), (iii), (iv) and (v). Their significance is assumed to be related to the wider pit arc, as this is what the paper asserts; however, their value is presently Unknown, as the significance of the assets has not been ascertained.

3.3.4 The 2020 SHLP paper suggests that the southern pit arc may have been constructed or enhanced to reflect the northern sequence of sinkholes. Durrington Henge appears to be located broadly at the centre of the groups, with Larkhill Causewayed Enclosure possibly incorporated within the northwest of the 'pit ring', and apparently reflected in the northwest/ southeast axes of Durrington Henge.

3.3.5 The 2020 SHLP paper notes that "That general presumption that the group of features north of Durrington Walls were natural in origin and, probably, solution features gains some support in the geological literature. Such features are relatively common on the chalk and the available mapping is likely to provide an underestimate of their actual distribution (Hopson et al. 2006, 215). Some of the features recorded north of Durrington are set within a slight valley trending west-east towards the Avon. While such a topographic situation can provide the conditions that can lead to the development of solution features, the southern group of anomalies does not align with any similar topographic feature, and actually crosses higher ground above dry valleys. Consequently, the origins of the southern group of anomalies as solution features or doline is less likely."

Location

3.3.6 The 'southern arc' is located on land to the west of Countess Farm, on the western side of the River Avon Valley. The anomalies are situated within parcels of arable agricultural land which are bisected by a track and PRoW. To the south lie the Nile Clumps, which are woodland features associated with the former extent of Amesbury Park. High voltage pylons cross the landscape to the south of the arc and are a prominent feature. Trees and shrubs border the A303, located c. 377m to the south of the southernmost element of the arc, Anomaly 4A. To the east there are views of Beacon Hill, with further pylons in the distance, while to the south-east the Boscombe Down aircraft hangars and development south of Amesbury are apparent.

3.3.7 Unlike the northern series of sinkholes/dolines which are located along a dry valley, the 2020 SHLP paper suggests that the 'southern arc' appears to disregard dry valleys, which occur between 7A and 8A, and between 2A and (i), and crosses slight ridges (see Gaffney et al. 2020, fig. 18).

Relationship with AG31, Countess Farm Barrows

3.3.8 Some of the 'southern arc' of anomalies coincide with known cropmarks, previously tentatively interpreted as possible barrows. This area contains a scattered group of features identified as possible Bronze Age round barrows, which appear as cropmarks on aerial photographs. The nature of many of these possible barrow features is uncertain, as stated in the Main HIA in the section on AG31, Countess Farm Barrows [APP-195, 382–390].

3.3.9 Four of the nine newly discovered geophysical anomalies suggested to make up the 'southern arc' coincide with features identified on aerial photographs (National Mapping Programme) as possible barrows or ring ditches (**4A, 6A, 7A & 9A**). Many cropmark features with possible barrow or ring-ditch forms within the WHS have been scheduled as a precautionary measure; three of the anomalies coincide with scheduled cropmark sites (**4A, 9A & 6A**).

- **Anomaly 4A** corresponds to the scheduled remains of a bowl barrow 400m north of the A303 on Countess Farm (NHLE 1009138; HER MWI12963; ES UID 4011; Site Amesbury 151 (RCHME 1979)). Noted as a cropmark on aerial photographs during the National Mapping Programme (Crutchley 2002). The Main HIA considered this feature as a designated discrete asset that conveys Attributes of the OUV of the WHS [APP-195, 474–475].
- **Anomaly 6A** corresponds to the scheduled remains of a bowl barrow 450m north of the A303, on Countess Farm (NHLE 1009137; HER MWI12962; ES UID 4008; Site Amesbury 146 (RCHME 1979)). Noted as a cropmark during the National Mapping Programme (Crutchley 2002). The Main HIA assessed this feature as part of AG31A Countess Farm barrow group – north [APP-195, 382–390]..
- **Anomaly 7A** is noted as a cropmark during the National Mapping Programme (Crutchley 2002). It is not designated. These are recorded in the Wiltshire and Swindon Historic Environment Record as "possible barrows northeast of the Avenue on Countess Farm" (HER MWI72763; ES UID 4077.02). Main HIA assessed this feature as part of AG31A Countess Farm barrow group – north [APP-195, 382–390].
- **Anomaly 9A** corresponds to the scheduled remains of a bowl barrow 170m south east of Strangways on Countess Farm (NHLE 1009145; HER MWI12957). Noted as a cropmark during the National Mapping Programme (Crutchley 2002). The Main HIA considers this feature as a designated discrete asset [APP-195, 473] that conveys Attributes of the OUV of the WHS.

3.3.10 The Main HIA noted that heritage assets within AG31 Countess Farm barrow group had largely been identified from aerial photographs rather than ground-truthed: "[…] possible barrows or ring ditches have been noted on aerial photographs, although their identification is uncertain […]. The barrows have been truncated by ploughing with no visible surface expression, though some appear to be identifiable at ground level by subtle colour changes of the ploughsoil." [APP-195, 384].

3.3.11 As demonstrated by the excavation of the Wilsford Shaft (UID 2016; NHLE 1010833) (see 3.3.17 below), it is possible that Bronze Age barrows were

constructed over earlier shafts, including natural shafts enhanced by humans. These sites may combine barrows built over sinkholes/dolines, and/or natural sinkholes expanded into shafts/wells. The temporal sequences of features is presently poorly understood, as are questions of memory in the landscape, and our understanding of the purpose and meaning of the continuing modifications to and development of the monumental landscape.

Stated links to other monuments in the Stonehenge landscape

3.3.12 The paper asserts potential relationships with a number of other monuments in the landscape of Neolithic and Bronze Age date. These relationships rest on the location, form and character of pits and associated post-hole alignments, dating evidence, and their spatial relationships with the location and sequence of other monuments and monument groups in the landscape. Stated relationships or parallels include:

3.3.13 **Stonehenge AG22** [1010140, MWI12442, MWI12450, MWI12515, MWI12517, MWI12520, MWI12914, MWI12915, MWI12919, MWI74644, MWI74646, MWI74647]

- The 2020 SHLP paper states that "[…] the concept of the pit group acting as a complex boundary, perhaps with its putative, associated post structure, may also find local parallels in the arrangements of monuments and spaces within the Stonehenge landscape, and specifically the Stonehenge Envelope. (Gaffney et al. 2020).
- The paper notes the theory that the burial mounds surrounding Stonehenge defined an area within which only a select few entered (Parker Pearson and Ramilisonina 1998).
- It suggests that the features reflect a concern with 'imbued boundaries', noting that the area demarcated by the Stonehenge Envelope - the visual territory of Stonehenge- is approximately the same size as that bounded by the pits at Durrington. It notes, "It may be that we are witnessing a similar arrangement around Durrington Walls marked, uniquely, by the digging of massive pits laid out with reference to a much earlier monument, the Larkhill causewayed enclosure." (Gaffney et al. 2020).
- The Main HIA acknowledges this theory, noting "Parker Pearson and Ramilisonina (1998) have speculated that there was a dualistic relationship in which Stonehenge was associated with the dead, whilst Durrington Walls was seen as the land of the living, with the Avon forming part of a processional route between the two." [APP-195, 296].

3.3.14 Durrington Walls, Woodhenge and Associated Sites, AG33 [NHLE 1009130, 1009131, 1009133, 1009140, 1009141]

- The paper states that "The data presented here suggest that a series of features, most likely large pits, surrounds the Durrington Walls henge enclosure, and that this group represents an elaboration of the monument complex at a massive, and unexpected, scale." (Gaffney et al. 2020).
- An association is suggested with "Clusters of pit-like features that form larger groups […]" such as "the large pit circle identified by ground penetrating radar

beneath the banks of Durrington Walls followed survey by the SHLP (Gaffney et al. 2018). Up to 90 anomalies, measuring up to 4.5m in length and c. 1.5m in width, were identified following survey, but the circuit may have originally included several hundred similar features. Together, these form a major alignment largely coincident with the later bank of the henge. Initially interpreted as containing individual stones, excavation demonstrated that at least some of these features contained large wooden uprights. The arrangement of these pits is interpreted as a distinct structure that was not necessarily intended to prefigure henge construction or emulate henge enclosure design (Gaffney et al. 2018)".

- The paper implies a spatial and geometric association between the new discovery and Durrington Walls Henge, noting: "If the features identified here are part of a single, larger arrangement of pits, then the overall structure of the pit group may originally have been centred on the area of the henge at Durrington Walls. This structure may have approached the River Avon at either end, forming an arc with a diameter of more than 2km." (Gaffney et al. 2020).
- "The presence of an alignment of smaller geophysical anomalies, probably representing pits or large post-holes, within the circuit in the south-western sector of the circuit (6A-9A), may be reflected in the Late Neolithic post alignment recorded by Wessex Archaeology between pits 14D and 15D and pits 11D and 13D […] A similar arrangement of posts may be present between pits 6A to 8A […]. The potential presence of an intermittent inner ring, within the pit circuit, cannot be excluded." (Gaffney et al. 2020).
- Durrington Walls Henge is addressed in the Main HIA, as AG33 Durrington Walls, Woodhenge and Associated Sites [APP-195, 396–406].

3.3.15 The site of the Larkhill Causewayed Enclosure, AG39 [HER MWI76658]

- Larkhill Causewayed Enclosure was identified during evaluation and excavated in 2016 prior to development related to the Army Basing Programme. The causewayed enclosure sits just below the brow of the low hill occupied by Larkhill Camp, commanding broad views to the northeast across the valley of the river Avon towards Barrow Clump and Sidbury. It is located immediately north of the World Heritage Site. While most of the enclosure remains un-investigated within Larkhill Camp, projections of its size suggest that its entire circuit lies on the northern side of the hill, therefore looking out across the Avon valley rather than south and south-west towards Stonehenge. This added a significant axis to the Early Neolithic landscape north of the WHS. The projected diameter compares well with that of Robin Hood's Ball (AG14).
- The Lesser Cursus (AG11) appears to align with the new enclosure at Larkhill and the Greater Cursus (AG23) may have divided the Larkhill area from Stonehenge. The Larkhill Causewayed Enclosure also appears to align with the northwest/southeast axis of the Durrington Walls Henge (AG33) and its solstitial alignment.
- The 2020 SHLP paper states that "The circuit of pits appears to incorporate the position of the recently discovered Early Neolithic causewayed enclosure at Larkhill, which has been dated to 3780–3650 cal BC. Excavation of that site also identified a series of later post-holes, one of which provided a date of 2480–2290 cal BC and is roughly contemporary with the date provided for pit 8A." (Gaffney et al. 2020). The paper notes that the Early Neolithic causewayed enclosure was cut in the Later Neolithic, with "a line of six large post-holes, running roughly

south-west to north-east […] the orientation of these posts was recorded as having a best-fit azimuth […] close to the direction of the midsummer solstitial sunrise".

- The paper notes, "[…] features iii and iv [and] 10D to 15D […] are also on the alignment of a larger group of features as the newly discovered Larkhill Causewayed enclosure is approached." A "degree of similarity across the 20 features identified suggests that they could have formed part of a circuit of large pits around Durrington Walls, and this may also have incorporated the recently discovered Larkhill causewayed enclosure." "The northern group appears to align on the recently discovered Larkhill causewayed enclosure (Leivers 2017)."
- The suggestion that the action and visual effect digging pits in the 'southern arc' may make reference to the northern pits making up "a much earlier monument, the Larkhill causewayed enclosure."
- The site of the Larkhill Causewayed Enclosure is located outside the boundary of the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS, and is addressed in the Main HIA as AG39 Larkhill Causewayed Enclosure [APP-195, 438-443]. This notes all the key known aspects of the Enclosure, including its focus to the northeast and northwest, away from the Stonehenge monument. The Main HIA states that "It is likely that the Larkhill Causewayed Enclosure was a major focus of activity in the Early Neolithic landscape, and may have played a role in the subsequent development of the area." [APP-195, 440].

3.3.16 Coneybury Henge and Associated Monuments, AG29 [UID 3019; NHLE 1012375, 1012376, 1012390]

- In describing the potential significance of pits in the Stonehenge landscape, the paper notes "a pit discovered during magnetic surveys prior to the excavation of Coneybury Henge, and often referred to as the Coneybury Anomaly, has been associated with the remains of Neolithic feasting (Richards 1990, 40-61). More recently, re-analysis of the pit's contents has suggested this feature was also associated with occasional contacts between hunter-gatherer and farming communities that coexisted in the Stonehenge area (Gron et al. 2018)." Finds from the 1980 excavation confirmed a Late Neolithic date for the monument although an Early Neolithic pit ('The Coneybury Anomaly') and later Bronze Age features were also located.
- The Coneybury Anomaly is addressed in the Main HIA, as part of AG29, Coneybury Henge and Associated Monuments [APP-195, 365-372].

3.3.17 **Wilsford Shaft** [Designated discrete asset conveying Attributes of OUV of WHS: UID 2016; NHLE 1010833]

- This feature is scheduled as a Pond barrow south of the A303 and 400m west of Normanton Gorse containing the 'Wilsford Shaft'. The paper describes it as a "substantive feature […] excavated in 1960-2. Surrounded by a bank, and initially interpreted as a pond barrow (Ashbee et al. 1989), the central shaft measured 6m in diameter at the surface, tapered to 1.8m at a depth of 6m, and descended vertically to a depth of 30m. Although well-like in appearance, the shaft is usually interpreted as a ritual structure containing a range of deposits. Generally dated to the Middle Bronze Age, there is an associated Late Neolithic date from a wooden bucket at the base of the shaft (Housley and Hedges 1989).

- The paper notes that "[…] the available evidence cannot yet be taken to suggest that these pits should be directly compared with ritual shafts or wells found elsewhere, including Wilsford or the currently undated shaft at Belle Tout (Allen 2017) [East Sussex]. However, the broad date range from the Durrington pit group may provide an enlarged context for a tradition linked to the excavation of pits within the Stonehenge landscape and, in that sense, there may be a link." (Gaffney et al. 2020).
- The 'Wilsford Shaft' is addressed in the Main HIA, as a discrete, isolated designated heritage asset: scheduled pond barrow south of the A303 and 400m west of Normanton Gorse containing the 'Wilsford Shaft' (NHLE 1010833) [APP-195, 459-60].

3.3.18 The Greater Cursus, Amesbury 56 and Winterbourne Stoke 30 Round Barrows, and the Amesbury 42 Long Barrow, AG23 [NHLE 1009132]

- In describing the potential significance of pits in the Stonehenge landscape, the paper notes "two large pits located within either end of the Greater Cursus and located during fieldwork undertaken by the Stonehenge Hidden Landscapes survey project (Gaffney et al. 2012, 2). The visual connections of these pits with the area of Stonehenge itself suggest a complex linkage between the emergent monuments and the surrounding landscape."
- These large pits were also noted in the Main HIA, which states: "discoveries made during the Hidden Landscapes Project included two huge pits within the Greater Cursus, positioned on the solstitial alignment of the midsummer sunrise and midwinter sunset when viewed from the Heel Stone at Stonehenge. This may be evidence for a link between the earlier Cursus monument and Stonehenge, possibly related to processional activity and the astronomical associations of the henge (Anon 2011; Gaffney et al. 2012)" [APP-195, 298].

3.3.19 Discrete and isolated pit-like features, solution hollows/ sinkholes/ dolines

- In describing the potential significance of pits in the Stonehenge landscape, the paper notes that "isolated pits, pit groups, or even tree holes incorporating archaeological material, which may be purposeful but frequently defy interpretation at an individual level […] specific pits, frequently located through remote sensing, may also achieve significance through their wider spatial or geographical context, or their relation to other pits or archaeological features." (Gaffney et al. 2020).
- Isolated pits and pit groups are addressed in the Main HIA as non-designated isolated and discrete assets [APP-195, 477-480].

Condition of the Durrington Walls discovery

3.3.20 A formal periodic condition assessment was last undertaken in 2010–2011 for heritage assets in the WHS (Wessex Archaeology 2012). This survey assessed the condition of known features previously interpreted as barrows in the area of the 'southern arc' of the Durrington Walls discovery, some of which coincide with anomalies (see 4.2.4 below). The condition survey indicated that most of the barrows had been levelled; extant barrows were in poor or fair condition. Several had experienced negative change since

they were last surveyed in 2002 and many had undergone cultivation impacts. A number of barrows were affected by mole burrowing.

3.3.21 Most of the features in the 'northern arc' have been excavated prior to development and are no longer extant.

Attributes of setting of the Durrington Walls discovery

3.3.22 The 'southern arc' of pit-like anomalies lack surface expression, which greatly reduces their superficial legibility. The visitor perceives only arable and pasture fields with a backdrop of historic and modern vegetation, electricity pylons, and both the sight and sound of distant traffic on the A345, A303, the Packway and Larkhill Road. Other monument groups are visible from this area, most prominently the wooded King Barrow Ridge. Overall, the visitor gains no sense of place, nor of meaningful visual connections – either intra-group, or more widely within the landscape.

3.3.23 The visual aspects of setting therefore do not contribute to the significance of this group, though an archaeological setting –appreciable through aerial photography, mapping and digital survey plots – does exist.

3.3.24 The viewshed analysis presented in the 2020 SHLP paper suggests that although few of the pits would have been visible from ground level at Durrington Walls, they may have been visible from a viewer standing on the bank, assuming a former height of 3m. "Pits 1A to 9A to the south as well as 14D and 15D and areas further east, are in view. There is no visual link to the area of the causewayed enclosure at Larkhill." (Gaffney in Gaffney et al. 2020, Viewshed Analysis). The paper notes that "Viewsheds generated from the outline of the henge provide no clear relationship with the positions of the recorded features overall […]. None of the features to the north are within sight of the monument, while those in the south are only variably placed in relation to views of the henge. While some features in the south may either see or be seen from the henge, none of the positions occupied by these features provides a quality view towards Durrington Walls that might be anticipated if such a characteristic was deemed to be important to the communities who excavated these pits […]. Neither is there a specific visual link to the location of the earlier causewayed enclosure at Larkhill. That monument's view is predominantly orientated to the north and east." (Gaffney et al. 2020).

3.3.25 The 2020 SHLP paper concludes that the strength of relationships with other monuments lies in the positioning of the features at a broadly similar distance from Durrington Walls Henge, rather than in its visual relationships.

3.3.26 The setting of the 'northern arc' of solution hollows could be said to reflect the topography and geology of the area. Solution hollows are a common feature of chalkland landscapes. The 'northern arc' of solution hollows follows a dry valley. The paper speculates that "This structure may have approached the River Avon at either end, forming an arc with a diameter of more than 2km." (Gaffney et al. 2020).

Integrity of the Durrington Walls discovery

Wholeness

3.3.27 The 'southern arc' of the Durrington Walls discovery is largely located within the WHS. The 'northern arc' is located north of the WHS.

Intactness

3.3.28 All but one of the 'southern arc' anomalies (7A) is located on arable ploughland. Superficial levels may have been impacted by ploughing. There is considered to be good potential for the survival of below ground archaeological and palaeoenvironmental remains; pit-like features, shafts, wells, sinkholes/dolines/solution hollows all have potential to trap palaeoenvironmental evidence, environmental sequences and cultural material.

3.3.29 The 2020 SHLP paper notes that sampling indicates that the date and environment of deposits is compatible with the preservation of sedimentary ancient DNA. Any modern investigations undertaken would be able to enhance the understanding of their place within the wider Stonehenge landscape. There is, however, no evidence presented to demonstrate whether waterlogged deposits or sequences may be present or absent.

3.3.30 The 'northern arc' features (10D – 15D) have been subject to archaeological excavation and are located on land that has been, or is in the course of being, developed. Features (iii) and (iv) are no longer extant.

Threats

3.3.31 All but one of the 'southern arc' anomalies are situated on arable agricultural land. Continued ploughing of these locations, in particular any increase in plough depth, has the potential to further truncate any surviving archaeological remains.

Authenticity of the Durrington Walls discovery

3.3.32 Factors that preserve or enhance the Authenticity of the Durrington Walls discovery include:

- The potential for the survival of archaeological, palaeoenvironmental and geoarchaeological deposits and features which can enhance and add to our knowledge of the anomalies but also of our understanding of the WHS as a whole;
- The potential for evidence regarding the 'geometry' of links between monuments and landscape features;
- Relationships between these and other contemporary and later monuments, as well as underlying geological and topographic features; and
- Modern archaeological investigations are providing evidence, information and inspiration for future research of other monuments in the Stonehenge landscape.

3.3.33 Factors that reduce or diminish the Authenticity of the Durrington Walls discovery include:

- The infilling and levelling of the 'southern arc' anomalies reduces their current legibility within the wider monumental landscape diminishing their ability to fully convey the OUV of the WHS, in particular Attribute 5, 'the siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other'.
- Parts of the suggested 'circuit' have been excavated, and any other elements that may once have existed may have been destroyed at Larkhill and Durrington during past development, and due to plough-levelling. The 2020 SHLP paper notes that "the current numbers of identified features represent a minimum, and other, similar, features may exist in unsurveyed areas or have been destroyed by development west and north-east of Durrington henge. A larger area, between Durrington Walls, Vespasian's Camp and the King Barrows has also been extensively remodelled. Opportunities for the identification of similar features may be severely hindered in these areas (Bishop 2011, 9; RCHME 1979)."

Contribution to the Attributes that convey the OUV of the WHS

3.3.34 The Attributes of OUV are described in the 2015 WHS Management Plan (Simmonds and Thomas 2015, 32). The relevance of the new discoveries are assessed in relation to their ability to contribute to expressing the Attributes of OUV below.

1. Stonehenge itself as a globally famous and iconic monument.

Stonehenge itself is positioned within a low basin or bowl, ringed by a number of barrows / groups situated on the low ridges surrounding it, perhaps forming a boundary to keep people or forces inside, or outside. The paper suggests that the pits demarcate a complex or 'imbued' boundary around Durrington Walls Henge. It may mirror the 'envelope' around the Stonehenge monument. The paper notes the speculation of Parker Pearson and Ramilisonina (1998) that there was a dualistic relationship in which Stonehenge was associated with the dead, whilst Durrington Walls was seen as the land of the living, with the Avon forming part of a processional route between the two.

The concept of an 'empty', sacred landscape in which there were few activities is challenged by research by the SHLP team (Gaffney et al. 2012; ibid. 2018) which suggests extensive small henge- and shrine-like structures in the landscape surrounding the stones.

Although the Durrington Walls discovery does not directly express this Attribute, the paper speculates that as a boundary around Durrington Walls Henge, it mirrors the 'imbued boundary' around the Stonehenge monument.

An entirely different aspect is also relevant, in terms of the iconic status of the monument and the politicisation of scientific research. The coordinated timing and publication of the Durrington Walls discovery hypothesis on the Summer Solstice, and the publicity and sensational media coverage which it

has generated, reflect the iconic status, ‘mythos’ and symbolism of Stonehenge – and the public passions, political and academic debates that revolve around it (see Barclay and Brophy 2020a; ibid. 2020b).

