

LAND SOUTH OF NO.140 LAUNCESTON ROAD

CALLINGTON

CORNWALL

RESULTS OF A HERITAGE IMPACT ASSESSMENT



South West Archaeology Ltd. report no. 190610



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Land South of no.140 Launceston Road, Callington, Cornwall

Results of a Heritage Impact Assessment and Walkover Survey

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SUMMARY

This report presents the results of a heritage impact assessment and walkover survey carried out by South West Archaeology Ltd. (SWARCH) for land south of no.140 Launceston Road, Callington, Cornwall, to inform a planning application for the potential commercial development of the site.

The site is located on the A388 between Callington and Kelly Bray, just outside the Tamar Valley mining district, part of the Cornish Mining World Heritage Site. The surrounding landscape contains evidence of prehistoric, medieval, and post-medieval settlement and farming activity, though it is the post-medieval industrial activity that dominates the immediate environs.

Desk-based assessment and walkover survey identified that the proposal site has been subject to quarrying activity during the 19th and 20th centuries, and whilst there is the potential for the surviving archaeological remains associated with the historic use of the landscape in the surrounding fields, the historic industrial use of the site is likely to have destroyed any such remains within the proposal site. It is deemed unlikely that any further archaeological work on the site would be worthwhile.

*In terms of indirect impacts, most of the designated heritage assets in the wider area are located at such a distance to minimise the impact of the proposed development, or else the contribution of setting to overall significance is less important than other factors. Whilst the immediate environs of the closest of these assets would be altered by any proposed development through the removal of what is currently open space and its replacement with a built environment, the intrinsic functional change of the proposed development is in-keeping with the site's current (industrial) use. Despite this, the siting of any structures within the base of the quarry pits would insulate the landscape context effects on these monuments through a combination of local blocking from the high sides of the quarry pits, the existing bank boundaries and trees. The only sites where there is the potential for an appreciable impact are: the Tamar Valley Mining District World Heritage Site (**slight**), the milestone north of no.128 Launceston Road (**neutral/slight**), and the Callington Town Water Company Fountain (**neutral/slight**). Similarly, the impacts on the Historic Landscape (**neutral to negligible**), the Aggregate Impact and the Cumulative Impact are likely to be **neutral**.*

*The overall impact of the proposed development can be assessed as **negligible to neutral/minor**. The impact of the development on any buried archaeological resource may be **permanent and irreversible**, and although the significance of any buried archaeological deposits remains unknown at present, these are likely to be **negligible** due to the historic quarrying on the site.*



June 2019

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CONTENTS

<i>SUMMARY</i>	2
<i>CONTENTS</i>	3
<i>LIST OF FIGURES</i>	4
<i>LIST OF TABLES</i>	4
<i>LIST OF APPENDICES</i>	4
<i>ACKNOWLEDGEMENTS</i>	4
<i>PROJECT CREDITS</i>	4
1.0 INTRODUCTION	5
1.1 PROJECT BACKGROUND	5
1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND	5
1.3 HISTORICAL BACKGROUND	5
1.4 ARCHAEOLOGICAL BACKGROUND	6
1.5 METHODOLOGY	6
2.0 HERITAGE IMPACT ASSESSMENT	8
2.1 HERITAGE IMPACT ASSESSMENT - OVERVIEW	8
2.2 NATIONAL POLICY	8
2.3 LOCAL POLICY	8
2.4 DIRECT AND INDIRECT IMPACTS	9
3.0 DIRECT IMPACTS	10
3.1 STRUCTURE OF ASSESSMENT	10
3.2 DOCUMENTARY HISTORY	10
3.3 CARTOGRAPHIC DEVELOPMENT	10
3.4 ARCHAEOLOGICAL BACKGROUND	12
3.4.1 PREHISTORIC 4000BC - AD43	13
3.4.2 ROMANO-BRITISH AD43 – AD409	13
3.4.3 MEDIEVAL AD410 – AD1540	13
3.4.4 POST-MEDIEVAL AND MODERN AD1540 - PRESENT	13
3.5 AERIAL PHOTOGRAPHY AND LIDAR	13
3.6 WALKOVER SURVEY	13
3.7 ARCHAEOLOGICAL POTENTIAL AND IMPACT SUMMARY	14
4.0 INDIRECT IMPACTS	16
4.1 INTRODUCTION	16
4.2 QUANTIFICATION	16
4.3 IMPACT BY CLASS OF MONUMENT OR STRUCTURE	17
4.3.1 INDUSTRIAL BUILDINGS AND INFRASTRUCTURE	17
4.3.2 CORNWALL AND WEST DEVON MINING LANDSCAPE WHS	19
4.3.3 HISTORIC LANDSCAPE	21
4.3.4 AGGREGATE IMPACT	22
4.3.5 CUMULATIVE IMPACT	22
5.0 CONCLUSION	24
6.0 BIBLIOGRAPHY & REFERENCES	25

LIST OF FIGURES

COVER PLATE: VIEW ACROSS THE SITE TOWARDS CALLINGTON; FROM THE NORTH-NORTH-EAST.

FIGURE 1: SITE LOCATION.	7
FIGURE 2: EXTRACT FROM THE 1842 CALLINGTON TITHE MAP (CRO).	11
FIGURE 3: EXTRACT FROM THE 1883 1ST ND EDITION OS 6" MAP (SURVEYED 1881-2).	11
FIGURE 4: EXTRACT FROM THE 1907 2 ND EDITION OS 6" MAP (REVISED 1905).	12

LIST OF TABLES

TABLE 1: SUMMARY OF DIRECT IMPACTS.	15
TABLE 2: SUMMARY OF INDIRECT IMPACTS.	23
TABLE 3: THE HIERARCHY OF VALUE/IMPORTANCE.	28
TABLE 4: MAGNITUDE OF IMPACT.	33
TABLE 5: SIGNIFICANCE OF EFFECTS MATRIX.	33
TABLE 6: SCALE OF IMPACT.	33
TABLE 7: IMPORTANCE OF SETTING TO INTRINSIC SIGNIFICANCE.	33
TABLE 8: THE CONCEPTUAL MODEL FOR VISUAL IMPACT ASSESSMENT.	34

LIST OF APPENDICES

APPENDIX 1: IMPACT ASSESSMENT METHODOLOGY	26
APPENDIX 2: PHOTOGRAPHIC ARCHIVE	35

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1.0 INTRODUCTION

LOCATION:	LAND SOUTH OF 140 LAUNCESTON ROAD
PARISH:	CALLINGTON
COUNTY:	CORNWALL
NGR:	SX 36103 70705
SWARCH REF.	CLR19

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by a private client (the Client) to undertake a heritage impact assessment for the land south of no.140 Launceston Road, Callington, Cornwall, in advance of the proposed construction commercial developments. This work was undertaken in accordance with best practice and ClfA guidelines.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

Callington is located on the A388 between Launceston (c.16km to the north) and Saltash (c.12km to the south-east), and to the west of the River Tamar. The site is situated on steeply sloping ground to the east of the A388 Launceston Road, c.1km north of the core of the Callington, and c.800m south of the village of Kelly Bray at a height of between approximately c.170m and 200m AOD. The soils of this area are the seasonally waterlogged fine loamy soils of the Sportsmans Association where they border the fine loamy and fine silty soils of the Denbigh 1 Association (SSEW 1983); which overlie the slate and honfelses of the Tavy Formation (BGS 2019).

