

A30 Chiverton to Carland Cross Environmental Statement

**Volume 6 Document Ref 6.4 ES Appendix 6.2
Historic environment desk based assessment**

HA551502-ARP-EHR-SW-RP-LE-000003

C01 | A3

22/08/18

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009 (as amended)
APFP Regulation 5(2)(a)

Table of Contents

	Pages
1 Non-technical Summary	1
2 Introduction	2
2.1 Scope of Project	2
2.2 Location, Topography and Geology	2
2.3 Aims and Objectives	3
3 Methodology	4
3.1 Legislation, Policy and Guidance	4
3.2 Local Policy	6
3.3 Standards and Guidance	8
3.4 Significance of heritage assets	8
4 Methodology	10
4.1 Study Area	10
4.2 Documentary Research	10
4.3 Cartographic Sources	10
4.4 Site visit	10
4.5 Consultation	10
4.6 Terminology	11
4.7 Assumptions and Limitations	11
5 Summary of Archaeological Results	12
5.1 Historical and Archaeological Background	12
5.2 Previous Archaeological Investigations	18
5.3 Archaeological Investigations for the Scheme	19
5.4 Map Summary	19
5.5 National Mapping Programme	20
5.6 Historic Character	21
5.7 Identification and Significance of Heritage Assets	23
5.8 Archaeological Potential of the Scheme	26
6 Conclusions	27
References	28
Electronic Sources	31
Abbreviations	32
Figures	33
Appendices	i
Appendix A Archaeological Data	ii
Appendix B Project Archive	xxix
Appendix C Cartographic data	xxx

Table of Figures

Figure 1	Designated heritage assets within outer 1km study area (west)	34
Figure 2	Designated heritage assets within outer 1km study area (east)	35
Figure 3	Non-designated heritage assets within inner 300m study area (west)	36
Figure 4	Non-designated heritage assets within inner 300m study area (east)	37
Figure 5	Features identified by National Mapping Programme (NMP) (west)	38
Figure 6	Features identified by National Mapping Programme (NMP) (east)	39
Figure 7	Grade II listed Church of Saint Peter (west facing)	40
Figure 8	Church of Saint Peter's graveyard view towards Scheme (east facing)	40
Figure 9	Grade II listed Schoolroom (north facing)	41
Figure 10	View from Schoolroom towards Scheme (west facing)	41
Figure 11	Grade II listed Lodge, Chyverton (north facing)	42
Figure 12	View from Lodge towards Scheme (south facing)	42
Figure 13	Round barrow at Carland Cross (north facing)	43
Figure 14	Round barrow at Carland Cross (west facing)	43

Table of Tables

Table 1	Factors for assessing significance of heritage assets	9
Table 2	Definition of archaeological time periods	12
Table 3	Archaeological potential of the Scheme	26
Table A-1	Designated heritage asset within footprint of the Scheme	ii
Table A-2	Non-designated heritage assets within footprint of the Scheme	ii
Table A-3	Features identified by the National Mapping Programme (NMP) within the footprint of the Scheme	iii
Table A-4	Designated heritage assets within 10m of the Scheme	iv
Table A-5	Non-designated heritage assets within 10m of the Scheme	v
Table A-6	Designated heritage assets within 300m inner study area	v
Table A-7	Non-designated heritage assets within 300m inner study area	x
Table A-8	Heritage at Risk assets within the 300m inner study area	xvii
Table A-9	Designated heritage assets within the 1km outer study area	xvii
Table A-10	Archaeological activity within footprint of the Scheme	xxiii
Table B-1	Project archive catalogue	xxix
Table C-1	Cartographic sources	xxx

1 Non-technical Summary

- 1.1.1 This historic environment desk-based assessment has been undertaken to inform, in accordance with the Chartered Institute for Archaeologists, Standard and guidance for historic environment desk-based assessment (2017), the historic environment baseline for the Environmental Impact Assessment of the A30 Chiverton to Carland Cross Improvement.
- 1.1.2 The assessment included analysis of all heritage assets within a 300m inner study area and analysis of designated heritage assets within a 1km outer study area of the Scheme. The assessment identified the Scheme is located along a historic main route that connects Devon and Cornwall, which lies within an area of multi-period archaeological activity, from the prehistoric to modern periods.
- 1.1.3 Continued settlement activity is noted from the prehistoric period, however it is Bronze Age burial monuments that predominate within the study area of the Scheme. Although the western part of the Scheme is located alongside the Gwennap Mining District of the Cornwall and West Devon Mining Landscape World Heritage Site, few sites associated with post-medieval mining activity are currently recorded within the study area. The route of the current A30 originated as an early historic main route-way that became an established 17th century coaching road and later part of an 18th century turnpike road. Evidence of this 18th century turnpike road are the compulsory milestones and associated tollhouses, which remain evident in the landscape today. In the area, later 20th century military activity is noted in one location only, west of Carland Cross where there is the site of a surface Cold War Royal Observer Corps and underground nuclear post.
- 1.1.4 On the basis of known archaeological evidence, within undeveloped areas of the Scheme there is considered to be:
- High potential for below ground remains relating to Bronze Age funerary and ceremonial activity, medieval settlement and post-medieval mining activity;
 - Medium potential for Romano-British settlement; and
 - Low potential for early-medieval settlement and Cold War activity.
- 1.1.5 A geophysical survey, undertaken in June 2017, has identified areas of possible archaeological interest along the Scheme, in areas south of Newlyn Downs, north-east and south of Zelah, and south-west of Chyverton Park. The most common features identified, however, were linear anomalies, most likely forming enclosures or field systems, suggesting further settlement activity. A programme of archaeological trial trenching is currently underway, the results of which will be incorporated into the Scheme baseline when available.

2 Introduction

2.1 Scope of Project

- 2.1.1 The Scheme comprises the construction of 12.7km of ‘expressway compatible’ dual carriageway between Chiverton Cross roundabout (in the west) and Carland Cross junction (in the east) on the A30. The existing Chiverton Cross and Carland Cross roundabouts are to be replaced with grade separated junctions to provide connections to the local highway network.
- 2.1.2 To accommodate the new dual carriageway, the existing A30 will be retained to provide a local route. It will connect to a number of minor side roads leading to and from Truro to the south of the A30, and to and from Perranporth and Newquay to the north.
- 2.1.3 The proposed scheme will consist of the following;
- 70mph high quality dual carriageway to current standards;
 - New grade-separated junctions at Chiverton and Carland Cross;
 - New bridge at Chybucca taking the B3284 over the new dual carriageway, with west-facing slip-roads connecting to the new dual carriageway;
 - The existing B3284 will be realigned and extended to run parallel to the new dual carriageway adjoin the new bridge at Chybucca;
 - Six other crossing points where local roads cross the new road using under or over bridges; and
 - Retention of the existing A30 for local traffic and non-motorised users.

2.2 Location, Topography and Geology

- 2.2.1 The A30 is a main route from London to Land’s End and is particularly important as one of two trunk roads connecting Devon and Cornwall, past numerous settlements including Okehampton, Launceston, Bodmin, Redruth and Hayle. The A30 Chiverton to Carland Cross section lies north-west of Truro and provides businesses and residents in this corridor with access to the wider Strategic Road Network (SRN), predominantly the M5 and A38.
- 2.2.2 The A30 is located within an open plateau that has a gentle undulating topography, with shallow river valleys. Chiverton roundabout is located at the peak of a ridge, next to the northern boundary of the Gwennap Mining District of the Cornwall and West Devon Mining Landscape World Heritage Site (WHS), from where the landscape descends steeply westwards.
- 2.2.3 The solid geology from Chiverton roundabout to Chyverton Park comprises Porthowan Formation bedrock, containing mudstone and sandstone. From Chyverton Park to Carland Cross, the solid geology of Grampound Formation, containing mudstone, sandstone and siltstone is recorded. Superficial deposits across the Scheme are minimal, with a scattering of clay, silt, sand and gravel overlying the bedrock in places¹.

¹ <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

2.3 Aims and Objectives

- 2.3.1 The aim of the historic environment desk-based assessment (DBA) is to provide an overview of readily available documentary data relating to the history of the sites and their archaeological potential. The DBA is also focused on establishing the significance of the heritage assets. The DBA is being undertaken to form the baseline of the Environmental Impact Assessment (EIA) for the Scheme. For that reason, the assessment of impact will be contained in the Environmental Statement.

3 Methodology

3.1 Legislation, Policy and Guidance

Legislation

- 3.1.1 The legislation presented below is relevant to the assessment of effects on the historic environment for the Scheme:
- Ancient Monuments and Archaeological Areas Act (AMAA) 1979; and
 - Planning (Listed Buildings and Conservation Areas) (P(LBCA) Act 1990.
- 3.1.2 The AMAAA largely relates to Scheduled Monuments and Section 61(12) defines sites that warrant protection due to their being of national importance as 'ancient monuments'. A monument is defined by the Act as *"any building, structure or work above or below the surface of the land, any cave or excavation; any site comprising the remains of any such building, structure or work or any cave or excavation; and any site comprising or comprising the remains of any vehicle, vessel or aircraft or other movable structure or part thereof"*.
- 3.1.3 Section 61 of the Act states that deliberate damage to a monument is a criminal offence and any intrusive works taking place within one will require Scheduled Monument Consent (SMC) from the Secretary of State. For non-intrusive work, such as geophysical surveys, Historic England are responsible for issuing licences under Section 42 of the Act.
- 3.1.4 Section 1 of the P(LBCA) Act defines a listed building as *"a building which is for the time being included in a list compiled or approved by the Secretary of State under that section. For the purpose of the Act any object or structure fixed to the building, which, since on or before 1 July 1948, has formed part of the land and is comprised within the curtilage of the building is treated as part of the building"*. 'Building' is defined as including any structure or erection and any part of a building". The key elements of this Act relevant to this assessment are outlined below:
- Section 66 places a responsibility upon the decision-maker in determining applications for planning permission for a Scheme that affects a listed building or its setting to have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses; and
 - Section 72 of the Act places a duty upon the decision maker in determining applications for planning permission within conservation areas to pay special
 - Attention to the desirability of preserving or enhancing the character or appearance of that area.

National Policy Statement for National Networks

- 3.1.5 The National Policy Statement for National Networks (NPS) sets out the need for and Government's policies to deliver development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. The policies for the conservation of the historic environment are set out in Chapter 5, which states *"Those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural or artistic interest are called 'heritage assets'. Heritage assets may*

be buildings, monuments, sites, places, areas or landscapes. The sum of the heritage interests that a heritage asset holds, or its value, is referred to as its significance. Significance derives not only from a heritage asset's physical presence, but also from its setting. Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments, should be considered subject to the policies for designated heritage assets. The absence of designation for such heritage assets does not indicate lower significance”.

- 3.1.6 The NPS advises “*the Secretary of State should also consider the impacts on other non-designated heritage assets (as identified either through the development plan process by local authorities, including ‘local listing’, or through the nationally significant infrastructure project examination and decision making process) on the basis of clear evidence that the assets have a significance that merit consideration in that process, even though those assets are of lesser value than designated heritage assets”.*

National Policy

- 3.1.7 National Planning policies on the conservation of the historic environment are set out in the revised National Planning Policy Framework 2018 (NPPF) and should be adhered to in conjunction with NPS, where the NPS does not cover a specific issue. The NPPF was first published on 27 March 2012, and revised on 24 July 2018 replacing all previous Planning Policy Statements, including Planning Policy Statement 5 (PPS 5): Planning for the Historic Environment. Guidance to help practitioners implement this policy, including the legislative requirements that underpin it, is provided in Planning for the Historic Environment Practice Guide (June 2012) produced to support the previous PPS 5 (2010). Non-designated heritage assets as well as those designated under the above legislation are given protection under the NPPF. Policies dealing with the conservation and enhancement of the historic environment is set out principally in Section 16 of the NPPF.
- 3.1.8 The NPPF places much emphasis on heritage “significance”, which is defined, in Annex 2, as:
- “The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.”*
- 3.1.9 The effects of any development on a heritage asset therefore need to be assessed against the four components of its heritage significance: its archaeological, architectural, artistic or historic interest.
- 3.1.10 Paragraph 189 of the NPPF places a duty on the local planning authority to require an applicant to describe the significance of any heritage assets affected by a proposal. However, the same paragraph makes it clear that the level of detail should be:
- i) proportionate to the importance of the heritage asset; and
 - ii) no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset.

- 3.1.11 Paragraph 190 states that it is the "the particular significance of any heritage asset" that should be taken into account when considering the impact of a proposal on a heritage asset.
- 3.1.12 Paragraph 193 applies specifically to designated heritage assets, such as scheduled monuments, listed buildings and conservation areas. It states that great weight should be given to the conservation of designated heritage assets and it notes that significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting.
- 3.1.13 Paragraph 194 deals with substantial harm to, or total loss of significance, of a designated heritage asset. Paragraph 197, on the other hand, deals with less than substantial harm and notes that any such harm should be weighed against the public benefits of the proposal.
- 3.1.14 Paragraph 200 deals with the setting of heritage assets and states that applications that would preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably. It is clear that this relates only to those aspects that positively contribute to significance. The NPPF does not require proposals to enhance the significance of heritage assets, as long as their significance is preserved (i.e. a similar provision to the Planning (Listed Building and Conservation Areas) Act 1990).

3.2 Local Policy

- 3.2.1 The Cornwall Local Plan (2010-2030) was adopted in November 2016 and contains the following policies which are relevant to the scheme:

Policy 2 – Spatial Strategy: 1. Respecting and enhancing quality of place

- 3.2.2 Proposals should maintain and respect the special character of Cornwall, recognising that all urban and rural landscapes, designated and undesignated, are important by:

- Ensuring that the design of development is high quality and demonstrates a cultural, physical and aesthetic understanding of its location;
- Considering the impact of development upon the biodiversity, beauty and diversity of landscape and seascape, character and setting of settlements, wealth of natural resources, agricultural, historic and recreational value of Cornwall;
- Identifying the value and sensitivity, of the character and importance of landscapes, biodiversity and geodiversity and historic assets;
- Protecting, conserving and enhancing the natural and historic landscape, heritage, cultural, biodiversity and geodiversity assets of Cornwall in recognition of their international, national and local status, in accordance with national legislation and policy, as amplified by the other policies of this plan.

Policy 24 – Historic Environment

- 3.2.3 Development proposals will be permitted where they would sustain the cultural distinctiveness and significance of Cornwall's historic rural, urban and coastal environment by protecting, conserving and where appropriate enhancing the significance of designated and non-designated assets and their settings.

- 3.2.4 Development proposals will be expected to:
- sustain designated heritage assets;
 - take opportunities to better reveal their significance;
 - maintain the special character and appearance of Conservation Areas, especially those positive elements in any Conservation Area Appraisal;
 - conserve and, where appropriate, enhance the design, character, appearance and historic significance of historic parks and gardens; and
 - conserve and, where appropriate, enhance other historic landscapes and townscapes, including registered battlefields, including the industrial mining heritage.
- 3.2.5 Development within the Cornwall and West Devon Mining Landscape WHS and its setting should accord with the WHS Management Plan. Proposals that would result in harm to the authenticity and integrity of the Outstanding Universal Value should be wholly exceptional.
- 3.2.6 If the impact of the proposal is neutral, either on the significance or setting, then opportunities to enhance or better reveal their significance should be taken.
- 3.2.7 All development proposals should be informed by proportionate historic environment assessments and evaluations (such as heritage impact assessments, desk-based appraisals, field evaluation and historic building reports) identifying the significance of all heritage assets that would be affected by the proposals and the nature and degree of any effects and demonstrating how, in order of preference, any harm will be avoided, minimised or mitigated.
- 3.2.8 Great weight will be given to the conservation of the Cornwall's heritage assets. Where development is proposed that would lead to substantial harm to assets of the highest significance, including undesignated archaeology of national importance, this will only be justified in wholly exceptional circumstances, and substantial harm to all other nationally designated assets will only be justified in exceptional circumstances.
- 3.2.9 Any harm to the significance of a designated or non-designated heritage asset must be justified. Proposals causing harm will be weighed against the substantial public, not private, benefits of the proposal and whether it has been demonstrated that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long term use of the asset.
- 3.2.10 In those exceptional circumstances where harm to any heritage assets can be fully justified, and development would result in the partial or total loss of the asset and/or its setting, the applicant will be required to secure a programme of recording and analysis of that asset, and archaeological excavation where relevant, and ensure the publication of that record to an appropriate standard in a public archive.
- 3.2.11 Proposals that will help to secure a sustainable future for the Cornwall's heritage assets, especially those identified as being at greatest risk of loss of decay, will be supported.

3.3 Standards and Guidance

3.3.1 In addition to compliance with the NN NPS and NPPF, this desk-based assessment has been compiled in accordance with professional standards and guidance. The standards and guidance which relate to this assessment are:

- ClfA, 2017, Standard and guidance for historic environment desk-based assessment;
- ClfA, 2014a, Code of Conduct;
- Historic England, 2015, Good Practice Advice in Planning (GPA2) Managing Significance in Decision - Taking in the Historic Environment – this advice note provides information to support the NPPF and Planning Practice Guidance (PPG), such as aiding in assessing the significance of heritage assets;
- Historic England, 2015, Good Practice Advice in Planning (GPA3) The Setting of Heritage Assets – this advice note sets out a staged approach for assessing the impact of a proposed development on the heritage significance of assets, due to changes in their setting;
- English Heritage, 2008, Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment – this document sets out the approach to making decisions and offering guidance about all aspects of England's historic environment;
- English Heritage, 2011, Seeing the History in the View, a Method for Assessing Heritage Significance within Views - this document presents a method for understanding and assessing heritage significance within views; and
- Department for Communities and Local Government, 2014, Planning Practice Guidance 18a: Conserving and enhancing the historic environment, Scoping and consultation.

3.4 Significance of heritage assets

3.4.1 Due to the nature of the Scheme, the categories used by this DBA to describe the significance of heritage assets has been based on the criteria described in the Design Manual for Roads and Bridges (DMRB, Volume 11, Section 3, Part 2), as shown in Table 1, and supported by the Heritage Values described in the Conservation Principles Policies and Guidance.

3.4.2 Conservation Principles sets out a method of how heritage values can be ascribed to a place and a recommended approach on how to assess its significance. Historic assets/places are valued in many ways, Conservation Principles groups their value into four categories:

- Evidential value: the potential of a place to yield evidence about human activity;
- Historical value: the ways in which past people, events and aspects of life can be connected through a place to the present;
- Aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place; and
- Communal value: the meanings of a place for the people who relate to it, or form whom it figures in their collective experience or memory.

Table 1 Factors for assessing significance of heritage assets

Significance	Typical Descriptors
Very High	World heritage sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives
High	Nationally important assets (scheduled monuments, Grade I and II* listed buildings, Grade I registered parks and gardens). Assets with the potential to contribute to national research objectives.
Medium	Designated (conservation areas, Grade II listed buildings, Grade II registered parks and gardens) or non-designated assets that are of regional importance. Assets with the potential to contribute to regional research objectives.
Low	Assets of local importance (locally listed buildings). Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
Negligible	Assets of local importance (locally listed buildings). Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
Unknown	The importance of the resource has not been ascertained.