2. The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites.

Small-scale core sampling has yielded evidence that “One anomaly at least (8A) dates to the later Neolithic. Another anomaly (5A) dates to the Middle Bronze Age. However, this may be a later recut of an earlier pit.” (Gaffney et al. 2020; n.b. Middle Bronze Age remains are currently excluded from expressing Attributes of OUV as set out in the SoOUV). The function of the ‘pit circle’ is currently unknown, although the paper implies that its apparent geometrical reflection of Durrington Walls Henge, and its potential inclusion of Larkhill Causewayed Enclosure, associate it with both funerary and ceremonial monuments of the Neolithic and Bronze Age. There is still the potential for below ground remains to survive, as well as other possible associated features such as the remains of post-hole alignments.

In terms of physical remains of Neolithic date, the Durrington Walls discovery is assessed to potentially contribute to this Attribute of OUV.

3. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape

and

5. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other.

The paper argues for a strong relationship between natural features in the landscape (e.g. series of sinkholes along dry valley north of Durrington Walls; River Avon) having a structuring effect on the layout or “geometry” of the ceremonial landscape – the location of Larkhill Causewayed Enclosure, Durrington Walls Henge, and the ‘southern arc’ of pit-like anomalies. It claims that the ‘massive circle’ that it encloses echoes the Stonehenge bowl or visual envelope to the southwest.

4. The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy.

Astronomical studies of the WHS have identified the monuments that convey the fourth attribute of OUV: ‘the design of Neolithic and Bronze Age funerary and ceremonial sites and assets in relation to the skies and astronomy’ (Ruggles 1997; 2010; Chadburn 2011). The latest ICOMOS-International Astronomical Union thematic study on astronomical heritage (Chadburn and Ruggles 2017) holds that the following monuments in the Stonehenge element of the WHS are considered to have significant astronomical alignments: Stone settings at Stonehenge (Bluestone and Trilithon horseshoes, Bluestone Circle, Sarsen Circle, Slaughter Stone and its companion, Heel Stone and its companion), the Avenue (straight

segment closest to Stonehenge), Stonehenge Station-Stone Rectangle, Woodhenge and the Southern Circle at Durrington Walls.

The paper presents possible astronomical alignments associated with the monuments in the study area (Yorston in Gaffney et al. 2020, Archaeoastronomy). It considers views towards the winter solstice sunrise from the Southern Circle at Durrington Walls, and views from the Durrington Walls Avenue towards the summer solstice sunset. The paper notes, "*it is apparent that all pits in this arc have similar views towards the winter solstice sunrise in the direction of Boscombe Down. There is no particular focus: each pit is looking towards a different point on the horizon* […] *The* […] *winter sunset shows more variability between pits. Of particular note are pit i, where the sun sets behind Coneybury Hill* […]*, pit 8A, where the sun sets over the King Barrow Ridge* ([…] *though these barrows are, of course, an anachronism) and pit 9A, which has varied views, some stopping at the King Barrow Ridge and some extending much further* […]".

Main HIA Annex 5 – Archaeoastronomy [APP-200] considers the relationship between the monuments that contribute to OUV and the skies and astronomy. It is assessed that this analysis remains unchallenged by the Durrington Walls discovery, as the key focus remains the Southern Circle at Durrington Walls (see Figure 8 in this HIA Addendum).

6. The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.

Although no longer visible as above ground, the paper claims that the anomalies appear to form part of the wider ceremonial landscape are likely to contain valuable archaeological and palaeoenvironmental information. These arcs of pit-like geophysical anomalies and associated fence-lines are stated to be an important aspect of the 'geometry' of the WHS, linked to Durrington Walls Henge and the Larkhill Causewayed enclosure, and perhaps forming an encircling barrier, a counterpoint to the Stonehenge envelope/bowl.

7. The influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others.

3.3.35 As a new discovery of potential subsurface features, there are no specific pre-existing historical, architectural or artistic associations. The discovery and investigation of the pit-like anomalies, the range of geophysical survey techniques used and interpretation on a large scale, and aspects such as the potential for future sedimentary ancient DNA (sedaDNA) sampling, reflect the ongoing influence of research in the WHS on the development of archaeological science.

Contribution to the Integrity of the WHS

3.3.36 Core sampling of one anomaly (8A) in the 'southern arc' of the Durrington Walls discovery has yielded Neolithic radiocarbon dates, and further palaeoenvironmental and archaeological remains are anticipated to survive. As such it contributes to several of the Attributes of the OUV of the WHS.

3.3.37 The 2020 SHLP paper implies a relationship between the Durrington Walls discovery and other monuments within and associated with the WHS.

Contribution to the Authenticity of the WHS

3.3.38 Although no longer clearly legible within the landscape, the future investigation of the Durrington Walls discovery may have the potential to increase our understanding of the past landscape layout, geometry, land use and use of natural resources within the WHS.

Contribution to other aspects of the WHS

Tourism and the visitor experience

3.3.39 It is not considered that the Durrington Walls discovery makes any particular contribution to tourism and the visitor experience, as the suggested 'pit circuit' comprises buried features or anomalies with little or no readily visible surface expression. Although the locations of the 'southern arc' of anomalies are nominally accessible to walkers, most are located within active arable farmland beyond footpaths and offer limited potential for public presentation, enjoyment or engagement activities.

Public understanding of OUV

3.3.40 Although the new discovery affords opportunities for archaeological research, it is not assessed that it presently contributes to public understanding of OUV. Its significance is not currently well evidenced, with no clear shared expert understanding informed and supported by intrusive archaeological investigation. There is very limited evidence upon which to communicate relevant and authentic narratives, promote the archaeological significance of the WHS, and anchor informed conservation measures.

Public visibility of monuments from the current A303

3.3.41 Some of the south-facing slopes of the fields in which the 'southern arc' are located are intermittently visible in glimpsed views through the shrubs and trees north of the current A303. The sites are not readily visible from the road, nor are their suggested associations. It is not considered that public visibility of the Durrington Walls discovery from the current A303 makes any obvious contribution to the motorist's experience of the WHS.

Archaeoastronomical aspects

3.3.42 The key focus of archaeoastronomical alignments in this area remains the Southern Circle at Durrington Walls, as indicated in Main HIA Annex 5 –

Archaeoastronomy [APP-200]. The Durrington Walls discovery does not contribute to this aspect.

Intangible cultural heritage, including spiritual aspects and cultural influences.

3.3.43 Spiritual aspects and cultural influences are focussed on other areas of the WHS, as discussed in Main HIA section 6.16, Intangible cultural heritage [APP-195] and in Main HIA Annex 6 – Influences on architects, historians and archaeologists [APP-201], HIA Annex 7 – Influences of the monuments and landscape of the Stonehenge part of the WHS on artists [APP-202] and HIA Annex 8 – Influences of the monuments and landscape of the Stonehenge part of the WHS on literature and popular culture [APP-203].

3.3.44 The new discovery is not related to any known current ceremonies or events, or any undertaken within historical memory. There are no documented traditions of cultural transmission specifically related to the discovery.

3.3.45 The SHLP's research forms part of a long and ongoing tradition of evolving archaeological research and the formulation of theories regarding the Stonehenge landscape, developing our understanding of the relationship between human activity and the natural landscape.

Assessment of significance and value

3.3.46 Based on the assertions in the 2020 SHLP paper, the discovery's contribution to OUV would be related to the tangible evidence it provides for the following Attributes of OUV:

- 2. The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites.
- 3. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.
- 4. The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy (via association with the Southern Circle at Durrington Walls).
- 5. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other.
- 6. The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.
- 7. The influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others.

3.3.47 In accordance with Table 3 in the Main HIA [APP-195], and for the purposes of this assessment as set out in para. 2.3.2 above, the Durrington Walls discovery is assessed as **potentially Very High** value.

Existing baseline

3.3.48 The southernmost extent edge of the 'southern arc' of pit-like anomalies (Anomaly 4A) is located c. 377m north of the current the A303, and at this point the carriageway lies in a cutting. The A303 and traffic are visible as the road rises from Countess Roundabout to Stonehenge Cottages. Traffic noise is audible from most locations, being very prominent from those areas immediately adjacent to the road. The existing A303 is already a dual carriageway at this point.

3.3.49 The existing A303 is assessed as having a **Negligible** impact on Attributes of OUV of the WHS conveyed by the 'southern arc', resulting in a **Slight Adverse** effect.

Assessment of impact of Scheme

Temporary construction activities

3.3.50 A construction working area, outside the main works area, is proposed north of the course of the A303 (Area X21; indicative design only). At its nearest point, this is located c. 220m south of Anomaly 4A and c. 210m southwest of Anomaly 5A.

3.3.51 This working area would have no direct physical impacts on the physical locations of the anomalies, and no indirect impacts on their depositional environment. The existing landform character will be maintained. This is assessed as a Neutral impact.

3.3.52 If used (subject to detailed design), this working area would have a limited and temporary, reversible impact on the setting of the anomalies. This is assessed as a temporary Negligible Negative impact.

Permanent operation

3.3.53 The proposed eastern portal is located southwest of the 'southern arc' of pit-like anomalies, lying approximately 620m southwest of Anomaly 7A. The course of the A303 would run approximated 377m south of Anomaly 4A, with the sliproad approaching Countess Roundabout c. 650m southeast of 4A. Countess Roundabout would be located c. 545m south of Anomaly (i).

3.3.54 A short length of canopy would be placed over the top of the eastern portal that would assist in concealing the eastern portal from the 'southern arc', alongside the positioning of the eastern portal within a concealing dry valley. Lighting would be hooded and directional to minimise light spill from the eastern portal mouth. Traffic would continue to be visible in the distance, with views of the Scheme as it heads towards Countess Roundabout and Flyover. Traffic would continue to be visible. This is assessed as a **Neutral impact** as the valley location of the portal, the inclusion of a canopy into its design and sensitive lighting would result in little substantive change from the present situation.

3.3.55 The Scheme does not impact on the stated inter-relationships of the suggested 'arcs' of pit-like anomalies with Stonehenge (AG22; not visible from this area), Durrington Walls (AG33; located to the north of the 'southern arc'), or the Larkhill Causewayed Enclosure (AG39; which may form part of the northwest of the 'arc'). The Scheme would result in **No Change** following construction.

3.3.56 Relationships between the Durrington Walls discovery and the Coneybury Anomaly (AG29), Wilsford Shaft (UID 2016; NHLE 1010833), pits at either end of the Greater Cursus (AG23) and discrete and isolated pit-like features, solution hollows/ sinkholes/ dolines in the landscape are not based on intervisibility or layout, but on pit-like form. The Scheme would result in **No Change** to these associations following construction.

3.3.57 The Scheme is distant from the new Durrington Walls discovery, and its setting characterised by suggested archaeological relationships with monuments such as Durrington Henge to the north, and the Larkhill Causewayed Enclosure with its wider topographical relationships including the River Avon and Sidbury Hill. The 'northern arc' features follow a dry valley. This setting is already characterised by modern elements in the landscape, including Larkhill Army Base, residential development at Larkhill and Durrington, traffic and roads (i.e. A303, A345, Packway, Larkhill Road), and pylons. It is assessed that the 'southern arc' of pit-like anomalies, and the wider 'circle', are considered to be too distant from the Scheme for it to meaningfully alter their setting. The Scheme will not entail the severance of any stated relationships. The Scheme would result in **No Change** following construction.

3.3.58 No key archaeological materials that contribute to the OUV of the Durrington Walls discovery would be impacted. It is not considered that the Scheme would result in a loss of the Attributes of OUV conveyed by the Asset Group.

Impact on fabric

3.3.59 The Durrington Walls discovery would not be physically impacted by the Scheme. The WHS will retain all existing physical evidence of the anomalies.

3.3.60 There will be no physical impacts on any currently known significant archaeological features with which the pits are interpreted as having a relationship, i.e. Stonehenge (AG22), Durrington Walls (AG33), or the Larkhill Causewayed Enclosure (AG39).

3.3.61 The Scheme would result in **No Change** to the fabric of the discovery.

Impact on setting

3.3.62 The use of the retained cutting, the canopy and the positioning of the portal in a dry valley in the landscape will limit the impacts to the setting and therefore the low contribution this makes to the significance of the 'southern

arc' of anomalies. A **Neutral effect** is assessed for all of the 'southern arc', derived from **No Change** to **potentially Very High value** assets.

Significance of effect (based on permanent operational impacts)

3.3.63 Significance of effect is calculated taking account of the potentially Very High value of the asset as set out in para. 2.3.2 above and in accordance with Table 5 in the Main HIA [APP-044]. It is assessed the presence of the constructed Scheme would result in a **Neutral effect** (derived from **No Change** to a **potentially Very High** value asset).

Proposed mitigation

3.3.64 The Scheme will not result in any physical impact on any elements of the 'southern arc' of pit-like features, or upon related sub-surface deposits.

3.3.65 Most of the northern sinkholes are no longer extant and lie distant from the Scheme, with most elements located beyond the WHS boundary; the closest elements are Anomaly (ii), which lies c. 1660m to the north of the DCO Scheme boundary, and the site of Anomaly 15D, c. 1940m north of the DCO Scheme boundary.

3.3.66 No archaeological mitigation of physical impacts is proposed, as the Scheme will not result in any direct impacts on the fabric of the features.

3.3.67 In terms of mitigation of temporary setting impacts during construction works, the Scheme Outline Environmental Management Plan (OEMP) states:

- All temporary works will be designed and undertaken to minimise their visual impact. [TR10025-001949, Table 4.1 Design development principles: P-G06]
- The main works contractor shall define within the Construction Environmental Management Plan (CEMP) the proposed approach to site lighting around construction compounds and elsewhere along the route alignment, giving consideration to the WHS context and other environmental constraints and shall consult with the members of the Heritage Monitoring and Advisory Group (HMAG) on the approach to site lighting in relation to matters within the WHS. Lighting shall be at the minimum luminosity necessary and use low energy consumption fittings and should avoid light spillage. Lighting shall also be designed, positioned and directed so as not to unnecessarily intrude on sensitive heritage receptors. This provision will apply particularly to sites where night working will be required and in particular the tunnelling portal areas. [TR10025-001951, Table 3.2b Record of Environmental Actions and Commitments (REAC) tables for the main works, General: MW-G29].

Table 1. Summary anticipated impacts of the Scheme on fabric and setting, scale of impact, significance of effect and residual effect upon the Durrington Walls discovery.

Value of Durrington Walls discovery	Potentially Very High

Impact of the existing A303 and associated roads and infrastructure on the Attributes of OUV expressed by the Durrington Walls discovery	Neutral	
Significance of effect of existing A303 and associated roads and infrastructure on the Attributes of OUV expressed by the Durrington Walls discovery	Neutral	
Scale and severity of change / impact of Scheme	**Fabric**	No Change
	Setting	No Change
Significance of effect of Scheme, taking into account embedded mitigation (design)	Neutral	
Significance of effect of Scheme, following proposed additional mitigation (residual effect)	Neutral	

3.4 The Durrington Walls discovery and WHS inscription criteria

3.4.1 Although the 1985 WHS nomination document (HBMCE 1985) and 1986 WHS inscription criteria focus on the megalithic monuments of Stonehenge and Avebury, they also include "*Associated Sites"*, noting *"the continual use and shaping of the landscape over more than 2000 years, from the early Neolithic to the Bronze Age"*, which *"Together with their settings and associated sites* […] *form landscapes without parallel."* The wording of the nomination document, and subsequent inscription criteria and retrospective Stonehenge, Avebury and Associated Sites SoOUV which flow from it, have and continue to provide room for the inclusion of relevant new discoveries.

3.4.2 Based on the interpretation stated in the 2020 SHLP paper, the contribution of the Durrington Walls discovery to the Criteria for inscription on the World Heritage List are assessed as follows:

- **Criterion (i): The monuments of the Stonehenge, Avebury and Associated Sites demonstrate outstanding creative and technological achievements in prehistoric times.**
    - The SoOUV notes that "Durrington Walls is the largest known henge in Britain, around 500m in diameter, demonstrating the ability of prehistoric peoples to conceive, design and construct features of great size and complexity".
    - The paper states that "[…] the scale of implementation is remarkable. Aside from the effort of digging so many large pits […], the area enclosed is significantly larger than, for instance, the Greater Cursus […] Although visually striking, the apparent regularity demonstrated through the pit placement need not require any recourse to the existence of standard metrics during the Late Neolithic (Chamberlain and Parker Pearson 2007; Teather et al. 2019). The variation in the pit circuit does not suggest that precision was required and the goal to achieve an approximate distance appears to have been achieved through pacing. However, the distances

involved may suggest the existence of a tally system to record steps rather than directly measure distance."

- **Criterion (ii): The World Heritage property provides an outstanding illustration of the evolution of monument construction and of the continual use and shaping of the landscape over more than 2000 years, from the early Neolithic to the Bronze Age.**
    - The SoOUV notes that "The megalithic and earthen monuments of the World Heritage property demonstrate the shaping of the landscape through monument building for around 2000 years from circa 3700 BC, reflecting the importance and wide influence of both areas. […] The two parts of the World Heritage property provide an excellent opportunity for further research.
    - The new discoveries claims to demonstrate relationships between geology, topography and the 'structuration' or layout of the landscape; and a spectrum of human use – and possibly enhancement – of natural features. These aspects are widespread across the WHS, and are covered by Criterion (ii).

- **Criterion (iii): The complexes of monuments at Stonehenge and Avebury provide an exceptional insight into the funerary and ceremonial practices in Britain in the Neolithic and Bronze Age. Together with their settings and associated sites, they form landscapes without parallel.**
    - The SoOUV notes that: "The design, position and interrelationship of the monuments and sites are evidence of a wealthy and highly organised prehistoric society able to impose its concepts on the environment. An outstanding example is the alignment of the Stonehenge Avenue (probably a processional route) and Stonehenge stone circle on the axis of the midsummer sunrise and midwinter sunset, indicating their ceremonial and astronomical character. At Avebury the length and size of some of the features such as the West Kennet Avenue, which connects the Henge to the Sanctuary over 2km away, are further evidence of this."
    - No specific funerary purpose has been ascribed to the Durrington Walls discovery, which has yielded material dated to the Early Neolithic and Middle Bronze Age. Multiple associations with ceremonial practices are discussed, but none are yet confirmed. Like the Greater Cursus and the Stonehenge and Avebury Avenues, the Durrington Walls discovery is claimed to be a large-scale feature.
    - The Durrington Walls discovery may be relevant to Criterion (iii), particularly its relationship with the 'ceremonial' Durrington Walls henge. With regard to burial, the 2020 SHLP paper suggests that some pit-like anomalies may be associated with, or coincide with burial mounds, forming a central shaft: "The slight possibility that some of the Durrington pits might contain deeper features or even shafts is

intriguing, but further work is needed to establish whether these pits are uniformly deep or include other, concealed, features." However, this has yet to be demonstrated through modern excavation.

4 Other large pit-like geophysical anomalies in the landscape

4.1 Discrete and isolated heritage assets including pits

4.1.1 A number of large geophysical anomalies are illustrated in the 2020 SHLP paper (Gaffney et al. 2020, figure 9). These may be purely natural sinkholes with no cultural material associated, form natural repositories for cultural material, or be deliberately modified, dug or exploited for some cultural purpose.

4.1.2 The Main HIA [APP-195] notes that “The WHS contains a wide range of discrete and isolated heritage assets which do not readily conform to topographic or geographical groupings, but do contribute to expressing Attributes of OUV and the wider significance of the WHS.” These were considered in the Main HIA [APP-195] where it was considered that the Scheme may impact upon their fabric or setting.

4.1.3 The Main HIA notes, “Most of these isolated assets are barely perceptible above ground, and their significance is principally derived from the potential evidential value of their buried remains and their broader landscape context and setting. The evidential value of isolated non-designated assets is frequently uncertain and the legibility of meaningful visual, spatial and contextual associations has been diminished by unsympathetic land-use such as large arable fields and other features within the landscape including roads.” [APP-195, para. 6.10.9].

4.1.4 These are considered in Main HIA Section 6.10, Discrete and isolated assets: baseline description and assessment of Scheme impacts and effect: Non-designated heritage assets.

4.1.5 This section re-considers these pits in the light of the new Durrington Walls Henge discovery, to determine whether the discovery might change the previous assessment.

4.2 Description of other large pit-like geophysical anomalies in the landscape

4.2.1 The locations of probable and potential pit-like geophysical anomalies over 5m in diameter identified by the SHLP are illustrated on figure 9 in the 2020 SHLP paper, reproduced **Error! Reference source not found.**below. They are illustrated in the context of other heritage assets and Asset Groups, and the proposed Scheme, in Figures 1 – 8 in this report.

4.2.2 The full SHLP raw data and interpretations have not been released in the public domain, or entered onto the Wiltshire and Swindon Historic Environment Record or the National Trust archaeological and historic building database. Information on these features, including geolocational data and plots, are not provided in the paper, and have not been released to the A303 project team.

4.2.3 The location of the 35 anomalies have been approximately extrapolated from figure 9 in the 2020 SHLP paper and superimposed on the A303 Project GIS, which contains all project data, including SHLP data for the route corridor; other geophysical surveys undertaken for the Scheme and previous iterations; field evaluation data; aerial photography transcriptions; Wiltshire HER and National Heritage List data, as well as LiDAR digital terrain modelling layers and background Ordnance Survey and British Geological Survey mapping (Figures 1 – 8 in this report, labelled Pits 001 to Pit 035).

4.2.4 To enable comparison with existing project unique identification numbers, unique ID numbers (e.g. **Anomaly 01**) have been assigned to large pit-like anomalies over 5m in diameter located away from the main arc of anomalies identified in the 2020 SHLP paper (Gaffney et al. 2020, fig. 9). These are illustrated on Figures 1 to 8 in this Addendum (noting that on the figures **Anomaly 001** equates to **Pit 001**).

4.2.5 This data has been assessed to identify:

- Assets located within the WHS that contribute to OUV; and
- Assets outside the WHS boundary which have relationships with assets within the WHS that contribute to OUV.

Also noting where these coincide with previously known sites already assessed in the Main ES [APP-044] or Main HIA [APP-195].

Large pit-like geophysical anomalies scoped out of HIA

4.2.6 The majority of large pit-like anomalies are isolated in the landscape and their character, date, and relationships with each other and other identified features within the Main ES and Main HIA are unknown or uncertain. Some are only revealed on the Gaffney drawing, relying solely on unpublished geophysical survey data from the Stonehenge Hidden Landscape Project, including Anomalies 014 – 021; and Anomalies 023 – 028. Some are recorded on earlier alignments of the Scheme (south of Winterbourne Stoke), including Anomalies 004 – 007. Anomalies 009 – 013 were recorded during geophysical surveys undertaken for the development of the Stonehenge Visitor Centre.

4.2.7 None of these anomalies will be physically impacted by the Scheme. Most will not have their setting changed and so consequentially will not be considered further, as the Scheme will not impact upon their fabric, setting or significance or on the Attributes of OUV that they convey. Anomalies scoped out of this HIA Addendum include:

- Pits located beyond the WHS boundary and setting of the WHS, not impacted by the Scheme, which are scoped out of both ES Addendum and HIA Addendum assessment: Anomalies 004, 005, 006, 007.
- Pits located within the WHS, not impacted by the Scheme, which are scoped out of both ES Addendum and HIA Assessment: Anomalies 009, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 023, 024, 025, 026, 027, 028, 031, 035.