1.3 HISTORICAL BACKGROUND

The parish town of Callington ('settlement at or of the bare hill') in the Hundred and Deanery of East, is a pre-Domesday settlement. The manor was held by the Ferrers family in 1267; subsequently passing by marriage through the families of Champernown, Willoughby, Pawlet, Dennis, Rolle, the Earl of Orford, to Robert George Trefusis, Esq. Kelly Bray ('grove of the hill') is a medieval settlement first recorded in 1280. Prior to the 19th century, the principal trade of the area was in agriculture and wool.

The surrounding landscape is dominated by the industrial activity of the Tamar Valley mining district, famous for its copper mines, on the lower slopes of Kit Hill. Tin has been worked in the area from the medieval period, with evidence of streamworks, shode working and open works and by the 17th century lode-back working; though it was not until the 19th century that there was mining and quarrying on an industrial scale. Between 1844 and 1870 the Tamar Valley became the richest copper producing area in England, though the mines of the Callington area were fickle, with recurring patterns of closure, re-opening and mergers. In 1843 the surrounding mines of Holmbush, Kelly Bray and Redmoor (copper, tin, and lead) united to form the Callington Mining Company, with dividends paid out by 1846, though it went out of business in 1854. There are numerous 19th century mines in the surrounding landscape, including the multiple mines of Kit Hill; Little Hurtdown; Excelsior (tin); and the Silver Valley Mine (tin and copper), East Cornwall St Vincent Mine of Hingston Down; and Wheal Gould.

The site lies within an area identified on the Historic Landscape Characterisation (HLC) as *post-medieval enclosed land*, though there are elements of medieval farmland. Medieval farmland is described as *Anciently Enclosed Land* which has been strongly demonstrated to indicate areas first settled, enclosed and farmed during later Prehistory and continuing into the early Medieval period.

1.4 ARCHAEOLOGICAL BACKGROUND

There has been limited archaeological investigation within the immediate area of the proposal site, largely associated with surveys of the surrounding mining and industrial landscape, but including archaeological geophysical survey and evaluations which have identified evidence of field boundary alteration.

The site is situated within a landscape rich with prehistoric monuments, the Cornwall and Scilly Historic Environment Record (HER) recording a number of Neolithic (MCO11009) and Bronze Age (MCO2462, MCO2979, MCO2980) barrows on Kit Hill and Hingston Down (MCO2963, MCO2964); along with findspots (MCO768, MCO828, MCO1810); with additional monuments and possible Iron Age or Romano-British enclosure settlements within the wider landscape. Most of the other known heritage assets in the vicinity are related to the post-medieval mining of the area and form part of the Tamar Valley World Heritage Site (WHS), but include medieval settlement and limited medieval industrial activity. A post-medieval fountain (MCO47579), and milestone (MCO52445) are recorded on the western boundary of the site, and a post-medieval quarry (MCO29661) is recorded within the proposal site.

1.5 METHODOLOGY

This archaeological assessment was undertaken in accordance with best practice. The desk-based assessment follows the guidance as outlined in: *Standard and Guidance for Archaeological Desk-Based Assessment* (CIfA 2014) and *Understanding Place: Historic Area Assessments in a Planning and Development Context* (English Heritage 2012).

The heritage impact assessment follows the guidance outlined in: *Conservation Principles: policies and guidance for the sustainable management of the historic environment* (English Heritage 2008), *The Setting of Heritage Assets* (Historic England 2015), *Seeing History in the View* (English Heritage 2011), *Managing Change in the Historic Environment: Setting* (Historic Scotland 2010), and with reference to *Guidelines for Landscape and Visual Impact Assessment 3rd Edition* (Landscape Institute 2013).



FIGURE 1: SITE LOCATION (THE SITE IS INDICATED).

2.0 HERITAGE IMPACT ASSESSMENT

2.1 HERITAGE IMPACT ASSESSMENT - OVERVIEW

The purpose of heritage impact assessment is twofold: Firstly, to understand – insofar as is reasonably practicable and in proportion to the importance of the asset – the significance of a historic building, complex, area, monument or archaeological site (the ‘heritage asset’). Secondly, to assess the likely effect of a proposed development on the heritage asset (direct impact) and/or its setting (indirect impact). This methodology employed in this assessment is based on the approach outlined in the relevant DoT guidance (DMRB vol.11; WEBTAG), used in conjunction with the ICOMOS (2011) guidance and the staged approach advocated in *The Setting of Heritage Assets* (GPA3 Historic England 2015). The methodology employed in this assessment can be found in Appendix 1.

2.2 NATIONAL POLICY

General policy and guidance for the conservation of the historic environment are now contained within the *National Planning Policy Framework* (Department for Communities and Local Government 2019). The relevant guidance is reproduced below:

Paragraph 189

In determining applications, local planning authorities should require the applicant to describe the significance of any heritage assets affected, including the contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should be consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which a development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Paragraph 190

Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset’s conservation and any aspect of the proposal.

A further key document is the Planning (Listed Buildings and Conservation Areas) Act 1990, in particular section 66(1), which provides *statutory protection* to the setting of Listed buildings:

In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall 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.

2.3 LOCAL POLICY

Policy 24: *Historic Environment* in *The Cornwall Local Plan: Strategic Policies 2010-2030* makes the following statement:

All development proposals should be informed by proportionate historic environment assessments and evaluations... identifying the significance of all heritage assets that would be affected by the proposals and the nature and degree of any affects and demonstrating how, in order of preference, any harm will be avoided, minimised or mitigated.

Great weight will be given to the conservation of Cornwall's heritage assets... Any harm to the significance of a designated or non-designated heritage asset must be justified... In those exceptional circumstances where harm to any heritage assets can be fully justified, and the 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 public archive.

2.4 DIRECT AND INDIRECT IMPACTS

This assessment is broken down into two main sections. Section 3.0 addresses the *direct impact* of the proposed development i.e. the physical effect the development may have on heritage assets within, or immediately adjacent to, the development site. Designated heritage assets on or close to a site are a known quantity, understood and addressed via the *design and access statement* and other planning documents. Robust assessment, however, also requires a clear understanding of the value and significance of the *archaeological* potential of a site. This is achieved via the staged process of archaeological investigation detailed in Section 3.0. Section 4.0 assesses the likely effect of the proposed development on known and quantified designated heritage assets in the local area. In this instance the impact is almost always indirect i.e. the proposed development impinges on the *setting* of the heritage asset in question, and does not have a direct physical effect.