4 Methodology

4.1 Study Area

4.1.1 Although the focus of the DBA is the Scheme, an essential historic and archaeological contextual background is presented for the general area of the Scheme in order to consider the potential for previously undiscovered archaeology to be present.

4.1.2 In accordance with best practice, professional judgement and experience of working on similar schemes, two study areas of 300m and 1km from the centreline of the Scheme was applied in the assessment:

- The 'inner study area' extends 300m beyond the limits of the scheme and was applied for the identification of all heritage asset types (designated, non-designated and potential) to establish archaeological context and potential (Figure 1, Figure 2); and
- The 'outer study area' was applied for the identification of all designated heritage assets, and this extends up to 1km (Figure 3, Figure 4).

4.2 Documentary Research

4.2.1 This assessment comprised of an examination of readily available published and unpublished written records, illustrations, maps and archaeological and geological records. Information was sourced from the Cornwall and Scilly Historic Environment Record (CSHER) and the Historic England National Heritage List for England (NHLE) on heritage assets and archaeological investigations for within the study area, including the English Heritage² National Mapping Programme (NMP). The NMP data is shown on Figure 5 and Figure 6. A gazetteer of all these records is provided in Appendix A and their locations shown on Figures 1-4.

4.3 Cartographic Sources

4.3.1 Historic Ordnance Survey 1:10,560, 1:10,000, 1:2,500 and 1:1,250 maps from the 19th Century onwards were examined to gain an understanding of the development of the study area, and how this may affect the potential for buried archaeological assets to survive.

4.4 Site visit

4.4.1 The compilation of the assessment was supported by walkover surveys (Figures 7-14) undertaken in January 2016 and September 2017 of both the inner and outer study area. These visits helped to provide familiarity with the Scheme and the identification of any heritage assets that may be visible.

4.5 Consultation

4.5.1 On-going consultation has been undertaken with Historic England during the evolving design process of the Scheme.

4.5.2 Consultation with Cornwall Council's Planning Archaeologist agreed a programme of non-intrusive geophysical survey, completed in June 2017, followed by a 3%

² Now known as 'Historic England'.

intrusive trial trench evaluation of the Scheme corridor, which was ongoing at the time of writing.

4.6 Terminology

- 4.6.1 The technical terminology applied to the assessment process is based on that contained within the NPPF Planning Practice Guide, Conservation Principles Policies and Guidance and The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3.
- 4.6.2 Cultural heritage comprises World Heritage Sites (WHS), Scheduled Monuments (SM), Listed Buildings (LB, Grades I, II* and II), Registered Parks and Gardens (RPG, Grades I, II* and II), Registered Battlefields, Conservation Areas (CA), buried archaeological remains and earthworks. Cultural heritage features are referred to as heritage assets.

4.7 Assumptions and Limitations

- 4.7.1 Data used to compile this assessment consists of secondary information derived from a variety of sources, predominately the CSHER. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate.
- 4.7.2 The CSHER is a record of known archaeological and historic assets. It is not an exhaustive record of all surviving historic assets and does not preclude the existence of further assets, which are unknown at present.
- 4.7.3 No site visits were undertaken where it was judged that the safety or welfare of the project team members would have been compromised, this is with particular regard to post-medieval mining sites. The setting assessment was conducted from publicly accessible areas only, as access to private land was not agreed at the time of survey.

5 Summary of Archaeological Results

5.1 Historical and Archaeological Background

5.1.1 The archaeological and built heritage baseline, including elements of the historic landscape is discussed below. Approximate historical periods, as defined by Historic England³, are provided in Table 2.

Table 2 Definition of archaeological time periods

Period name	Date range	Additional periods, where needed
Palaeolithic	500,000 – 10,000BC	
Mesolithic	10,000 – 4,000BC	
Neolithic	4,000 – 2,200BC	
Bronze Age	2,200 – 700BC	
Iron Age	700BC – AD43	
Romano-British	AD43 - 410	
Early Medieval (Anglo-Saxon)	410 - 1066	
Medieval	1066 - 1540	
Post-medieval	1540 - 1901	Tudor - 1485 - 1603 Elizabethan - 1558 - 1603 Stuart - 1603 – 1714 (Jacobean 1603 – 1625) Hanoverian – 1714 – 1837 (Georgian 1714– 1830) Victorian - 1837 - 1901
20th century	1901 - 2000	
21st century	2001 - 2100	

Historical Background

5.1.2 In Cornwall, early prehistoric activity from hunter-gatherer groups is frequently evidenced by numerous surface collections of lithic scatters, especially on areas of uplands⁴. In the study area, Mesolithic finds have been noted approximately 220m east of Four Burrows, at Zelah and Newlyn Downs. Later Neolithic activity is also noted but again only by finds, such as leaf-shaped flint arrowheads; however the presence of such finds demonstrates the continued occupation of the area during this period.

5.1.3 During the later prehistoric period, Cornwall was a widely populated area and many hilltops were transformed with the construction of enclosures and funerary monuments known as round barrows. The main period of round barrow construction occurred in the Bronze Age, the forms of which fall into five broad categories:

³ Historic England, PastScape, <http://www.pastscape.org.uk/TextPage.aspx> (accessed 28 September 2017)

⁴ Hosfield, R., Straker, V. and Gardiner, P. Palaeolithic and Mesolithic, 23-62 in Webster, C.J. (ed.) 2008, The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service

- Bowl barrow – inverted bowl-shaped mounds, with slopes of varying profile, sometimes with a surrounding ditch and occasionally an outer bank;
- Bell barrow - bowl-shaped mound that is separated from its surrounding ditch by a strip of land and so in profile presents as a bell-shape;
- Saucer barrow – very low mound, defined by a surrounding ditch with an external bank;
- Pond barrow – the mound has been removed but surrounding bank is sometimes coupled with a ditch defining a central area, which is level or dished; and
- Disc barrow – defining ditch and external bank, with one or two small mounds in the level interior.

- 5.1.4 Whilst barrows are often isolated, many occur in groups referred to as ‘barrow cemeteries’; these are often nucleated or linear in form. These cemeteries typically comprise of a variety of barrow types that were often constructed over many generations⁵. Within the study area, over 38 barrows have been recorded, the majority of which are in broadly linear groupings. .
- 5.1.5 The Scheme is located within an area that was controlled by the Dumnonii tribe during the Iron Age. The Dumnonii occupied one of the largest regions of Britain, occupying Cornwall, Devon and parts of southern Somerset; their capital was at Isca Dumnoniorum, now modern day Exeter⁶. Characteristic Cornish Iron Age sites are enclosed settlements known as rounds, open settlements and hillforts, such as the hillfort 250m south-west of Tresawsen. Rounds were in use from the beginning of the later Iron Age to at least the end of the Romano- British period⁷. Within the study area, five rounds have been recorded.
- 5.1.6 By the Romano-British period, the extraction of tin and lead in the South-West became a significant element of the economy, which was exported to the rest of Britain and beyond⁶. Exeter had become a Roman Legionary Fortress and was located at the south-western end of the Fosse Way; no main roads extended into Cornwall, only local trackways were utilised.
- 5.1.7 Cornwall did not experience the invasion by the Saxons and Danes during the early-medieval period, but remained under the rule of local Romano-British and Celtic elites. No real distinction was made between the Kingdom of Cornwall and Dumnonii tribes, but the area was known as the name given by the Anglo-Saxons ‘Cornweal’ (then becoming Cornwall)⁸. By the end of the early medieval period, there was an acceptance of Christianity, which is evidenced by parish churches and wayside crosses in the area. Wayside crosses are the most common type of Cornish crosses that stood at the side of roads, ancient tracks and footpaths to indicate the route to the parish church. By the later medieval period, they were also used to mark tracks to sites of pilgrimage, monastic sites, ancient chapels and holy wells. During the post-medieval period, crosses and stones were also located across the landscape to mark parish boundaries, and manorial or individual land ownership boundaries, with some having initials carved into the stone⁸.

⁵ Field, D. Introductions to Heritage Assets Prehistoric Barrows and Burial Mounds, English Heritage, 2011

⁶ Holbrook, N. (ed) Roman, 151-161, in Webster, C.J. (ed) The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008

⁷ Fitzpatrick, A. (ed) Later Bronze Age and Iron Age, 117-143, in Webster, C.J. (ed) The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008

⁸ Cornwall Heritage Trust, Cornwall all 410-1066, <http://www.cornwallheritagetrust.org/discover/cornwall-410-1066/> (accessed 11 October 2017)

- 5.1.8 The Cornish medieval landscape, as with elsewhere in the UK, became colonised by new settlements. Over time many settlements split into two or sometimes three separate entities, often single farms, distinguished by place-name elements such as higher, lower, east and west. Many place-names derive from the Cornish language, especially the first element 'tre' that means farmstead or estate, such as Trevalso⁹. Throughout the late medieval period and later 19th and 20th centuries, open strip fields and farmland gradually became enclosed, creating block shaped fields surrounding settlements, and demonstrating distinct ownership of land¹⁰. Within the study area, Chyverton was the property of the Arundell family in the medieval period, which by 1724, was purchased by John Andrew of Trevallance and then later passed through the family. The 1760s saw the existing house remodelled, with the park created 10 years later. A change of ownership later saw the planting of an extensive collection of rhododendrons and magnolias, which was extended after World War II (WWII)¹¹. The 161 hectare (ha) park is now currently home to an equestrian centre known as the 'Chyverton Estate Equestrian Park'¹².
- 5.1.9 During the medieval period, a wide range of metal ores continued to be extracted, which has influenced the appearance of the landscape and character of the area. Numerous prospecting pits were undertaken to establish the location, character, quality and extent of tin deposits and lodes. By the post-medieval period, the landscape drastically changed further as mining for extracted minerals, such as tin and copper lead, changed from small scale mining and prospecting pits, to industrialised steam driven deep mining shafts, which enabled Cornwall to produce two thirds of the world's copper¹³. The Gwennap parish, which lies adjacent the Scheme, became a specialist area for copper mining in this period and as a result developed into the richest mining district in Cornwall¹⁴. Today, much of Cornwall remains shaped by this 18th century deep industrialised mining and in recognition of this, the area was awarded World Heritage Status in 2006, of which the Gwennap Mining District became a part¹⁵.
- 5.1.10 By the 1860s, however, the mining economy collapsed and the burden of unemployment saw a mass emigration from the area. The following years threw the local economy into a deep slump, and by the 20th century, the landscape had become predominantly rural in character, supporting a mixed farming regime and tourist industry⁹.
- 5.1.11 The development and form of Cornwall's roads was hugely affected by the county's unique topography and landscape, especially as its rivers run north-south; as a result all traffic passing east/west along the peninsula had to cross several valleys¹⁶. Roads were particularly narrow and winding, often running in gullies between steep banks and keeping to hilly ground rather than the wet river

⁹ Schwartz, S.P. and Parker, R. Tin Mines and Miners of Lanner, The Heart of Cornish Tin. Halsgrove, 2012

¹⁰ Rippon, S. and Croft, B. Post-Conquest Medieval, 195-207, in Webster, C.J. (ed.) 2008, The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008

¹¹ Chyverton Park, Truro, England, <http://www.parksandgardens.org/places-and-people/site/4709/description> (accessed 11 October 2017)

¹² Chyverton Park, <http://www.chyvertonpark.com/> (accessed 11 October 2017)

¹³ Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2013–2018. Cornish Mining World Heritage

¹⁴ Cornish Mining. The Gwennap-Chacewater Mining District, <http://www.comishmining.net/sites/gwennap.htm> (accessed 11 October 2017)

¹⁵ Sharpe, A. Cornwall and West Devon Mining Landscape World Heritage Site, Condition Survey 2014. Cornwall Event Report, 2014

¹⁶ An introduction history of transport in Cornwall, <http://www.cornwallheritagetrust.org/discover/history-of-transport/> (accessed 11 October 2017)

valleys. Due to the difficult terrain, packhorses were more common than wheeled vehicles, well into the 18th century.

- 5.1.12 From the 17th century, turnpike trusts were set up by Acts of Parliament, with powers to collect road tolls for maintaining principal roads in Britain¹⁷. In common with many areas outside London, the turnpike roads came late to Cornwall. However, by 1770 there were three turnpike routes into the county, along with their associated tollhouses and milestones, which fed three principle roads to Truro¹⁸. From 1767, mileposts were compulsory on all turnpikes, not only to inform travellers of direction and distances, but to help coaches keep to schedule and for charging for changes of horses at the coaching inns¹⁹. A large section of the A30 follows the course of the 17th century 'Land's End coaching road'²⁰, which later became one of the longest A-roads in the UK. From 1966 to 2007, piecemeal works led to improvements to the A30, however, areas of some congestion still remain²¹.

Archaeological Background

Prehistoric

- 5.1.13 The earliest prehistoric evidence recorded within the study area is from finds dating from the Mesolithic period. At St Allen and within the footprint of the Scheme, a large scatter of Mesolithic material was recorded (HER site no. MCO1858) that comprised a pebble-flint scraper, flint flakes and a leaf-shaped arrowhead . Further Mesolithic activity is noted by a small flint pick (HER site no. MCO607), found approximately 220m east of Four Burrows; 34 flint flakes and implements (HER site no. MCO6850) including a piece of blade flake, a micro-burin and a nodular flint end scraper found at Zelah, and a flint microlith found to the south of Newlyn Downs (HER site no. MCO1096).
- 5.1.14 Evidence of Neolithic activity is only noted by finds within the study area, where two flint leaf arrowheads have been recorded, one at Four Burrows (HER site no. MCO606) and one at Zelah (HER site no. MCO1859). Further prehistoric finds include a flint arrowhead (HER site no. MCO604) from Four Burrows and a quern (HER site no. MCO749) found in St Allen.
- 5.1.15 38 Bronze Age barrows have been identified, individually and within groupings, making these the most common class of heritage assets present within the study area . Nine of the groupings have between 2-10 barrows recorded, 14 barrows are Scheduled Monuments, one is on the Heritage at Risk register (Warren's Barrow, NHLE Site no. 1016888), six are no longer extant, five may be possible barrows (not confirmed), six are sites of possible barrows; three barrow-types have been identified – bowl, bell and long. Whilst only three barrows are termed as 'cemeteries', based on the distribution and location of the barrows along the higher topography (now the current A30), combined with the large number of the monuments, it is possible that that they are all part of an extended linear cemetery or part of two cemeteries, one focused around Three Burrows area and the other around Carland Cross.

¹⁷ Turnpike Roads in England, <http://www.turnpikes.org.uk/The%20Turnpike%20Roads.htm> (accessed 12 October 2017)

¹⁸ Cornw all Turnpike Trusts, <http://www.turnpikes.org.uk/Turnpikes%20in%20Cornwall.htm> (accessed 12 October 2017)

¹⁹ Milestones & Waymarkers, <http://www.milestonesociety.co.uk/aboutmilestones.html> (accessed 12 October 2017)

²⁰ 'Roads', in A History of the County of Wiltshire: Volume 4, ed. Elizabeth Crittall (London, 1959), pp. 254-271. British History Online <http://www.british-history.ac.uk/vch/wilts/vol4/pp254-271> (accessed 12 October 2017)

²¹ A30, <http://www.cbrd.co.uk/motorway/a30> (accessed 12 October 2017)

- 5.1.16 Evidence of Iron Age activity is noted within the footprint of the Scheme. Approximately 500m south of Chyverton Park, the place-name evidence of 'Marazanvose' (meaning 'market on the dyke') suggests a possible dyke (HER site no. MCO25228) dating from the Iron Age to Medieval periods may have been located here. Within the study area, the site of a scheduled hillfort 250m south-west of Tresawsen (NHLE site no. MCO1016445) confirms activity from this period, along with three enclosures and a site of possible enclosure/round recorded close to Three Burrows (HER site no. MCO34825). Aerial photographs have identified enclosure cropmarks 200m north-west of Tocroggan (HER site no. MCO8543), on Zelah Hill (HER site no. MCO8928) and south-west of Newlyn Downs (HER site no. MCO32388), and an Iron Age or Romano-British date has been proposed for these. Field-name evidence suggests a rectangular field in Henvier, which is named 'The Round', may possibly be the site of an enclosure (HER site no. MCO8042).

Romano-British

- 5.1.17 With the exception of the cross-period enclosures and rounds discussed above, there are no specific Romano-British heritage assets known within the study area. It is possible, however, that as-yet undiscovered remains dating from this period may exist.

Early Medieval (Anglo-Saxon)

- 5.1.18 Two heritage assets dating from the Early Medieval to Modern periods have been recorded within the study area.
- 5.1.19 At Three Burrows, a granite pillar (HER site no. MCO5914) located at the junction of St Agnes, Perranzabuloe and Kenwyn, is described on OS maps as a boundary stone, but it may have been a cross.
- 5.1.20 At Carland Cross, Warren's Barrow (NHLE site no. 1016888), in local tradition, is said to have been used as a beacon during these periods, with materials being imported to raise the height of the beacon.

Medieval

- 5.1.21 Within the footprint of the Scheme, the settlement of Henvier (HER site no. MCO14868), only two dwellings now remain, is first recorded from this date. In the study area, a further five settlements from this period are noted – Nancarrow (HER site no. MCO11732), Marazanvose (HER site no. MCO15622), Zelah (HER site no. MCO18428), Polstain (HER site no. MCO16419) and Caralsa (HER site no. MCO13728). Whilst no remains of the original Nancarrow and Marazanvose settlements remain, Zelah, Polstain and Caralsa are all still occupied today.
- 5.1.22 Further medieval evidence within the study area includes a curved trackway (HER site no. MCO31937) within the footprint of the Scheme at Three Burrows, the site of a leper hospital (HER site no. MCO28603) at Tresawsen, and a possible holy well, Vinteneack well (HER site no. MCO7128), although its location is uncertain. Place-name evidence suggests that Polstain (HER site no. MCO16419), meaning 'tin-pit', may have been a tin mining site during this period.
- 5.1.23 Christian medieval wayside crosses are known throughout Cornwall. Within the footprint of the Scheme, field-name evidence 'Cross Close' suggests the site of a cross (HER site no. MCO5575) approximately 350m south-west of Chyverton

Park. A field of the same name is also identified in Zelah (HER site no. MCO6268). At St Allen, a scheduled and Grade II listed 'Trevalsa Cross' (NHLE site no. 1016290/1136597), which stands 1m high with a round 'wheel' head, is located at a minor junction. A further possible cross (HER site no. MCO6269) that may have been used as a gatepost was identified at Zelah.