- Pits located beyond the WHS boundary and setting of the WHS, which are addressed in the ES Addendum, as these are not located within or within the setting of the WHS: Anomalies 001, 002, 003, 008.

4.2.8 Pits that may be affected by the Scheme are assessed below. These include:

- Pits located close to the DCO boundary within the WHS: Anomalies 021, 022, 029.
- Pits located within the DCO boundary, within the setting of the WHS: Anomalies 010, 032, 033, 034.
- Pit located within the DCO boundary within the WHS: Anomaly 030.

Large pit-like anomalies located close to the DCO boundary and within the WHS

4.2.9 Anomaly 021 – Countess Farm West. Previously unpublished geophysical survey anomaly identified by the Stonehenge Hidden Landscapes Project. Anomaly 021 is next to a pair of Scheduled Monuments – it is c.28m northeast of a 'bowl barrow 250m north of the A303 on Countess Farm' (NHLE 1014087 / MWI12655) and is c.34m west of 'Bowl barrow 260m north of the A303 on Countess Farm' (NHLE 1009139 / MWI12719). This anomaly is situated within the AG31A Asset Group (Countess Farm Barrows (North)). Although of uncertain significance, as it has not been archaeologically investigated, it is set within arable fields on the eastern side of a dry valley. It could **potentially be of Very High value** if of anthropogenic origin / or modified and of Late Neolithic to Early Bronze Age date, therefore it is assumed on a precautionary basis to be that for the purposes of this assessment, as set out in para. 2.3.2 above.

4.2.10 Anomaly 022 – East of Stonehenge Road. Previously unpublished geophysical survey anomaly identified by the Stonehenge Hidden Landscapes Project – unidentified in the data and geophysical survey report supplied by SHLP to the Scheme. Anomaly 022 is situated c.15m northeast of a Scheduled Monument –a 'Bowl barrow 50m south of A303' (NHLE1011231 / MWI13056). This anomaly is situated within the AG30 Asset Group (The Avenue Barrows). Although of uncertain significance, as it has not been archaeologically investigated, it is set within arable fields that slope down to a dry valley to the east. It could **potentially be of Very High value** if of anthropogenic origin / or modified and of Late Neolithic to Early Bronze Age date, therefore it is assumed on a precautionary basis to be that for the purposes of this assessment, as set out in para. 2.3.2 above.

4.2.11 Anomaly 029 – South of the Western Portal Approach Cutting. This anomaly is visible as a geophysical anomaly [m46] in Linford et al. 2015 (Figures 4 and 11). It is located 38m northwest of a scheduled monument 'Henge monument 300m south of Longbarrow Crossroads, East of A360' (NHLE 1021349 / MWI12666) and 34m northeast of an 'undated pit, Druids Lodge' (MWI75672). It lies within an extensive prehistoric field system (MWI13128) between Druids Lodge and Wilsford Down. It is likely that Anomaly 029 and MWI75672 are the same anomaly. The anomaly appears

to be just within the boundary of AG13 The Diamond Group. Although of uncertain significance, it has not been archaeologically investigated, it is set within an arable field on the southern edge of a dry valley. It could **potentially be of Very High** value if of anthropogenic origin / or modified and of Late Neolithic to Early Bronze Age date, therefore it is assumed on a precautionary basis to be that for the purposes of this assessment, as set out in para. 2.3.2 above.

Large pit-like anomalies located within the DCO boundary, within the setting of the WHS

4.2.12 Anomaly 010 – Stonehenge Visitor Centre Car Park. Geophysical survey anomaly identified by Linford and Martin 2009, in which they state that "An earthwork depression on historic mapping, no longer visible. Correlates with magnetic response [m5]. Significance of [m5] is difficult to fully ascertain although possible that it represents an in-filled borrow pit or, perhaps, a dew pond predating the more substantial Imber pond sunk against the road". (Linford and Martin 2009, p.4). As this is adjacent to the dew pond, a shallow grassed depression set beside the A360 road and within the Stonehenge Visitor Centre car park, it is more probable that this is best interpreted as an earlier infilled dewpond or borrow pit close to the road of Low value. As this feature will not be physically be impacted by the Scheme (but will be preserved in situ in its current setting within the Stonehenge Visitor Centre car park), it is not considered further in this impact assessment.

4.2.13 Anomaly 032 – West of the A360, North of Winterbourne Stoke Crossroads. Identified as a geophysical survey anomaly (figs. 4, 9: AAJV 2017b: Phase 3, anomaly 8122). It has not been archaeologically investigated by evaluation trenching as it lies on the DCO boundary. The geophysical anomaly was interpreted as a cluster of three large pit like features. The anomaly lies on the eastern periphery of a probable Romano-British field system (MWI73257) and is located c. 97m southeast of a scheduled monument 'Bowl barrow 450m SSW of Airman's Corner on Winterbourne Stoke Down' (NHLE 1008949 / MWI7052), which is part of a group of Barrows on Winterbourne Stoke Down. Although of uncertain significance, as it has not been archaeologically investigated, it is set in arable fields on the northern edge of a dry valley. It could **potentially be of Very High value** if of anthropogenic origin / or modified and of Late Neolithic to Early Bronze Age date, therefore it is assumed on a precautionary basis to be that for the purposes of this assessment, as set out in para. 2.3.2 above.

Anomaly 033 – West of the A360, North of Winterbourne Stoke Crossroads. Located in the same area as a non-designated heritage asset identified on the 'Bronze Age Barrow, North of Winterbourne Stoke Roundabout' (MWI6403). A geophysical survey identified two anomalies at this location (8103 and 8125) (AAJV 2017b: Phase 3, figs. 5 & 10). Trench 448 identified two separate depressions within the chalk bedrock.

The northernmost depression was sample excavated and was found to be a natural solution feature infilled with Pleistocene cryoturbated chalk deposits

and Holocene colluvium. The colluvium contained worked flint flakes, burnt flint and five sherds of Romano-British pottery that was captured in the natural depression.

The southernmost anomaly was more geologically complex, formed as a solution feature but capturing a range of Pleistocene and Holocene deposits including a complex series of Pleistocene loess deposits, cryoturbated colluvium, coombe deposits under periglacial conditions and further colluvium.

The solution hollows were investigated by geoarchaeological boreholes to 7m in depth.

The natural features have evidenced their potential to capture anthropogenic and palaeoenvironmental material and therefore are of **Medium value**, along with their geoarchaeological interest. It is set within an arable field on the southern edge of a dry valley.

4.2.14 Anomaly 034 – West of Winterbourne Stoke Crossroads. Wessex Archaeology's AAJV Phase 4 Geophysical Survey Report (2017c) [REP1-041], does not identify a large geophysical anomaly or group of anomalies that could combine to form a single feature in this location. It is possible that the 2020 SHLP paper (fig. 9) uses a concentration of field edge ferrous debris in this location (a very common occurrence in geophysical survey), to suggest a 5m+ sized geophysical anomaly. On the basis of the interpretation and data produced by the Applicant's above survey, the data does not support the identification of a large 5m+ diameter anomaly in this part of the Scheme. Anomaly 034 (alluded to in the 2020 SHLP paper, fig. 9 which relies upon the Wessex Archaeology Phase 4 Geophysical Survey Report mentioned above) is therefore not an actual geophysical anomaly and is discounted from further impact assessment.

Large pit-like anomalies located within the DCO boundary and within the WHS

Anomaly 030 – South of the Western Portal Approach Cutting. This anomaly was identified in geophysical survey (anomaly 4410 in the AAJV (2017a): Phase 1 Geophysical Survey report [REP1-045, 27–8]) and was thought to be part of a dry valley system / natural depression. It was archaeologically trial trenched (Trench 241) and measured c.8m in diameter. It was hand-excavated to a depth of 1.28m and augered to refusal point at 1.6m. It was interpreted, following sample excavation as a natural sinkhole which contained an assortment of cultural material in its upper gradual silting fills (including worked flint, burnt flint, two sherds of abraded probable Beaker pottery, ten sherds of Roman pottery, two sherds of medieval pottery and an eroded tooth fragment (cattle), likely collecting within a natural capture point / hollow in the landscape. The top of the natural depression was used to light a fire(s) (in situ fire-reddened areas), probably during the medieval period. The solution hollow is largely of natural origin with scant use in the medieval period, set within an arable field on the south side of a dry valley / coombe.

At the eastern end of Trench 241 the soil sequence represented the shallow infilling of the dry valley or coombe, rather than a further solution hollow. Here the natural geology comprised soliflucted or heavily cryoturbated Chalk overlain by a thin colluvial deposit (<0.15 m deep), a mid-reddish brown silty clay, with the ploughsoil above.

As a natural feature and associated with the dry valley network identified in the Main ES [APP-044, UID 2098] it is assessed as being of **Medium value**.

4.3 Assessment of significance of other large pit-like anomalies in the landscape

4.3.1 The Main HIA notes, "[…] extant sites or monuments of proven Early Neolithic to Early Bronze Age date, and located within the WHS, [are] assessed to be of Very High value as these assets convey Attributes of OUV. However, some archaeological evidence of these dates within the WHS may contribute to the understanding of the WHS and its OUV, but in itself is not considered to convey OUV. […] the value of non-designated archaeological evidence is individually assessed on its own merit." APP-195. [para. 6.10.10].

4.3.2 The Main HIA goes on to note, "It is problematic to assess the value of geophysical anomalies and sites plotted from aerial photographs, such as pits, where the date and character of sites are not proven. Where the date is unknown and the form of monuments is not diagnostic, the value is assessed as unknown." [APP-195, para. 6.10.11].

4.3.3 With regard to pit-like anomalies identified in the course of geophysical surveys for the A303 Scheme, the 2020 SHLP paper states, "There are a number of substantial pit-like anomalies within these datasets, including individual features that may be comparable in size to the Durrington pits and which have also been interpreted as solution features (Highways Agency 2019a, 5.1.9; 2019b, 203). Despite this, no comparable group of features have been reported from this extensive dataset, and currently the alignment of features at Durrington is unique. The character and significance of the remaining features, and their distribution, awaits detailed investigation." (Gaffney et al. 2020).

Integrity of other large pit-like anomalies in the landscape

Wholeness

4.3.4 Many of these features are contained within the boundary of the WHS: Anomalies 009, 011, 012, 013, 014, 015, 016, 017, 018, 019, 021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031 and 035.

4.3.5 Anomalies 010, 032, 033, 034 are located within the setting of the WHS.

4.3.6 Anomalies 001, 002, 003, 004, 005, 006, 007 and 008 are located beyond the WHS boundary and setting of the WHS.

Intactness

4.3.7 Few of the anomalies retain any prominent surface expression, largely due to plough levelling. Modern excavation has demonstrated that, even where features retain no surface expression, and have clearly been subject to truncation of upper horizons, the buried remains retain at least some potential to yield new information.

4.3.8 Several anomalies have been sampled. The buried remains of unexcavated portions of these sinkholes are presumed to remain largely intact. Certain sinkholes retain proven deposits and sequences of particular geoarchaeological interest.

Threats

4.3.9 The location of a number of these anomalies within or close to scheduling constraint areas and their location within the WHS should ensure that they are factored into decision making where proposals have the potential to affect them.

Authenticity of other large pit-like anomalies in the landscape

4.3.10 Factors that preserve or enhance the Authenticity of other large pit-like anomalies in the landscape include:

- Truncation caused by ploughing and animal burrowing;
- Evidence yielded by modern sampling and investigation, including palaeoenvironmental data;
- Ongoing research since the inscription of the WHS, which has provided new sources of information and opportunities for understanding these assets within the context of the wider cultural and natural landscape of the WHS;
- The buried remains of the features survive largely intact, and thus have the potential to yield an ‘authentic testimony’ to any prehistoric communities who used them, who used the surrounding environment, and/or whose cultural material became incorporated in them.

4.3.11 Factors that reduce or diminish the Authenticity of other large pit-like anomalies in the landscape include:

- Some aspects of their setting, which has been fragmented by modern development, roads, plantations and the inclusion of several of the features within a large expanse of intensive, industrial-scale arable farmland.
- The physical integrity of the anomalies may have been affected by past evaluative sampling, although this has been partially offset by the information gathered by these investigations, and the enhanced understanding of their place within the wider Stonehenge landscape.

Contribution to the Attributes that convey the OUV of the WHS

4.3.12 There is currently insufficient data to determine the chronology, nature or associations of these discrete geophysical anomalies, and whether they contribute to expressing Attributes of OUV. As they are located within the WHS, these features logically form an element of the ‘landscape without

parallel', and the geological and topographical setting of monuments and sites of Neolithic and Bronze Age date. However, no specific contribution of these features to Attributes conveying OUV is currently evidenced by archaeological data. All of those features within this set which have been subject to intrusive investigation and sampling have been identified as solution hollows; their value principally relates to their geoarchaeological interest.

4.3.13 None of these features are identified as contributing to Attributes that convey the OUV of the WHS, mainly because they are either undated, or have only yielded limited, redeposited evidence for Neolithic and Early Bronze Age activity, and no evidence for structural enlargement or modification. There is currently no definitive and verifiable evidence to confirm any theoretical spatial or chronological relationships between these specific pit-like geophysical anomalies and known monuments and groups of monuments of Neolithic to Early Bronze Age date in the landscape.

Contribution to the Integrity of the WHS

4.3.14 These pit-like anomalies are not currently considered to contribute to any of the Attributes of the OUV of the WHS, based on the available excavated evidence.

4.3.15 At present, it is not currently demonstrated whether they are interrelated with the wider complex of Neolithic and Bronze Age sites and monuments within the WHS. There is no excavated archaeological evidence that supports their contribution to the overall Integrity of the WHS. Geological sinkholes are often located in dry valleys (see Hopson 2006, above), and the distribution of sites and monuments in the landscape is linked to natural topography, including dry valleys and associated underlying geological horizons; however, this does not necessarily correlate to a causal relationship between monuments groupings and sinkholes.

Contribution to the Authenticity of the WHS

4.3.16 The features have the potential to increase our understanding of past environments, and the underlying geology and topography of the 'landscape without parallel'; some may contain cultural material associated with periods of Neolithic and Bronze Age activity within the WHS.

Assessment of significance and value

4.3.17 Most pit-like anomalies are untested, and of unknown value; two have been sampled, and are assessed to be medium value.

4.3.18 A review of the publicly available data indicates that most of these features have not been tested by intrusive fieldwork and are, therefore, undated anomalies of uncertain value. However, in order to ensure that their eventual potential to contribute to aspects of OUV is not underestimated, as a precautionary approach, as set out in para. 2.3.2 above, these have therefore been treated as having **potentially Very High value**.

4.3.19 The two that have been ground-truthed have been interpreted as natural solution hollows.

- Anomaly 033 was geologically complex, including Pleistocene loess deposits and is assessed as being of **Medium value**.
- Anomaly 030 is assessed to be of **Medium value**, with more limited geoarchaeological interest.

Existing baseline

4.3.20 The presence of the A303 and other roads can be perceived from some of the locations of the anomalies. Given that these features do not express Attributes of OUV, no significance of effect is assessed.

Assessment of impact of Scheme

4.3.21 The changes arising from the Scheme are too distant to have a significant impact on many of the pit-like anomalies. The alterations to Longbarrow Junction have a limited setting impact, due to the combination of intervening distance and topography, and the fact that the Scheme mainline would run in vertical cutting, with the Longbarrow Junction and all sliproads in sloped cutting to conceal traffic.

Impact on fabric

4.3.22 As indicated in the DAMS, the only known large pit-like geophysical anomaly within the WHS and DCO boundary, Anomaly 030, will be preserved in place within the Site 39 Preservation of Archaeological Remains area [TR10025-001951, 358–359]. Therefore, there will be no impact upon its fabric, resulting in a **Neutral effect** (derived from **No Change** to a **Medium value** receptor).

Impact on setting

4.3.23 Anomaly 029 is located within the WHS to the south of the Western Portal Approach Cutting and Anomaly 032 lies immediately outside the WHS boundary but within the setting of the WHS, close to the A360 North sliproad from Longbarrow Junction. These anomalies will experience fairly limited setting impacts, due to the low baseline quality of the setting and the intervening topography (the Western Portal and approach cutting being largely situated in a dry valley). A worst case **Slight adverse effect** is assessed for the setting of these Anomalies, derived from a **Negligible impact** on a **potentially Very High value** asset as set out in para. 2.3.2 above.

Significance of effect (based on permanent operational impacts)

4.3.24 Taking account of the **potentially Very High value** of the assets as set out in para. 2.3.2 above and in accordance with Main HIA Table 5 [APP-195], there will be a **Neutral effect on fabric** and a worst case **Slight adverse**

effect on setting; the overall significance of effect of the Scheme on other large pit-like anomalies in the landscape is assessed as **Slight adverse**.

Proposed mitigation

4.3.25 There will be no physical impacts on any of the other Discrete / Isolated Anomalies which will be either preserved in situ within the DCO boundary or outside the DCO boundary.

4.3.26 The following Discrete and Isolated Anomalies are situated in farmland beyond the DCO boundary: Anomalies 021, 022, and 029. As they are beyond the DCO boundary, no specific mitigation measures are proposed.

4.3.27 The DAMS proposes the following mitigation measures for the following Discrete and Isolated Anomalies located within the DCO boundary and within the setting of the WHS:

- Anomaly 010 – Preservation of Archaeological Remains (PAR) within Site 36 PAR area [TR010025-001951, 353–354].
- Anomaly 032 – situated within area X18 - Outside construction working area - no Scheme impact [TR010025-001951, 185 and 443].
- Anomaly 033 – PAR within Site 17.2 PAR area [TR010025-001951, 283–285].

4.3.28 There is one pit located within the DCO boundary within the WHS:

- Anomaly 030 – PAR within Site 39 PAR area [TR010025-001951, 358–359].

Table 2. Summary anticipated impacts of the Scheme on fabric and setting, scale of impact, significance of effect and residual effect upon other large pit-like anomalies in the landscape.

Value of other large pit-like anomalies in the landscape	Potentially Very High (uncertain; untested anomalies) Medium (sampled Anomalies 030 and 033)	
Impact of the existing A303 and associated roads and infrastructure on the Attributes of OUV expressed by other large pit-like anomalies in the landscape	N/A – no specific contribution to Attributes that convey the OUV of the WHS is currently evidenced by archaeological data	
Significance of effect of existing A303 and associated roads and infrastructure on the Attributes of OUV expressed by other large pit-like anomalies in the landscape	Slight adverse (setting)	
Scale and severity of change / impact of Scheme	**Fabric**	No Change
	Setting	Negligible Change

Significance of effect of Scheme, taking into account embedded mitigation (design)	Slight adverse (setting)
Significance of effect of Scheme, following proposed additional mitigation (residual effect)	Slight adverse (setting)

5 Mitigation

Preservation in place (known large pit-like anomalies within DCO boundary)

5.1.1 Within the setting of the WHS, three pit-like geophysical anomalies are identified: Anomalies 010, 032 and 033. These will be preserved in situ within the DCO boundary through the procedures set out in the DAMS for the preservation of archaeological remains [TR010025-001951].

5.1.2 Within the WHS, Anomaly 030 will be preserved in situ within the DCO boundary through procedures as set out in the DAMS for the preservation of archaeological remains [TR010025-001951].

Research-led investigation

5.1.3 Should any additional sinkholes or other pit-like features be identified within the DCO footprint during the course of preliminary or main works, these will be protected during works, investigated and/or preserved in place. They will be subject to detailed professional archaeological investigation following iterative research methods, reporting and prompt public dissemination of factual and interpretative information, as set out in the DAMS [TR010025-001951].

5.1.4 The DAMS provides for the iterative development of the mitigation strategy for excavation, artefact recovery and sampling where required, which will be agreed with the Technical Partner's Archaeologist, Archaeological Contractor, Wiltshire Council, Historic England and for sites within the WHS, HMAG, at a site consultation meeting. Where agreement cannot be reached the iterative site strategy (or relevant aspect of it that is sought to be agreed) will be approved by Wiltshire Council in consultation with Historic England. Any departures will be agreed as part of the agreement on the iterative site strategy (or approved by Wiltshire Council in consultation with Historic England where agreement cannot be reached). In the event of unexpected circumstances or where requirements change and evolve as part of the responsiveness of the strategy, further consultation (as part of normal or additional site meetings) will be required to request advice, and agree any change to the strategy (with any such change being approved by Wiltshire Council in consultation with Historic England where agreement cannot be reached), as part of the iterative development of the mitigation strategy [TR010025-001951, para. 6.1.24].

5.1.5 The DAMS notes that "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. The research objectives and excavation strategy will be kept under review during the investigation at each site." [TR010025-001951, para. 6.3.7–8].

5.1.6 The investigation and recording strategy for such features includes geo-archaeological investigation [TR010025-001951, section 6.7], palaeoenvironmental sampling [TR010025-001951, paras. 6.3.59 to 6.3.69] and scientific dating, including radiocarbon and optically stimulated luminescence (OSL) dating [TR010025-001951, para. 6.3.70–74].

5.1.7 The Research Questions in the DAMS highlight priorities for research including “the possibility of the recovery of environmental evidence from (for instance) sinkholes” [TR010025-001951, para. 4.4.18], with the Description of Archaeological Resource [possibility of the recovery of environmental evidence from, section 3.3] and Research Themes [TR010025-001951, section 4.2] highlighting the potential for evidence of human use, and the presence of cultural material within utilised natural features such as tree hollows, sinkholes or dolines.

6 Impacts of A303 Scheme

6.1.1 It is assessed that the A303 Scheme will not have any significant impact on the Durrington Walls discovery. It will not result in any direct physical impacts on the suggested 'pit circuit', upon related sub-surface deposits or upon hypothetical associations and interrelationships with other monuments and Asset Groups in the landscape.

6.1.2 Construction of the eastern portal and its approach road would be apparent from the 'southern arc' associated with Durrington Walls Henge in a similar way to the Countess Farm Barrows (AG31). Impacts here are fairly limited, due to the separating distance, the dominating presence of the existing A303, the low baseline quality of the setting and the intervening topography (the Eastern Portal being situated in a dry valley).

6.1.3 The Main ES [APP-044] and Main HIA [APP-195] consider other large pit-like anomalies, assessed as isolated and discrete non-designated heritage assets. Those located within the DCO boundary have been identified via geophysical survey and evaluation. These will not be physically impacted by the Scheme, as they will be preserved in place as set out in the DAMS [TR010025-001951]. One pit within the WHS (Anomaly 029), and another within the setting of the WHS (Anomaly 032) will experience a worst-case Negligible change to their setting, resulting in a Slight adverse significance of effect.

6.1.4 Taking into account the discovery, it is assessed that the presence of the suggested Durrington Walls discovery does not change the assessment of Scheme impacts on the WHS as a whole set out in the Main HIA [APP-195].