3.0 DIRECT IMPACTS

3.1 STRUCTURE OF ASSESSMENT

For the purposes of this assessment, the *direct effect* of a development is taken to be its direct physical effect on the buried archaeological resource. In most instances the effect will be limited to the site itself. However, unlike designated heritage assets (see Section 4.0) the archaeological potential of a site, and the significance of that archaeology, must be quantified by means of a staged programme of archaeological investigation. Sections 3.2-3.5 examine the documentary, cartographic and archaeological background to the site; Section 3.6 details the results of a walkover survey; Section 3.7 summarises this information in order to determine the significance of the archaeology, the potential for harm, and outlines mitigation strategies as appropriate. Appendix 1 details the methodology employed to make this judgement.

3.2 DOCUMENTARY HISTORY

The parish town of Callington, from the Old English *calu* and *tūn* meaning ‘settlement at or of the bare hill’ (Watts 2010) in the Hundred and Deanery of East, is a pre-Domesday settlement held by the king (Williams & Martin 1992). The manor of Callington is recorded variously as *Calweton*, *Calvington*, and *Killington* and was held by the Ferrers family in 1267 when the market was first granted. Subsequently it passed by marriage through the families of Champernown, Willoughby, Pawlet, Dennis, Rolle, the Earl of Orford, and in 1791 to Robert George Trefusis, Esq. (Lysons 1814). Kelly Bray, from the Cornish *kelli* and *bre* meaning ‘grove of the hill’ (Watts 2010) is a medieval settlement first recorded in 1280. Prior to the 19th century, the principal trade of the area was in agriculture and wool.

The site is situated just outside the Tamar Valley mining district, famous for its copper mines, on the lower slopes of Kit Hill. Tin has been worked in the area from the medieval period, with evidence of streamworks, shode working and open works and by the 17th century lode-back working; though it was not until the 19th century that there was mining and quarrying on an industrial scale. Between 1844 and 1870 the Tamar Valley became the richest copper producing area in England, though the mines of the Callington area were fickle, with recurring patterns of closure, re-opening and mergers. In 1843 the surrounding mines of Holmbush, Kelly Bray and Redmoor (copper, tin, and lead) united to form the Callington Mining Company, with dividends paid out by 1846, though it went out of business in 1854 (Gillard 2002). There are numerous 19th century mines in the surrounding landscape, including the multiple mines of Kit Hill; Little Hurtdown; Excelsior (tin); and the Silver Valley Mine (tin and copper), East Cornwall St Vincent Mine of Hingston Down; and Wheal Gould.

3.3 CARTOGRAPHIC DEVELOPMENT

The earliest detailed cartographic source available to this study is the tithe map of c.1842 (Figure 2). It is clear that at this date the open moorland of Kingston Common had yet to be enclosed. This land would have been used as common grazing, and is recorded on the accompanying tithe apportionment as ‘healthy pasture’. Much of the surrounding land was under the ownership of the Right Honourable Lord Ashburton (to the east) and the Reverend Horace Rice as glebe land (to the west). Many of the surrounding fields not part of the common land show the curving and irregular boundaries of medieval field-systems, though the plots immediately to the south of the proposal site show straighter boundaries indicating more recent enclosure.

The 1st edition Ordnance Survey (OS) mapping (Figures 4 and 5) shows a dramatically remodelled landscape. The surrounding area of the moor can be seen to have been divided up and enclosed into a combination of smaller and larger plots, and settlement appears to have increased slightly

to the north. Most notably the Callington Consols (tin and copper), Lady Ashburton (copper and silver), and Redmoor (tin, copper and lead) mines are depicted, along with numerous quarries and shafts, including quarry pits which cover the majority of the proposal site. By the beginning of the 20th century, the 2nd edition OS map shows further limited boundary alteration and settlement growth, along with the extension of the mining and quarrying activity. This appears to include the continued working of the quarry within the proposal site, as well as the sinking of a new mine shaft within fields to the south.



FIGURE 2: EXTRACT FROM THE 1842 CALLINGTON TITHE MAP (CRO); THE APPROXIMATE LOCATION OF THE SITE IS INDICATED.

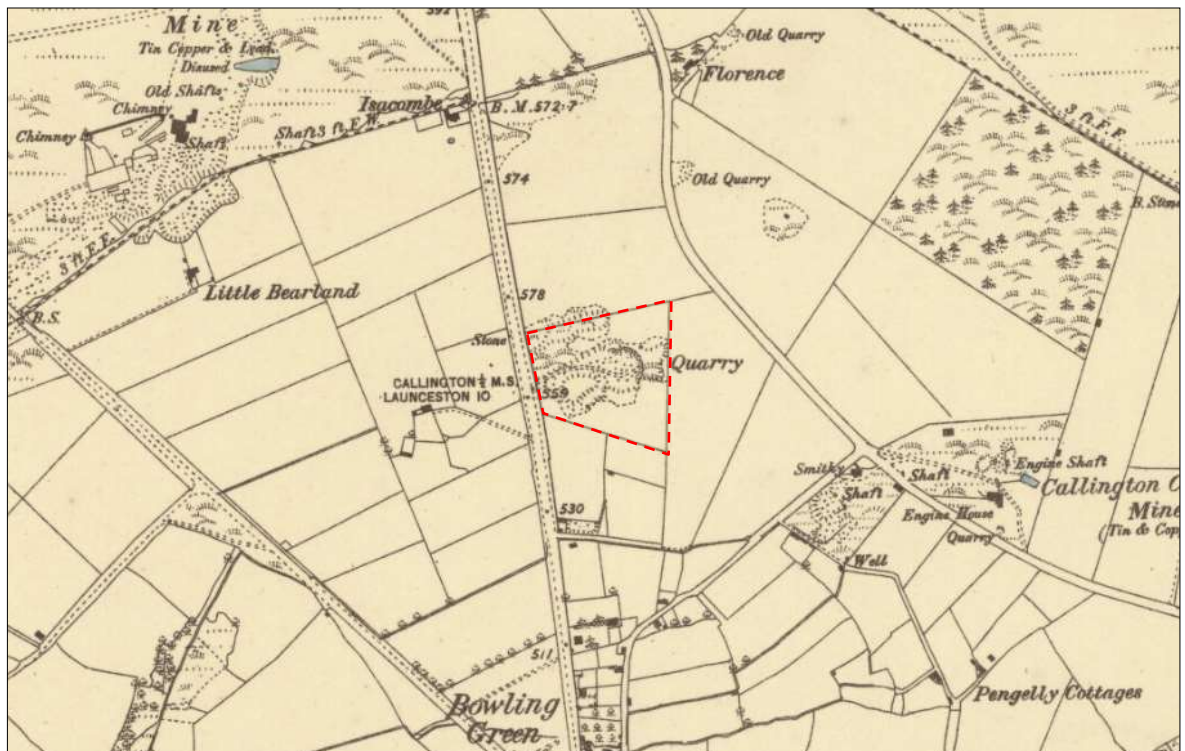


FIGURE 3: EXTRACT FROM THE 1883 1STND EDITION OS 6" MAP (SURVEYED 1881-2) (CORNWALL SHEET XXIX.NW); THE SITE IS INDICATED.