Post-medieval

- 5.1.24 17 milestones dating from the post-medieval period are recorded within the study area, which are associated with the historic routeway and turnpike road. Of these, 16 are Grade II listed structures, with one recorded within the footprint of the Scheme (NHLE site no. 1140923) approximately 2km east of Three Burrows. This milestone is an original 18th century turnpike road milestone; however, it is suggested to have been re-sited, as the mileage shown is not in correct sequence with the mileage of a stone to the east. A further contemporary Grade II listed guide stone (NHLE site no. 1136693) and Grade II listed cast iron guide post (NHLE site no. 1141580) are also noted within the study area, along with the site of a toll house (HER site no. MCO52571) at the interchange of the A30 and the road from Perranporth to Truro. In contrast to the abundance of milestones, few boundary stones survive in the area, however two early 19th century Grade II listed boundary stones (NHLE site nos. 1136600, 1140922) have been recorded.
- 5.1.25 In the study area, numerous farmhouses from the 18th and 19th centuries are recorded, with eight being Grade II listed including Chyverton Home Farmhouse (NHLE site no. 1141552) and Nancarrow Farmhouse (NHLE site no. 1136610). These dwellings demonstrate the continued historic and present day utilisation of the agricultural landscape. The Grade II* listed Chyverton House (NHLE site no. 1141551) and associated Grade II Registered Park and Garden, Chyverton Park (NHLE site no. 1000512) are located at the approximate mid-point of the Scheme, to the north of the A30. Chyverton Park is a late 18th century park that encompasses the country house, along with its Grade II listed stables (NHLE site no. 01312561) and a Grade II* listed bridge (NHLE site no. 1328680) directly east of the house. At the entrance of Chyverton Park, and approximately 60m north-west of the Scheme, lies the park's Grade II listed lodge, including its associated and adjoining walls and gate-piers (NHLE site no. 1136926). This entrance lodge was constructed later than Chyverton House and its park, during the mid to late 19th century.
- 5.1.26 Post-medieval ecclesiastical evidence is noted within the study area by the Grade II listed Church of Saint Peter (NHLE site no. 1141481), with its associated Grade II listed vicarage (NHLE site no. 1328719) and later built Grade II listed schoolroom (NHLE site no. 1141482) at Three Burrows, and two mid-19th century Grade II listed chapels – Zelah Methodist Chapel (NHLE site no. 1141472) and a Wesleyan Chapel (NHLE site no. 1328705) located within Mitchell Conservation Area (CA), a settlement with medieval origins, located to the east of Carland Cross.
- 5.1.27 Whilst mining was historically the largest industry within Cornwall, especially during the post-medieval period, within the study area only three areas of 19th century mining is recorded. At Three Burrows, Burra Burra mine (HER site no. MCO11903) produced copper, tin and zinc during this period. Directly west of Chyverton Park, the Grade II listed Batters Engine House (NHLE site no. 1141578) and its contemporary Grade II listed mine buildings (NHLE site no. 1136747) were part of a former lead mine. Wheal Ennis (HER site no.

MCO32374) was also opened as a lead mine, directly south of Newlyn Downs, but was unsuccessful and was subsequently closed within 12 months of commencing operation.

20th century

- 5.1.28 Approximately 600m west of Carland Cross, the site of a Cold War surface Royal Observer Corps reporting post and an underground nuclear post (HER site no. MCO42673), is recorded in the footprint of the Scheme. Nothing remains of either elements of the asset, although the underground post is marked by a line of BT poles.
- 5.1.29 Directly east of Chyverton Park, a small early 20th century church (HER site no. MCO45869) was recorded in the village of Zelah as a 'Mission Church'.

21st century

- 5.1.30 There are no heritage sites dating to the 21st century within the study area.

Unknown

- 5.1.31 Approximately 50m east of the site of the Cold War reporting post (HER site no. MCO42673) and within the footprint of the Scheme, five pits (approximately 5m in diameter) (HER site no. MCO32376) were identified from aerial photography. These pits are of unknown date but may have been military features relating to war activity.
- 5.1.32 There are four heritage assets of unknown date within the study area. At Three Burrows, an area of ditched field boundaries (HER site no. MCO31905) were identified as cropmarks from aerial photography during the Cornwall Mapping project. Directly south-west of Newlyn Downs, aerial photography also recorded a 46m wide and 71m long rectangular enclosure, and an area of five round pits between 8-18m across.

Heritage at Risk Asset

- 5.1.33 Within the study area, one heritage asset is recorded upon the Heritage at Risk register, Warren's Barrow (NHLE site no. 1016888). The barrow is a Scheduled Monument comprising a bell barrow situated on the tip of a south facing hill slope to the east of Newlyn Downs. Warren's Barrow is the most northerly barrow of a group of barrows that formed a prehistoric barrow cemetery at Carland Cross; the other barrows are designated under separate scheduling. The barrow has a stepped appearance with a central mound about 10m in diameter, and features a large central depression thought to be the result of an antiquarian excavation. The barrow stands at a maximum height of 3.6m and is 36m in diameter, with a possible ditch surrounding the barrow. The monument has modern material over the top of the barrow due to a temporary track. Warren's Barrow is on the 'Heritage at Risk' register due to significant localised problems resulting from scrub/tree growth on the monument. Further details are provided in Table A-8, Appendix A1.

5.2 Previous Archaeological Investigations

- 5.2.1 Within the inner 300m study area, 45 archaeological investigations have been undertaken, ranging from desk-based studies to field evaluations and

excavations. For this DBA, the assessment has focused on archaeological investigations within the footprint of the Scheme, to provide an understanding of activities within this area only. The summary is provided below and a detailed assessment is listed in Table A-10, Appendix A1.3.

- 5.2.2 The footprint of the Scheme has been subject to archaeological investigations from 1980 to 2014, which has included, desk-based assessments, watching briefs, geophysical surveys, management plans, walkover surveys and scheduled monument recording and repairs.
- 5.2.3 Investigations at Chiverton Cross and Carland Cross identified additional Bronze Age funerary monuments, barrows, within the prominent prehistoric landscape. Across the Scheme, investigations have found evidence of prehistoric, medieval and post-medieval agricultural activity comprising field boundaries and ditched enclosures, especially at Chiverton Cross, St Allen and Nanteague Farm, Allet. However, historic deep ploughing over some areas was found to have destroyed any potential below ground archaeology, as seen at an area at Carland Cross.

5.3 Archaeological Investigations for the Scheme

- 5.3.1 In June 2017, a non-intrusive geophysical survey was undertaken by SUMO Survey²², within 69 areas along the Scheme corridor. The summary is provided below and further details of this is included in Appendix A3.
- 5.3.2 The survey identified numerous anomalies of probable and possible archaeological interest, scattered along the length of the survey corridor but with concentrations to the south of Newlyn Downs (areas 8-10), approximately 1.4km north-east of Zelah (areas 14-15), directly south of Zelah (areas 23-24) and approximately 850m south-west of Chyverton Park (areas 26-32). By far the most common features identified were linear anomalies, which may represent enclosures or field systems. Possible ring ditches were also detected. Elsewhere, occasional lengths of linear anomalies and isolated pit-like anomalies were recorded. Pipes and anomalies of natural origin were also identified and past agriculture was visible throughout the survey area.
- 5.3.3 Cornwall Archaeological (CAU) are currently undertaking evaluation trenches along 12.9km of the Scheme corridor, which are being informed by the geophysical results and previous geotechnical test pitting²³.

5.4 Map Summary

- 5.4.1 Historic maps were examined to gain an understanding of the development of the study area and how this may affect the potential for buried heritage assets to survive. The summary is provided below and a detailed assessment is listed in Table C-1, Appendix C.
- 5.4.2 From the late 19th century, the study area roughly followed the route of a thoroughfare extending south-east from a crossroads named 'Three Burrows'. Three Burrows was shown as a well-established settlement featuring a church, school and public house, with at least three tumuli and a number of standing stones of likely prehistoric origin in the vicinity. The settlement was surrounded on

²² Gater, J. and Tanner, J. Geophysical Survey Report, A30 Carland to Chiverton, Cornw all, 2017

²³ Cornw all Archaeological Unit. A30 Carland Cross to Chiverton Roundabout, Cornw all. Written Scheme of Investigations for archaeological evaluation trenching, 2017

its southern side by a network of field systems associated with post-medieval miners' smallholdings.

- 5.4.3 Eastwards from Three Burrows, the thoroughfare was shown as a lane traversing through a patchwork of enclosed post-medieval field systems, which contained a significant number of tumuli, concentrated close to the route. Post-medieval quarries also peppered the landscape, along with a network of intersecting lanes stretching out across an expanse of farmland that allowed access to isolated farmsteads and small settlements. Two manor houses, Higher Ventogimps and Nancarrow, were depicted in the central part of the study area with their curtilages intact, surrounded by farmland.
- 5.4.4 Larger settlements were infrequent and were concentrated around the thoroughfare and its intersections. Zelah was the most prominent of these and was shown as a concentration of dwellings that include a public house, school, chapel and smithy. Immediately north of Zelah, a number of small settlements such as Polstain, Henvier and Cralsa are recorded in close proximity to each other, connected by winding lanes.
- 5.4.5 From this point, the thoroughfare changed from a lane to a track, which followed a course through a landscape of marsh and farmland that was notably void of settlement. At the north-eastern end of the study area, a dense concentration of tumuli cluster in fields close to the Carland Cross Junction and former mine shafts are scattered across the landscape. North of the study, the remains of Cargoll Mine (recorded as 'lead, blende and copper disused') and the extant West Chiverton Mine are further evidence of past and current mining activity in the early 20th century.
- 5.4.6 Little change was recorded in the study area until the mid-20th century, when the route from the Three Burrows to Carland Cross was formalised as the A30 and recorded as a major trunk road. The course of the route remains unaltered and the landscape through which it passes it largely remains unchanged.

5.5 National Mapping Programme

- 5.5.1 The Cornwall and Isles of Scilly Mapping Project²⁴ is an external project of the National Mapping Programme (NMP)²⁵. It was funded by English Heritage and carried out by the Historic Environment Service of Cornwall County Council (formerly the Cornwall Archaeological Unit) over 12 years. The project has produced a huge amount of data, which has provided significant enhancement of the nature and extent of the archaeological resource in lowland Cornwall. The majority of sites (62%) identified from the project have extant earthwork or stone remains, 31% recorded as cropmarks, and 7% of the sites since destroyed.
- 5.5.2 For this DBA, the assessment has focused on features identified by the NMP within the footprint of the Scheme only. This provides an understanding of possible settlement within the limits of the Scheme. The summary is provided below and a detailed assessment is listed in Table A-3, Appendix A1.1.

²⁴ Young, A. Cornwall and Isles of Scilly Mapping Project, English Heritage HEEP Project 2710, A Report for the National Mapping Programme. Cornwall County Council, 2007

²⁵ A project to enhance our understanding about past human settlement, by providing information and syntheses for all archaeological sites and landscapes (visible on aerial photographs) from the Neolithic period to the 20th century in Bewley, R. Understanding England's Historic Landscapes: An Aerial Perspective. Landscapes 2, 74-84, 2001

- 5.5.3 With the footprint of the Scheme, features have been identified at the western end, from Three Burrows to Allet, and the eastern end, at Carland Cross. There is a noticeable absence of features in the central section of the Scheme.
- 5.5.4 At Three Burrows, two circular earthwork features were identified, possible barrows, along with three small circular structures directly south; the nature and date of these features is not known.. Directly north of Three Burrows, a linear bank feature (approximately 200m in length) was identified at the end of a circular trackway, approximately 160m north of the current A30. This may be the remnants of a bank that linked with/or defined the current trackway.
- 5.5.5 At Allet, two linear earthworks and a linear ditch are recorded on the northern side of the current A30, within areas of agricultural fields. These features provide evidence of previous divisions and drainage activity within these areas. Directly east of these, eight structures have been recorded, but their interpretations are unknown.
- 5.5.6 From Carland Cross to Newlyn Downs, three trackways were identified, which may be possible remnants of post-medieval mining access routes. Directly south of these two small linear structures are noted, which may have been associated with the extraction activity. Directly south of Newlyn Downs, two linear field drains confirm historic land management in this area.

5.6 Historic Character

- 5.6.1 The Cornwall Historic Landscape Assessment was undertaken as part of a general landscape assessment of the county in 1996²⁶. It identified 20 distinguishable Historic Landscape Characterisation (HLC) Types, such as Communications, Farmland: Medieval, Modern Enclosed Land, Upland Rough Ground and Industrial: Disused. A commentary on these Historic Character Types, to understand the origins and components of the HLC, was produced in 2008²⁷.
- 5.6.2 The Scheme, of which the eastern part is classed as a Communications HLC type (HLC no. HCO23), is mainly located within two HLC types - Post-medieval Enclosed Land (HLC no. HCO13) and Farmland: Medieval (HLC no. HCO4). Smaller HLC types are also recorded along the Scheme that comprise Ornamental (HLC no. HCO18), Plantations and Scrub (HLC no. HCO10), Modern Enclosed Land (HLC no. HCO11), Industrial: Disused (HLC no. HCO16) and Upland Rough Ground (HLC no. HCO07).
- 5.6.3 The western part of the Scheme, from Three Burrows to Allet, is located within the Post-medieval Enclosed Land HLC type (HLC no. HCO13). This land was enclosed in the 17th, 18th and 19th centuries and was previously upland rough ground, and often medieval commons, within generally high, exposed or poorly-drained parts of the county.
- 5.6.4 There are five principal types of field pattern in Cornwall that form the basis of subdivision of post-medieval enclosed land into sub-types²⁸:

²⁶ Cornw all County Council, Cornw all: A Landscape Assessment 1994 report. Landscape Design Associates in association with Cornw all Archaeological Unit, 1996

²⁷ Cornw all County Council, Cornw all Historic Landscape Character texts (2008). Historic Environment (Advice and Information), 2011

²⁸ Herring, P. Cornw all's Historic Landscape Presenting a method of historic landscape character assessment. Cornw all Archaeological Unit, 1998

- New farms (approximately 12ha) with large regular straight-sided fields;
- New smallholdings (usually less than 2ha) with small regular straight-sided fields;
- Extensions to medieval field systems, with no new settlement established;
- Alterations to medieval field systems, typically through insertion of a number of new field boundaries; and
- Complexes of horticultural gardens, usually tiny enclosures.

- 5.6.5 Fields in post-medieval enclosed land normally have straight sides, and boundaries have less mature or varied vegetation cover than in anciently enclosed land; many boundaries are dry-stone walls. Being exposed, there is relatively little woodland compared with anciently enclosed land, but evidence of its previous vegetation may remain in gorse, heather, bracken etc. on hedges and in corners of fields. Land is now predominantly pasture, with little arable, this being essentially marginal land.
- 5.6.6 Directly north of Tregavethan, a small area of Plantations and Scrub HLC type (HLC no. HCO10) is noted. These HLC types are mainly conifer plantations, comprising those on uplands planted to produce timber, re-plantings of ancient woodlands that had been intensively harvested and those created as elements of designed ornamental landscapes.
- 5.6.7 From Allet to Newlyn Downs, the Scheme is located within the Farmland: Medieval HLC type (HLC no. HCO4). This is agricultural heartland, with farming settlements documented before the 17th century AD, whose field patterns are morphologically distinct from the generally straight-sided fields of later enclosure; with either medieval or prehistoric origins. They tend to be on relatively sheltered land, not too steep and not too poorly drained, but can extend onto the edges of high downs. There are networks of winding lanes and roads, often deeply cut by the passage of people, animals and vehicles over centuries. These connect farming settlements whose layouts are typically irregular and were often clearly shrunken from hamlets; some still remain hamlets. Church-towns and a few larger villages are scattered through this HLC type, which also contains, or surrounds, most of the county's ancient towns.
- 5.6.8 The area of Chyverton Park is recorded as an Ornamental HLC type (HLC no. HCO18), which is described as a deliberately and carefully manipulated landscape, parklands and gardens that surrounds large country houses, normally of 18th and 19th century origin.
- 5.6.9 The route of the Scheme, from Zelah to Carland Cross, follows the Communications HLC type (HLC no. HCO23), which is subdivided into the Major Roads division. This HLC type is described as *"the main communication lines that are sufficiently large in an area or significant in impact to be mapped"*. The communications infrastructure of Cornwall is largely needs driven, but the locations established and routes taken are determined by a complex of factors including geographically determined ones (such as topography) and historical and tenurial ones. The main roads of Cornwall tend to have standardised furniture and features (such as cuttings, embankments, underbridges, bridges, barriers, signage), although the more recent stretches, such as that part of the A30 recently opened between Innis Downs and Indian Queens, have been designed with landscape impact more firmly in mind.

- 5.6.10 Directly north of Carland Cross, an area of Post-medieval Enclosed Land HLC type (HLC no. HCO13) is noted, with two areas of Modern Enclosed Land HLC type (HLC no. HCO11) to the west and south-west. This HLC type comprises mainly anciently enclosed land or post-medieval enclosed land whose field systems have been substantially altered by large-scale hedge removal in the 20th century. It also includes 20th century intakes from rough ground, woodland and marsh.
- 5.6.11 To the west of Carland Cross, two smaller HLC types are recorded - an area of Upland Rough Ground HLC type (HLC no. HCO07), which comprises areas of rough grassland, heathland and open scrub, usually on the higher or more exposed ground in a locality, and an area of Industrial: Disused HLC type (HLC no. HCO16), where industrialised extraction, usually mining and quarrying, historically took place.

5.7 Identification and Significance of Heritage Assets

Designated Heritage Assets

- 5.7.1 One post-medieval designated heritage assets is recorded within the footprint of the Scheme, a post-medieval milestone - Milestone at SW 771486 NE (NHLE no. 1140923). Further details are provided in Table A-1, Appendix A1.1.
- 5.7.2 Although not within the footprint of the Scheme, six designated heritage assets are noted within close proximity (<10m), which include a WHS, two SMS, one RPG and two listed structures:
- Two areas of scheduled Bronze Age barrows - Two bowl barrows 290m and 375m north of Higher Ennis Farm (NHLE no. 1017050, alongside the Scheme) and a Bowl barrow 100m south west of Callestick Vean (NHLE no. 1016103, approximately 5m from the Scheme);
 - The post-medieval Cornwall and West Devon Mining Landscape – Gwennap Mining District WHS (NHLE no. 1000105, alongside the Scheme);
 - Chyverton Park, a post-medieval Grade II Registered Park and Garden (NHLE no. 1000512, approximately 0.5m from the Scheme); and
 - Two post-medieval Grade II listed boundary stones - Boundary Stone at SW 778487 NE (NHLE no. 1140922) and a Boundary Stone at SW 773486 NE (NHLE no. 1136600), both approximately 10m from the Scheme.
- 5.7.3 Further details of the significance of these assets are provided in Table A-4, Appendix A1.2.
- 5.7.4 Within the inner 300m study area, 27 designated assets are recorded, eight SMS, nine Grade II LBs and ten Grade II listed structures, which comprise:
- Eight scheduled Bronze Age barrows, including one long barrow and the Heritage at Risk Warren's Barrow (NHLE no. 1016888, approximately 15m south of the Scheme);
 - Four Grade II listed post-medieval farmhouses, including Chyverton Home Farmhouse (NHLE no. 1141552, approximately 145m west of the Scheme);
 - The Grade II LBs post-medieval Church of Saint Peter (NHLE no. 1141481), Vicarage (NHLE no. 1328719) and Schoolroom (NHLE no. 1141482), all approximately 175m west of the Scheme;
 - One Grade II listed Lodge south-east of Chyverton House (NHLE no. 1136926, approximately 60m west of the Scheme);

- One Grade II listed post-medieval guide stone (NHLE no. 1136693, approximately 250m north of the Scheme); and
- Nine Grade II listed post-medieval milestones.