Table 3. Assessed impacts and effects of the existing A303 and anticipated impacts and effects of the Scheme on the Durrington Walls discovery, which conveys Attributes of OUV

Heritage asset	Impact of existing baseline/ A303 on Asset Group conveying Attributes of OUV	Effect of existing baseline/ A303 on Asset Group conveying Attributes of OUV	Impact of Scheme on heritage assets conveying Attributes of OUV	Anticipated significance of effect of Scheme	Residual significance of effect of Scheme
New discovery ("Massive, Late Neolithic Pit Structure associated with Durrington Walls Henge")	Negligible	Slight Adverse (setting)	No Change	Neutral	Neutral
Other large pit-like anomalies in the landscape	Negligible	Slight Adverse (setting)	Negligible Change	Slight adverse (setting)	Slight adverse (setting)

7 Impact assessment on the Attributes which convey the OUV of the WHS, Integrity and Authenticity

7.1.1 The potential overall impacts and effects of the Scheme on individual Attributes of OUV expressed by the Durrington Walls discovery, taking into account the results of the detailed assessments from the Main HIA and the changes tabulated above, are assessed in this HIA Addendum. This takes account of both positive and negative impacts, to arrive at an overall conclusion regarding the effect of the Scheme on the Attributes of OUV and the Authenticity and Integrity of the WHS. In making this balanced judgement, a precautionary approach has been adopted so as to avoid overstating positive impacts and beneficial effects where these arise.

7.1.2 Table 4 provides a summary of the significance of effect of the existing A303 and the anticipated significance of effect of the Scheme on the Attributes of OUV, Integrity and Authenticity. The results in Table 4 remain unchanged from the Main HIA [APP-195].

Table 4. Summary of assessment of significance of effect of existing A303 and anticipated significance of effect of Scheme on Attributes of OUV, Integrity and Authenticity (with consideration of Durrington Walls discovery)

Attribute of Outstanding Universal Value	Impact of existing A303	Effect of existing A303	Impact of Scheme	Effect of Scheme
1. Stonehenge itself as a globally famous and iconic monument	Moderate Negative	Large Adverse	Major Positive	Very Large Beneficial
2. The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites	Moderate Negative	Large Adverse	Negligible Negative Change	Slight Adverse
3. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape	Minor Negative	Moderate Adverse	Negligible Negative Change	Slight Adverse
4. The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy	Minor Negative	Moderate Adverse	Moderate Positive Change	Large Beneficial
5. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other	Moderate Negative	Large Adverse	Negligible Positive Change	Slight Beneficial
6. The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel	Moderate Negative	Large Adverse	Negligible Positive Change	Slight Beneficial

7. The influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others	Negligible Negative	Slight Adverse	Negligible Positive Change	Slight Beneficial
Integrity	Major Negative	Large Adverse	Negligible Positive Change	Slight Beneficial
Authenticity	Negligible Negative	Slight Adverse	Negligible Positive Change	Slight Beneficial

8 Conclusions

8.1.1 In accordance with the 2011 ICOMOS HIA Guidance, this HIA Addendum:

- Identifies heritage potentially at risk and its contribution to the OUV of the property;
- Identifies how change or development will impact on OUV, positively or negatively;
- Identifies how change or development will impact on integrity and authenticity, positively or negatively; and
- Considers how adverse impacts of the Scheme might be mitigated.

8.1.2 The conclusions from the Main HIA, including how the Scheme fulfils aspects of the 2015 WHS Management Plan's Vision, Aims and Policies, would be unchanged, as demonstrated by the commentary above. The conclusions from the Main HIA are repeated below for clarity.

8.1.3 The Scheme would bring substantial benefits to large parts of the WHS, in particular the tunnel section where **Very Large Beneficial** effects would be experienced by Stonehenge itself (Attribute 1) with **Large Beneficial** effects on its solstitial alignments (Attribute 4).

8.1.4 **Slight Beneficial** effects would be experienced in relation to the siting of monuments in relation to each other (Attribute 5), within the landscape without parallel (Attribute 6), and with regards to the influence that the monuments and their landscape setting have on architects, artists, historians, archaeologists and others (Attribute 7).

8.1.5 **Slight Adverse** effects would be experienced on physical archaeological remains (Attribute 2). There would be **Slight Adverse** effects upon the siting of monuments in relation to the landscape (Attribute 3) due to the positioning of new cuttings within the WHS (western and eastern approach roads and portals), which avoid known archaeological remains that contribute to the OUV of the WHS but introduce new severance and impacts on the setting of assets and Asset Groups.

8.1.6 The OUV of the WHS would therefore be sustained overall by the construction of the Scheme, which would create opportunities for greater public access, appreciation and enjoyment of the WHS, through increased connectivity between key monuments and monument groups north and south of the existing A303. The Scheme would thus enable beneficial opportunities for the transmission of OUV and increasing the public's awareness, understanding and perception of the OUV of the WHS in a local, regional, national and international context.

8.1.7 The Scheme is assessed to have a **Slight Beneficial** effect on the Integrity of the WHS as a whole and a **Slight Beneficial** effect on the Authenticity of the WHS as a whole.

8.1.8 Overall, the Scheme is assessed to have a **Slight Beneficial** effect on the OUV of the WHS as a whole.

9 References

Anon, 2011. Discoveries Provide Evidence of a Celestial Procession at Stonehenge, University of Birmingham Press Release, 26 November 2011. Available at www.birmingham.ac.uk/news/latest/2011/11/25Nov-Discoveries-provide-evidence-of-a-celestial-procession-at-Stonehenge.aspx

Ashbee, P., Bell, M. and Proudfoot, E. 1989 Wilsford Shaft: Excavations 1960-2, English Heritage Archaeological Reports 11, London: English Heritage.

Barclay, G.J. & Brophy, K. 2020a A veritable chauvinism of prehistory': nationalist prehistories and the 'British' late Neolithic mythos, Archaeological Journal 177. Available at https://doi.org/10.1080/00665983.2020.1769399

Barclay, G.J. & Brophy, K. 2020b Disrupting the Past. Wessex, Orkney and Brexit: when archaeology fails. British Archaeology Magazine: Council for British Archaeology September/October 2020, 48–49.

Bishop, S. 2011. Stonehenge World Heritage Site Landscape Project Level 1 Field Investigations Archaeological Survey Report. English Heritage Research Report Series 82-2011.

Chadburn, A and Ruggles, C. 2017. Stonehenge World Heritage Property, United Kingdom. In: C. Ruggles and M. Cotte (eds) Heritage Sites of Astronomy and Archaeoastronomy in the Context of the UNESCO World Heritage Convention. Thematic Study, vol. 2. Bognor Regis: Ocarina Books Ltd. / International Council on Monuments and Sites / International Astronomical Union, pp. 41–62. Available at https://www3.ocarinabooks.com/_downloads/ocarinabooks.com/heritage-of-astronomy_thematic-study_2ndedition.pdf

Chadburn, A. and Ruggles, C. 2015. Category of Astronomical Heritage: Tangible Immovable. Stonehenge World Heritage Property, United Kingdom. Portal to the Heritage of Astronomy. UNESCO's Astronomy and World Heritage Initiative / International Working Group on Astronomy and World Heritage / International Astronomical Union. Available at https://www3.astronomicalheritage.net/index.php/show-entity?identity=49&idsubentity=1.

Chamberlain, A. and Parker Pearson, M. 2007 'Units of measurement in Late Neolithic southern Britain' in M. Larsson and M. Parker Pearson (eds) From Stonehenge to the Baltic. living with cultural diversity in the third millennium BC, Oxford: Archaeopress, 169–74.

Consortium of Archaeologists and the Blick Mead Project Team 2020. Late representation made on behalf of the Consortium of Archaeologists and the Blick Mead Project Team and accompanying statement of Paul Garwood, dated 25 June 2020. [TR010025-001960]

Crutchley, S. 2002 'Aerial Survey Stonehenge World Heritage Site Mapping Project: Management Report', Report Series AER/14/2002, Swindon: English Heritage. Available at

https://research.historicengland.org.uk/redirect.aspx?id=6835%7C%20Stonehenge%20World%20Heritage%20Site%20Mapping%20Project:%20Management%20Report

Darvill, T. 2020 Comment: Ground control – how Bronze Age builders reshaped the landscape. Apollo International Art Magazine, 16 July 2020. Available at https://www.apollo-magazine.com/neolithic-pits-durrington-discovery-near-stonehenge/

Darvill, T., Marshall, P., Parker Pearson, M., and Wainwright, G. 2012. Stonehenge remodelled, Antiquity 86, 1021–40.

Daw, T. 2018. 'Larkhill causewayed enclosure posthole alignment', Sarsen.Org [blog] http://www.sarsen.org/2018/02/larkhill-causewayed-enclosure-posthole.html

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.

Gaffney, C., Gaffney, V., Neubauer, W., Baldwin, E., Chapman, H., Garwood, P., Moulden, H., Sparrow, T., Bates, R., Löcke, K., Hinterleitner., A., Trinks., I., Nau., E., Zitz., T., Floery, S., Verhoeven, G., and Doneus, M. 2012. Short Report: The Stonehenge Hidden Landscapes Project. Archaeological Prospection. Volume 19(2), pp. 147–155. https://doi.org/10.1002/arp.1422

Gaffney V., Neubauer W., Garwood P. Gaffney, C.F., Locker, K., Bates, R., De Smedt, P., Baldwin, E., Chapman, H., Hinterleitner, A., Wallner, M., Nau, E., Filzwieser, R., Kainz, J., Trausmuth, T., Schneidhofer, P., Zotti, G., Lugmayer, A., Trinks, I., and Corkum, A. 2018. Durrington Walls and the Stonehenge Hidden Landscape Project 2010-2016. Archaeological Prospection. 25(3), 255–269. https://doi.org/10.1002/arp.1707

Gaffney, V. et al. 2012. The Stonehenge Hidden Landscapes Project. Archaeological Prospection. University of Birmingham Report 2012.121.

Gaffney V. et al. 2020. A Massive, Late Neolithic Pit Structure associated with Durrington Walls Henge. Internet Archaeology 55. https://doi.org/10.11141/ia.55.4

Garwood, P. 2019. Paul Garwood. Additional Submission accepted at the discretion of the Examining Authority - Examination Presentation [AS-042]

Gron, K., Rowley-Conwy, P., Fernandez-Dominguez, E., Gröcke, D., Montgomery, J., Nowell, G. and Patterson, W. 2018 'A meeting in the forest: hunters and farmers at the Coneybury “anomaly”, Wiltshire', Proceedings of the Prehistoric Society 84, 111–144. https://doi.org/10.1017/ppr.2018.15

Highways England 2017. A303 Amesbury to Berwick Down. Geophysical Survey Report Phase 2. Arup Atkins Joint Venture. Report No. 113223-07.

Highways England 2018a. A303 Stonehenge Amesbury to Berwick Down Heritage Impact Assessment Scoping Report. February 2018. Available at

http://www.a303scientificcommittee.org.uk/images/documents/june2018/Heritage_Impact_Assessment_Scoping_Report1.pdf

Highways England 2018b. A303 – Amesbury to Berwick Down. 6.1 Environmental statement Chapter 6 - Cultural Heritage. October 2018. [APP-044]

Highways England 2018c. A303 – Amesbury to Berwick Down. 6.3 Environmental Statement Appendices. 6.3 Environmental Statement Appendix 6.1 - Heritage Impact Assessment. October 2018. [APP-195]

Highways England 2018d. A303 – Amesbury to Berwick Down. 6.3 Environmental Statement Appendices. Appendix 6.1 Annex 2 Inventory with summary descriptions. October 2018. [APP-197]

Highways England 2018e. A303 – Amesbury to Berwick Down. 6.3 Environmental Statement Appendices. Appendix 6.1 Annex 4 - Previous archaeological and antiquarian investigations within the Stonehenge part of the WHS. October 2018. [APP-199]

Highways England 2018f. A303 – Amesbury to Berwick Down. 6.3 Environmental Statement Appendices. Appendix 6.3 Gazetteer of Archaeological Assets. October 2018. [APP-212]

Highways England 2018g. A303 – Amesbury to Berwick Down. Deadline 2 Submission - 8.11 Draft Detailed Archaeological Mitigation Strategy (DAMS). May 2019. [REP2-038]

Highways England 2018h. A303 Amesbury to Berwick Down 6.3 Environmental Statement Appendices Appendix 6.8 Cultural Heritage – Summary of nonsignificant effects. October 2018. [APP-217]

Highways England 2018i. A303 Amesbury to Berwick Down 6.3 Environmental Statement Appendix 6.1 Annex 6 - Influences of the monuments and landscape of the Stonehenge part of the Word Heritage Site on architects, historians and archaeologists. October 2018. [APP-201]

Highways England 2018j. A303 Amesbury to Berwick Down 6.3 Environmental Statement Appendix 6.1 Annex 7 - Influences of the monuments and landscape of the Stonehenge part of the World Heritage Site on artists. October 2018. [APP-202]

Highways England 2018k. A303 Amesbury to Berwick Down 6.3 Environmental Statement Appendix 6.1 Annex 8 - Influences of the monuments and landscape of the Stonehenge part of the World Heritage Site on literature and popular culture. October 2018. [APP-203]

Highways England 2019a. A303 – Amesbury to Berwick Down. Stage 4 – Geophysical Survey: Phase 4. April 2019. HE551506-AMW-EHR-SW-GN_000_Z - RP-LH-0001. [REP1-041]

Highways England 2019b. A303 Stonehenge Amesbury to Berwick Down Archaeological Evaluation Report: Western Portal and Approach - Part 1: Text April 2019. [REP1-045]

Highways England 2019c. A303 Amesbury to Berwick Down 8 TR010025 Deadline 3 8.26 – Palaeoenvironmental Assessment: Western Portal and Approaches. May 2019. [REP3-023]

Highways England, 2020a. A303 – Amesbury to Berwick Down. Stage 4 – Fieldwalking Report: Parsonage Down and Winterbourne Stoke Bypass (West) HE551506-AMW-EHR-Z1_GN_ZZ_ZZ-RP-EN-0187.

Highways England, 2020b. A303 – Amesbury to Berwick Down. 8.11(7) – Detailed Archaeological Mitigation Strategy (DAMS) - Revised response to Department for Transport request for further information dated the 4th May 2020. May 2020. [TR010025-001951] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001951-A303%20Stonehenge%20-%20DAMS_18-05-2020.pdf

Highways England, 2020c. A303 Amesbury to Berwick Down TR010025. 6.3 (8) Final Outline Environmental Management Plan - Revised response to Department for Transport request for further information. May 2020. [TR010025-001949] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001949-6.3%20Appendix%202.2(8)%20–%20Outline%20Environmental%20Management%20Plan%20(OEMP)_FINAL_DfT%20Revision.pdf

Historic England, 2017. Exploring the Landscape of Stonehenge. Historic England Research Issue 6, Summer 2017. Available at https://content.historicengland.org.uk/images-books/publications/historic-england-research-6/he-research-6.pdf/

Hopson, P.M., Farrant, A.R., Newell, A.J., Marks, R.J., Booth, K.A., Bateson, L.B., Woods, M.A., Wilkinson, I.P., Brayson, J. and Evans, D.J. 2006. 'Geology of the Salisbury Sheet Area', British Geological Survey Internal Report IR/06/011. Available at http://nora.nerc.ac.uk/id/eprint/7175/1/IR06011.pdf

Housley, R.A. and Hedges, R.E.M. 1989. 'Radiocarbon dating' in P. Ashbee, M. Bell and E. Proudfoot (eds) Wilsford Shaft: Excavations 1960-2, English Heritage Archaeological Reports 11, Swindon: English Heritage, 68–69.

ICOMOS 2011. Guidance on Heritage Impact Assessments for Cultural World Heritage properties. Paris: International Council on Monuments and Sites. Available at https://www.icomos.org/world_heritage/HIA_20110201.pdf

Leivers, M. 2017. 'Robin Hood's other ball? A newly-discovered causewayed enclosure at Larkhill, Wiltshire', PAST: the Newsletter of the Prehistoric Society 85, 12−13. Available at http://www.prehistoricsociety.org/publications/publication/past_85_april_2017/

Leivers, M. and Thompson, S. 2015. 'Larkhill East and West SFA, Larkhill, Wiltshire - Archaeological Evaluation Report', Unpublished report: Wessex Archaeology. https://doi.org/10.5284/1058924

Leivers, M., Thompson, S., Valdez-Tullett, A. and Wakeham, G. 2020. 'Larkhill Service Family Accommodation, Larkhill, Wiltshire Post-excavation Assessment Report', Unpublished report: Wessex Archaeology.

Linford, N. and Martin, L., 2009. Airman's Corner, Winterbourne Stoke, Wiltshire. Report on Geophysical Survey, February – March 2009. English Heritage Research Department Report Series no. 23-2009.

Parker Pearson, M. and Ramilisonina, 1998. Stonehenge for the ancestors: the stones pass on the message. Antiquity Volume 72, pp. 308–326.

Parker Pearson, M., Pollard, J., Richards, C., Thomas, J., Tilley, C., Richards, C. and Welham, K., 2005. The Stonehenge Riverside Project: Interim Report 2005. Unpublished interim report, University of Sheffield.

Parker Pearson, M., Pollard, J., Richards, C., Thomas, J., Tilley, C., and Welham, K., 2008. The Stonehenge Riverside Project: exploring the Neolithic landscape of Stonehenge. Documenta Praehistorica. Volume 35, pp. 153–166.

Parker Pearson, M., Allen, M., Bayer, O., Casswell, C., Chan, B., French, C., Garwood, P., Nunn, B., Pitts, M., Pollard, J., Pullen, B., Richards, C., Richards, J., Robinson, D., Rylatt, J., Shaw, D., Teather, A. and Thomas, J., 2008. Stonehenge Riverside Project 2008. Interim Report. Report 2008.095.

Parker Pearson, M., 2012. Stonehenge: exploring the greatest Stone Age mystery. London: Simon and Schuster.

Parker Pearson, M., 2012. Stonehenge and the beginning of the British Neolithic. In: A. M. Jones, J. Pollard, M. J. Allen and J. Gardiner eds Image, Memory and Monumentality. Archaeological Engagements with the Material World: A Celebration of the Academic Achievements of Professor Richard Bradley. Prehistoric Society Research Paper 5. Oxford: Oxbow Books, pp. 18–28.

RCHME, 1979. Stonehenge and its Environs: Monuments and Land Use. Edinburgh: Edinburgh University Press.

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

Ruggles, C.L.N. 2014. Stonehenge and its landscape. In: C.L.N. Ruggles ed. Handbook of Archaeoastronomy and Ethnoastronomy. New York: Springer, 1223–1238.

Schmidt, A. and Crabb, N. 2017 'Larkhill SFA Haul Road, Larkhill, Wiltshire - Detailed Gradiometer Survey Report', Unpublished report: Wessex Archaeology.

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/

Stonehenge Alliance 2020. Letter from the Stonehenge Alliance to the Secretary of State for Transport, dated 26 June 2020. [TR010025-001961]

Teather, A., Chamberlain, A. and Parker Pearson, M. 2019. 'The chalk drums from Folkton and Lavant: Measuring devices from the time of Stonehenge', British Journal for the History of Mathematics 34(1), 1-11. https://doi.org/10.1080/17498430.2018.1555927

Thompson, S. and Powell, A.B. 2018. Along Prehistoric Lines: Neolithic, Iron Age and Romano-British activity at the former MOD Headquarters, Durrington, Wiltshire, Oxford: Oxbow Books.

UNESCO 2008. Revision of Statements of Significance and Statements Outstanding Universal Value - Stonehenge, Avebury, and Associated Sites (UK). World Heritage Committee Decision 32 COM 8B.93. Paris: World Heritage Centre, United Nations Educational, Scientific and Cultural Organization. http://whc.unesco.org/en/decisions/1539

UNESCO/ICOMOS 2016. Report on the Joint World Heritage Centre/ICOMOS Advisory Mission to Stonehenge, Avebury and Associated Sites, 27–30 October 2015. http://whc.unesco.org/document/141037

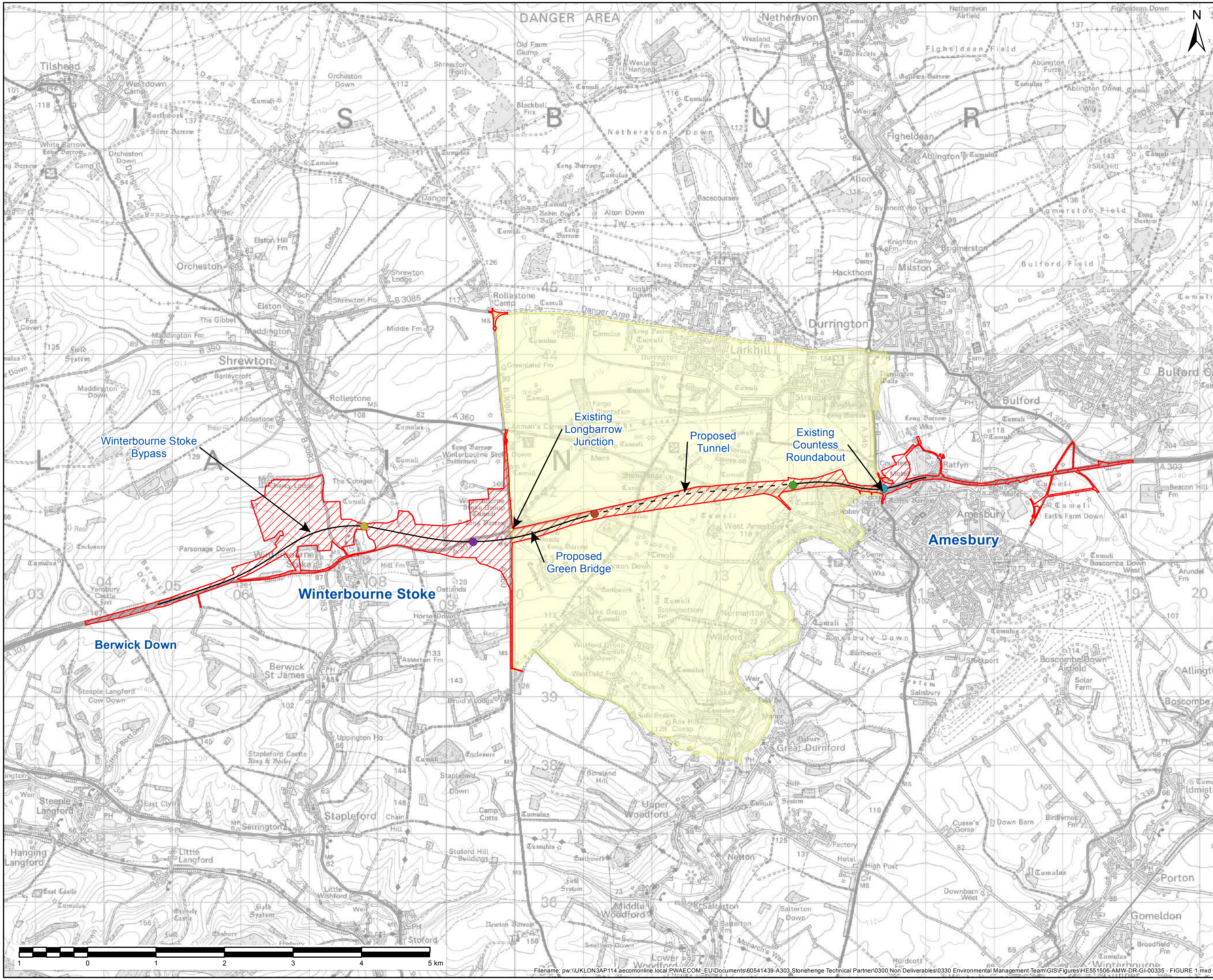
UNESCO World Heritage Centre 2019. The Operational Guidelines for the Implementation of the World Heritage Convention. United Nations Educational, Scientific and Cultural Organisation/Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage/World Heritage Centre WHC.19/01, July 2019. http://whc.unesco.org/en/guidelines

Urmston, B. 2014. 'Army Rebasing: Larkhill East Site, Salisbury, Wiltshire – Detailed Gradiometer Survey Report', Unpublished report: Wessex Archaeology. https://doi.org/10.5284/1048789

Wessex Archaeology 2009. Airman's Corner Wiltshire. Detailed Gradiometer Survey Report. Report No. 71420.02.