FIGURE 4: EXTRACT FROM THE 1907 2ND EDITION OS 6" MAP (REVISED 1905) (CORNWALL SHEET XXIX.NW); THE SITE IS INDICATED.

3.4 ARCHAEOLOGICAL BACKGROUND

There has been limited archaeological investigation within the immediate area of the proposal site, largely associated with surveys of the surrounding mining and industrial landscape, but including archaeological geophysical survey and evaluation at Pengelly Farm (Leonard 2010) identifying only evidence of field boundary alteration.

The site is situated within a landscape rich with prehistoric monuments, the Cornwall and Scilly Historic Environment Record (HER) recording a number of Neolithic (MCO11009) and Bronze Age (MCO2462, MCO2979, MCO2980) barrows on Kit Hill and Hingston Down (MCO2963, MCO2964); along with findspots (MCO768, MCO828, MCO1810); with additional monuments and possible Iron Age or Romano-British enclosure settlements within the wider landscape. Most of the other known heritage assets in the vicinity are related to the post-medieval mining of the area and form part of the Tamar Valley World Heritage Site (WHS), but include medieval settlement and limited medieval industrial activity. A post-medieval fountain (MCO47579), and milestone (MCO52445) are recorded on the western boundary of the site, and a post-medieval quarry (MCO29661) is recorded within the proposal site.

The historic fieldscape in this area is characterised by the Cornwall and Scilly HLC as *post-medieval enclosed land*, though there are elements of medieval farmland. Medieval farmland is described as *Anciently Enclosed Land* (AEL) and formed the agricultural heartland of Cornwall with the settlements and field systems typically having clear medieval antecedents. AEL has also been strongly demonstrated to indicate areas first settled, enclosed and farmed during later Prehistory and continuing into the early Medieval period. It is considered highly likely that buried archaeology dating to the Prehistoric and Romano-British periods generally survives within areas of AEL.

3.4.1 Prehistoric 4000BC - AD43

The evidence for Prehistoric activity in this area is relatively substantial, probably reflecting the elevated landscape. The earliest evidence dates to the Bronze Age and includes funerary monuments identified in the immediate vicinity (MCO2978), though with numerous other examples, alongside possible settlement activity, recorded scattered throughout the wider landscape.

3.4.2 Romano-British AD43 – AD409

The evidence for Romano-British activity is sparse. However, it is probable that the Iron Age settlements of the area continued into this period.

3.4.3 Medieval AD410 – AD1540

The archaeology of the medieval period is represented by cropmarks indicating possible medieval agriculture including ridge and furrow (MCO40269) and field-systems (MCO39552, MCO40263, MCO40265) or hollow ways (MCO40293, 40294); alongside early industrial activity (MCO40264); and the settlements of Callington (MCO23392) and Kelly Bray (1280, MCO150897).

3.4.4 Post-Medieval and Modern AD1540 - Present

Population and settlement expanded during the post-medieval period. However, much of the development of this area was associated with the growth of the industrial economy, largely associated with the Tamar Valley WHS, and including the creation of a saw mill at Kelly Bray (MCO29463); mines at Callington Consols (MCO11911), Kelly Bray (MCO12197), Lady Ashburton (MCO12212), Redmoor (MCO12467), Woodland (MCO47582); and a number of quarries across the landscape (MCO24364, MCO29661, MCO39546, MCO39550, MCO40260, MCO40262).

3.5 AERIAL PHOTOGRAPHY AND LIDAR

The proposal site is recorded as being a quarry since the mid-19th century, and assessment of the readily-available aerial photography and LiDAR for the site itself is not worthwhile. However, aerial photographs from the 1940s onwards are the primary source of evidence of cropmarks, largely for the medieval and post-medieval field boundaries (MCO40265) and hollow ways (MCO40293, MCO40294), and both depict elements of surrounding agricultural and mining landscape.

3.6 WALKOVER SURVEY

The site subject to the proposed development was the subject of a walkover assessment as part of this programme of works. The survey took place on 30th May 2019 in overcast and misty conditions. The following observations can be made.

The proposal site is a trapezoidally-shaped plot steeply terraced into the west facing shallow sloping lower flanks of the granite outcrop of Kit Hill at the northern limit of the town of Callington. It sits within an area of pastoral fields which are slowly being subsumed into the urban sprawl of both Callington and Kelly Bray. The surrounding block of fields is flanked by the busy A388 road (west) and quiet country lane of Florence Road (east); the fields bounded by a mixture of hedges, fences and hedgebanks, some with mature trees, often of fine herringbone form and dating to the 19th century laying out of this landscape. These fields are all pastoral, providing grazing for a mix of stock, particularly sheep, but including horses and ponies; some of the fields containing small modern stable blocks and shelters.

The site is accessed through two recently established metal gateways, both appearing to have been forced into the western roadside bank boundary from the A388, and which lead onto rough

trackways. The site appears as a 'green' overgrown plot with mature grass and shrubs having partly re-colonised the site.

The western roadside boundary is comprised predominantly of a wide earth, stone and quarry waste bank with tall mature hedgerow trees and two modern heavy-duty metal gates. Towards the northern end the bank changes to a demonstrably stone-faced historic hedgebank. The northern boundary is comprised of a historic herringbone stone hedgebank with mature tree hedgerow behind, except towards the centre of the boundary where a quarry pit extends into the adjacent field, the boundary at this point reverting to the wire and post fence which runs along the edge of the neighbouring plot at the top of the quarry cut. The stone hedgebank boundary returns and continues along the eastern boundary as well as forming the eastern end of the southern boundary. The southern boundary, however, is largely comprised of an earth bank, an opening in the bank forming an access point at its centre into the adjacent fields which have been divided into pony paddocks.

A series of tracks are present across the site, all roughly 'stoned' by quarry waste. Of these, one runs along each of the western, southern and eastern boundaries, circumventing the open quarry pits, and one runs from each of the two gates in the western boundary into the quarry pits.

Three quarry pits are present within the site, all open with exposed sheer rock sides, with some scrub ingress. A crude 'cut' has been made, linking the widest points of the larger middle with the smaller southern pit. Between these pits, where there is a surviving rock outcrop, is a large quarry waste tip. The quarry is far deeper than would be expected on such a small site and the wider landscape is totally obscured when within the pits.

As an undesignated heritage asset the quarry currently has high authenticity and integrity having been little altered. However, its intrinsic value is low, even for an undesignated asset, reflecting only one of many relatively small scale extractive sites situated in the landscape. Any development of the site would significantly alter its appearance, removing the re-wilded 'natural' aspect of its appearance. However, this could be mitigated by the design of the development to retain the existing boundaries, particularly to those to the north and east where they survive as better quality stone hedgebanks and may be visible from the WHS; additional planting of native hedgerow species may also allow the site to blend further in, particularly as it matures. The retention of the 'quarry' aspect of the site through the siting of low structures to the base of the quarry pits, surrounding them by steep rock faces would also reduce the impact of any alterations to the site in wider landscape views. The construction of buildings should also be of a general industrial character, with the inclusion of local slatestone and timber boarding to hark back to the former use of the site and emphasise and reference the site's heritage and the wider regions character.