5.7.5 Further details of the significance of these assets are provided in Table A-6, Appendix A1.3.

5.7.6 Within the outer 1km study area, 30 designated assets are recorded, six SMs (one also designated as Grade II listed), one Grade II* LB, one Grade II* listed structure, 14 Grade II LBs, seven Grade II listed structures and one CA, which comprise:

- Four scheduled Bronze Age barrows;
- A scheduled Iron Age hillfort, 250m south west of Tresawsen (NHLE no. 1016445);
- A scheduled and Grade II listed medieval cross (NHLE no. 1016290/1136597);
- The Grade II* listed post-medieval Chyverton House (NHLE no. 1141551);
- The Grade II* listed post-medieval Bridge east of Chyverton House (NHLE no. 1328680);
- Ten Grade II listed post-medieval houses, farmhouses and associated farm buildings;
- A Grade II listed post-medieval Wesleyan Chapel (NHLE no. 1328705);
- The Grade II listed post-medieval Plume of Feathers Public House (NHLE no. 1141450);
- Two areas of mining activity - the Grade II listed post-medieval Batters Engine House (NHLE no. 1141578) and mine buildings 400m north-east (NHLE no, 1136747);
- One Grade II listed post-medieval guide post (NHLE no. 1141580);
- Six Grade II listed post-medieval milestones; and
- Mitchell CA (approximately 300m east of the Scheme).

5.7.7 Further details of the significance of these assets are provided in Table A-9, Appendix A1.3.

Cornwall and West Devon Mining Landscape World Heritage Site

5.7.8 The Cornwall and West Devon Mining Landscape WHS was designated in 2006, recognising the international importance of the mining culture and the impact this had on the development of the modern, global, mining economy, throughout the world today¹³.

5.7.9 It is the largest WHS in the UK, comprising 10 areas each of which features distinctive patterns of buildings, monuments and sites. Together these form a unified, coherent cultural landscape and share a common identity as part of the overall exploitation of ore-bearing minerals here from the 18th to 20th centuries.

- Area 1: St Just Mining District;
- Area 2: The Port of Hayle;
- Area 3: Tregonning and Gwinear Mining Districts with Trewavas;
- Area 4: Wendron Mining District;
- Area 5: Camborne and Redruth Mining District with Wheal Peevor and Portreath Harbour;
- Area 6: Gwennap Mining District with Devoran and Perran and Kennall Vale;

- Area 7: St Agnes Mining District;
- Area 8: The Luxulyan Valley and Charlestown;
- Area 9: Caradon Mining District; and
- Area 10: Tamar Valley Mining District with Tavistock.

- 5.7.10 The Scheme lies adjacent 'Area 6: Gwennap Mining District with Devoran and Perran and Kennall Vale' area of the WHS. This rural mining district produced a major proportion of the world's supply of copper during the 18th and first half of the 19th centuries. Mining villages, important Methodist sites and the houses and estates of industrial entrepreneurs are included, together with major ancillary industrial sites, important early railway networks and the remains of an early 19th century mining port.
- 5.7.11 Gwennap was once described as the "*richest square mile in the Old World*". The widespread and devastating landscape impact of copper mining may be seen together with remains of the network of railways that linked the mines to the ports.
- 5.7.12 The desolate, largely heathland landscape, considerably modified by mining, is carpeted with waste rock (deads), dotted with islands of consolidated building remains, and with shafts surrounded by distinctive Cornish mine hedges. The central and northern sections of this area are notable for their well-preserved landscape of smallholdings, interspersed with small mining settlements together with the mines, which they served. St Day, Carharrack and Chacewater are particularly fine examples of mining villages. Scorrier House, Tregulow and Burncoose are examples of the grand houses and estates built by mining industrialists.

Known Non-designated Heritage Assets

- 5.7.13 Six non-designated heritage assets and one findspot are recorded within the footprint of the Scheme, ranging from the Mesolithic to the 20th century, with one of unknown date. These comprise:
- A large scatter of Mesolithic material, including a scraper, flint flakes and an arrowhead (HER no. MCO1858);
 - A possible dyke dating from the Iron Age to the medieval periods (HER no. 25228);
 - The site of a medieval cross (HER no. MCO5575);
 - A trackway dating from the medieval to post-medieval periods (HER no. MCO31937);
 - The settlement of Henvor, occupied from the medieval to present (HER no. MCO14868);
 - The site of a 20th century observation post (HER no. MCO42673); and
 - A line of five small pits of unknown date (HER no. MCO32376).
- 5.7.14 Further details of the significance of these assets are provided in Table A-2, Appendix A1.1.
- 5.7.15 Although not within the footprint of the Scheme, one non-designated heritage asset is noted within close proximity (<10m) – a possible Iron Age to Romano-British round (HER no. MCO34825), approximately 3m from the Scheme. Further details are provided in Table A-5, Appendix A1.2.
- 5.7.16 Within the inner 300m study area, 58 non-designated assets are recorded, along with seven findspots, ranging from the Mesolithic to modern periods, which

include Bronze Age barrows, Iron Age to Romano-British enclosures, settlements dating to the early medieval and medieval periods and post-medieval mining activity. Further details are provided in Table A-7, Appendix A1.3.

5.8 Archaeological Potential of the Scheme

- 5.8.1 Baseline data has shown the Scheme to be located within an area of multi-period archaeological activity from the prehistoric to modern periods; however, it is the Bronze Age burial landscape that dominates the area. Due to the high concentration of the funerary monuments, there is a high potential for below ground remains within undeveloped areas of the Scheme.
- 5.8.2 Settlement sites within the study area are noted from the Iron Age and Romano-British periods, locally known as ‘rounds’, continuing into the Early Medieval period with the settlement of Trevalso, and the Medieval settlements of Marazanvose, Zelah, Polstain, Caralsa and Nancarrow, of which some remain occupied to date. There is a potential for further settlement activity within the undeveloped areas of the Scheme, which is detailed in Table 3.
- 5.8.3 The Post-medieval period is defined by milestones associated with the turnpike road and the mining industry. Whilst the Gwennap Mining District of the WHS lies adjacent the Scheme, only three sites are currently recorded within the study area. There is a high potential for below ground remains associated with the extraction industry, within undeveloped areas of the Scheme.
- 5.8.4 The modern period is represented by the site of a Cold War observation post and an underground nuclear post at Mitchell. There is a low potential for below ground remains associated with this period within undeveloped areas of the Scheme.

Table 3 Archaeological potential of the Scheme

Description	Significance	Potential within the Scheme
Remains associated with prehistoric activity (Bronze Age funerary and ceremonial landscape)	Medium	High
Remains associated with Romano-British activity (settlement activity)	Medium	Medium
Remains associated with Early Medieval activity (settlement activity)	Medium	Low
Remains associated with Medieval activity (settlement activity)	Low	High
Remains associated with Post-medieval activity (mining activity)	Low	High
Remains associated with Modern activity (Cold War activity)	Low	Low

6 Conclusions

- 6.1.1 Baseline data has demonstrated the Scheme is located along a principal historic route that connects Devon and Cornwall, and which lies within an area of multi-period archaeological activity, from the prehistoric to modern periods.
- 6.1.2 Continued settlement activity is noted from the prehistoric period, however it is the Bronze Age burial landscape that dominates the study area for the Scheme. The distribution and location of the barrows along the higher topography, combined with the large number of monuments, suggests that these represent either one large cemetery, or part of two cemeteries, one at Three Burrows and the other that coincides with Carland Cross.
- 6.1.3 Although the western part of the Scheme is located alongside the Gwennap Mining District of the Cornwall and West Devon Mining Landscape WHS, very little post-medieval mining activity is currently recorded within the study area.
- 6.1.4 The development of Cornwall's roads was affected by the county's unique topography and landscape, resulting in particularly narrow and twisting roads. The route of the current A30 originated as an early historic main route-way that became an established 17th century coaching road and later part of an 18th century turnpike road, along with its compulsory milestones and associated tollhouses; these remain extant in the landscape today.
- 6.1.5 In the study area, later 20th century military activity is evidenced in one location only, west of Carland Cross by the site of a surface Cold War Royal Observer Corps and underground nuclear post.
- 6.1.6 As a result of this known archaeological activity, within undeveloped areas of the Scheme there is:
- High potential for below ground remains relating to Bronze Age funerary and ceremonial activity, medieval settlement and post-medieval mining activity;
 - Medium potential for Romano-British settlement; and
 - Low potential for early-medieval settlement and Cold War activity.
- 6.1.7 The geophysical survey, undertaken in June 2017, has identified areas of possible archaeological interest along the Scheme, in areas south of Newlyn Downs, north-east and south of Zelah, and south-west of Chyverton Park. The most common features identified, however, were ditches, forming enclosures or field systems, suggesting further settlement activity. Evaluation trenches are currently being undertaken to help establish these findings, the results of which have not been published in time to inform this DBA.

References

- Bartlett, A. A30 Carland Cross to Chiverton Improvement Stage 2 Environmental Assessment Report - Archaeogeophysical Surveys at Warrens Barrow and SAM 32901. Cornwall Event Report, 2003
- Bartlett, A. A30 Carland Cross to Chiverton Cross Improvement Stage 2 Environmental Assessment Report Archaeogeophysical Surveys at Site OA 36 and Sites OA 152-4. Cornwall Event Report, 2003
- Bewley, R. Understanding England's Historic Landscapes: An Aerial Perspective. Landscapes 2 74–84, 2001
- Chartered Institute for Archaeologists (CIfA), Standard and guidance for historic environment desk-based assessment, 2017
- Chartered Institute for Archaeologists, Regulations for Code of Conduct, 2014
- Cole, R. Chiverton Cross Road Improvements Archaeological Watching Brief. Cornwall Event Report, 2006
- Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2013–2018. Cornish Mining World Heritage
- Cornwall Archaeological Unit. A30 Carland Cross to Chiverton Roundabout, Cornwall. Written Scheme of Investigations for archaeological evaluation trenching, 2017
- Cornwall Archaeological Unit. A30 Longrock to Innis Downs CHAMP: Devon and Cornwall. Report, 2014
- Cornwall County Council, Cornwall Historic Landscape Character texts (2008). Historic Environment (Advice and Information), 2011
- Cornwall County Council, Cornwall: A Landscape Assessment 1994 report. Landscape Design Associates in association with Cornwall Archaeological Unit, 1996
- Department for Communities and Local Government, Planning Practice Guidance 18a: Conserving and enhancing the historic environment, Scoping and consultation, 2014
- Department for Communities and Local Government National Planning Policy Framework, 2012
- Department for Transport, National Policy Statement for National Networks, 2014
- English Heritage, Seeing the History in the View, 2011
- English Heritage, Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment, 2008
- Field, D. Introductions to Heritage Assets Prehistoric Barrows and Burial Mounds, English Heritage, 2011
- Fitzpatrick, A. (ed) Later Bronze Age and Iron Age, 117-143, in Webster, C.J. (ed) The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008
- Goacher, H. Ventonteague, St Erme, Cornwall, Archaeological Assessment of Proposed Wind Turbines. Cornwall Archaeological Unit, 2014

- Gater, J. and Tanner, J. Geophysical Survey Report, A30 Carland to Chiverton, Cornwall, 2017
- Gater, J. and Gaffney, C. Report on Geophysical Survey, Chiverton Cross Roundabout, Report 90/41, 1990
- Hattam, D, E. Pumping Engines on the St Agnes Mines. Cornwall Event Report, 1993
- Hartgroves, S. Bayfield, T. An Archaeological Evaluation of the Four Burrows Windfarm Site. Cornwall Event Report, 1992
- Herring, P. Cornwall's Historic Landscape Presenting a method of historic landscape character assessment. Cornwall Archaeological Unit, 1998
- Historic England, Managing Significance in Decision-Taking in the Historic Environment, Historic Environment Good Practice Advice in Planning: 2, 2015
- Historic England, Historic Environment Good Practice Advice in Planning, Note 3, The Setting of Heritage Assets, 2015
- Holbrook, N. (ed) Roman, 151-161, in Webster, C.J. (ed) The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008
- Hosfield, R., Straker, V. and Gardiner, P. Palaeolithic and Mesolithic, 23-62 in Webster, C.J. (ed.) The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008
- James, T., Weddell, P. Land at Nanteague Farm, Allet, Cornwall: Archaeology and Cultural Heritage Assessment and Geophysical Survey. Cornwall Event Report, 2011
- Limbert, D. A30 Carland Cross to Chiverton Cross - Cultural Heritage Resource Assessment. Cornwall Event Report, 2004
- Oxford Archaeology. A30 Carland Cross to Chiverton Cross Improvement - Draft Archaeological Mitigation Strategy. Cornwall Event Report, 2004
- Oxford Archaeology. A30 Carland Cross to Chiverton Cross Improvements - Report on an Archaeological Watching Brief on Geo-technical test-pits and inspection of borehole logs. Cornwall Event Report, 2004
- Oxford Archaeology. A30 Carland Cross to Chiverton Cross Improvements Wider Study Area - Assessment of Heritage of Historic Sources. Cornwall Event Report, 2003
- Pollington, M. Carland Cross Wind Farm Cornwall - Archaeological Desk-Based Assessment, 2008
- Preston-Jones, A. and Lawson Jones, A. Repairs to Killigrew Barrow, Carland Cross, St Erme Scheduled Monument no. 988B. Cornwall Archaeological Unit, Cornwall County Council, 1997
- Rainbird, P., Robinson, S. Land at Nanteague Farm, Allet, Cornwall: Results of an Archaeological Trench Evaluation. Cornwall Event Report, 2013
- Rippon, S. and Croft, B. Post-Conquest Medieval, 195-207, in Webster, C.J. (ed.) 2008, The Archaeology of South West England, South West Archaeological Research Framework Resource Assessment and Research Agenda. Somerset Heritage Service, 2008

Sharpe, A. Cornwall and West Devon Mining Landscape World Heritage Site Condition Survey. Cornwall Archaeological Unit, 2014

Stephens, C. Carland Cross Windfarm, Windfarm (Report No 95/02).Cornwall Event Report, 1995

Schwartz, S.P. and Parker, R. Tin Mines and Miners of Lanner, The Heart of Cornish Tin. Halsgrove, 2012

Thomas, N. An Archaeological Evaluation of the Carland Cross Area. Cornwall Event Report, 1991

Webb, A. Carland Cross Windfarm, Cornwall: Archaeological Strip, Map and Record and Watching Brief. Cornwall Event Report, 2012

Young, A. Cornwall and Isles of Scilly Mapping Project, English Heritage HEEP Project 2710, A Report for the National Mapping Programme. Cornwall County Council, 2007

Electronic Sources

A30, <http://www.cbrd.co.uk/motorway/a30> (accessed 12 October 2017)

An introduction history of transport in Cornwall,
<http://www.cornwallheritagetrust.org/discover/history-of-transport/> (accessed 11 October 2017)

British Geological Survey – Geology of Britain viewer,
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed 25 September 2017)

Busby, P. Garvinack Farm, Truro, Cornwall: Archaeological Watching Brief. Cotswold Archaeology, 2014,
<http://archaeologydataservice.ac.uk/archives/view/greylit/details.cfm?id=49415&det=y>
(accessed 15 September 2017)

Chyverton Park, Truro, England, <http://www.parksandgardens.org/places-and-people/site/4709/description> (accessed 11 October 2017)

Chyverton Park, <http://www.chyvertonpark.com/> (accessed 11 October 2017)

Cornish Crosses – Old Cornwall Societies,
www.oldcornwall.net/download/i/mark.../Crosses%20-%20An%20Introduction.pdf
(accessed 11 October 2017)

Cornish Mining. The Gwennap-Chacewater Mining District,
<http://www.cornishmining.net/sites/gwennap.htm> (accessed 11 October 2017)

Cornwall Heritage Trust, Cornwall 410-1066,
<http://www.cornwallheritagetrust.org/discover/cornwall-410-1066/> (accessed 11 October 2017)

Cornwall Turnpike Trusts, <http://www.turnpikes.org.uk/Turnpikes%20in%20Cornwall.htm>
(accessed 12 October 2017)

Harrison, T. S. Carland Cross Wind Farm, 2012. Archaeological Services WYAS.
<http://archaeologydataservice.ac.uk/archives/view/greylit/details.cfm?id=29106&det=y>
(accessed 15 September 2017)

Historic England, PastScape, <http://www.pastscape.org.uk/TextPage.aspx> (accessed 28 September 2017)

Milestones & Waymarkers, <http://www.milestonesociety.co.uk/aboutmilestones.html>
(accessed 12 October 2017)

'Roads', in A History of the County of Wiltshire: Volume 4, ed. Elizabeth Crittall (London, 1959), pp. 254-271. British History Online <http://www.british-history.ac.uk/vch/wilts/vol4/pp254-271> (accessed 12 October 2017)

Turnpike Roads in England, <http://www.turnpikes.org.uk/The%20Turnpike%20Roads.htm>
(accessed 12 October 2017)

Abbreviations

AMAA	Ancient Monuments and Archaeological Areas Act 1979
CA	Conservation Area
CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
CSHER	Cornwall and Scilly Historic Environment Record
DBA	Historic Environment Desk-Based Assessment
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
GPA	Good Practice Advice
HER	Historic Environment Record
LB	Listed Building
NHLE	Historic England National Heritage List for England
NMP	National Mapping Programme
NPPF	National Planning Policy Framework
NPS	National Policy Statement for National Networks
NSIPs	Nationally Significant Infrastructure Projects
P(LBCA)	Planning (Listed Buildings and Conservation Areas) Act 1990
PPG	Planning Practice Guidance
RPG	Registered Park and Garden
SM	Scheduled Monument
SMC	Scheduled Monument Consent
SRN	Strategic Road Network
WHS	World Heritage Site