Wessex Archaeology 2012. Stonehenge and Avebury World Heritage Site, Wiltshire. Monument Condition Survey. Unpublished report 74080.06, January 2012. Salisbury: Wessex Archaeology.

Figures



NOTES / LEGEND

- Proposed scheme boundary
- Indicative centreline

Locations are indicative for the purpose of EIA

- Location of the Eastern portal
- Location of the Western portal
- Location of the Countess junction
- Location of the Longbarrow junction
- Location of the River Till crossing
- Stonehenge element of World Heritage Site

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of highways england

Project Title

A303 AMESBURY
TO BERWICK DOWN

Drawing Title

FIGURE 1
LOCATION OF SCHEME COMPONENTS AND EXTENT OF STONEHENGE ELEMENT OF STONEHENGE, AVEBURY AND ASSOCIATED SITES WHS

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	11/08/20

Internal Project No. 60541200

Scale @ A3: 1:50,000 | Zone: SW

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

AmW
AECOM + mace + WSP

Drawing Number Highways England PIN	Originator		Volume	Rev
HE551506	AMW		GEN	02
SCHEME WIDE	DR	GI	00335	
Location	Type	Role	Number	

HIA FIGURE 3A

HIA FIGURE 3B

HIA FIGURE 3C

HIA FIGURE 3D

NOTES / LEGEND

- Indicative centreline
- Proposed scheme boundary
- 2km Study Area
- World Heritage Site
- Scheduled Monument

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 2 KEY MAP INDICATING THE LOCATION OF SCHEDULED MONUMENTS WITHIN AND ADJACENT TO THE STONEHENGE ELEMENT OF THE STONEHENGE, AVEBURY AND ASSOCIATED SITES WHS

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	11/08/20

Internal Project No. 60541200

Scale @ A3: 1:75,000 | Zone: SW

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Bristol
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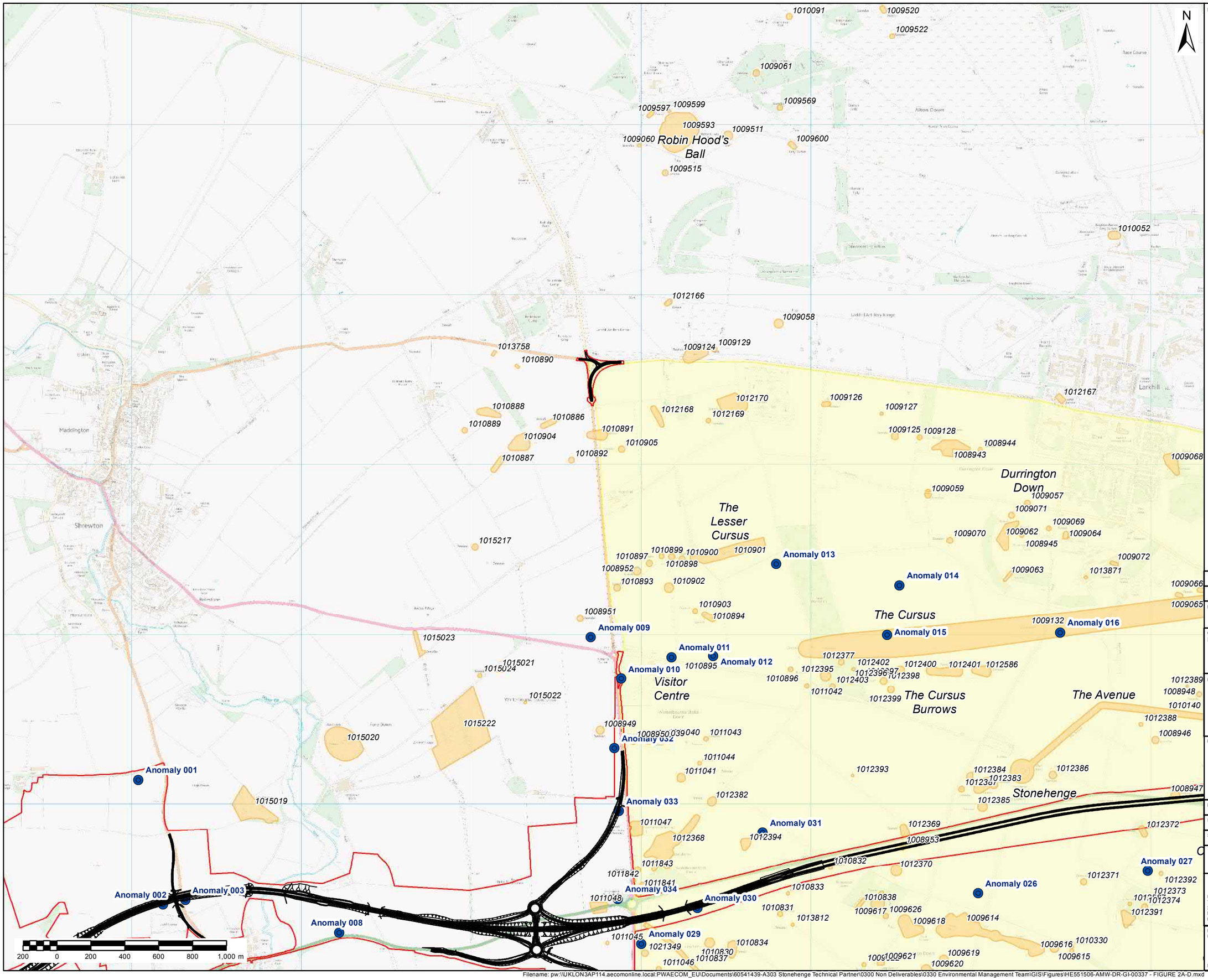
Drawing Number Highways England PIN	Originator	Volume		Rev
HE551506	AMW	GEN		02
SCHEME WIDE	DR	GI	00336	
Location	Type	Role	Number	

1 0 1 2 3 4 5 km

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00336 - FIGURE 2.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (other)
- Scheduled Monument
- World Heritage Site

Assets labelled with National Heritage List for England (NHLE) List Entry Number

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 2A LOCATION OF SCHEDULED MONUMENTS AND PROBABLE AND POTENTIAL PIT-LIKE GEOPHYSICAL ANOMALIES OVER 5M IN DIAMETER (NORTHWEST)

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	13/08/20

Internal Project No.: 60541200

Scale @ A3: 1:20,000 | Zone: SW

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Bristol
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Drawing Number: Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
HE551506	AMW	GEN	SCHEME WIDE	DR	GI	00337	02

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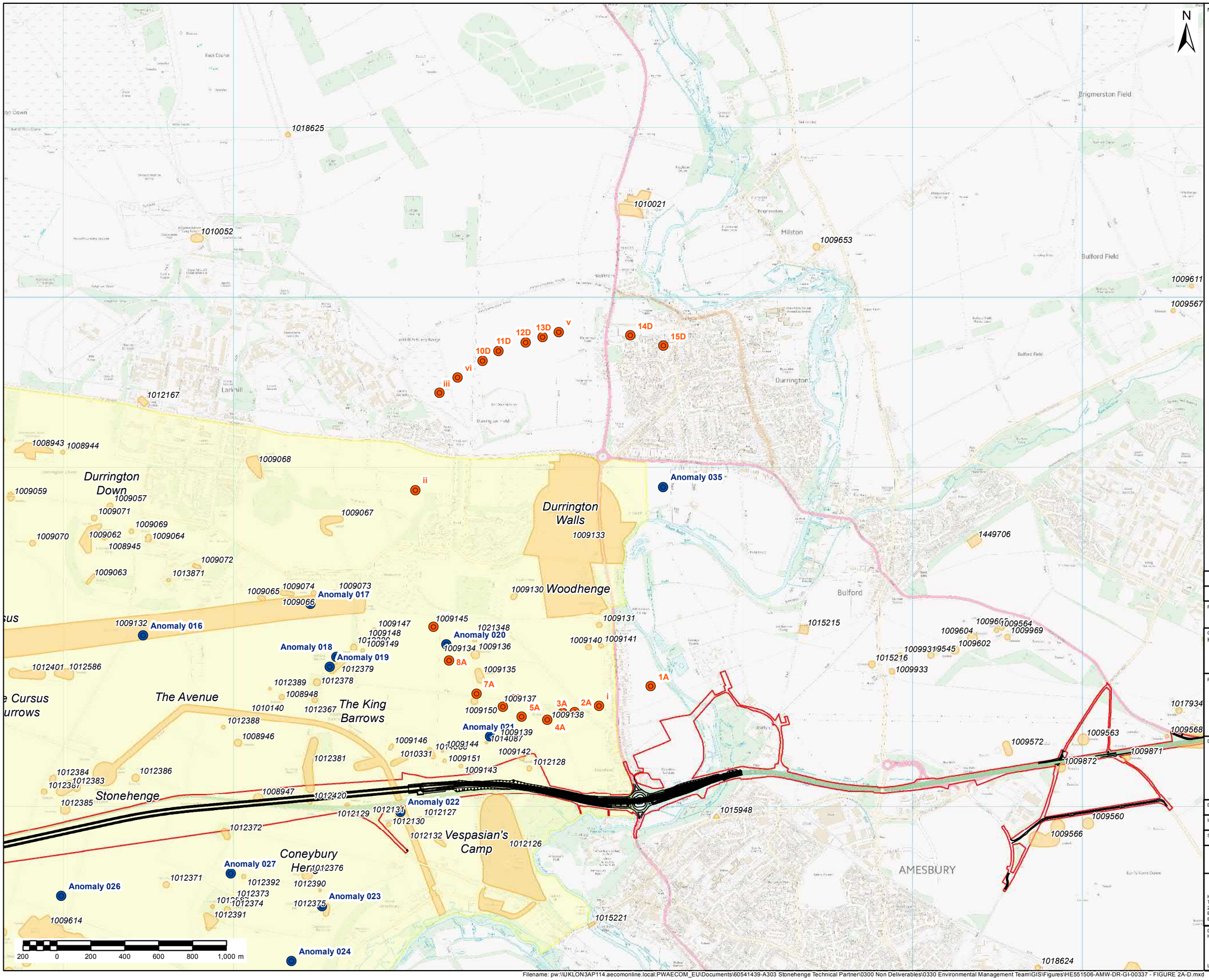

NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Scheduled Monument
- World Heritage Site

Assets labelled with National Heritage List for England (NHLE) List Entry Number

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 2B LOCATION OF SCHEDULED MONUMENTS AND PROBABLE AND POTENTIAL PIT-LIKE GEOPHYSICAL ANOMALIES OVER 5M IN DIAMETER (NORTHEAST)

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	13/08/20

Internal Project No.: 60541200

Scale @ A3: 1:20,000 | Zone: SW

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Bristol
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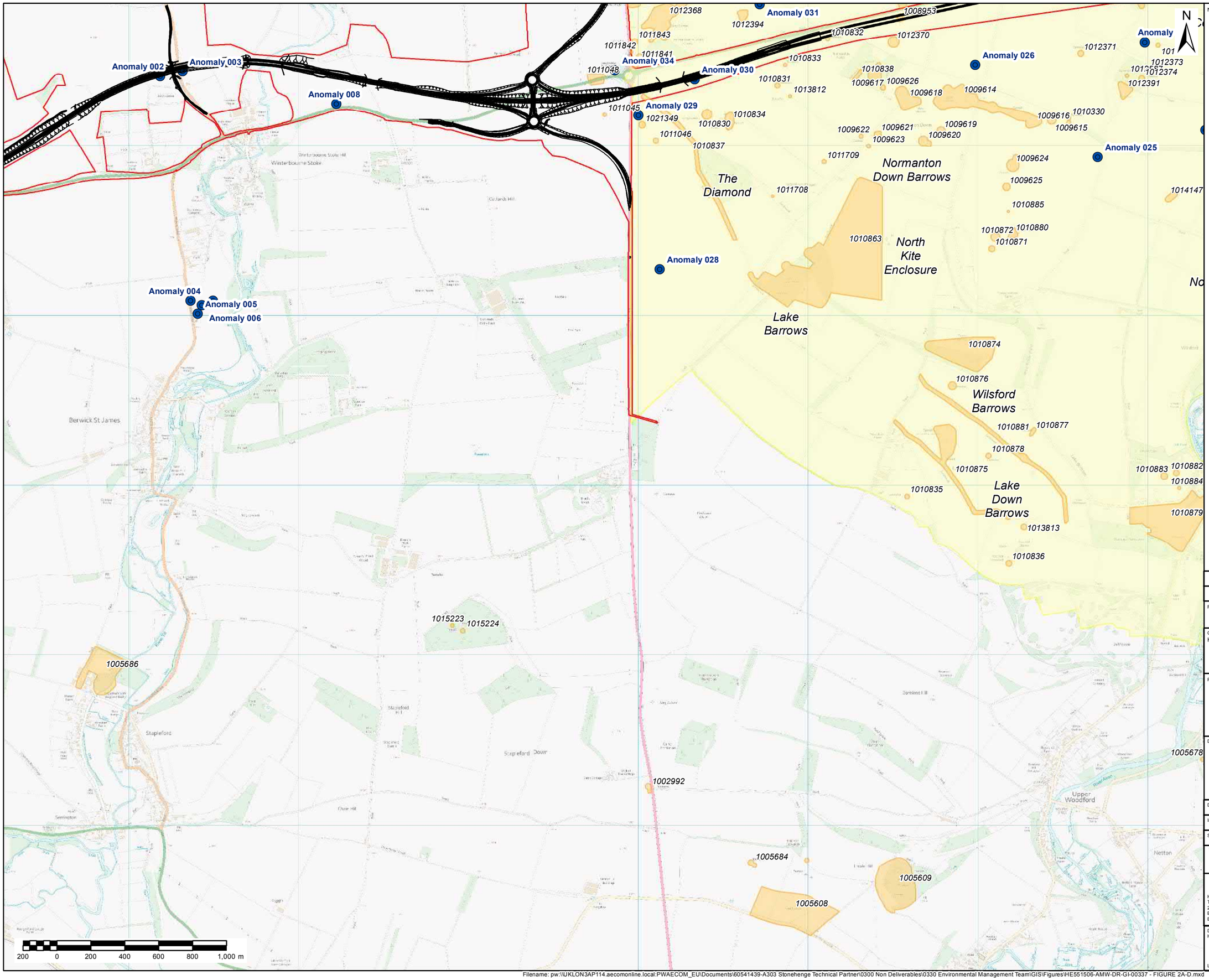
Drawing Number: Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
HE551506	AMW	GEN	SCHEME WIDE	DR	GI	00337	02

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00337 - FIGURE 2A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (other)
- Scheduled Monument
- World Heritage Site

Assets labelled with National Heritage List for England (NHLE) List Entry Number

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 2C LOCATION OF SCHEDULED MONUMENTS AND PROBABLE AND POTENTIAL PIT-LIKE GEOPHYSICAL ANOMALIES OVER 5M IN DIAMETER (SOUTHWEST)

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	13/08/20

Internal Project No.: 60541200

Scale @ A3: 1:20,000 | Zone: SW

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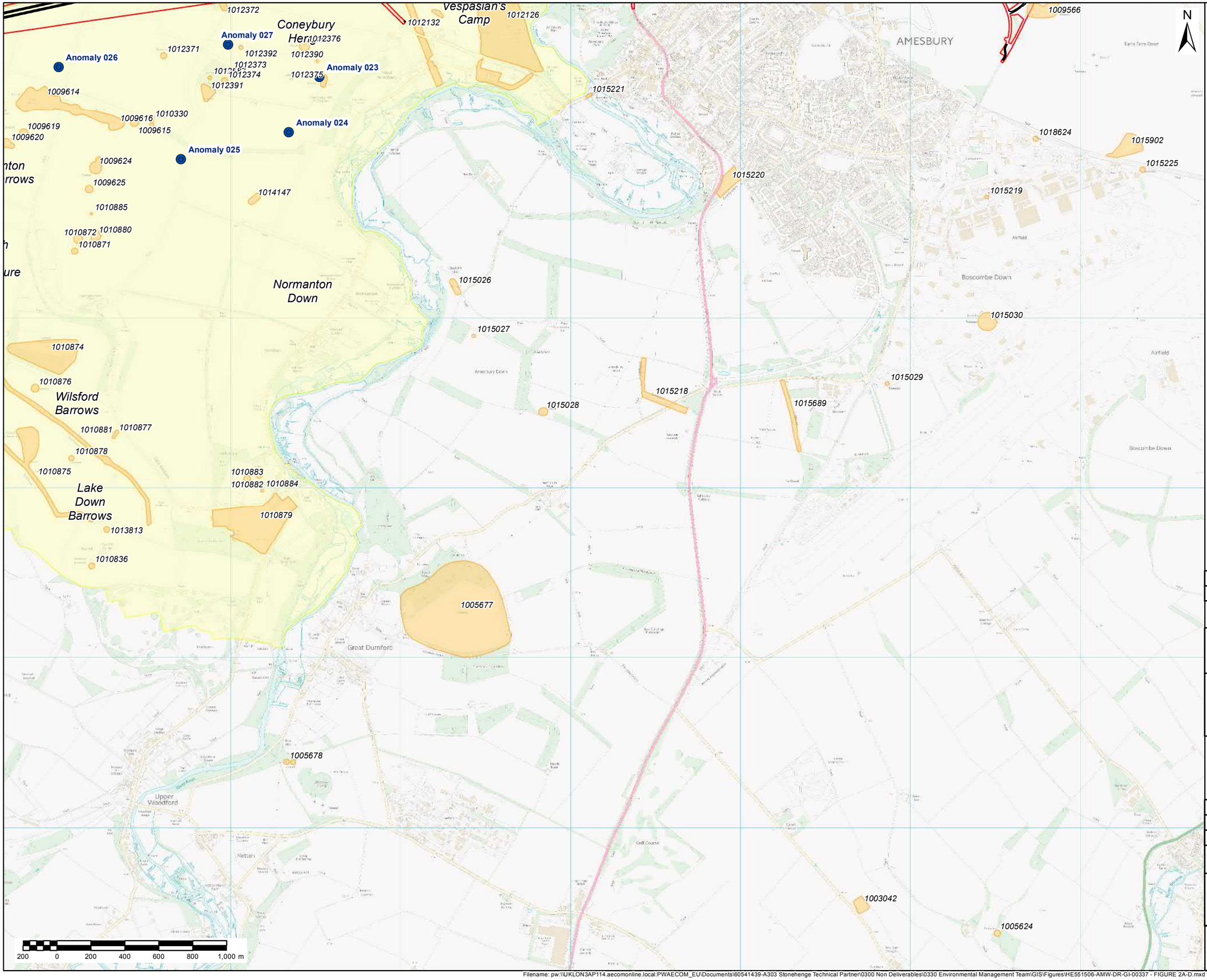
Bristol
BS1 6HA

AECOM + mace + WSP

Drawing Number Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	02

Location	Type	Role	Number
SCHEME WIDE	DR	GI	00337

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00337 - FIGURE 2A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (other)
- Scheduled Monument
- World Heritage Site

Assets labelled with National Heritage List for England (NHLE) List Entry Number

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 2D LOCATION OF SCHEDULED MONUMENTS AND PROBABLE AND POTENTIAL PIT-LIKE GEOPHYSICAL ANOMALIES OVER 5M IN DIAMETER (SOUTHEAST)

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	13/08/20

Internal Project No: 60541200

Scale @ A3: 1:20,000 | Zone: SW

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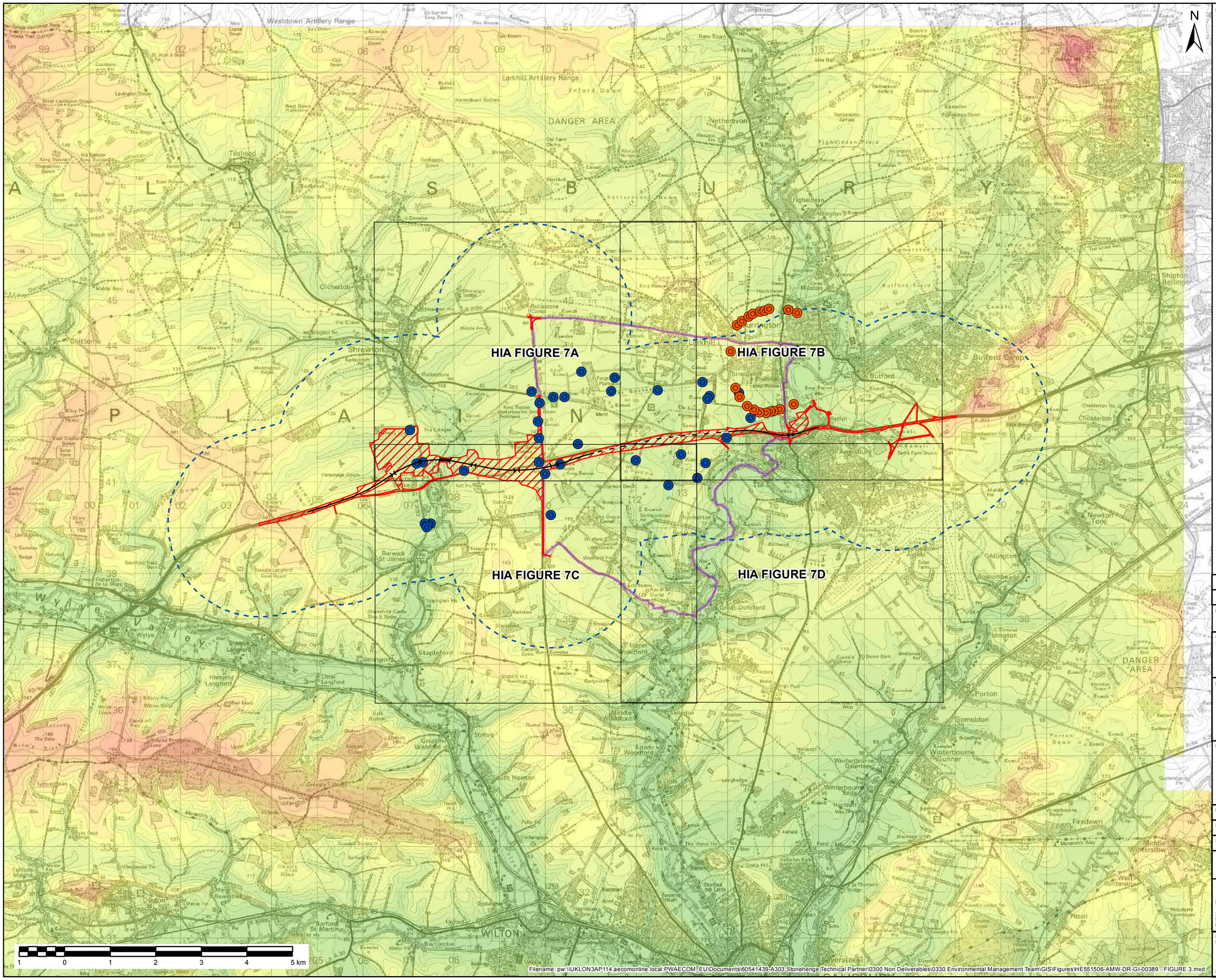
Bristol
BS1 6HA