3.7 ARCHAEOLOGICAL POTENTIAL AND IMPACT SUMMARY

The direct *effect* of any development would be the disturbance or destruction of archaeological features or deposits present within the footprint of the development; the *impact* of the development would depend on the presence and significance of archaeological deposits.

Based on the results of the desk-based assessment and walkover survey, the archaeological potential of the site would appear to be *Low*, any pre-19th century archaeological remains likely to have been destroyed when the quarry was active; and it is unlikely that further archaeological works on the site would be worthwhile.

LAND SOUTH OF NO.140 LAUNCESTON ROAD, CALLINGTON, CORNWALL

TABLE 1: SUMMARY OF DIRECT IMPACTS.

Asset	Type	Distance	Value	Magnitude of Impact	Assessment	Overall Assessment
Direct Impacts						
Unidentified archaeological features	U/D	Onsite	Unknown	Major	Low	Slight/Moderate
<i>After mitigation</i>			Negligible	Minor	Neutral/Slight	Neutral/negligible

4.0 INDIRECT IMPACTS

4.1 INTRODUCTION

For the purposes of this assessment, the *indirect effect* of a development is taken to be its effect on the wider historic environment. The principal focus of such an assessment falls upon identified designated heritage assets like Listed buildings or Scheduled Monuments. Depending on the nature of the heritage asset concerned, and the size, character and design of a development, its effect – and principally its visual effect – can impact on designated assets up to 20km away.

The methodology adopted in this document is based on that outlined in *The Setting of Heritage Assets* (GPA3 Historic England 2015), with reference to ICOMOS (2011) and DoT (DMRB, WEBTAG) guidance. The assessment of effect at this stage of a development is an essentially subjective one, but one based on the experience and professional judgement of the authors. Appendix 1 details the methodology employed.

This report follows the staged approach to proportionate decision making outlined in *The Setting of Heritage Assets* (Historic England 2015, 6). *Step one* is to identify the designated heritage assets that might be affected by the development. The first stage of that process is to determine an appropriate search radius, and this would vary according to the height, size and/or prominence of the proposed development. For instance, the search radius for a wind turbine, as determined by its height and dynamic character, would be much larger than for a single house plot or small agricultural building. The second stage in the process is to look at the heritage assets within the search radius and assign to one of three categories:

- Category #1 assets: Where proximity to the proposed development, the significance of the heritage asset concerned, or the likely magnitude of impact, demands detailed consideration.
- Category #2 assets: Assets where location and current setting would indicate that the impact of the proposed development is likely to be limited, but some uncertainty remains
- Category #3 assets: Assets where location, current setting, significance would strongly indicate the impact would be no higher than negligible and detailed consideration both unnecessary and disproportionate. These assets are still listed in the impact summary table.

For *Step two* and *Step three*, and with an emphasis on practicality and proportionality (*Setting of Heritage Assets* p15 and p18), this assessment then groups and initially discusses heritage assets by category (e.g. churches, historic settlements, funerary remains etc.) to avoid repetitious narrative; each site is then discussed individually, and the particulars of each site teased out. The initial discussion establishes the baseline sensitivity of a given category of monument or building to the potential effect, the individual entry elaborates on local circumstance and site-specific factors. The individual assessments should be read in conjunction with the overall discussion, as the impact assessment is a reflection of both.

4.2 QUANTIFICATION

The size of the proposal site, as well as the local topography, would indicate that a small search radius of approximately 250m is sufficient for this study.

There are three heritage assets in categories 1 and 2 which have been deemed to require detailed consideration. These are: the Callington Town Water Company Fountain; Milestone to the north of No.128 Launceston Road; and the Cornwall and West Devon Mining World Heritage Site (Area A10i).

4.3 IMPACT BY CLASS OF MONUMENT OR STRUCTURE

4.3.1 INDUSTRIAL BUILDINGS AND INFRASTRUCTURE

A range of industrial and extractive structures, often exhibiting elements of formal planning, rarely with a view to aesthetics

A whole range of structures relating to a whole range of industries falls under this broad category, and include ruined, standing and functioning buildings. This might include: bridges, canals, capstans, clay-drying facilities, engine houses, fish cellars, gunpowder mills, railways, warehouses and so forth. However, in most instances industrial buildings were not built with aesthetics in mind, despite the elements of formal planning that would often be present. The sensitivity of these structures to the visual intrusion of a wind turbine depends on type, age and location.

It is usually the abandoned and ruined structures, now overgrown and 'wild', that are most sensitive to intrusive new visual elements; wind turbines in the immediate vicinity could compete for attention.

What is important and why

This is a very heterogeneous group, though all buildings and associated structures retain some evidential value, which ranges with the degree of preservation. Some structures are iconic (e.g. Luxulyan viaduct) and quite often others are, due to the rapid intensification of industry in the 18th and 19th centuries, innovative in both design and application (historical/illustrative). Some may survive as working examples – in which case the associational value is maintained – but many are ruinous or converted (historical/associational). All were designed, and many conform to a particular template (e.g. engine houses) although incremental development through use-life and subsequent decrepitude may conceal this. Fortuitous development may then lead to ruinous or deserted structures or building complexes taking on the air of a romantic ruin (e.g. Kennall Vale gunpowder works), imagery quite at odds with the bustle and industry of their former function. Some of the more spectacular or well-preserved structures may become symbolic (e.g. South Crofty Mine), but communal value tends to be low, especially where public access is not possible.

Asset Name: Callington Town Water Company Fountain	
<i>Parish:</i> Callington, Cornwall	<i>Value:</i> Medium
<i>Designation:</i> Undesignated	<i>Distance to Development:</i> Immediately adjacent on boundary
<i>Description Summary: HER ENTRY: A decorative commemorative fountain with the inscription "Fountain erected by James Venning for two reservoirs built 1886-1892" is located north of Bowling Green. The fountain is two-tier and lined with C19 tile made locally at Hingston Down and the base measures approx 3m by 3m (RIS-CB field note 90).</i>	
<i>Conservation Value:</i> This has historical associative value with the water company and also James Venning, clearly a prominent citizen in his day. It has a quirky aesthetic very reminiscent of its time, with florid foliate patterns in the tiles, of a distinct art nouveau period. It has no communal or evidential value, its construction obvious and simple, although it may conceal 19 th century soil layers beneath its base, connected to early road coverings etc.	
<i>Authenticity and Integrity:</i> Recently cleaned back and repaired this is complete and appears totally unaltered. It is very authentic, if unused and underappreciated.	
<i>Setting:</i> Located on an open stretch of road between Callington and Kelly Bray. Situated on a slight rise to the east side of the road, and cut in to flank the roadside.	
<i>Contribution of Setting to Significance of Asset:</i> Likely situated here as the climb out of Callington for horses etc. would have been tiring and this is the point the slope to Kelly Bray crests and evens out. It is also the main northern approach to the town so was a feature which could not be overlooked.	
<i>Magnitude of Effect:</i> The quarry to the immediate east is to be developed into a commercial site. Currently it is slightly overgrown and derelict/empty, but still of 'abandoned industrial' character. This is in line with	

the wider World Heritage Site which is of historic mining character; general mineral and natural resource exploitation a common theme across this region. A change in use and appearance of the quarry may alter and update the character of the immediate setting. However, the fountain documents the 'tide of progress' for the town and therefore further diversification and progress, particularly the improvement of the economy etc. are themes which link the fountain to modern schemes. The fountain is in some physical peril, being situated immediately adjacent to the southern of the two main gateways into the site, and it may be prudent to move the gateway slightly downhill and angle the entrance, as is already being considered as a safety measure for the scheme. If restored and incorporated as part of the scheme the fountain presents an intriguing feature at the entrance to a smart new commercial park for the town, and then its status may rise as a pleasing town monument.