Figures

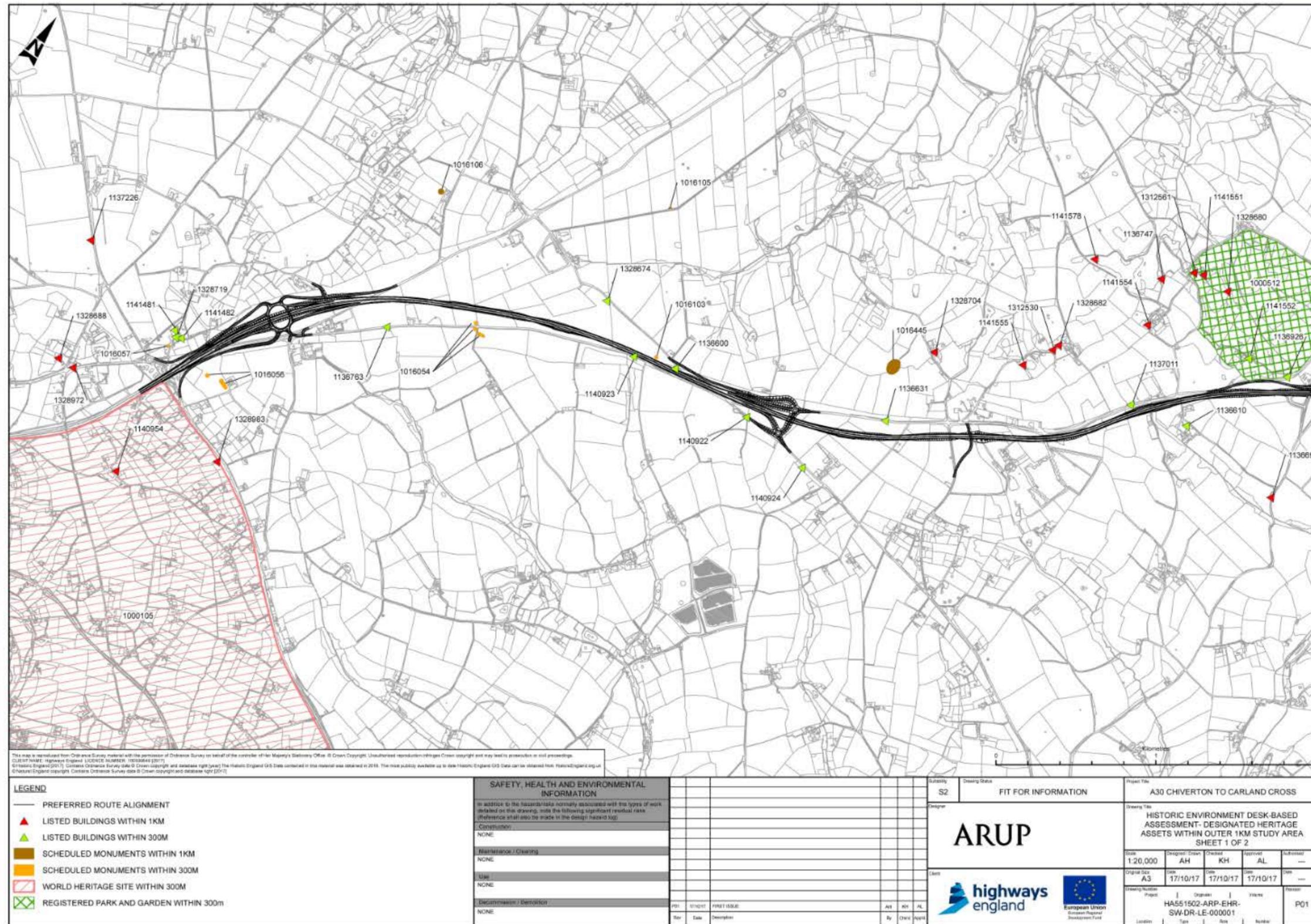


Figure 1 Designated heritage assets within outer 1km study area (west)

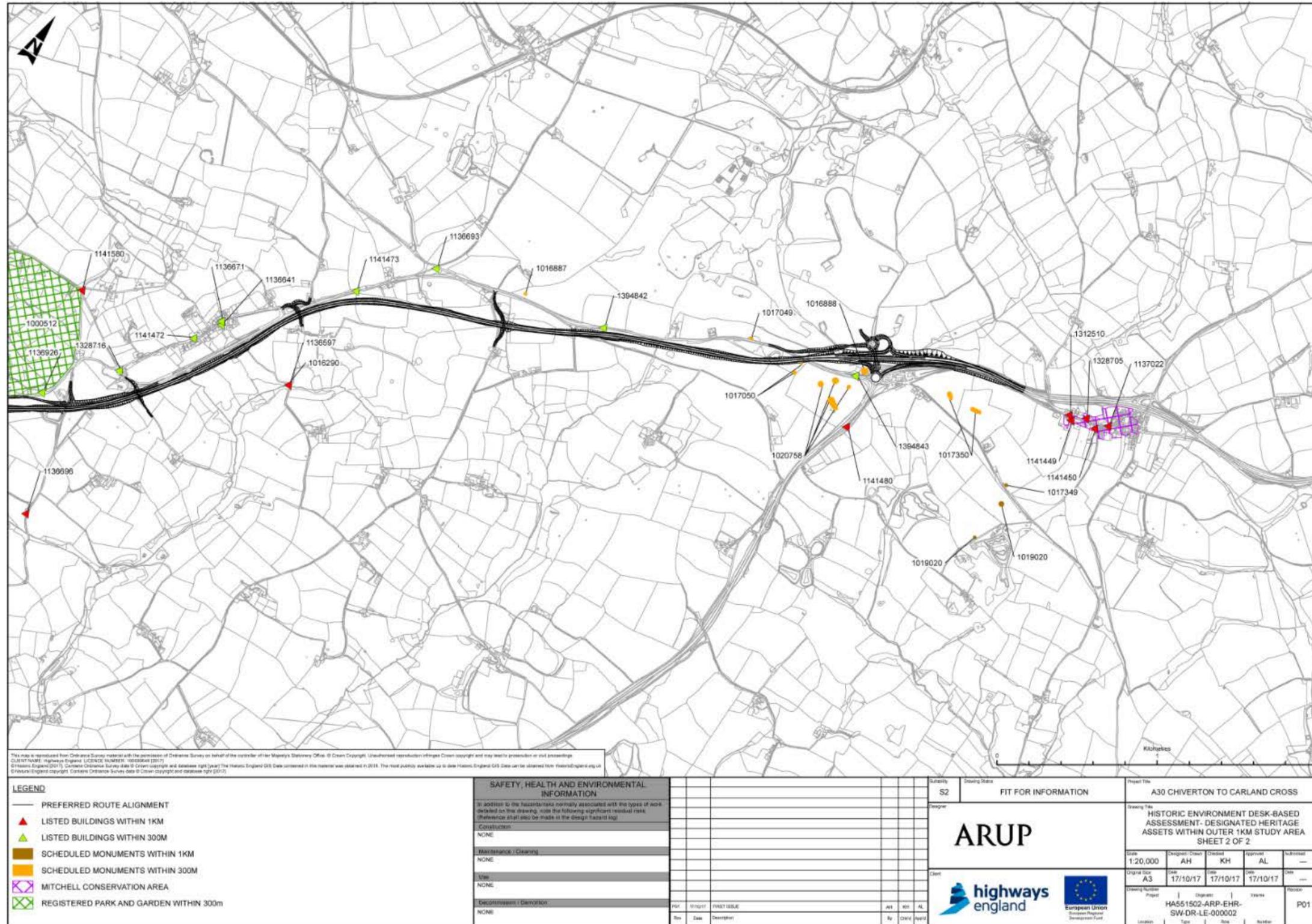


Figure 2 Designated heritage assets within outer 1km study area (east)

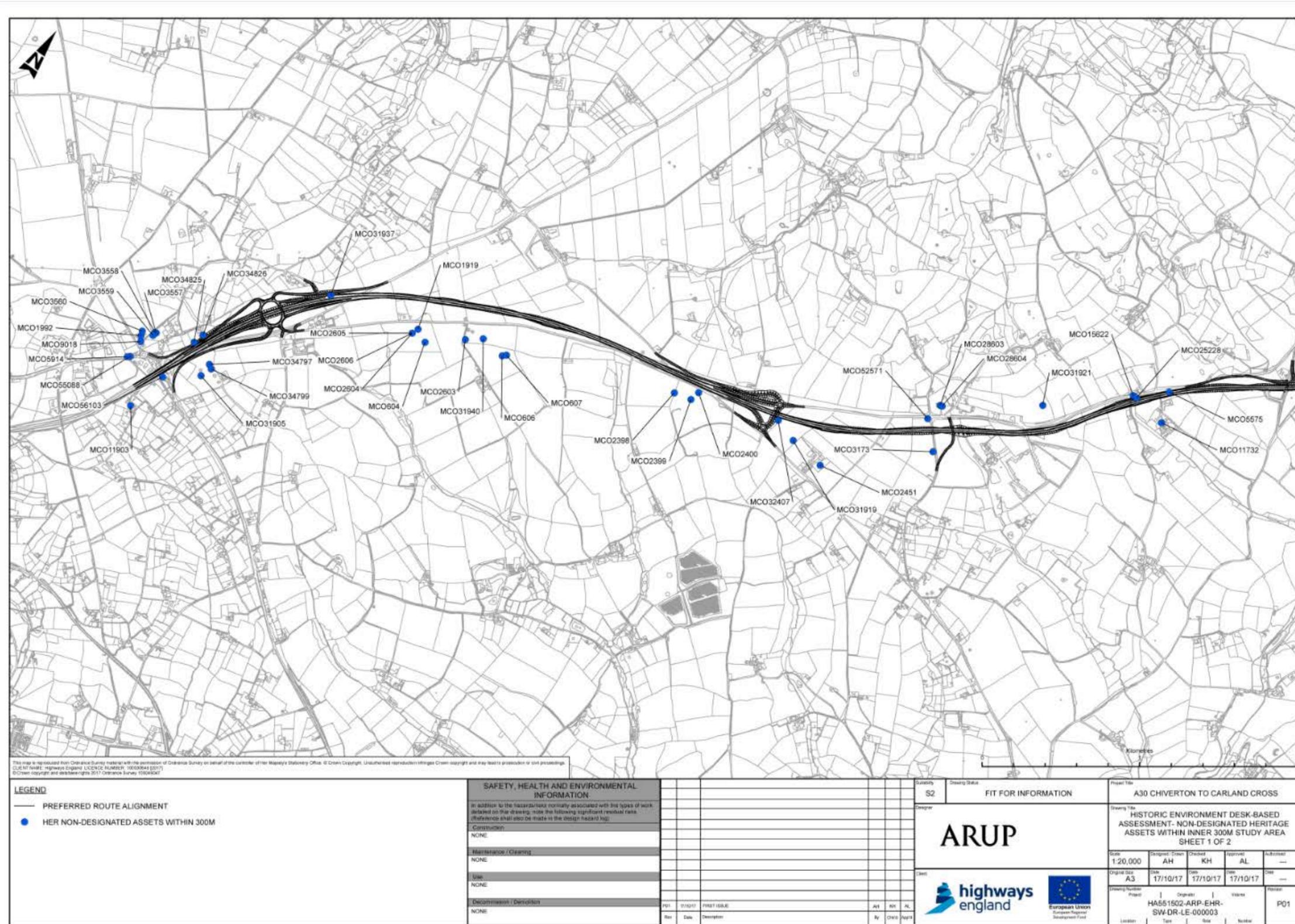


Figure 3 Non-designated heritage assets within inner 300m study area (west)

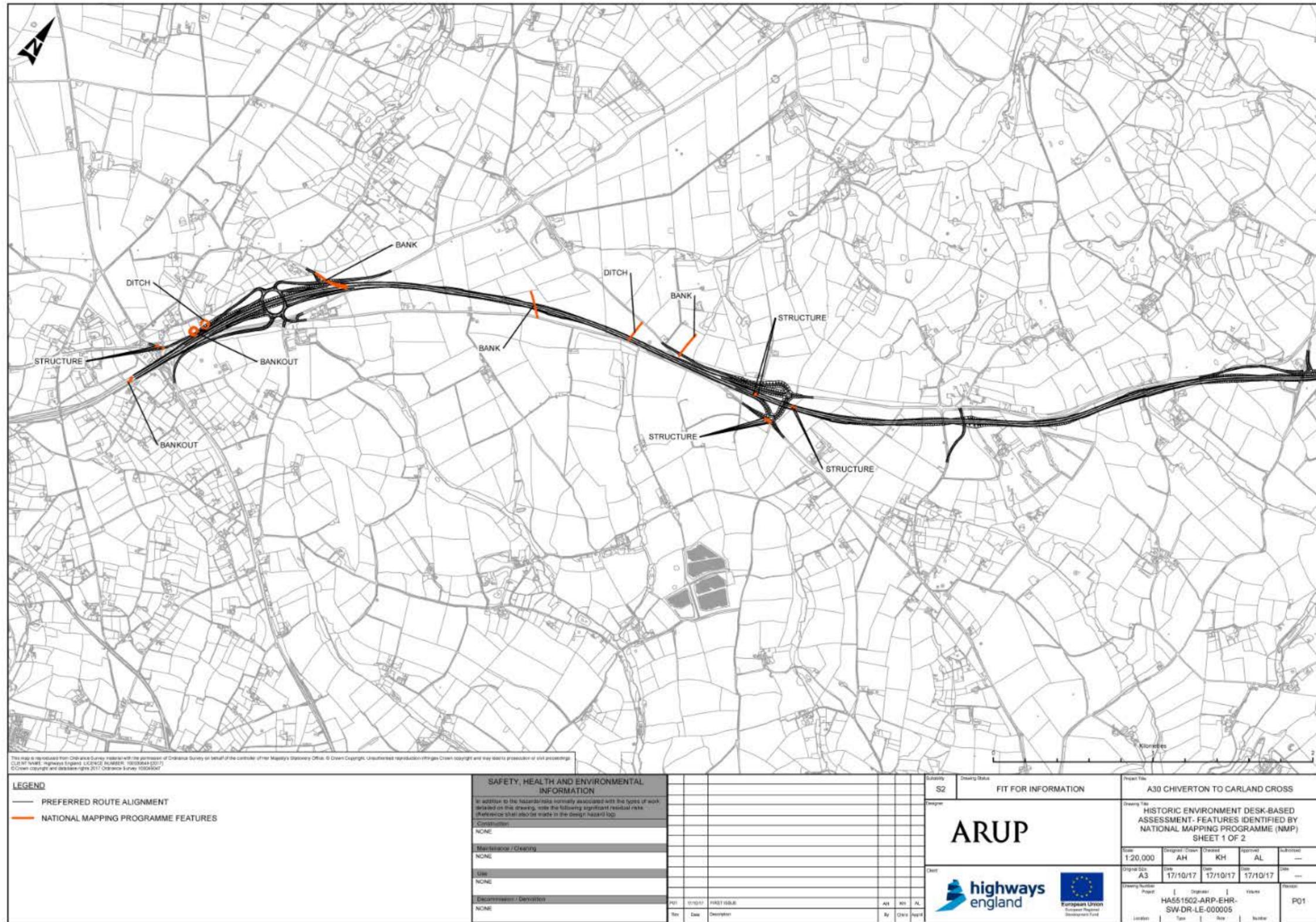


Figure 5 Features identified by National Mapping Programme (NMP) (west)

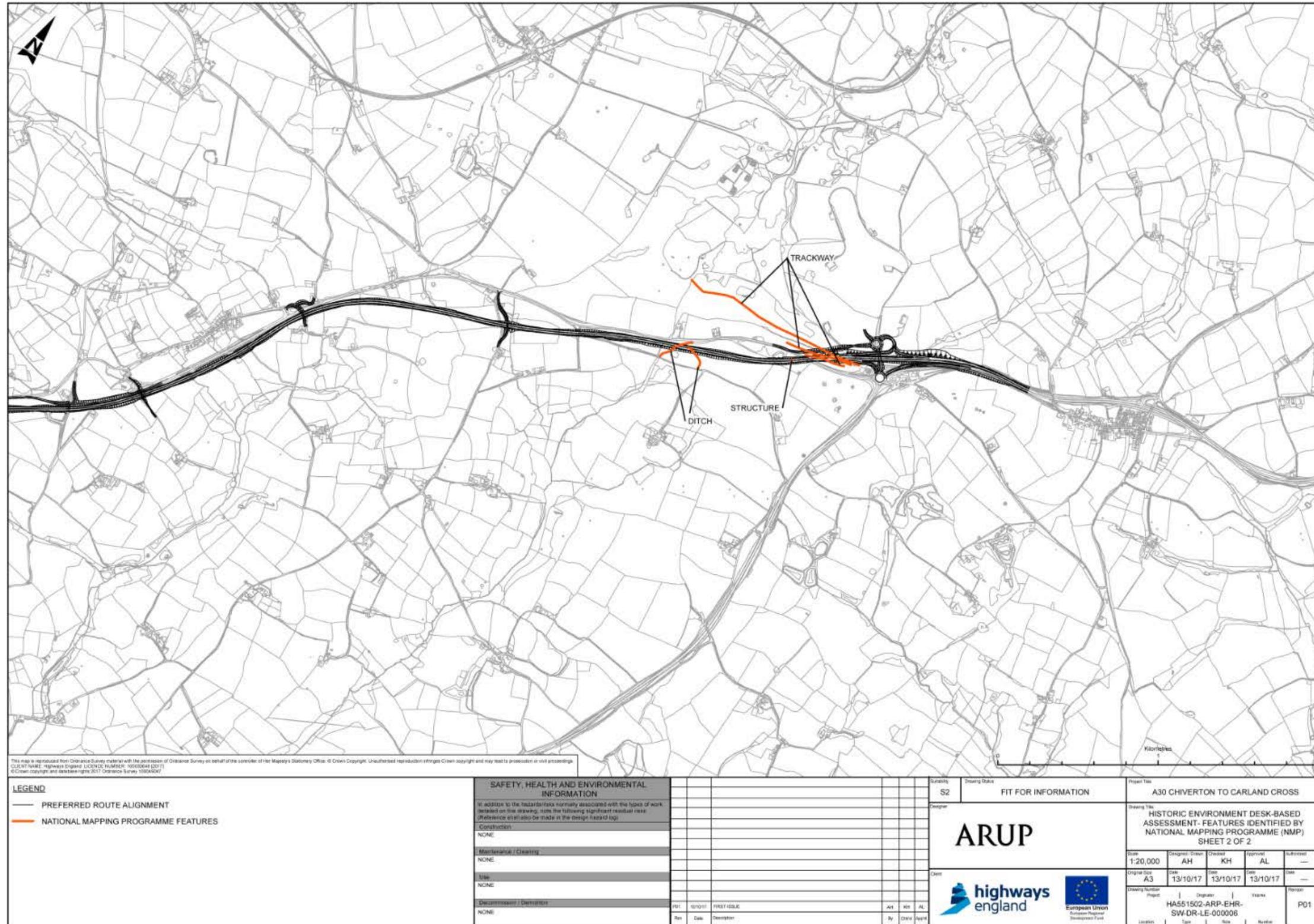


Figure 6 Features identified by National Mapping Programme (NMP) (east)



Figure 7 Grade II listed Church of Saint Peter (west facing)



Figure 8 Church of Saint Peter's graveyard view towards Scheme (east facing)