AECOM + mace + WSP

Drawing Number: Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
HE551506	AMW	GEN	SCHEME WIDE	DR	GI	00337	02

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00337 - FIGURE 2A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Indicative centreline
- Proposed tunnel
- 2km Study Area
- World Heritage Site

Topography (m)

- <=50
- >50 - 60
- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150
- >150 - 160
- >160 - 170
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- >210 - 220
- >220

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 3 KEY MAP INDICATING THE LOCATION OF PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES OVER 5M IN DIAMETER AND NON-DESIGNATED HERITAGE ASSETS WITHIN AND ADJACENT TO THE STONEHENGE ELEMENT OF THE WHS

Designed	Drawn	Checked	Approved	Date
HS	AM	GM	WB	13/08/20

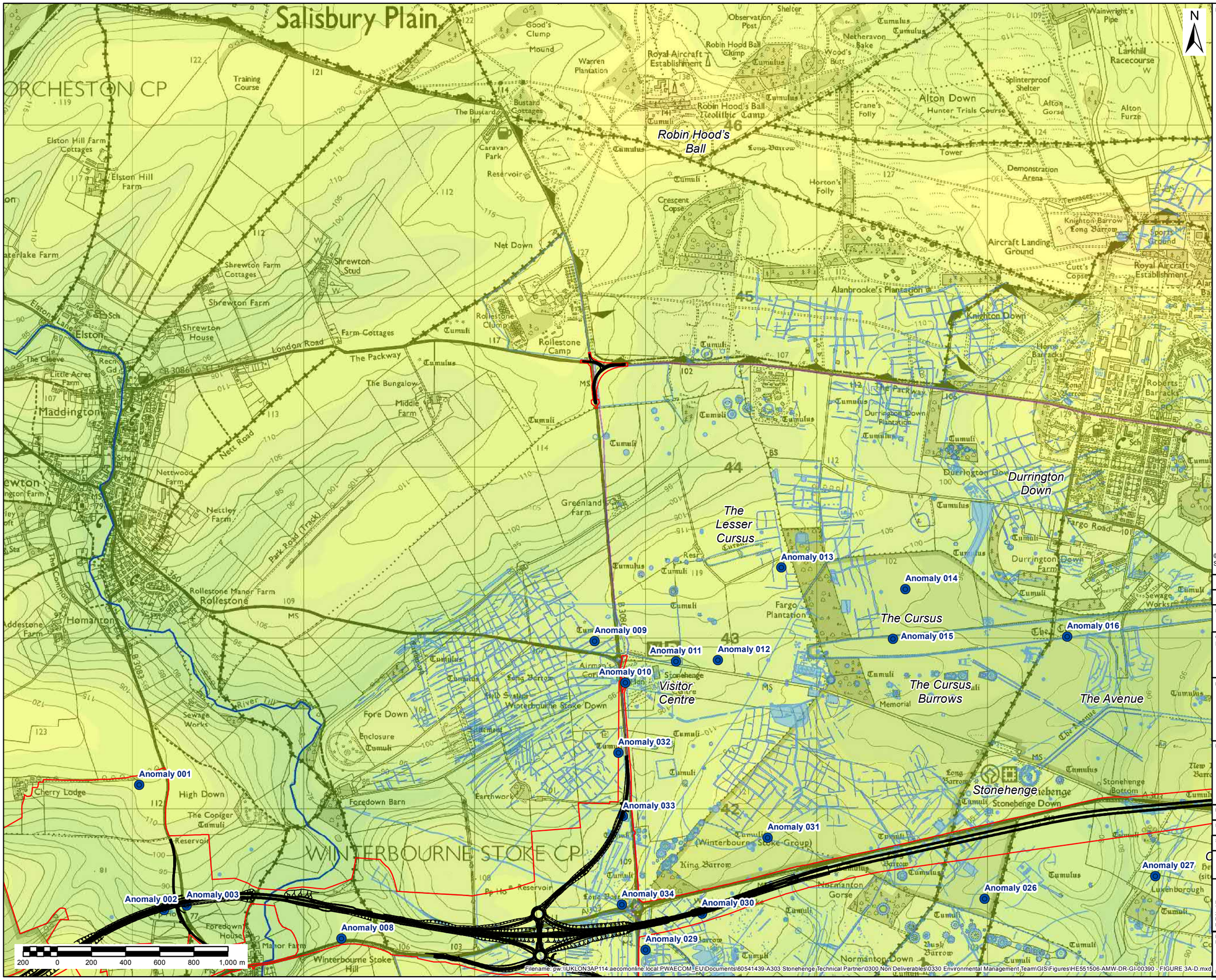
Internal Project No: 60541200

Scale @ A3: 1:75,000 | Zone: SW

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	02
SCHEME WIDE	DR	GI 00389	
Location	Type	Role / Number	



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (other)
- Non Designated HER Monuments - Point
- Non Designated HER Monuments - Line
- Non Designated HER Monuments - Area
- Watercourse
- World Heritage Site

Topography (m)

- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150

Note:
Selected assets labelled with Wiltshire and Swindon Historic Environment Record (WSHER) number.

Revision Details	By	Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 3A LOCATION OF NON-DESIGNATED HERITAGE ASSETS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES WITHIN AND ADJACENT TO THE STONEHENGE ELEMENT OF THE WHS (NORTHWEST):

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No.: 60547200

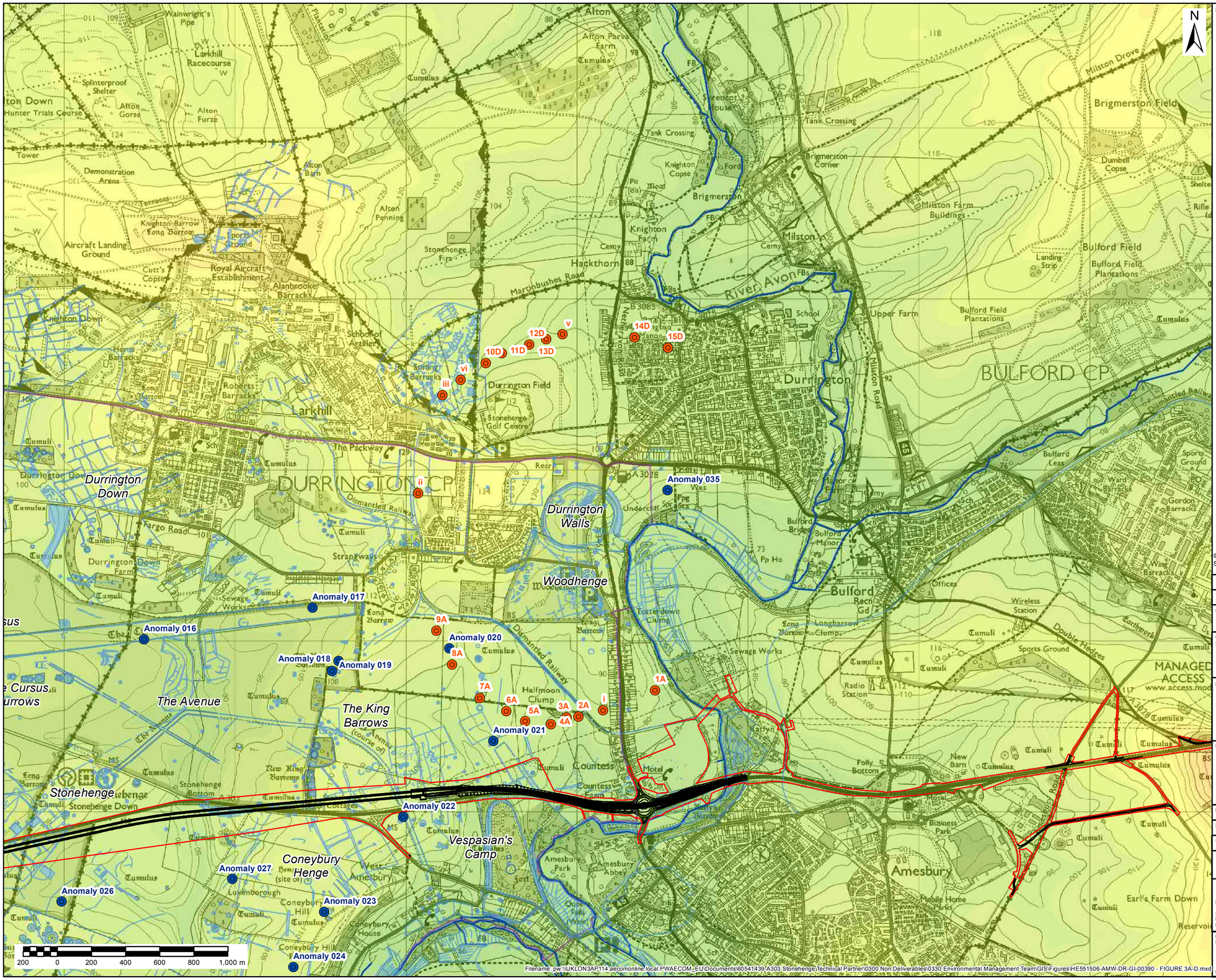
Scale @ A3: 1:20,000 | Zone: SW

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		02
SCHEME WIDE	DR	GI	00390	
Location	Type	Role	Number	

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00390 - FIGURE 3A-D.mxd



N

NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Non Designated HER Monuments - Point
- Non Designated HER Monuments - Line
- Non Designated HER Monuments - Area
- Watercourse
- World Heritage Site

Topography (m)

- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150
- >150 - 160
- >160 - 170

Note:
Selected assets labelled with Wiltshire and Swindon Historic Environment Record (WSHER) number.

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title:

A303 AMESBURY TO BERWICK DOWN

Drawing Title:

FIGURE 3B
LOCATION OF NON-DESIGNATED HERITAGE ASSETS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES WITHIN AND ADJACENT TO THE STONEHENGE ELEMENT OF THE WHS (NORTHEAST):

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No. 60547200

Scale @ A3: 1:20,000 | Zone: SW

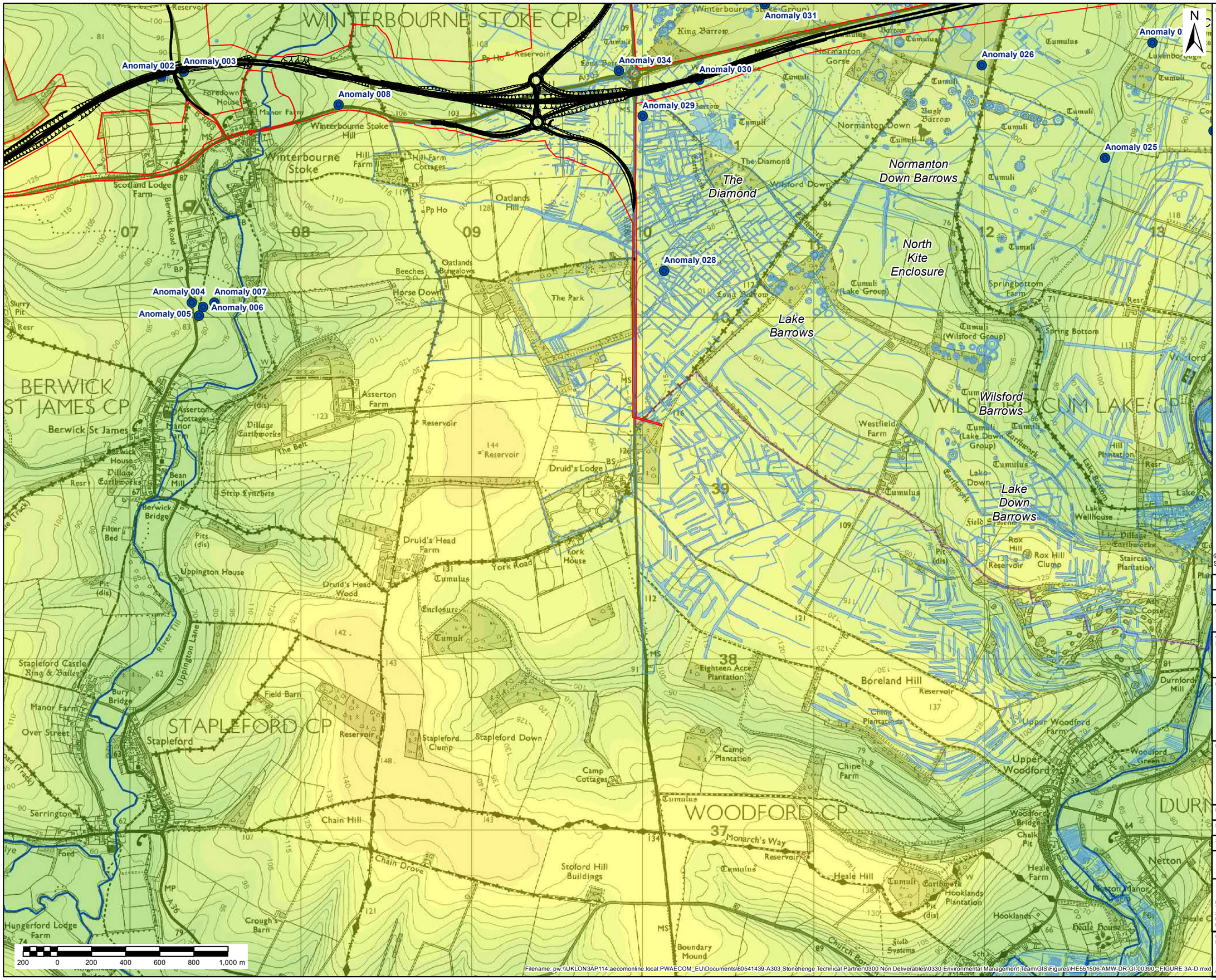
Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

AECOM + mace + WSP

Drawing Number: Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	02

Location	Type	Role	Number
SCHEME WIDE	DR	GI	00390

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM-EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00390 - FIGURE 3A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (other)
- Non Designated HER Monuments - Point
- Non Designated HER Monuments - Line
- Non Designated HER Monuments - Area
- Watercourse
- World Heritage Site

Topography (m)

- >50 - 60
- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150

Note:
Selected assets labelled with Wiltshire and Swindon Historic Environment Record (WSHER) number.

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title:

A303 AMESBURY TO BERWICK DOWN

Drawing Title:

FIGURE 3C
LOCATION OF NON-DESIGNATED HERITAGE ASSETS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES WITHIN AND ADJACENT TO THE STONEHENGE ELEMENT OF THE WHS (SOUTHWEST):

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No.: 60547200

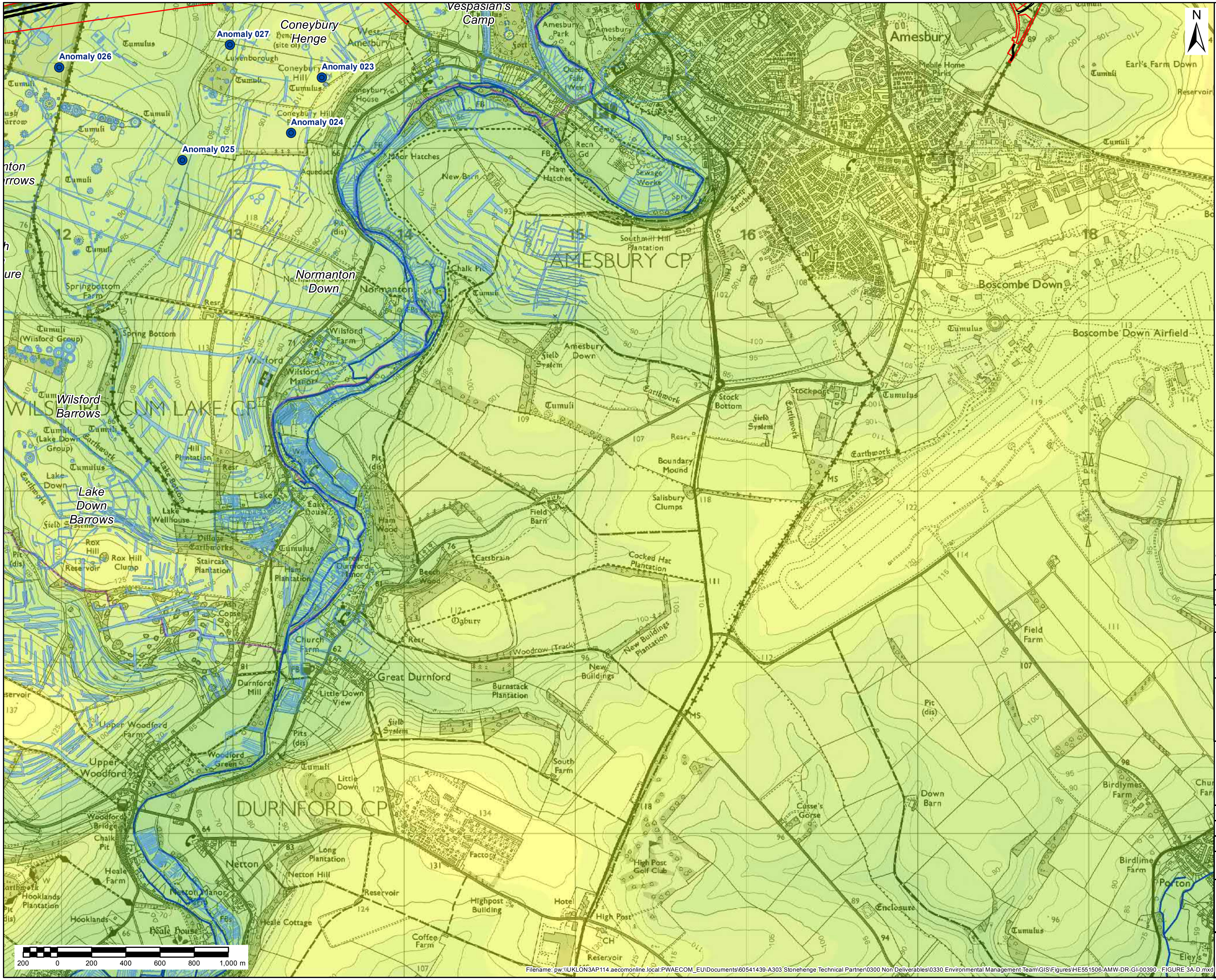
Scale @ A3: 1:20,000 | Zone: SW

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

AECOM + mace + WSP

Drawing Number	Originator	Volume	Rev
Highways England PIN			
HE551506	AMW	GEN	02

Location	Type	Role	Number
SCHEME WIDE	DR	GI	00390



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (other)
- Non Designated HER Monuments - Point
- Non Designated HER Monuments - Line
- Non Designated HER Monuments - Area
- Watercourse
- World Heritage Site

Topography (m)

- >50 - 60
- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150

Note:
Selected assets labelled with Wiltshire and Swindon Historic Environment Record (WSHER) number.