Magnitude of Impact: Medium value asset + Slight change

Overall Impact Assessment: **Negative/minor to Negligible Impact**
(dependant on the gateway being moved, or there could be a direct physical negative impact)

Asset Name: Milestone to the north of No.128 Launceston Road	
<i>Parish:</i> Callington, Cornwall	<i>Value:</i> Medium
<i>Designation:</i> GII	<i>Distance to Development:</i> Immediately adjacent on boundary
<i>Description Summary: Listing: Milestone of late C19 date. Stone, painted white with black lettering, of obelisk form, with tapering sides and pyramidal cap. It bears painted signage to the two roadside faces: "C / 1/2" and "L / 10". The milepost was erected by the side of the road established by the Callington Turnpike Trust. However, the milepost appears to post-date the end of the existence of the Trust in 1874. Together with two other, similar, stones it occurs at the junction between the Launceston Trust's road and that of the Callington Trust. It also appears to date from after the passing of the Highways and Locomotive Act of 1878. Such later stones did not have incised lettering, but painted signage. Its survival, with two similar examples as a group has historical importance.</i>	
<i>Supplemental Comments:</i> Four sided, obelisk style stone milestone. Intended to be painted but only the letter C is painted on, not incised like earlier styles. In good condition, the grass around it is obviously maintained to some extent, cut to expose the milestone to view. Largely listed as an example of type and as part of a wider group indicating historic road networks, less intrinsic individual value.	
<i>Conservation Value:</i> Historical associative value with both the Callington Turnpike and Launceston Turnpike trusts, although it may post-date both. No communal value or evidential value. Local stone, but painted not incised so less architectural or aesthetic value.	
<i>Authenticity and Integrity:</i> In its original location and still technically performing its roadside function, as authentic as it could be, as a way-marker and complete, so high in historic integrity.	
<i>Setting:</i> Located to the east of the road, on the northern approach to Callington, on the former turnpike road to Launceston.	
<i>Contribution of Setting to Significance of Asset:</i> The milestone remains in its intended location and is still performing its function. It is authentic and easily identifiable because of this. It is also a good signifier that the road is an old route, clearly preceding any modern signage.	
<i>Magnitude of Effect:</i> The quarry to the immediate east is to be developed into a commercial site. Currently it is slightly overgrown and derelict/empty, but still of 'abandoned industrial' character. This is in line with the wider World Heritage Site which is of historic mining character; general mineral and natural resource exploitation a common theme across this region. A change in use and appearance of the quarry and an intensification of activity in the area may alter and update the character of the immediate setting. It will not however interfere with the use of the road, or the milestone's relationship or visual link to the road. It will not prevent it from performing its marker function.	
<i>Magnitude of Impact:</i> Medium value asset + minor to negligible change	
<i>Overall Impact Assessment:</i> Negligible Impact	

4.3.2 CORNWALL AND WEST DEVON MINING LANDSCAPE WHS

Asset Name: Tamar Valley Mining District (Area A10i of the World Heritage Site – Cornwall and West Devon)	
Parish: East Cornwall District (with Tavistock)	
Designation: World Heritage Site; landscape of outstanding universal value	
Value: Very high	
Distance to Development: edge of WHS within 100m of development site	
Description: <i>Statement of outstanding universal value</i>	<i>Area 10: Tamar Valley Mining District with Tavistock.</i> <i>The mining district comprises both valley and upland setting for tin, copper, silver-lead and arsenic mining, ore processing and smelting. It includes the river Tamar and its associated industrial river quays, and the major town of Tavistock that was remodelled during the nineteenth century with profits derived principally from copper mining royalties. The boundary has been drawn to contain all of the principal mines in the upland area from west to east, and in the valley setting from north to the south (including the Bere silver mines in the south). The principal mining quays, villages and mineral railway network are within the boundary, and the linear route of the early nineteenth century Tavistock Canal links the two sub areas.</i>
Supplemental Comments:	The mining in this district is less visually dominant in the landscape than in other areas, due to the more intensive redevelopment and reuse of the landscape. Nonetheless it is inherent in character and form in all of the main communities. Within the uplands this area has successfully reclaimed the mining areas as public land and it is actively used as an amenity by the community. There are information boards and lots of public active engagement with the heritage assets. The mining landscape is very much a relict landscape here however and understanding of its transformative contribution to this landscape is less developed here than in other areas which did not have fairly large settlements already, or links to the coast etc. What does survive is less pristine than in other areas, more scattered, with some real high points like Morwellham Quay.
Evidential Value:	The evidential value of the standing structures which so define the WHS is limited to some extent, as they conform to a standardised type that operated in a known way and utilised local materials. However, there is capacity for investigation and assessment/recording at specific locations within the wider site to give a more detailed and phased picture of each mine's development. Some of the mines have a pre 18 th century heritage which is far more ephemeral and often obscured by later structures. The area around Kit Hill is rich in prehistoric archaeology and there is a potential 17 th century siege work and a 19 th century 'castle' folly. The inter-relatedness of this landscape and the sealing of historic deposits beneath later features add to evidential value.
Historical Value:	The refinement of mineral extraction in Cornwall and its related technological innovations influenced later commercial mining around the world. The products from Cornish mining fuelled the industrial revolution which led to the development of the modern world. The historical value of the Tamar Valley mining district, as part of the World Heritage Site is recognised as of international significance, a landscape of 'outstanding universal value'.
Aesthetic Value:	The aesthetic value of the WHS varies across the Site having three key elements: built heritage; areas of open upland heathland, and the deeply incised wooded Tamar river valley; and urban historic centres, particularly Tavistock, in the extreme east of Area 10. The 18 th and 19 th century built heritage which forms the most visually distinctive element were solidly constructed in traditional materials and the massive scale of the engine house walls and chimneys are obvious and impressive. The engine houses have often been loosely maintained under a scheme of managed dereliction and consequently retain a certain desolate grandeur. It is particularly the loss of the roofs of these buildings that allows them to exist as a frame to the natural beauty of their upland heathland setting. An intact roofscape on such large structures would present such a monolithic aspect as to dominate. The mining sites have been encouraged to re-wild with a naturalised character, allowing gorse and heather to populate the slopes in and around the assets. The majority of the mining heritage remains, therefore, now have an inappropriate and inauthentic