Figure 9 Grade II listed Schoolroom (north facing)



Figure 10 View from Schoolroom towards Scheme (west facing)



Figure 11 Grade II listed Lodge, Chyverton (north facing)



Figure 12 View from Lodge towards Scheme (south facing)



Figure 13 Round barrow at Carland Cross (north facing)



Figure 14 Round barrow at Carland Cross (west facing)

Appendices

Appendix A Archaeological Data

A.1 Known heritage assets

A.1.1 Heritage assets within footprint of the Scheme

Table A-1 Designated heritage asset within footprint of the Scheme

NHLE ²⁹ site number	Name	Designation	Period	NLHE Description	Significance of asset
1140923	Milestone at SW 771486 NE	Grade II Listed Structure	Post-medieval	Tall slender painted dressed granite monolith square-on-plan with pyramidal head. One of the original 18 th century Turnpike Road milestones but probably re-sited because mileage shown is not in correct sequence with mileage on stone to east.	Medium

Table A-2 Non-designated heritage assets within footprint of the Scheme

HER site number	Name	Period	HER Description	Significance of asset
MCO1858	Findspot – scraper, flint flakes, arrowhead	Mesolithic	At St Allen, western part of the field contained a large scatter of Mesolithic material, a small pebble-flint scraper and three flint flakes were recovered from a gentle south-west facing slope. A leaf-shaped arrowhead was found nearby.	Medium
MCO25228	Possible dyke	Iron Age to Medieval	Suggested that the name Marazanvose means 'market on the dyke', which could imply a dyke or fossway as its place of origin.	Medium
MCO5575	Site of cross	Medieval	The Tithe Award field-name 'Cross Close' possibly implies the site of a cross, of which there are no extant remains.	Low
MCO31937	Trackway	Medieval to Post-medieval	A curved linear feature, considered likely to be a trackway or hollow way, 46m long and comprised of two outer banks with a central ditch, was seen as cropmarks on vertical aerial photographs.	Low

²⁹ The National Heritage List for England (<http://list.english-heritage.org.uk/advancedsearch.aspx>)

HER site number	Name	Period	HER Description	Significance of asset
MCO14868	Settlement - Henvver	Medieval to Modern	The settlement of Henvver is first recorded in 1280 when it is spelt "Henford". The name is Cornish and means 'old road' possibly in reference to the old route way followed by the modern day A30. The settlement is still occupied today.	Low
MCO42673	Site of observation post	20 th century	This site at Mitchell, consists of a surface Royal Observer Corps reporting post and an underground nuclear post. Nothing now remains of either, although the underground post is marked by a line of BT poles.	Low
MCO32376	Pits	Unknown	Five small features (approx. 5m across), were visible on vertical aerial photographs taken in 1946, in a field immediately to the south of the A30 to the west of Carland Cross. The features may be pits flanked on two sides by spoil. They are of uncertain date or function and may military features relating to World War II.	Low

Table A-3 Features identified by the National Mapping Programme (NMP³⁰) within the footprint of the Scheme

Features	NMP Description	Significance of asset
Structure	26 large area features were recorded in the western and eastern parts of the Scheme, however their interpretations are unknown.	Low
Trackway	At Carland Cross, 6 trackways were recorded. These are interpreted as post-medieval or earlier in origin that were normally industrial-related. None of these features would have been recorded or mapped on OS mapping.	Low
Ditch	8 ditched features were recorded in the western and eastern parts of the Scheme, which could include hollow ways, pits, ponds, etc.	Low
Bank	At the western part of the Scheme, 6 bank features were recorded.	Low
Bankout	At Three Burrows, 6 earthwork or cropmark banks were recorded.	Low

³⁰ Young, A. Cornwall and Isles of Scilly Mapping Project, English Heritage HEEP Project 2710, A Report for the National Mapping Programme. Cornwall County Council, 2007

A.1.2 Heritage assets within 10m of the Scheme

Table A-4 Designated heritage assets within 10m of the Scheme

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1017050	Two bowl barrows 290m and 375m north of Higher Ennis Farm	Scheduled Monument	Bronze Age	The monument includes two prehistoric bowl barrows, situated on the summit of a ridge south west of Carland Cross. The scheduling is divided into two separate areas of protection. The northern barrow has a mound 9m in diameter and 0.7m high, with an irregular profile: the south and west sides have been cut into, and the top is uneven, possibly due to stone robbing. The mound of the southern barrow is 21.5m in diameter and 1m high, with an irregular rounded profile and a flattened but uneven top. A depression 2m-3m wide, to the north west of the mound, is considered to be the remains of an outer ditch. Remains of a modern lookout tower, which formerly stood on the barrow. These two barrows are located towards the west of a small barrow cemetery containing bowl, bell, and platform barrows. Alongside the Scheme.	High
1016103	Bowl barrow 100m south west of Callestick Vean	Scheduled Monument	Bronze Age	Monument includes a bowl barrow located 100m South West of Callestick Vean and just North of the A30. The barrow survives as a low lying mound which is the result of ploughing, yet the barrow is still 0.5m in height and 20m in diameter. Approx. 5m from Scheme.	High
1000105	Cornwall and West Devon Mining Landscape – Gwennap Mining District	World Heritage Site	Post-Medieval	Much of the landscape of Cornwall and West Devon was transformed in the 18th and early 19th centuries as a result of the rapid growth of pioneering copper and tin mining. Its deep underground mines, engine houses, foundries, new towns, smallholdings, ports and harbours, and their ancillary industries together reflect prolific innovation, which, in the early 19th century, enabled the region to produce two-thirds of the world's supply of copper. The substantial remains are a testimony to the contribution Cornwall and West Devon made to the Industrial Revolution in the rest of Britain and to the fundamental influence the area had on the mining world at large. Cornish technology embodied in engines, engine houses and mining equipment was exported around the world. Cornwall and West Devon were the heartland from which mining technology rapidly spread. Alongside the Scheme.	Very High

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1000512	Chyverton Park	Grade II Registered Park and Garden	Post-medieval	Chyverton Park is a late-18th-century house and park on an earlier site, 0.5km north of Marazanvose. The gardens and pleasure grounds occupy about 58 hectares within a larger estate. The site encompasses two Grade II* Listed Buildings, two Grade II Listed Buildings and two Grade II Listed structures. The site comprises Chyverton House (Grade II* Listed Building), the gardens and pleasure grounds that lie north-east of the house including a wooded area of ornamental trees (planted 1870s then enhanced in 1920s), a late 18th century park that is today an area of mixed plantations and a kitchen garden enclosed by stone walls 3m in height. The estate is now in divided ownership, of which part is an equestrian centre. Approx. 0.5m from Scheme.	Medium
1140922	Boundary Stone at SW 778487 NE	Grade II listed structure	Post-medieval	Approx. early 19th century boundary stone. Partially dressed granite monolith. Square-on-plan and rectangular in elevation. One of a few surviving boundary stones of the former parish of Tregavethan. Approx. 10m from Scheme.	Medium
1136600	Boundary Stone at SW 773486 NE	Grade II listed structure	Post-medieval	Early 19 th century, of former parish of Tregavethan. Painted partly dressed granite monolith, roughly square-on-plan and rectangular in elevation. Incised Roman letter T on north road facing side. One of the few surviving boundary stones of the former parish of Tregavethan absorbed, following the Cornwall Review order, 1934, into the parish of Kenwyn. . Approx. 10m from Scheme.	Medium

Table A-5 Non-designated heritage assets within 10m of the Scheme

HER site number	Name	Period	HER Description	Significance of asset
MCO34825	Possible round feature	Iron Age to Romano-British	A possible curvilinear round, 50m by 40m, is partially visible as an indistinct low earth bank on air photographs and was plotted as part of the NMP. Approx. 3m from Scheme.	Low

A.1.3 Heritage assets within 300m inner study area

Table A-6 Designated heritage assets within 300m inner study area

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1016054	The Four Burrows	Scheduled Monument	Bronze Age	Monument includes a group of four Bronze age barrows situated on a commanding hilltop at Four Burrows and fall into 3 separate areas. The Barrows are situated between the parish boundary of Kenwyn and Perranzabuloe with two barrows on each side. The four barrows are varying in height (2.5m - 3.9m) and diameter (16m-24m) and two barrows have circular depressions in the centre indicating possible antiquarian excavations. Possible that the barrows are the surviving remnants of a Bronze Age barrow cemetery.	High
1016056	The Three Burrows	Scheduled Monument	Bronze Age	Monument includes a group of 3 Bronze age barrows that have been ploughed and so reduced in height, they are located just east of Chiverton Cross and South East of St Peter's Church at Three Burrows. The three barrows are similar in diameter (20m - 22m) and in height (1m - 1.5m) and only one of the barrows has any trace of a surrounding ditch.	High
1016057	Bowl barrow 125m south of St Peter's Church at Three Burrows	Scheduled Monument	Bronze Age	Monument includes a large bowl barrow located at the property boundary separating the Old Vicarage and Burrow Farm. The barrow is 3m in height and approx. 18m in diameter and contains a central pit which is possibly the result of an antiquarian investigation of an internal collapse of the structure.	High
1016887	Bowl barrow 130m south east of Penglaze	Scheduled Monument	Bronze Age	Monuments includes a bowl barrow situated at the south end of Newlyn Downs. The barrow survives as a low lying mound due to cultivation and ploughing. The barrow is still 0.5m in height and has a diameter of 23m despite the ploughing.	High
1016888	Warren's Barrow	Scheduled Monument	Bronze Age	Monument includes a bell barrow situated on the tip of a south facing hill slope to the east of Newlyn Downs. The most northerly barrow of a group of barrows that formed a prehistoric barrow cemetery, the other barrows are under separate scheduling. Stepped appearance with a central mound about 10m in diameter, contains a large central depression thought to be the cause of an antiquarian excavation. The whole barrow stand at a maximum height of 3.6m and is 36m in diameter in total. Possible surviving ditch underneath the ground surrounding the barrow. Currently has modern material over the top of the barrow due to a temporary track.	High

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1017049	Bowl barrow 500m north west of Higher Ennis Farm	Scheduled Monument	Bronze Age	Monument includes part of a Bronze Age barrow located on the western edge of a ridge South West of Carland Cross. The mound is approx. 0.7m in height and 22m in diameter and is considered closely linked with similar barrows in the area and is possible they form a small round barrow cemetery. There is a slight 2m wide depression on the ground thought to represent the barrows surrounding ditch.	High
1017350	Prehistoric long barrow and four round barrows 580m and 750m south west of Mitchell Farm	Scheduled Monument	Bronze Age	Monument includes a long barrow and four round barrows within two areas of protection. Together they form the western part of a prehistoric ridge top barrow cemetery located high above the east of Carland Cross. 3 of the 4 round barrows are situated close together whereas the last barrow is around 150m to their west. They all however share a similar size (15m-16m in diameter, 0.2-0.3m in height). The Long barrow is located North West of the western round barrow, the long barrow measures approx. 22m long, 13m across and 0.4m in height.	High
1020758	Round barrow cemetery 420m north east of Higher Ennis Farm	Scheduled Monument	Bronze Age	Monument includes a round barrow cemetery containing 5 barrows of bowl, bell and platform type; Also closely associated with four other barrows which form outliers and are subject to their own scheduling. All the mounds are substantially intact despite modern ploughing on a four of the five and evidence for disturbance at 2. The northern most barrow has the remains of the enclosed ditch as well as Killigrew Barrow which is a prominent bell barrow in the cemetery with a mound of 17m in diameter and 2.5m in height and the enclosed ditch shown by a 3m depression in the ground.	High
1141481	Church of Saint Peter	Grade II listed building	Post-medieval	Church built in 1847, designed by William White. The Tower was rebuilt in 1898. Killas rubble with granite was used for the walls and freestone dressing. Gothic Style with pointed arched doorway and arch braced roof structures. Leaded glazing on original windows which also have pointed arched openings with plate tracery.	Medium
1141482	Schoolroom immediately east of Church of St Peter	Grade II listed building	Post-medieval	Schoolroom/Churchhall built approx. mid-19th century. Possibly designed by William White who designed church St Peter and vicarage. Killas rubble walls painted, wooden lintels and scantle slate roof with garble ends. Rectangular plan, single storey.	Medium

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1328719	Vicarage	Grade II listed building	Post-medieval	Former vicarage now a private residence, built in 1847 designed by William White. Built using stucco and delabole slate gabled for the roof. Gothic Style features and an irregular reversed F shaped plan. 2 storeys plus attic. Arched window above doorway.	Medium
1141472	Zelah Chapel, and Forecourt	Grade II listed building	Post-medieval	1859 Methodist Chapel and extension for a schoolroom added 1868; Building built using killas stone with granite dressings and brick arches for the openings. Chapel is nearly square in plan with a hipped roof. Schoolroom rectangular in plan, pebble dashed and with a slate roof. Forecourt of chapel is semi-circular in plan with killas walls 1.5 m in height. Monolithic granite gate piers holding the gate with has a scrolled ornamental crest. Monument commemorating the dead in World War 1 is made from a white marble tablet on a black slate.	Medium
1141552	Chyverton Home Farmhouse	Grade II listed building	Post-medieval	Late 18th century pair of estate cottages. Rubble and cob walls with timber lintels. Slate half hipped roof with central axial brick stacks. Cottages are a mirror imaged identical pair, 2 storeys. Early 20th century doors and windows added into original openings.	Medium
1136926	Lodge at approximately 700m east-south-east of Chyverton House, including associated and adjoining walls and gate-piers	Grade II listed building	Post-medieval	In the mid to late 19th century an entrance lodge to Chyverton estate was built using coursed dressed killas with granite dressing. L shaped plan with approximately 3 rooms and 1 storey in height. Original ledge door and casement windows survive. The principal gateway has a square on plan with panelled piers with pyramidal caps.	Medium
1136610	Nancarrow Farmhouse, and attached Wall	Grade II listed building	Post-medieval	Early 19th century Farmhouse on a site of an earlier mansion. Made with coursed killas sandstone and a slate roof. 2 storeys and a central staircase creating symmetrical elevation. 20th century glazed porch added. Killas stone wall approx. 3.5m high runs from wing of house approx. 39m west , sweeping down 1.5m at west end to meet a dwarf wall with spear headed railings and ornamental gate.	Medium
1136671	Rose Cottage	Grade II listed building	Post-medieval	18th century house at the end of the row. Built from stone and cob, rendered at front and whitewashed. Wheat straw thatch roof. Two storeys, façade symmetrically arranged off centre. 20th century door and paned timber windows all at original openings.	Medium

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1136641	Shirley Farmhouse	Grade II listed building	Post-medieval	Early 19th century farmhouse set at right angle to road. Rendered with slate roof. Symmetrical plan with central entrance and flanking living rooms. 2 storey main house and single storey outhouse. 20th century glazed door in original doorway.	Medium
1136693	Guide Stone at SW 821529	Grade II listed structure	Post-medieval	18th or 19th century guide stone. A square monolith approx. 1.5m in height with a pyramidal top made with granite that has been painted. Inscribed on the south face with letters UTUH and on north face illegible inscriptions.	Medium
1394843	Milestone approx. 253m south-west of Carland Cross	Grade II listed structure	Post-medieval	Milestone erected in the late 18th century and was one of a number of milestones altered in the late 19th century to add extra inscriptions when the construction of new roads was implemented by the local council. Square on plan with a pyramidal head, made from granite stone and is painted white. Approx. 1m in height.	Medium
1394842	Milestone approx. 458m south-west of Journey's End	Grade II listed structure	Post-medieval	Milestone erected in the late 18th century and was one of a number of milestones altered in the late 19th century to add extra inscriptions when the construction of new roads was implemented by the local council. Square on plan with a pyramidal head, made from granite stone and is painted white. Approx. 0.7m in height.	Medium
1140924	Milestone at SW 783487 NE	Grade II listed structure	Post-medieval	Early 19th century milestone (possibly recut in the early 19th century). Painted granite monolith with a rectangular on plan, the milestone is round headed.	Medium
1136631	Milestone at SW 786492 NE	Grade II listed structure	Post-medieval	18th century milestone. Painted granite monolith with a square on plan and a pyramidal head. South facing side intact with Arabic numerals 35 over the letter L all in relief. An original 18th century Turnpike Road milestone but probably resisted as mileage shown is not in correct sequence with mileage on stone to east.	Medium
1136763	Milestone at SW 706479	Grade II listed structure	Post-medieval	18th century milestone. Painted dressed granite monolith with a square on plan and a pyramidal head. Former inscriptions have been defaced.	Medium
1328674	Milestone at SW 767488	Grade II listed structure	Post-medieval	Early 19th century milestone. Round headed painted dressed granite milestone with a rectangular on plan.	Medium
1137011	Milestone at SW 797502	Grade II listed structure	Post-medieval	18th century milestone. Painted granite monolith with a square on plan and a pyramidal head. Original inscription in relief at the front of the monolith.	Medium

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1328716	Milestone on High Road against wall of Zelah Lane Chapel	Grade II listed structure	Post-medieval	Early 19th century milestone. Painted granite monolith with rectangular shaft and a hipped top. Inscribed on 3 sides.	Medium
1141473	Milestone on Zelah Hill	Grade II listed structure	Post-medieval	Early 19th century milestone. Rectangular shaft with a pyramidal top, painted and made with granite.	Medium

Table A-7 Non-designated heritage assets within 300m inner study area

HER site number	Name	Period	HER Description	Significance of asset
MCO604	Findspot – arrowhead	Prehistoric	A flint arrowhead recorded from Four Burrows. The present location and condition/survival of the arrowhead is unknown.	Medium
MCO749	Findspot – quern	Prehistoric	Location of a quern found in St Allen parish. Possibly associated with a possible round at Henver.	Medium
MCO31921	Settlement	Prehistoric to Modern	Two ditched enclosures with associated pits and field boundaries are visible as cropmarks on aerial photography. Plotted during the Cornwall Mapping Project, enclosures are polygonal with curved corners and morphologically look prehistoric. However, without archaeological work a later date cannot be ruled out.	Low
MCO6850	Findspot – flint artefacts	Mesolithic	Mesolithic pebble-flint scatter was discovered in a ploughed field. 34 flint flakes and implements were collected including: obliquely blunted micro-lith, a truncated blade flake, a micro-burin and a nodular flint end scraper.	Medium
MCO607	Findspot – flint pick	Mesolithic	Location of small flint pick 220m east of four burrows barrow group.	Medium
MCO1096	Findspot – flint microlith	Mesolithic	Location of a flint microlith found near Penglaze farm. An isolated find.	Medium
MCO1859	Findspot - arrowhead	Neolithic	Location of a damaged leaf-shaped arrowhead.	Low
MCO606	Findspot - arrowhead	Neolithic	Location of translucent flint leaf arrowhead 220m east of four burrows barrow group.	Low
MCO1992	Barrow cemetery	Bronze Age	A group of nine or ten barrows at the eastern end of an elongated plateau at Chiverton Cross at Three Burrows. Some of the barrows are scheduled monuments; The Three Barrows that gave the cemetery its name and one other which is in reasonable shape.	High