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England — Working on behalf of highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 3D LOCATION OF NON-DESIGNATED HERITAGE ASSETS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES WITHIN AND ADJACENT TO THE STONEHENGE ELEMENT OF THE WHS (SOUTHEAST):

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No. 60547200

Scale @ A3: 1:20,000 | Zone: SW

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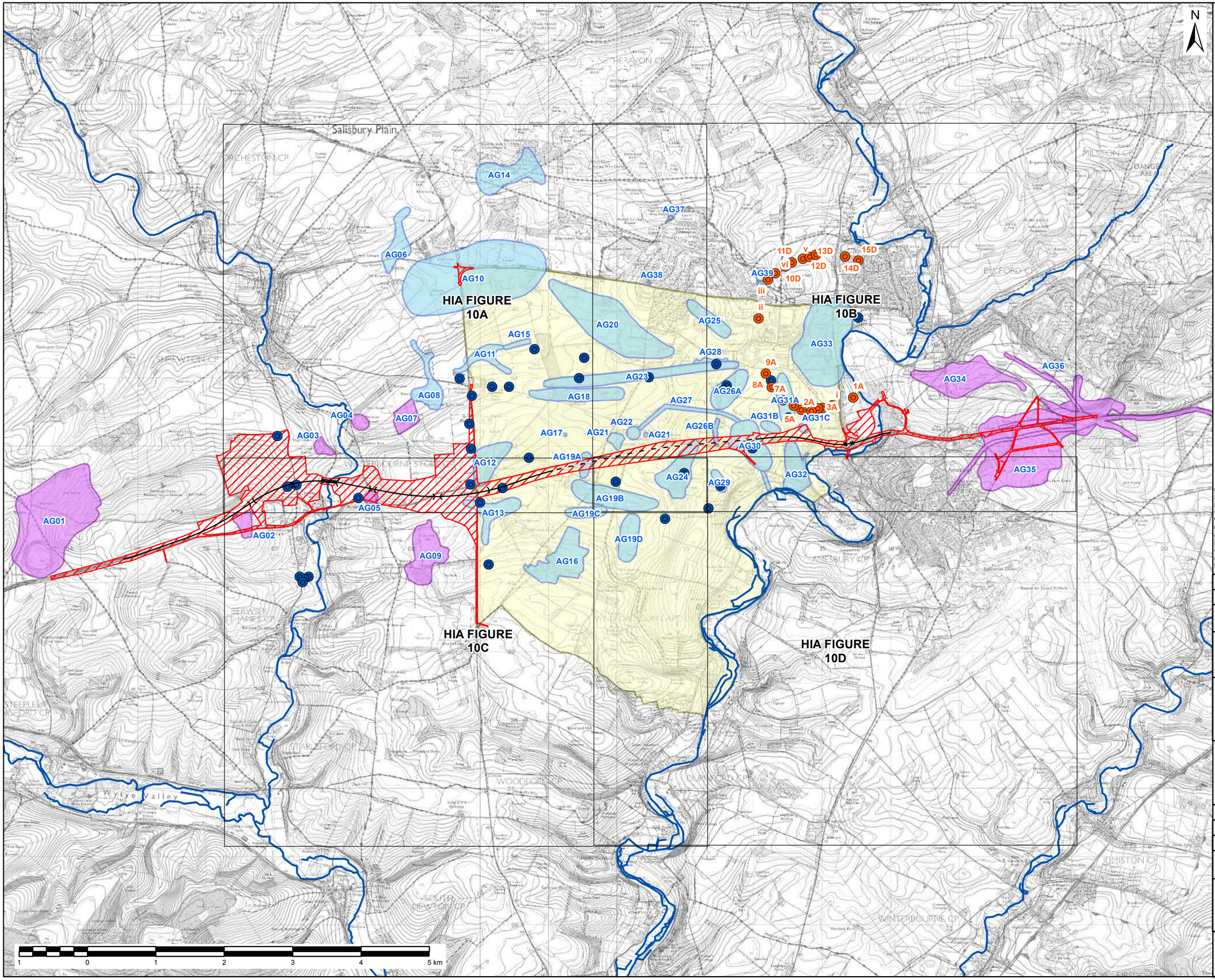
Bristol
BS1 6HA

AmW — AECOM + mace + WSP

Drawing Number

Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	02
SCHEME WIDE	DR	GI 00390	
Location	Type	Role / Number	

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00390 - FIGURE 3A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Indicative centreline
- Watercourse
- 5m Contour Intervals
- Watercourse
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- World Heritage Site

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 4
KEY MAP INDICATING THE LOCATION OF PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES OVER 5M IN DIAMETER AND ASSET GROUPS

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No.: 60541200

Scale @ A3: 1:50,000 | Zone: SW

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Drawing Number Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
HE551506	AMW	GEN	SCHEME WIDE	DR	GI	00384	02

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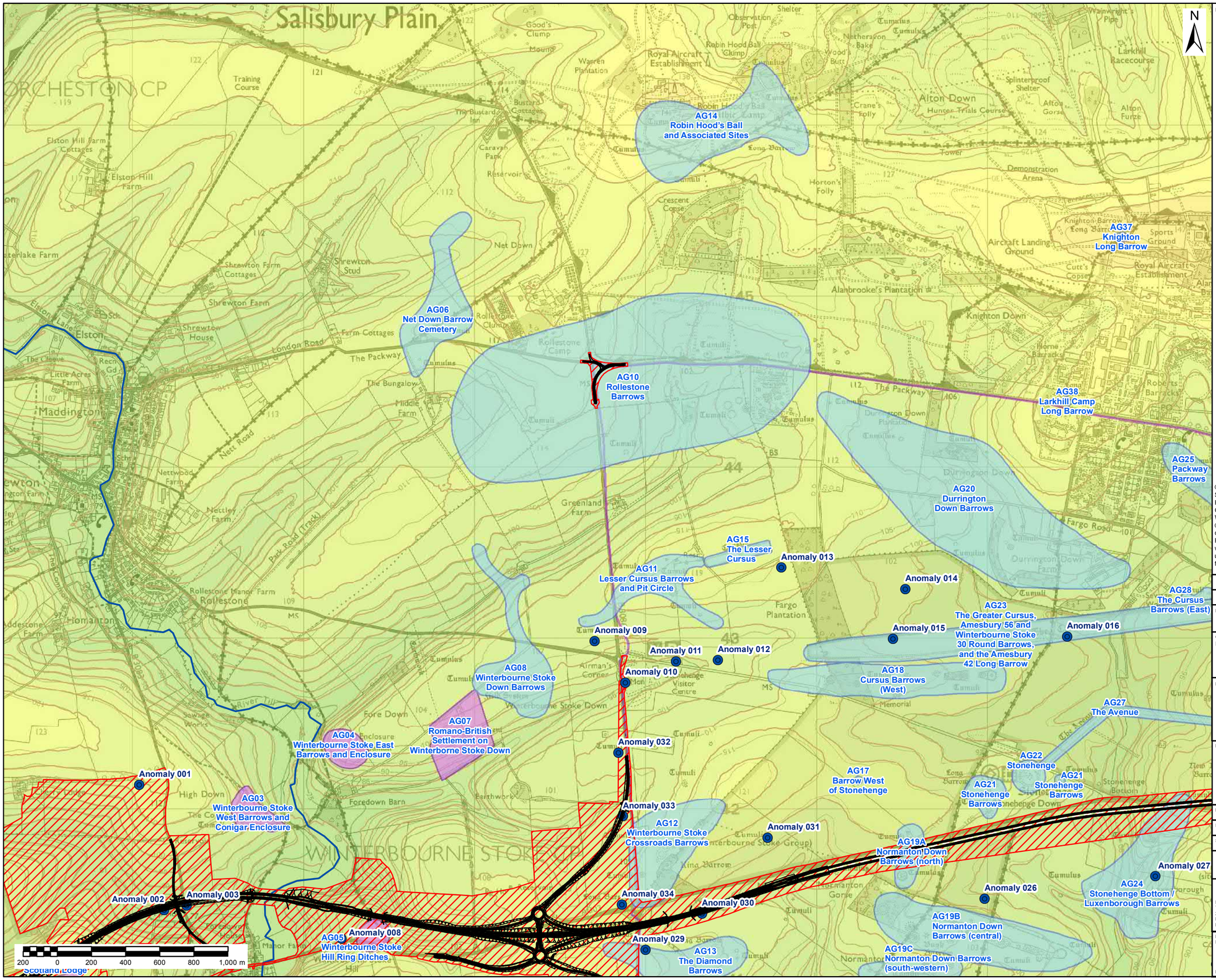

NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (other)
- Proposed route alignment
- Proposed structure
- 5m Contour Intervals
- Watercourse
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- World Heritage Site

Topography (m)

- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 4A LOCATION OF ASSET GROUPS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES OVER 5M IN DIAMETER

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No.: 60541200

Scale @ A3: 1:20,000 | Zone: SW

Highways England
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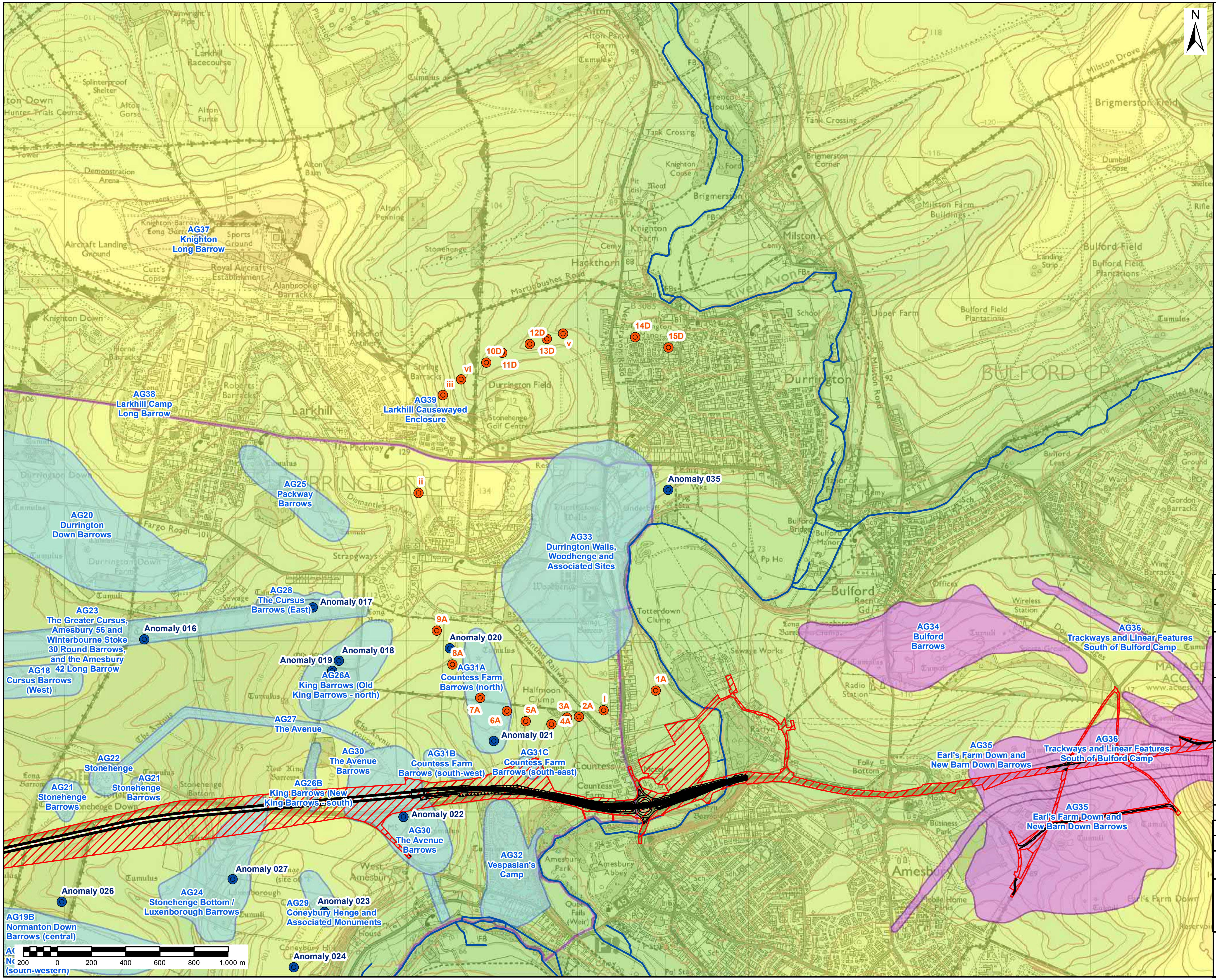
Drawing Number Highways England PIN	Originator	Volume			Rev
HE551506	AMW	GEN			02
SCHEME WIDE		DR	GI	00385	
Location		Type	Role	Number	

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00385 - FIGURE 4A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Proposed route alignment
- Proposed structure
- 5m Contour Intervals
- Watercourse
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- World Heritage Site

Topography (m)

- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150
- >150 - 160
- >160 - 170

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 4B LOCATION OF ASSET GROUPS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES OVER 5M IN DIAMETER

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No. 60541200

Scale @ A3: 1:20,000 | Zone: SW

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

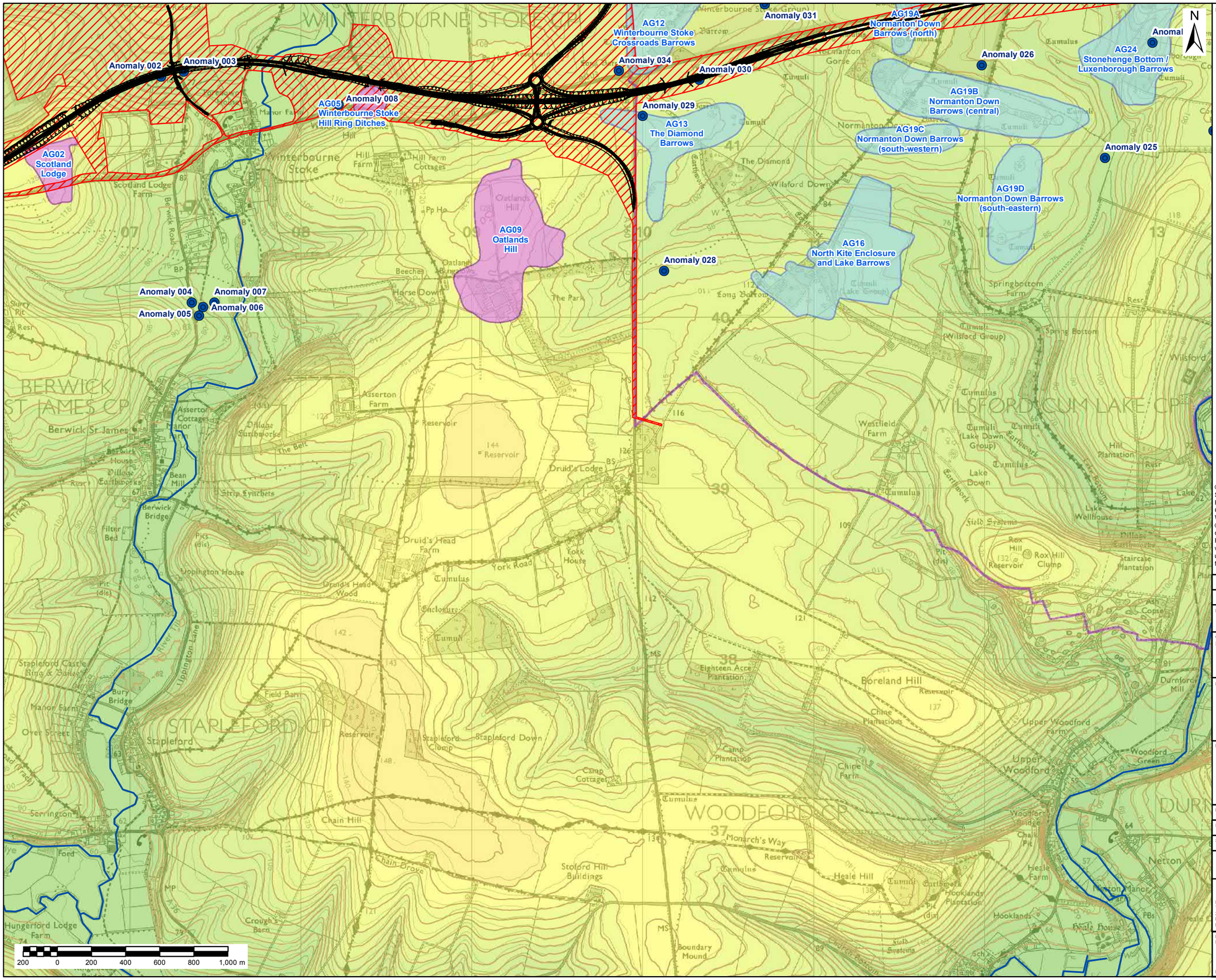
AmW
AECOM + mace + WSP

Drawing Number

Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	02

Location	Type	Role	Number
SCHEME WIDE	DR	GI	00385

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00385 - FIGURE 4A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (other)
- Proposed route alignment
- Proposed structure
- 5m Contour Intervals
- Watercourse
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- World Heritage Site

Topography (m)

- >50 - 60
- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 4C
LOCATION OF ASSET GROUPS AND PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES OVER 5M IN DIAMETER

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No.: 60541200

Scale @ A3: 1:20,000 | Zone: SW

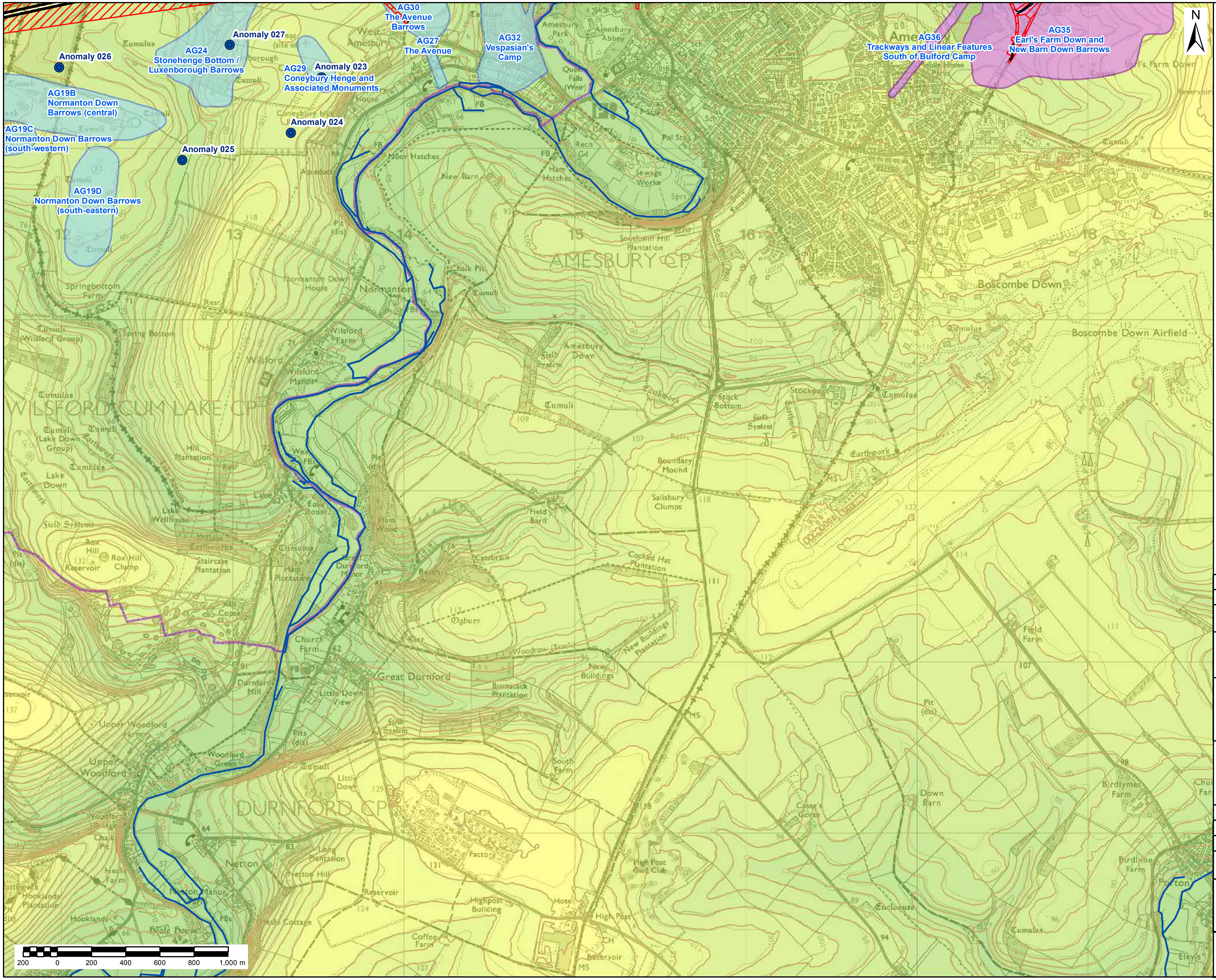
Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

AECOM + mace + WSP

Drawing Number: Highways England PIN	Originator	Volume	Rev
HE551506	AMW	GEN	02

Location	Type	Role	Number
SCHEME WIDE	DR	GI	00385

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00385 - FIGURE 4A-D.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (other)
- Proposed route alignment
- 5m Contour Intervals
- Watercourse
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- World Heritage Site

Topography (m)

- >50 - 60
- >60 - 70
- >70 - 80
- >80 - 90
- >90 - 100
- >100 - 110
- >110 - 120
- >120 - 130
- >130 - 140
- >140 - 150

Revision Details	By / Check	Date	Suffix

Purpose of issue
FINAL

Client
Highways England
Working on behalf of highways england

Project Title
A303 AMESBURY
TO BERWICK DOWN

Drawing Title
FIGURE 4D
LOCATION OF ASSET GROUPS AND
PROBABLE AND POTENTIAL PIT-LIKE
ANOMALIES OVER 5M IN DIAMETER

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

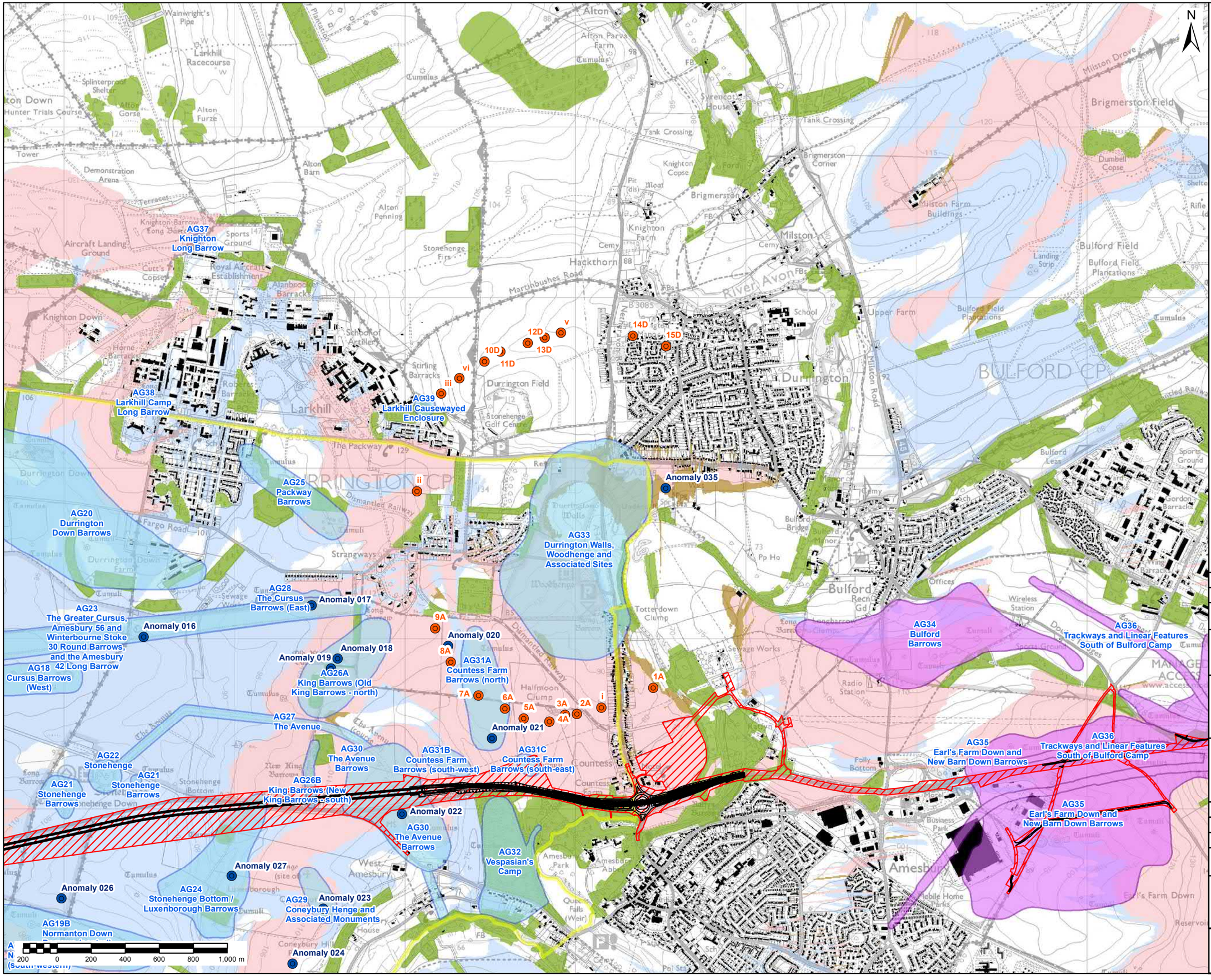
Internal Project No. 60541200

Scale @ A3 1:20,000 | Zone SW

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

AmW
AECOM + mace + WSP

Drawing Number						Rev
Highways England PIN	Originator		Volume			
HE551506	AMW		GEN			02
SCHEME WIDE	DR	GI	00385			
Location	Type	Role	Number			