	<p>'romantic ruin' appearance.</p> <p>The smallholdings and farmland which surround the areas of upland on which the mines are focused has suffered more aesthetically, having been divided and developed with much having been subsumed into the urban expansion of settlements such as Kelly Bray, St Anne's Chapel, Gunnislake, Calstock and Callington, all of which have been significantly expanded in the 20th century with housing estates.</p>
<i>Communal Value:</i>	<p>The WHS has communal value for the population of Cornwall as people moved to the region to work in the mines from all over the world. The mining communities were very strong socially, which is evidenced by the number of social clubs, chapels, schools and other community buildings created in the height of the mining period. The majority of the settled population in these mining areas of Cornwall will have family members who worked in the mines; and there is a very real connection between the relict mining landscape and the population of Cornwall.</p>
<i>Authenticity:</i>	<p>The district is not authentic in character, in that it has been intensively settled in the time since the end of mining, focussing around the existing urban centres, but now expanded well past their historic limits and projecting into the WHS landscape, often in a linear pattern along roadways, providing an almost continuous pattern of characterless urban sprawl, rather than individual communities.</p> <p>The upland areas, where the concentration of mining assets is to be found in the landscape has also been intentionally re-wilded, in connection with the adoption of more of the former industrial areas for leisure and tourism activities. The landscape is no longer characterised by steaming chimneys, coal piles or tips of poisonous waste associated with mineral extraction. It now feels very different from the simple rural landscape, now a diverse rural landscape of tea rooms, farm parks, riding centres, plant nurseries etc. The differing elements of the landscape now feel very divided and separate.</p>
<i>Integrity:</i>	<p>The historical integrity of the landscape when assessed by its individual heritage assets is very high, as the engine houses, buildings and workings of the mines generally survive well.</p>
<i>Topographical Location and Landscape Context:</i>	<p>The rounded granite summit of Kit Hill dominates the western part of Area 10. The site under study lies on the lower western flanks of Kit Hill, just out of the landscape context of the WHS, but within its landscape fringe.</p>
<i>Principle Views:</i>	<p>There are vast 360° views from Kit Hill, the key element in the WHS potentially being affected. Principle views however include those to the south east, over St Anne's Chapel to Gunnislake and Drakewalls, to the Tamar valley beyond and Calstock and its viaduct. Distant views south to Saltash and the Tamar and Lynher estuaries. There are views north-east to the flanks of Dartmoor and west over Liskeard towards Bodmin Moor.</p>
<i>Landscape Presence:</i>	<p>Kit Hill, topped by the striking vertical profile of the chimney shaft is visually and topographically dominant within the western part of the A10 landscape.</p>
<i>Immediate Setting:</i>	<p>The WHS occupies the Tamar river valley, stretching east to Tavistock and south-east down to Calstock, west to Callington and Kit Hill.</p>
<i>Wider Setting:</i>	<p>The WHS is flanked to the north-east and east by Dartmoor and its southerly fringes; to the south by the intersecting estuaries of the Tamar and Lynher at Saltash and Plymouth; to the west by the eastern flanks of Bodmin. The link between the upland inland areas and easily accessible coastal districts were facilitated further by the East Cornwall mineral railway, which connected these flanking districts with that inland.</p>
<i>Enhancing Elements:</i>	<p>Many of the engine houses are maintained under park-like conditions by the council which has developed open access land sites, or by the National Trust and other groups. Access to the sites is encouraged with car parks, walking routes and information centres, boards and a proactive heritage tourism strategy. This gets the public to interact with the landscape and the heritage assets it contains.</p>
<i>Detracting Elements:</i>	<p>The re-wilding of mining sites, whilst attractive and successful as far as tourism goes, has led to a misrepresentation of the realities of the assets and their functions. Information boards and locally focused education can counter this and allow people to appreciate the dramatic changes in their landscape, which would have been a brutalist industrial-scape of</p>

	spoil tips, smoking chimneys and scarred with road tracks and railways.
<i>Direct Effects:</i>	None – the site lies just outside the WHS Area 10.
<i>Indirect Effects:</i>	There is a likelihood of a cumulative impact from further development of a site, which whilst not within the WHS formed part of an industrial landscape in use at the same time as many of the WHS assets. This dilutes the wider setting in which we experience the WHS. There is already a disconnect happening between the re-wilded uplands and mining sites and the more modernised farming and urban landscapes. If development is allowed of the green belt land which flanks the uplands and the urban centres become linked by urban sprawl the different phases of development of this landscape and the special character wider afield will be lost, leaving the valued sites in a vacuum or bubble of 'relevance'. By allowing too much alteration to the smallholding pattern within the landscape, in which the quarry stands, one removes the presence of the people, the physical population who re-settled these remote locations and powered the industry which has left such obvious and dominant markers on the landscape. By altering quarries, canals, roadways and other wider infrastructure which provide the WHS its setting are being further dismantled, in this case the links between different WHS areas across the landscape.
<i>Contribution of Setting to the Significance of the Asset:</i>	The WHS does not sit in isolation of its context, either physically or culturally. It is a wholly man-made cultural layer imposed on the natural topography of the region, for which it was exploiting its natural resources. The upland setting and rocky granite outcrops are the very reason for the WHS as a mining landscape, containing the 'lodes' sought by the mine companies. The surrounding landscape, the field patterns and communities provide the human element of this landscape, those that moved and transformed these often very rural and undeveloped places in the 18 th and 19 th centuries.
<i>Magnitude of Effect:</i>	The commercial development of the quarry, for a mixed business or retail function will transform a currently unused part of the landscape but will naturally change the character of the site and its appearance. It will insert built form into a space which is currently slightly overgrown and still clearly identifiable as an industrial-adjacent feature. This can be minimised by clever, low-lying design however and the retention of bunds, banks and hedges.
<i>Impact</i>	Very High Value Asset + Slight Change (to wider setting)
<i>Overall Impact Assessment:</i>	Negligible Impact.

4.3.3 HISTORIC LANDSCAPE

General Landscape Character

The landscape of the British Isles is highly variable, both in terms of topography and historical biology. Natural England has divided the British Isles into numerous 'character areas' based on topography, biodiversity, geodiversity and cultural and economic activity. The County Councils and AONBs have undertaken similar exercises, as well as Historic Landscape Characterisation.

Some character areas are better able to withstand the visual impact of development than others. Rolling countryside with wooded valleys and restricted views can withstand a larger number of sites than an open and largely flat landscape overlooked by higher ground. The English landscape is already populated by a large and diverse number of intrusive modern elements, e.g. electricity pylons, factories, modern housing estates, quarries, and turbines, but the question of cumulative impact must be considered. The aesthetics of individual developments is open to question, and site specific, but as intrusive new visual elements within the landscape, it can only be **negative**.