HER site number	Name	Period	HER Description	Significance of asset
MCO2603	Site of possible barrow	Bronze Age	Possible remains of a barrow, described as being possibly extant at Four Barrows. Although this barrow is in poor condition, the Scheduled area should be extended to include this final member of the group. This barrow was not identified on any aerial photographs looked at during the Cornwall Mapping Project.	High
MCO1919	Barrow cemetery	Bronze Age	A group of three barrows, a short distance SW from the four burrows group was recorded in 1851. None however, are extant.	Medium
MCO2398	Barrow	Bronze Age	First described in 1851 in Carvinack, as a low barrow of 12.2m in diameter. In 1954 was excavated by Dudley, many artefacts discovered including quartz, three cremations and pot sherds. However, this excavation almost completely ruined the barrow and now all that is visible are cropmarks seen from aerial photographs.	Medium
MCO2399	Barrow	Bronze Age	One of a group of three at Carvinack. Not visible on the surface but can be seen as crop marks in aerial photography.	Medium
MCO2400	Barrow	Bronze Age	One of a group of three at Carvinack. A slight swelling on the surface indicates its presence alongside visibility in crop marks on aerial photography.	Medium
MCO3173	Barrow	Bronze Age	An extant barrow in Nanteague, 0.5m high due to regular ploughing throughout the 19th and 20th century. Visible as a slight mound on aerial photography.	Medium
MCO31919	Barrow	Bronze Age	Circular mound, possibly surrounded by a circular ditch, is visible as cropmarks taken via aerial photography, on Allet Downs, 160 yards north-west of Woonbucka.	Medium
MCO2320	Site of barrow	Bronze Age	Cargoll Burrow is named in the St Allen Tithe award in the 1840s. No longer extant.	Medium
MCO2604	Site of barrow	Bronze Age	Recorded by Thomas 1851. No remains visible today, would have formed a group of three at Four Barrows.	Medium
MCO2605	Site of barrow	Bronze Age	Recorded by Thomas 1851. No remains visible today, would have formed a group of three at Four Barrows.	Medium
MCO2606	Site of barrow	Bronze Age	Recorded by Thomas 1851. No remains visible today, would have formed a group of three at Four Barrows.	Medium
MCO3560	Site of barrow	Bronze Age	Aerial photography shows an irregular, low grassy mound approx. 11m in diameter at Three Burrows, possibly a Bronze Age barrow. Was plotted as part of the NMP.	Medium

HER site number	Name	Period	HER Description	Significance of asset
MCO3557	Site of barrow	Bronze Age	Symons observed a barrow at Three Burrows in 1870, nothing more is known of this site and nothing is currently visible. Not an extant structure.	Medium
MCO31940	Possible barrow	Bronze Age	Circular earthwork, approx. 12m across, seen as cropmarks on aerial photography. Lies 80m to the east of the extant barrows at Four Burrows. Possible further barrow.	Medium
MCO3559	Possible barrow	Bronze Age	Ditched feature south of St Peters Church at Three Burrows, part of two features surveyed by OS. This ditched feature is approx. 3.0m wide and 0.3m deep, its purpose is uncertain. Possibly a Bronze Age barrow but no appreciable mounds which leaves its interpretation open.	Medium
MCO32370	Possible barrow	Bronze Age	A possible Bronze Age round barrow is visible on vertical aerial photographs taken in 1946. The site lies in close proximity to two other previously documented barrows (32022 and 32023).	Medium
MCO34797	Possible barrow	Bronze Age	Crop mark shown in aerial photography is a possible small round barrow, approx. 10m in diameter at Three Burrows. When taken with other small barrows in area they form a straight line of 4 barrows with two of those in the Three Burrows group (40m to the south-east).	Medium
MCO34799	Possible barrow	Bronze Age	Crop mark shown in aerial photography is a possible small round barrow, approx. 10m in diameter at Three Burrows. When taken with other small barrows in area they form a straight line of four barrows with two of those in the Three Burrows group (60m to the South West).	Medium
MCO3558	Site of possible barrow	Bronze Age	Ditched feature south of St Peters Church at Three Burrows, part of two features surveyed by OS. This ditched feature is approx. 3.0m wide and 0.3m deep, has been cut into by a road and its purpose is uncertain. Possibly a Bronze Age barrow but no appreciable mounds, which leaves its interpretation open.	Medium
MCO32149	Site of possible barrow	Bronze Age	Cropmarks of a ploughed round mound, approx. 20m across, are visible on aerial photographs at Newlyn Downs. Mound lies close to two documented Bronze Age round barrows, possibly indicating feature to be a barrow. Other alternatives such as a post medieval spoil heap cannot be ruled out.	Medium
MCO2451	Site of possible barrow	Bronze Age	Barrow is identified in 1851 around 146m NW of Woonbucka enclosure, Chybucca. Identified Woonbucka enclosure as modern day Chybucca but there is no evidence of a barrow around this area.	Medium

HER site number	Name	Period	HER Description	Significance of asset
MCO2332	Site of possible barrow	Bronze Age	Reported to CAU when the ground west of Warrens Barrow, Carland Cross is ploughed a low stony mound is revealed. Suggested possible barrow.	Medium
MCO19213	Possible site of barrow or round house	Bronze Age to Iron Age	In 1898 while describing the barrows at Carland Cross, Prior suggests another structure that are the remains of a hut circle. However, in 1970 the OS surveyor could find no trace of this structure. It is not extant today.	Low
MCO34826	Possible round	Bronze Age to Romano-British	Faint cropmarks showing a possible curvilinear round show on aerial photographs at Chiverton, plotted as part of the NMP. The cropmarks show a structure approx. 50m by 50m in measurement and the western side of the structure is preserved by the line of the existing field hedge which joins at this point.	Medium
MCO8543	Enclosure	Iron Age to Romano-British	Aerial photography shows cropmarks of an enclosure 200m to the north-west of Tolcroggan. The cropmarks show two concentric oval enclosures, the inner enclosure measuring approx. 40m by 30m and the outer enclosure measuring approx. 70m by 50m. Ditches appear to radiate from the inner enclosure.	Medium
MCO8928	Enclosure	Iron Age to Romano-British	On Zelah Hill, the field-name 'Round Field' suggests the site of a round. Cornwall Mapping project plotted the site which appears to be D-shaped approx. 63m by 57m and can be seen via aerial photographs taken by the RAF in 1947.	Medium
MCO32388	Enclosure	Iron Age to Romano-British	Cropmarks shown on aerial photographs show a deflection of a field boundary to the SW of Honeycombe. Possibly evidence for a structure being in the way of the field boundary as well as further cropmarks showing an eastern side of an enclosure. Suggestions for round structure could be an Iron Age - Romano British round.	Medium
MCO8042	Site of a round	Iron Age to Romano-British	A rectangular field in Henver is named 'The Round' which could possibly suggest a round ancient earthwork. There are no visible remains of the earthwork.	Low
MCO4043	Possible beacon	Early Medieval to Modern	Warrens Barrow is in local tradition to have been used as a beacon, with the materials raising the beacon coming from elsewhere. It is an extant structure, Warrens Barrow is also a Scheduled Monument.	High
MCO17810	Settlement	Early Medieval to Medieval	The settlement of Trevalso is first recorded in 1301 where it is spelt "Trevalda". The name is Cornish and contains the meaning farmstead/estate which could imply a settlement of early medieval origin.	Low

HER site number	Name	Period	HER Description	Significance of asset
MCO5914	Boundary stone/cross	Early Medieval to Modern	Plain granite pillar, located at the junction of St Agnes, Perranzabuloe and Kenwyn parishes. OS maps describe the pillar as a boundary stone but others suggest the structure is a cross.	Low
MCO15622	Settlement – Marazanvose, market	Medieval	Suggested that the name Marazanvose means 'market on the dyke' which could imply a medieval marketplace or settlement. Area is now a small cluster of houses and no extant remains of original settlement remain.	Low
MCO11732	Country house, settlement	Medieval	The settlement of Nancarrow is first recorded in 1201, the OS map of 1888 records that Nancarrow is the site of a mansion but there is no survival of the original house.	Low
MCO12436	Possible mine	Medieval	In 1554 settlement of Polstain is first recorded meaning 'tin-pit' and is assumed to refer to a medieval tin mining site.	Low
MCO6268	Site of possible cross	Medieval	Field name 'Cross Close' in Zelah possibly implies the site of a medieval cross. There are no extant remains or local tradition of a cross in the area.	Low
MCO6269	Possible cross	Medieval	In 1964 Warner claimed that a medieval cross was being used as a gatepost at Zelah Hill. However, OS surveyors and other specialists say that alleged cross is no more than a granite gatepost.	Low
MCO7128	Site of possible holy well	Medieval	'Vinteneacke well' is documented in 1613, there is a chapel meadow and copious spring at the source of River Aleen which is where the well is suggested to lie. Location however, is uncertain and are no obvious extant remains.	Low
MCO28603	Site of leper hospital	Medieval	In 1915 Henderson twice refers to the site of a lazar house at Tresawsen. Nothing is now visible and the precise location of the site is uncertain, but the later Perran Almshouses (37128.1) may be on the site.	Low
MCO18428	Settlement - Zelah	Medieval to Modern	The settlement of Zelah is first recorded in 1311, when it is spelt "Sele". The settlement is still occupied today, now a village.	Low
MCO16419	Settlement - Polstain	Medieval to Modern	The settlement of Polstain is first recorded in 1554. The name is Cornish and means stream tin, possibly referencing a medieval tin mine. The settlement is still occupied today.	Low
MCO13728	Settlement - Caralsa	Medieval to Modern	The settlement of Caralsa is first recorded in 1525. It is still occupied today.	Low

HER site number	Name	Period	HER Description	Significance of asset
MCO32340	Nonconformist chapel	Post-medieval	Wayside Bible Christian chapel lies at the edge of Zelah village and appears to have been lengthened and remodelled possibly to provide space for a Sunday school facility around the 19th century. The chapel was built with Killas rubble walls, brick arches and a scantle slate roof. Simple building that is extant today.	Low
MCO28604	Almshouses	Post-medieval	Perran Almshouses, possibly on the site of an earlier lazar house at Tresawsen.	Low
MCO53060	School	Post-medieval	Boys and Girls school built in 1877 in Zelah, recorded on OS maps in 1880 and 1907. Extant Structure, no longer a school.	Low
MCO9018	Blacksmiths workshop	Post-medieval	OS map of 1878 marks a Blacksmiths workshop outside the Chiverton Arms. This building survives and is being used as a garage or store for the public house.	Low
MCO11903	Mine	Post-medieval	19th century Burra Burra mine, producing copper, tin and zinc mine. OS map of 1962 shows the mine as small and disused.	Low
MCO32374	Mine	Post-medieval	Wheal Ennis, a lead mine was opened in 1851 was unsuccessful and closed in 1852. Recorded on the 1880 OS map as an 'old shaft' and is visible on aerial photographs as an extant mound.	Low
MCO55088	Milestone	Post-medieval	18th century square granite milestone with pyramidal top. Survives on the north-west side of the old A30 at Three Burrows. Has probably been re-sited.	Low
MCO52571	Site of toll house	Post-medieval	A toll house and/or gate was reputed to have been at interchange of A30 and the road from Perranporth to Truro was recorded to have been a toll house/gate. This section of the A30 between Carland Cross and Chiverton Cross, was not part of the turnpike road system, the link to the west originally going through Truro, presumable at the insistence of the Truro Turnpike Trust.	Low
MCO9447	Site of blacksmiths workshop	Post-medieval	A blacksmith workshop in Zelah is recorded on several maps in the 19th century, however the site of the building has been redeveloped.	Low
MCO56103	Well	Post-medieval to 20th Century	Stone-Lined well was discovered during works next to Chiverton Cross roundabout. Photographed and filed before covering the well once again. Extant structure.	Low
MCO45869	Church	20th Century	Small early 20th century church in the village of Zelah. It is first recorded on the 2nd Edition OS 1:2500 map as "Mission Church".	Low

HER site number	Name	Period	HER Description	Significance of asset
MCO31905	Field system	Unknown	Ditched field boundaries viable as cropmarks and mapped from aerial photography during the Cornwall Mapping project. The boundaries lie in close association with the Bronze Age round barrows at Three Burrows. They are of uncertain date, but most likely to be Post Medieval.	Low
MCO32363	Enclosure	Unknown	Cropmarks from aerial photographs show a 46m wide and 71m long rectangular enclosure, immediately to the south of Penny Come Quick. Unknown purpose and date.	Low
MCO32371	Pits	Unknown	Five round pits between 8m and 18m across are visible as cropmarks on aerial photographs. Located just south of Newlyn Downs, uncertain of date or function.	Low
MCO21486	Possible site of enclosure	Unknown	An earthwork with a single bank was noted by the Victoria County History, however no defensive earthwork was identified on Carland Down.	Low

Table A-8 Heritage at Risk assets within the 300m inner study area

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1016888	Warren's Barrow	Scheduled Monument	Bronze Age	<p>The monument is a bell barrow situated on the tip of a south facing hill slope to the east of Newlyn Downs. The barrow is the most northerly barrow of a group of barrows that formed a prehistoric barrow cemetery at Carland Cross, the other barrows are under separate scheduling. Stepped appearance with a central mound about 10m in diameter, contains a large central depression thought to be the cause of an antiquarian excavation. The whole barrow stand at a maximum height of 3.6m and is 36m in diameter in total. Possible surviving ditch underneath the ground surrounding the barrow. Currently has modern material over the top of the barrow due to a temporary track.</p> <p>The monument is on the 'Heritage at Risk' register due to significant localised problems resulting from scrub/tree growth on the monument.</p>	High

A.1.4 Heritage assets within the 1km outer study area**Table A-9 Designated heritage assets within the 1km outer study area**

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1016105	Bowl barrow 425m south west of Higher Callestick Farm	Scheduled Monument	Bronze Age	<p>Monument includes the surviving remains of a bowl barrow occupying the space between two streams which flow to the north Cornish coast. Barrow is 2m high and was originally 20m in diameter however the eastern half of the barrow cut away by a track in the field alongside the barrow. Flat topped appearance and some of the exposed barrow brought up white quartzite and some larger unidentified stones.</p>	High

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1016106	Bell barrow 520m west of Pendown	Scheduled Monument	Bronze Age	Monument includes a bell barrow occupying a gentle north west facing spur around 900m north west of the Four Barrow group. Originally had a berm (level platform) around the central mound and was ditched, however, due to ploughing those features cannot be recognised. Rounded profile. 2m high and 34m in diameter.	High
1017349	Bowl barrow 570m south of Mitchell Farm	Scheduled Monument	Bronze Age	Monument includes a bowl barrow situated above a south west slope on a ridge east of Carland cross. The mound has a 17m in diameter and rises to 2.3m high. This barrow is closely associated with a group of barrows along the ridge top which is a separate scheduling, together they form a prehistoric barrow cemetery.	High
1019020	Two bowl barrows 650m and 410m north west of Hendra Farm	Scheduled Monument	Bronze Age	Monument includes two bowl barrows, situated above a south west slope on a ridge east of Carland cross. The northern barrow has a prominent mound approx. 24.4m in diameter and 2.5m high. Whereas the Southern barrow is approx. 17m across N-S and 15m E-W and 1m in height. Mound for the northern barrow created from earth and small stones, a possible antiquarian excavation caused an irregular hollow on the top of the mound (10m N-S, 4m E-W and 0.4m deep). This monument is closely associated with other barrows beyond this scheduling which together form a ridge-top prehistoric barrow cemetery.	High
1016445	Hillfort 250m south west of Tresawsen	Scheduled Monument	Iron Age	Monument includes an Iron Age fort situated on a gentle north facing hill slope approx. 500m west of a springhead. Internal area is 3.8ha defended by a rampart which survives with a height of 2m along its eastern circuit. The inner rampart was fronted by a ditch which can be seen as a depression to the eastern side of the fort. An outer, near concentric enclosure formed of defences went around the inner sections of the hill fort although these are no longer visible on the ground.	High

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1016290/ 1136597	Trevalsa Cross 350m north west of Trerice/ Wayside Cross at SW 817518	Scheduled Monument/ Grade II listed structure	Medieval	Monument includes the medieval wayside cross, situated at a minor junction east of Zelah in northern Cornwall. Round 'wheel' head on an upright granite shaft set in a modern granite base. The overall monument reaches 1.1m in height. The round 'wheel' head of the monument measures 0.46m high by 0.45m wide and 0.18m thick. Whereas, the shaft of the monument measures 0.68m high by 0.24m wide and 0.19m thick. The cross as well as being a scheduled monument is also a Grade II listed structure.	High
1141551	Chyverton House	Grade II* listed building	Post-medieval	Country house, built approx. early mid-18th century and extended in the 1770s for John Thomas. Brick laid at front and killas rubble used at the rear with pentewen stone dressing and dry delabole slate roofs. In the 19th century additions were made to the house including a wing on the left side of the house and interior furnishings were replaced. The doorway fitted with a window and pavilion set back either side. In the mid to late 19th century a porch was added to the country house. 2 Storeys above the basement plus attics.	High
1328680	Bridge at approximately 150m east of Chyverton House	Grade II* listed structure	Post-medieval	Drive, humped-back bridge with wider approaches at either end, over a small dammed stream built in 1780 for John Thomas. Coursed killas with killas parapet string, brick arch, brick parapets and dressed granite copings.	High
1137022	Wellesley House, and attached Stables Block	Grade II listed building	Post-medieval	House with stables approx. early 19th century (1800-1820). Right wing added approx. late 19th Century (1899). Gritstone ashlar, with slate roof. 18th century type fire place decorated frieze.	Medium
1140954	Primrose Farmhouse	Grade II listed building	Post-medieval	Farmhouse approx. 19th century (1800-1852) built by Henry James for himself, 2 storey extension added in the mid-19th century (1813-1886). Painted killas and cob. Wheat reed thatched roof, old wooden launder under eaves.	Medium
1141449	Mitchell Farmhouse	Grade II listed building	Post-medieval	Farmhouse approx. early to mid-19th century (1800-1866). Coursed killas stone with contrasting quoins and dressings. Graded stone slate roof.	Medium