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Proposed route alignment
- Proposed structure
- Existing Building (8m – OS MasterMap)
- Existing Woodland (10m – National Forest Inventory)
- Where traffic along the existing A303 is not theoretically visible, but traffic along the proposed A303 is theoretically visible
- Where traffic along the existing A303 is theoretically visible, but traffic along the proposed A303 is not theoretically visible
- Where traffic along the existing A303 is theoretically visible, and where traffic along the proposed A303 is also theoretically visible
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- World Heritage Site

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 5 LOCATION OF PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES AND ASSET GROUPS IN RELATION TO THE ZONE OF THEORETICAL VISIBILITY OF THE SCHEME

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No: 60541200

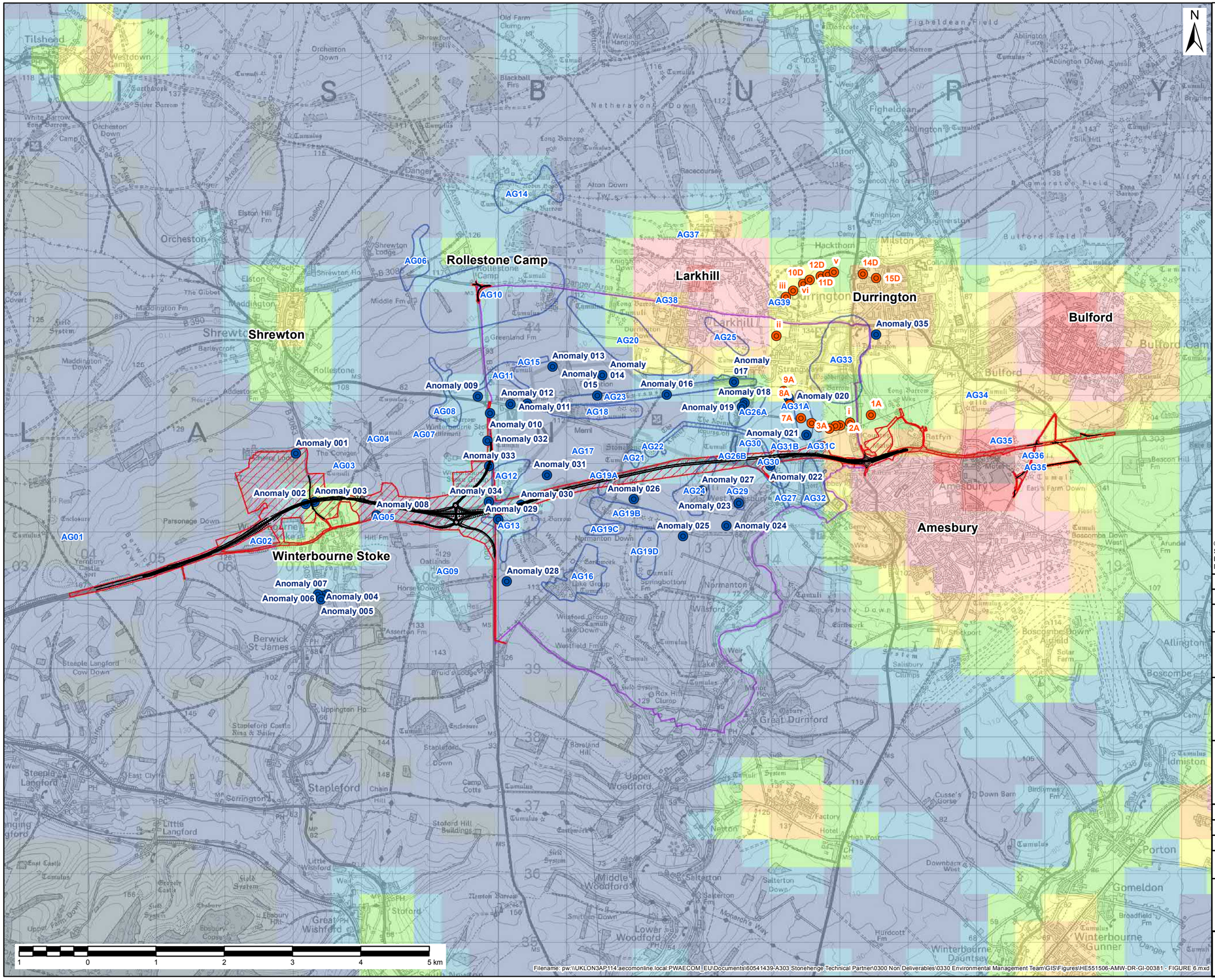
Scale @ A3: 1:20,000 Zone: SW

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		02
SCHEME WIDE	DR	GI	00387	
Location	Type	Role	Number	

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00387 - FIGURE 5.mxd



NOTES / LEGEND

- Proposed scheme boundary
- Pit-like geophysical anomalies (other)
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Proposed route alignment
- HIA Asset Groups
- World Heritage Site

Night Lights (Existing Sources of Light)

(NanoWatts / cm2 /sr)

- >32 (high)
- 16 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 0.5 - 1
- 0.25 - 0.5
- < 0.25 (low)

Revision Details	By	Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 6 LOCATION OF PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES AND ASSET GROUPS IN RELATION TO DARK SKIES (EXISTING)

Designed	Drawn	Checked	Approved	Date
LO	AM	GM	LO	13/08/20

Internal Project No.: 60547200

Scale @ A3: 1:50,000 | Zone: SW

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

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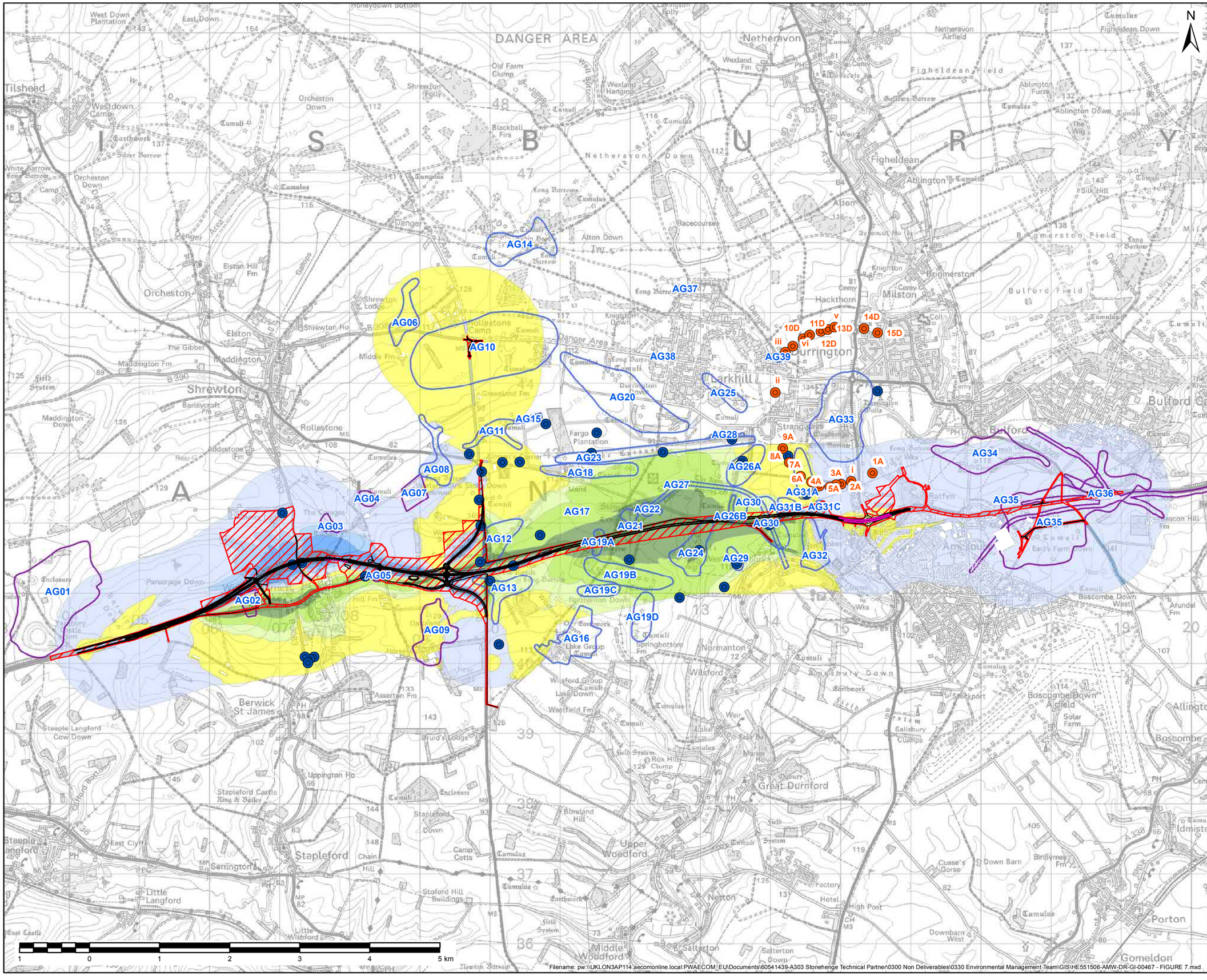
Drawing Number	Originator	Volume	Rev
Highways England PIN: HE551506	AMW	GEN	02
Location: SCHEME WIDE	Type: DR	Role: GI	Number: 00381

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00381 - FIGURE 6.mxd



Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\HE551506-AMW-DR-GI-00467 - FIGURE 7.mxd

NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Noise Barrier
- Solid Parapet
- Asset Groups outside the WHS addressed in the Environmental Statement
- Asset Groups within or with a relationship to the WHS
- Building

Do Something Long Term Change 2041: Do Something Minus 2026 Do Minimum LA10, 18h dB at 4m (free-field)

- >=10.0
- +5.0 to +9.9
- +3.0 to +4.9
- 0 to +2.9
- <0 to -2.9
- -3.0 to -4.9
- -5.0 to -9.9
- <=10.0

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 7 PROBABLE AND POTENTIAL PIT-LIKE ANOMALIES AND ASSET GROUPS IN RELATION TO NOISE (PROPOSED SCHEME IN OPERATION): LONG TERM CHANGE IN TRAFFIC NOISE LEVELS - 2041 DO-SOME-THING MINUS 2026 DO-MINIMUM

Designed	Drawn	Checked	Approved	Date
SS	AM	GM	SS	13/08/20

Internal Project No.: 60547200

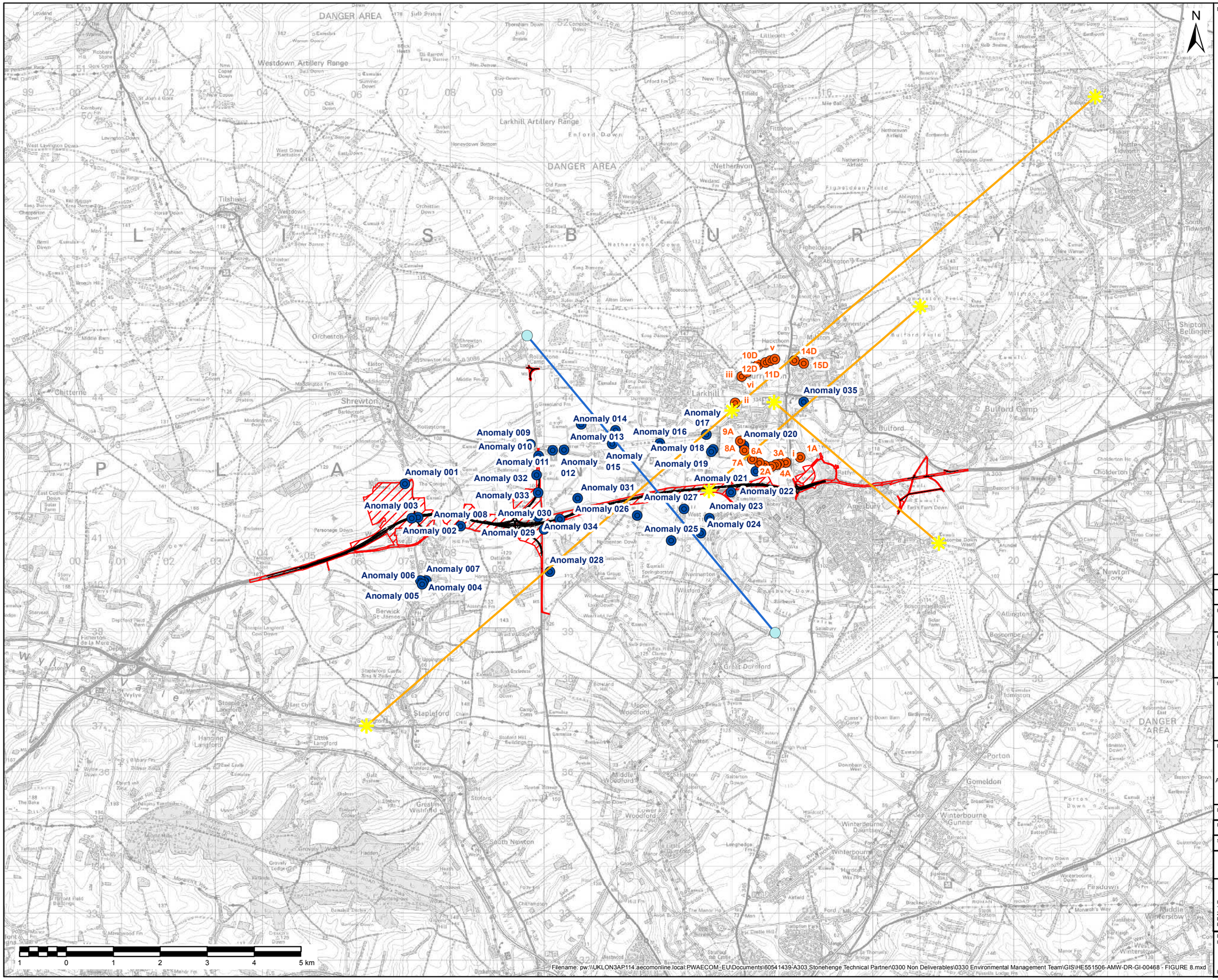
Scale @ A3: 1:50,000 | Zone: SW

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

AECOM + mace + WSP

Drawing Number	Originator	Volume	Rev
Highways England PIN	AMW	GEN	02
HE551506			

Location	Type	Role	Number
SCHEME WIDE	DR	GI	00467



NOTES / LEGEND

- Proposed scheme boundary
- Proposed route alignment
- Moon
- Sun
- Pit-like geophysical anomalies (Durrington Walls discovery)
- Pit-like geophysical anomalies (other)
- Moonrise/Moonset
- Sunrise/Sunset

Revision Details	By / Check	Date	Suffix

Purpose of issue: FINAL

Client: Highways England

Working on behalf of: highways england

Project Title:

A303 AMESBURY TO BERWICK DOWN

Drawing Title:

FIGURE 8
PIT-LIKE ANOMALIES IN RELATION TO INDICATIVE LOCATION OF ASTRONOMICAL SIGHTLINES AT THE STONEHENGE ELEMENT OF STONEHENGE, AVEBURY AND ASSOCIATED SITES WHS AND THE SURROUNDING AREA, WITH END-POINTS ON HORIZONS (AFTER CHADBURN AND RUGGLES 2017, FIG. 4.6)

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Abbreviations

AG	Asset Group
BC	Before Christ
BGL	Below Ground Level
BH	Borehole
CEMP	Construction Environmental Management Plan
DAMS	Detailed Archaeological Mitigation Strategy
DCO	Development Consent Order
DfT	Department for Transport
EIA	Environmental Impact Assessment
ES	Environmental Statement
GPR	Ground penetrating radar
HER	Historic Environment Record
HIA	Heritage Impact Assessment
HMAG	A303 Heritage Monitoring and Advisory Group
ICOMOS	International Council on Monuments and Sites
LiDAR	Light Detection and Ranging
NHLE	National Heritage List for England
NGR	National Grid Reference
NPSNN	National Policy Statement for National Networks
OEMP	Outline Environmental Management Plan
OS	Ordnance Survey
OSL	Optically Stimulated Luminescence dating
OUV	Outstanding Universal Value
REAC	Record of Environmental Actions and Commitments
SHLP	Stonehenge Hidden Landscapes Project
SoOUV	Statement of Outstanding Universal Value

SoS	Secretary of State
UID	Unique Identifier
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHS	World Heritage Site

Glossary

Attributes of Outstanding Universal Value

Attributes are a direct tangible expression of the Outstanding Universal Value of the property. At the Stonehenge, Avebury and Associated Sites World Heritage Site, all these attributes are ultimately derived from the 2008 Statement of Significance and the nomination and evaluation documentation of 1985. Taken together the attributes define the reasons for the Outstanding Universal Value of the Stonehenge and Avebury WHS.
Attributes are aspects of a property which are associated with or express the Outstanding Universal Value. Attributes convey that value and allow an understanding of it. Attributes can be tangible or intangible.
The WHS Operational Guidelines indicate a range of types of attribute which might convey Outstanding Universal Value, including:

- form and design;
- materials and substance;
- use and function;
- traditions, techniques and management systems;
- location and setting;
- language, and other forms of intangible heritage; and
- spirit and feeling

(Paragraph 82, Operational Guidelines for Implementation of the World Heritage Convention, UNESCO World Heritage Centre, 2019).

It is essential that the attributes identified for a property should flow from the Statement of Outstanding Universal Value and the justification for the criteria. Attributes must be identified as they are vital to understanding authenticity and integrity, and are the focus of protection, conservation and management.

(UNESCO, ICCROM, ICOMOS and IUCN 2011 Preparing World Heritage Nominations. World Heritage Resource Manual. 2nd ed., 31-32)

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 all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole. The Committee defines the criteria for the inscription of properties on the World Heritage List.

(Paragraph 49, Operational Guidelines for Implementation of the World Heritage Convention, UNESCO World Heritage Centre, 2019)

Nominations presented to the Committee shall demonstrate the full commitment of the State Party to preserve the heritage concerned, within its means. Such commitment shall take the form of appropriate policy, legal, scientific, technical, administrative and financial measures adopted and proposed to protect the property and its Outstanding Universal Value.

(Paragraph 53, Operational Guidelines for Implementation of the World Heritage Convention, UNESCO World Heritage Centre, 2019)

Statement of Outstanding Universal Value

A Statement of Outstanding Universal Value is the official statement adopted by the World Heritage Committee at the time of inscription of a property on the World Heritage List. When the World Heritage Committee agrees to inscribe a property on the World Heritage List, it also agrees on a Statement of Outstanding Universal Value that encapsulates why the property is considered to be of Outstanding Universal Value, how it satisfies the relevant criteria, the conditions of integrity and (for cultural properties) authenticity, and how it meets the requirements for protection and management in order to sustain Outstanding Universal Value in the long-term […] They should help to raise awareness regarding the value of the property, guide the assessment of its state of conservation and inform protection and management.

(Annex 5, Section 3.3, Operational Guidelines for Implementation of the World Heritage Convention, UNESCO World Heritage Centre 2019)

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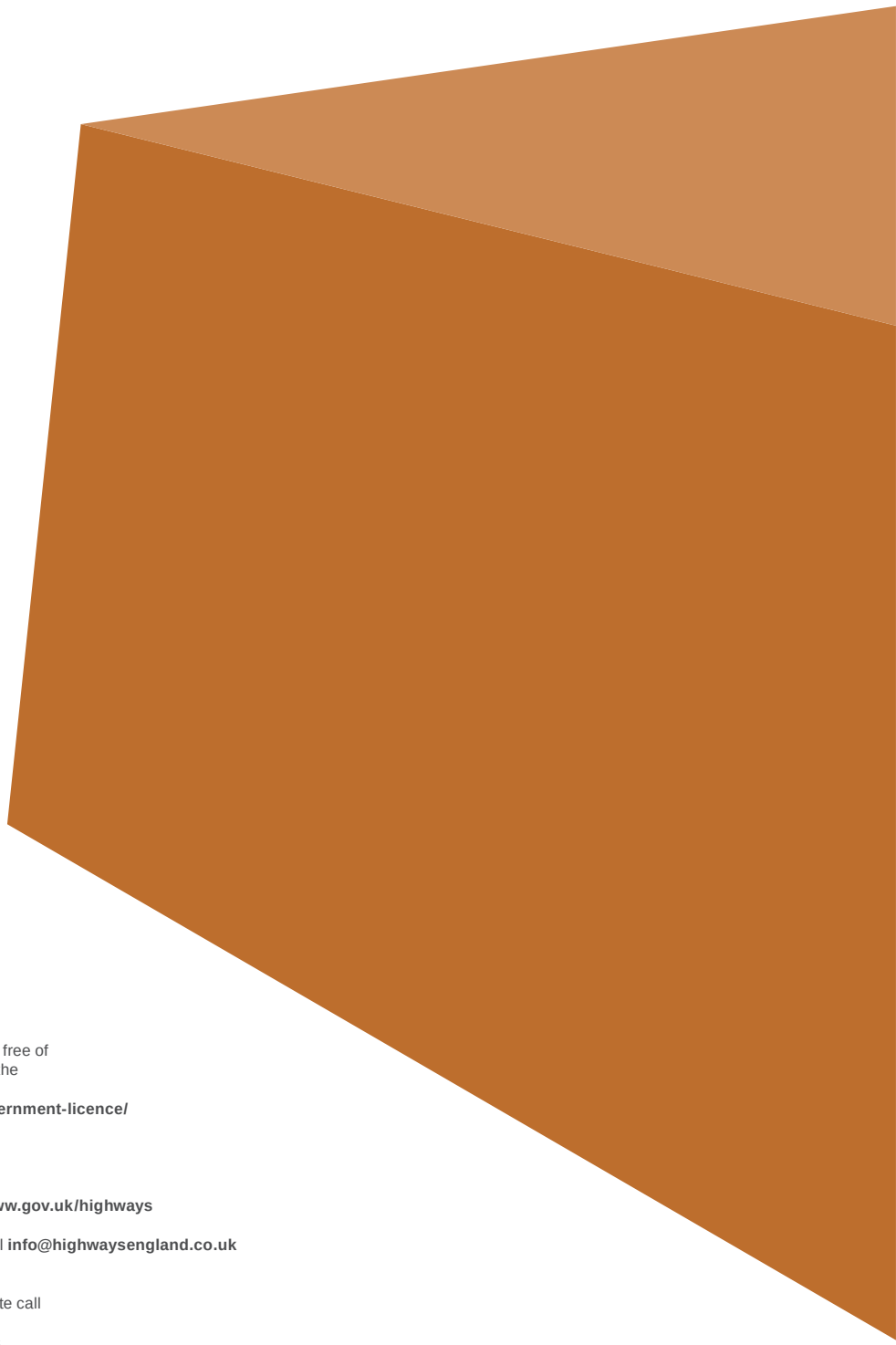

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