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1141450	Plume of Feathers Public House	Grade II listed building	Post-medieval	Inn originally approx. early 18th century (1700-1732) was remodelled in the late 19th century (1867-1899) and a courtyard was added 20th century (1900-1999). Rendered cob and stone. Slate roof.	Medium
1328682	Lower Ventongimps Farmhouse, Including Front Gardens Walls, Gate-Piers and Gate	Grade II listed building	Post-medieval	Farmhouse including garden wall, gate piers and gate built approx. 19th century (1800-1832). Mostly killas rubble with some granite quoins and brick arches over the openings. 2 storeys. Garden wall created with stone rubble, granite monolithic gate piers and old wrought iron gate.	Medium
1141554	Higher Ventongimps	Grade II listed building	Post-medieval	Farmhouse originally approx. 18th century. The 19th century saw the farmhouse reroofed and eaves heightened slightly, a porch and new windows installed and a dairy and back wing added on the left. 20th Century brought further extensions on the right of the farmhouse. 2 storeys. Pointed arched wooden doorway.	Medium
1141555	Ventongimps Villa	Grade II listed building	Post-medieval	Villa built approx. early 19th century (1800-1832). Killas rubble with timber lintels over the openings. 2 storeys. Original 4 panel door and small rectangular over light.	Medium
1328688	Highlands	Grade II listed building	Post-medieval	Originally a house and two cottages probably built in the 18th century. Extensions and renovations took place in the 20th century creating a single house. Painted rubble and cob walls with a wheat-reed thatched roof. 2 storeys.	Medium
1328704	Tresawen Farmhouse	Grade II listed building	Post-medieval	Farmhouse approx. 18th century (although also possible house built on a site of an earlier 17th century house 1600-1699). In the 19th century the central part is deepened and in the 20th century a conservatory is added. Grounded scantle slate roof with gable ends. Slate killas rubble walls and brick arches over the openings. 2 storeys.	Medium
1328705	Wesleyan Chapel	Grade II listed building	Post-medieval	Wesleyan chapel built in 1845. Uncoursed killas stone except on the south front where it is coursed killas stone with granite quoins to windows. Slate roof with crested ridge tiles. Schoolroom at the north end with a hipped roof. Tinted window frames from approx. 1910-1920. Diamond pattern glazing. Walls also rendered and lined as ashlar in black mortar.	Medium

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1141578	Batters Engine House	Grade II listed building	Post-medieval	Pumping beam engine house for former lead mine. 1868-1869. Killas rubble and granite dressings. Rectangular plan with round chimney. No surviving wooden floors or roof structure. 3 storeys. Unaltered elevations with round arches over openings.	Medium
1136747	Mine Buildings at approx. 400m east north east of Batters Engine House	Grade II listed building	Post-medieval	Approx. mid to late 19th century (1840 - 1880). 4 buildings inc. a possible boiler house, drying house, engine house and winder house. Killas rubble with dressed granite and brick arches over the opening. Overall T shaped plan, 2 storeys high and scissor braced roof structure.	Medium
1312530	Cartshed approx. 50 metres south west of Lower Ventongimps Farmhouse	Grade II listed building	Post-medieval	Cartshed built approx. mid-19th century (1833-1866). Killas rubble and brick gable at the front, alongside a grouted scantle slate roof with gable ends. Stone steps. 2 storeys.	Medium
1312561	Stables at approx. 30m south west of Chyverton House	Grade II listed building	Post-medieval	Stables built approx. late 18th century (1767-1799), added outbuilding in approx. early 19th century (1800). Roughly coursed killas with granite and brick dressings alongside a dry delabole slate roofs with predominated gables at the front. Overall 1 shaped plan.	Medium
1141580	Guide Post at SW 803515	Grade II listed structure	Post-medieval	Guide Post approx. late 19th century (1867-1899). Cast iron. Fluted column on a round base.	Medium
1328972	Milestone at SW 741465 SW	Grade II listed structure	Post-medieval	Milestone built 18th century. Granite Monolith. Shaped with a pyramidal-headed square on plan with original inscription to south side.	Medium
1328983	Milestone at SW 753466 NE	Grade II listed structure	Post-medieval	Milestone built approx. early 19th century. Painted dressed granite monolith. Rectangular with round top.	Medium
1136696	Milestone at SW 808502	Grade II listed structure	Post-medieval	Milestone approx. early 19th century (1800 - 1832). Painted Granite. Rectangular stone with rounded top.	Medium
1137226	Milestone at SW 738472	Grade II listed structure	Post-medieval	Milestone approx. early 19th century (1800-1832). Round-headed dressed granite monolith with incised inscription on front.	Medium
1141480	Milestone at SW 847536	Grade II listed structure	Post-medieval	Milestone approx. 18th or early 19th century (1700-1832). Granite. Whitewashed rectangular stone with rounded top.	Medium

NHLE site number	Name	Designation	Period	NHLE Description	Significance of asset
1312510	Milestone at west end of Village	Grade II listed structure	Post-medieval	Milestone approx. 18th OR early 19th century (1700-1832). Painted stone. Rectangular stone with rounded top.	Medium
n/a	Mitchell Conservation Area	Conservation Area	Medieval to modern	Mitchell Conservation Area comprises a medieval settlement sited at the foot of the downlands, encompassing five Grade II Listed Buildings – Wellesely House (NHLE no. 1137022), Mitchell Farmhouse (NHLE no. 1141449), the Plume of Feathers Public House (NHLE no. 1141450), a Wesleyan Chapel (NHLE no. 1328705) and a Milestone at the west end of the village (NHLE no. 1312510).	Medium

A.2 Previous Archaeological Investigations

Table A-10 Archaeological activity within footprint of the Scheme

Year	Archaeological Activity	Description
A30 Chiverton Cross to Carland Cross		
2003	Desk-based assessment	Report outlines the work carried out to complete the second stage of assessment based on a detailed data collection exercise - acquired from all the main repositories of archaeological information ³¹ (Event ID: ECO3919).
2003	Geophysical Survey	Geophysical Survey was carried out at two barrows at Carland Cross (Warren's Barrow, SAM32901) prior to road improvements ³² (Event ID: ECO3913).
2003	Geophysical Survey	Geophysical Survey was carried out (Site OA36 Zelah Hill and OA152-4 Four Burrows Wind Farm) prior to road improvements ³³ (Event ID: ECO3914).
2004	Pre-Feasibility Report	Oxford Archaeology proposed fieldwalking and further geophysical surveys to minimise the impact of the A30 road improvements to the cultural heritage in the area ³⁴ (Event ID: ECO3917).
2004	Historic Landscape Characterisation and Walkover Survey	HLC undertaken by Oxford Archaeology using detailed historic map evidence and observations carried out on a site survey ³⁵ (Event ID: ECO3916).
2004	Watching Brief and Test Pits	Oxford Archaeology's' primary geo-technical investigation of archaeological heritage didn't reveal any new archaeological sites of interest or sites where the land and conditions are favourable for preservation of paleo-environmental remains ³⁶ (Event ID: ECO3918).
2014	Cultural Heritage Management Plan	A CHAMP was produced by Cornwall Archaeological Unit for the A30 Longrock to Innis Downs. The Plan involved a DBA, site visits, management reports and fieldwork: The report discusses how the A30 is terrain obvious and influences the landscape which it passes, also shows how only a few cultural heritage features survive within the footprint (Bridge, 2 Scheduled Monuments, Medieval crosses, Guide Stone, Listed Milestones) ³⁷ (Event ID: ECO4511).
St Agnes		

³¹ Oxford Archaeology. A30 Carland Cross to Chiverton Cross Improvements Wider Study Area - Assessment of Heritage of Historic Sources. Cornw all Event Report, 2003

³² Bartlett, A. A30 Carland Cross to Chiverton Improvement Stage 2 Environmental Assessment Report - Archaeogeophysical Surveys at Warrens Barrow and SAM32901. Cornw all Event Report, 2003

³³ Bartlett, A. A30 Carland Cross to Chiverton Cross Improvement Stage 2 Environmental Assessment Report Archaeogeophysical Surveys at Site OA 36 and Sites OA 152-4. Cornw all Event Report, 2003

³⁴ Oxford Archaeology. A30 Carland Cross to Chiverton Cross Improvement - Draft Archaeological Mitigation Strategy. Cornw all Event Report, 2004

³⁵ Limbert, D. A30 Carland Cross to Chiverton Cross - Cultural Heritage Resource Assessment. Cornw all Event Report, 2004

³⁶ Oxford Archaeology. A30 Carland Cross to Chiverton Cross Improvements - Report on an Archaeological Watching Brief on Geo-technical test-pits and inspection of borehole logs. Cornw all Event Report, 2004

³⁷ Cornwall Archaeological Unit. A30 Longrock to Innis Downs CHAMP: Devon and Cornwall. Report, 2014

Year	Archaeological Activity	Description
1993	Building Record	Report describing and listing the pumping engines of the St Agnes Mines ³⁸ (Event ID: ECO989)
Chiverton Cross		
1990	Geophysical Survey	Magnetic responses found to be low but did locate one of the surviving barrows at Chiverton Cross Roundabout, some anomalies of archaeological potential recorded, trial trenching recommended ³⁹ (Event ID: ER184)
2006	Watching Brief	The watching brief, carried out by Historic Environmental Service, Cornwall County Council during work at Chiverton Roundabout. Archaeological features identified during the watching brief included: a ditch from a removed field boundary associated with a lost post-medieval farm and an uneven area of subsoil in the approx. position of a trackway recorded on the 1840 and 1880 OS maps ⁴⁰ (Event ID: ECO2533).
Cornwall and West Devon Mining Landscapes World Heritage Site		
2005	Management Plan	The World Heritage Site Management Plan 2005-2010 provided a framework of policies and actions to ensure consistent management of a multi-area serial World Heritage Site, in the care of a large number of owners and managers. Given the distributed nature of the Site, the plan focused on agreed policy principles, which can be applied in different Areas to take account of local circumstances whilst ensuring a unified approach to dealing with the identified management issues.
2014	Condition Survey	Undertaken by Cornwall Archaeological Unit to reassess all elements within private ownership and in unfavourable condition in 2010. Unchecked scrub growth found to be increasingly widespread problem, with loss to access to and visibility of some components. Some losses found due to road improvements or areas of new build. Funding cutbacks resulting in management cutbacks, conservation of engine houses and other monuments rare, industrial trials neglected ⁴¹ (Event ID: 2014RO60).
Four Barrows		

³⁸ Hattam, D. E. Pumping Engines on the St Agnes Mines. Cornwall Event Report, 1993

³⁹ Gater, J. and Gaffney, C. Report on Geophysical Survey, Chiverton Cross Roundabout, Report 90/41, 1990

⁴⁰ Cole, R. Chiverton Cross Road Improvements Archaeological Watching Brief. Cornwall Event Report, 2006

⁴¹ Sharpe, A. Cornwall and West Devon Mining Landscape World Heritage Site Condition Survey. Cornwall Archaeological Unit, 2014

Year	Archaeological Activity	Description
1992	Desk-based assessment	DBA for proposed Four Barrows Windfarm site, located near to a Neolithic/Bronze Age barrow cemetery: Four Burrows. The DBA showed the high possibility for archaeological potential at the site due to the diverse range of archaeological remains around the proposed site including: two/three barrows in a group just to the south of the proposed site and medieval boundaries to the east ⁴² (Event ID: ECO1850).
Garvinack Farm, Tregavethan		
2014	Watching Brief	Carried out by Cotswold Archaeology for Conergy West Sussex Ltd, the location for the watching brief was a site approx. 15ha in extent and covered three large fields immediately north of the A30. Two undated linear features were identified and are highly likely to be modern features. The watching brief showed a significant lack of subsoil suggesting ploughing has impacted the site to a high degree possibly meaning pre post medieval archaeological features have probably been removed ⁴³ (Event ID: ECO4485).
St Allen		
1980	Geophysical Survey	Geophysical survey undertaken at St Allen, Cornwall just to the east of Tolgroggan Farm. The results are exceptionally clear and detailed due to the strong magnetic topsoil; Complex system of intersecting ditched enclosures probably represent trackway ⁴⁴ (Event ID: ECO549).
Nanteague Farm, Allet		
2011	Desk-based assessment and Geophysical Survey	Undertaken by AC Archaeology, the DBA highlighted designated heritage assets within the outer study area (Iron Age Round/two Bronze Age barrows, Grade II Listed buildings and Milestones) and two non-designated assets of local significance are within the proposed site area. The Geophysical Survey identified potential archaeological remains which would be further looked into with an archaeological trench excavation ⁴⁵ (Event ID: ECO4044).

⁴² Hartgroves, S., Bayfield, T. An Archaeological Evaluation of the Four Burrows Windfarm Site. Cornwall Event Report, 1992

⁴³ Busby, P. Garvinack Farm, Truro, Cornwall: Archaeological Watching Brief. Cotswold Archaeology, 2014 Electronic Resource: [<http://archaeologydataservice.ac.uk/archives/view/greylit/details.cfm?id=49415&det=y>] (Accessed 15 September 2017)

⁴⁴ Bartlett, A., David, A. St Allen, Cornwall (AMLab Reports) Cornwall Event Report, 1980

⁴⁵ James, T., Weddell, P. Land at Nanteague Farm, Allet, Cornwall: Archaeology and Cultural Heritage Assessment and Geophysical Survey. Cornwall Event Report, 2011

Year	Archaeological Activity	Description
2013	Evaluation	Undertaken by AC Archaeology, for a proposed solar power station - four trenches, 250m in length, 1.9m wide. They were positioned to identify the anomalies found by an earlier geophysical survey. Results included: features related to a pattern of field boundaries, small enclosure containing two sherds of medieval pottery (possible evidence for an earlier agricultural enclosure) ⁴⁶ (Event ID: ECO4043).
Ventonteague		
2014	Desk-based assessment	Undertaken by Cornwall Archaeological Unit for a proposal of two wind turbines on agricultural land at Ventonteague, to the south of St Newlyn East. Two designated sites, both barrows and Scheduled Monuments, are located within 1km of the proposed turbine sites, with 30 undesignated sites. The barrow cemeteries at Higher Ennis Farm and Mitchell Farm, along with the Conservation Area of St Newlyn East, are given a moderate impact rating due to their proximity and degree of setting and visual intrusion that may be experienced. There are also significant numbers of Scheduled Monuments and Grade I, II* and II Listed Buildings, predominantly farmhouses, cottages and agricultural buildings, relatively close to the proposed turbine sites. Overall the potential visual, audible or setting impacts of the proposed wind turbines on the identified heritage assets are rated as minor ⁴⁷ (Event ID: 2014RO35).
Carland Cross		
1991	Evaluation	Evidence for Prehistoric activity comprised of scatter of six identified Bronze Age Barrows ⁴⁸ (Event ID: 1869).
1995	Geophysical Survey	Geophysical Survey undertaken at Carland Cross for a proposed Windfarm by Geophysical Surveys of Bradford - Results show disturbance from modern pipe works and debris, small sections within the site surveyed show possible archaeological disturbance but modern features could also be the source ⁴⁹ (Event ID: 1398).
1996	Scheduled Monument Recording and Repairs	Recording undertaken by Cornwall Archaeological Trust, repairs undertaken by volunteers from the British Trust for Conservation on Killigrew Barrow, Carland Cross. Recording found extensive sheep erosion and rabbit burrowing but retained impressive domed profile with flattened top. Erosion affected turf and slumping into capping layer, but deposits sealed deeper within the mound. Repairs included gorse and bramble removal, steps and terraces reformed into profile of mound, all bare areas filled with earth and turfed over; future management proposed ⁵⁰ (Event ID. 1997RO62).

⁴⁶ Rainbird, P., Robinson, S. Land at Nanteague Farm, Allet, Cornw all: Results of an Archaeological Trench Evaluation. Cornw all Event Report, 2013

⁴⁷ Goacher, H. Ventonteague, St Erme, Cornw all, Archaeological Assessment of Proposed Wind Turbines. Cornw all Archaeological Unit, 2014

⁴⁸ Thomas, N. An Archaeological Evaluation of the Carland Cross Area. Cornw all Event Report, 1991

⁴⁹ Stephens, C. Carland Cross Windfarm, Windfarm (Report No 95/02).Cornw all Event Report, 1995

⁵⁰ Preston-Jones, A. and Law son Jones, A. Repairs to Killigrew Barrow , Carland Cross, St Erme Scheduled Monument No. 988B. Cornw all Archaeological Unit, Cornw all County Council, 1997

Year	Archaeological Activity	Description
2008	Desk-based assessment	DBA undertaken for a windfarm found extensive pre-historic activity including a number a bronze age barrows recorded as cropmarks but also surviving as earth works. Anticipated to be potential for previously unrecorded archaeological remains at this site ⁵¹ (Event ID: ECO2190).
2012	Geophysical Survey and Watching Brief	Carried out by Archaeological Services WYAS on behalf of Scottish Power Renewables, the location for the services was an area of agricultural land 230ha across situated to the North West of Carland Cross with the A30 running along the south side boundary. The site is split into two sections the eastern half situated around Carland Cross Wind Farm and the western half of the site situated around Newlyn Downs. When the western half was recorded two possible post-medieval parish boundary stones were discovered ranging in height from 0.6m - 1.1m. However, no features of archaeological origin were discovered underneath the ground surveyed confirming the negative result from the geophysical survey. It's possible that deep ploughing over time has destroyed any archaeology that may have resided in this part of the site. Much like the western half the eastern half didn't hold much archaeological potential or features, a single undated linear ditch was recorded possibly a post-medieval boundary feature. The monitoring and recording confirmed a low archaeological potential of the site ⁵²⁵³ (Event ID: ECO4064, ECO4077, ECO4298).

⁵¹ Pollington, M. Carland Cross Wind Farm Cornw all - Archaeological Desk-Based Assessment, 2008

⁵² Harrison, T. S. Carland Cross Wind Farm, 2012. Archaeological Services WYAS. Electronic Resource: [<http://archaeologydataservice.ac.uk/archives/view/greylit/details.cfm?id=29106&det=y>] (Accessed 15 September 2017)

⁵³ Webb, A. Carland Cross Windfarm, Cornw all: Archaeological Strip, Map and Record and Watching Brief. Cornw all Event Report, 2012

A.3 Current Archaeological Investigations

A.3.1 Geophysical Survey, June 2017

A.3.1.1 See Document 6.4 Environmental Statement Appendix 6.3 Geophysical Report.

Appendix B Project Archive

B.1 Project Archive Catalogue

Table B-1 Project archive catalogue

File number	Description of contents
256019-29/01	Historic mapping
256019-29/02	Historic research documents
256019-29/03	Cornwall and Scilly HER
256019-29/04	Site visit photographs
256019-29/05	GIS out-put data

Appendix C Cartographic data

C.1 Cartographic sources

Table C-1 Cartographic sources

Year	Map	Scale
1880	Cornwall & Isles of Scilly	1:2,500
1887	Cornwall & Isles of Scilly	1:10,560
1887-1888	Cornwall & Isles of Scilly	1:10,560
1907	Cornwall & Isles of Scilly	1:2,500
1933	Cornwall & Isles of Scilly	1:2,500
1960	Ordnance Survey Plan	1:2,500
1962-1963	Ordnance Survey Plan	1:10,560
1967	Ordnance Survey Plan	1:2,500
1970	Ordnance Survey Plan	1:10,560
1973-1974	Ordnance Survey Plan	1:10,000
1975-1982	Ordnance Survey Plan	1:10,000
1980	Ordnance Survey Plan	1:10,000
1990-1992	Ordnance Survey Plan	1:10,000

If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.