The proposed site would be constructed within the *East Cornwall and Tamar Moorland Fringe Landscape Character Area (LCA)*:

- This LCA comprises the domesticated and enclosed landscape of the western slopes of the middle Tamar Valley. The plateau is dissected in its northern area by narrow river valleys whose waters rise on the granite of Bodmin Moor. These gradually deepen as they pass over the softer rock on the edge of the moor. In general this is a moorland fringe area with small fragmented areas of wetland and rough ground in the small stream valleys. Further south and to the east the margins of the plateau are dissected by short river valleys, some steep-sided, which are tributaries to the Tamar or Lynher. The plateau can be bleak and exposed but mostly retains its shrubby hedge landscape except on higher former rough ground areas such as Viverdon where the hedges are banks with grass and gorse. The sheltered valley sides allow more luxurious hedge growth and the landscape appears to be more wooded though true woodland is restricted to the steepest valley sides and the wetter valley bottoms. The plateau has always provided a transport network and settlement sites and the area includes several busy roads and several major settlements. Saltash with its proximity to Plymouth provides a more urban contrast to the more tranquil northern parts of the LCA.
- The development will replace an area of industrial quarrying activity which forms part of the human interaction with the landscape rather than the natural landscape itself. It sits within a deep quarry pit that will help screen the development from the surrounding landscape and is situated on the edge of existing settlement. On that basis, the impact is assessed as **neutral**.

4.3.4 AGGREGATE IMPACT

The aggregate impact of a proposed development is an assessment of the overall effect of a single development on multiple heritage assets. This differs from cumulative impact (below), which is an assessment of multiple developments on a single heritage asset. Aggregate impact is particularly difficult to quantify, as the threshold of acceptability will vary according to the type, quality, number and location of heritage assets, and the individual impact assessments themselves.

Based on the restricted number of assets where any appreciable effect is likely, the aggregate impact of this development is **neutral**.

4.3.5 CUMULATIVE IMPACT

Cumulative impacts affecting the setting of a heritage asset can derive from the combination of different environmental impacts (such as visual intrusion, noise, dust and vibration) arising from a single development or from the overall effect of a series of discrete developments. In the latter case, the cumulative visual impact may be the result of different developments within a single view, the effect of developments seen when looking in different directions from a single viewpoint, of the sequential viewing of several developments when moving through the setting of one or more heritage assets.

The Setting of Heritage Assets 2011a, 25

*The key for all cumulative impact assessments is to focus on the **likely significant** effects and in particular those likely to influence decision-making.*

GLVIA 2013, 123

An assessment of cumulative impact is, however, very difficult to gauge, as it must take into account existing, consented and proposed developments. The threshold of acceptability has not, however, been established, and landscape capacity would inevitably vary according to landscape character. The proposed development would be on the edge of the existing town, which has already seen both domestic and commercial developments. Whilst it will replace a 'brown-field' site of industrial activity which has been allowed to become overgrown and 'derelict', it will continue the industrial function of the site. With that in mind, an assessment of **neutral** is appropriate.

TABLE 2: SUMMARY OF INDIRECT IMPACTS.

Asset	Type	Distance	Value	Magnitude of Impact	Assessment	Overall Assessment
Tamar Valley Mining District World Heritage Site	WHS	<100m	Very High	Slight	Negligible	Slight
Milestone to the north of no.128 Launceston Road	GII	Adjacent	Medium	Slight	Negligible	Neutral/slight
Callington Town Water Company Fountain	U/D	Adjacent	Medium	Slight	Negative/minor to negligible	Neutral/slight
Historic Landscape	-	-	High	No change to negligible	Neutral/Slight	Neutral to Negligible
Aggregate Impact	-	-	-	No change	Neutral/Slight	Neutral
Cumulative Impact	-	-	-	No change	Neutral	Neutral

5.0 CONCLUSION

The site is located on the A388 between Callington and Kelly Bray, just outside the Tamar Valley mining district, part of the Cornish Mining World Heritage Site. The surrounding landscape contains evidence of prehistoric, medieval, and post-medieval settlement and farming activity, though it is the post-medieval industrial activity that dominates the immediate environs.

Desk-based assessment and walkover survey identified that the proposal site has been subject to quarrying activity during the 19th and 20th centuries, and whilst there is the potential for the surviving archaeological remains associated with the historic use of the landscape in the surrounding fields, the historic industrial use of the site is likely to have destroyed any such remains within the proposal site. It is deemed unlikely that any further archaeological work on the site would be worthwhile.

In terms of indirect impacts, most of the designated heritage assets in the wider area are located at such a distance to minimise the impact of the proposed development, or else the contribution of setting to overall significance is less important than other factors. Whilst the immediate environs of the closest of these assets would be altered by any proposed development through the removal of what is currently open space and its replacement with a built environment, the intrinsic functional change of the proposed development is in-keeping with the site's current (industrial) use. Despite this, the siting of any structures within the base of the quarry pits would insulate the landscape context effects on these monuments through a combination of local blocking from the high sides of the quarry pits, the existing bank boundaries and trees. The only sites where there is the potential for an appreciable impact are: the Tamar Valley Mining District World Heritage Site (**slight**), the milestone north of no.128 Launceston Road (**neutral/slight**), and the Callington Town Water Company Fountain (**neutral/slight**). Similarly, the impacts on the Historic Landscape (**neutral to negligible**), the Aggregate Impact and the Cumulative Impact are likely to be **neutral**.

With this in mind, the overall impact of the proposed development can be assessed as **negligible** to **neutral/minor**. The impact of the development on any buried archaeological resource may be **permanent** and **irreversible**, and although the significance of any buried archaeological deposits remains unknown at present, these are likely to be minimal due to the historic quarrying on the site.

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APPENDIX 1: IMPACT ASSESSMENT METHODOLOGY

Heritage Impact Assessment - Overview

The purpose of heritage impact assessment is twofold: Firstly, to understand – insofar as is reasonable practicable and in proportion to the importance of the asset – the significance of a historic building, complex, area or archaeological monument (the ‘heritage asset’). Secondly, to assess the likely effect of a proposed development on the heritage asset (direct impact) and its setting (indirect impact). This methodology employed in this assessment is based on the staged approach advocated in *The Setting of Heritage Assets* (GPA3 Historic England 2015), used in conjunction with the ICOMOS (2011) and DoT (DMRB vol.11; WEBTAG) guidance. This Appendix contains details of the methodology used in this report.

National Policy

General policy and guidance for the conservation of the historic environment are now contained within the *National Planning Policy Framework* (Department for Communities and Local Government 2018). The relevant guidance is reproduced below:

Paragraph 189

In determining applications, local planning authorities should require the applicant to describe the significance of any heritage assets affected, including the contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should be consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which a development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Paragraph 190

Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset’s conservation and any aspect of the proposal.

A further key document is the Planning (Listed Buildings and Conservation Areas) Act 1990, in particular section 66(1), which provides *statutory protection* to the setting of Listed buildings:

In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall 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.

Cultural Value – Designated Heritage Assets

The majority of the most important (‘nationally important’) heritage assets are protected through *designation*, with varying levels of statutory protection. These assets fall into one of six categories, although designations often overlap, so a Listed early medieval cross may also be Scheduled, lie within the curtilage of Listed church, inside a Conservation Area, and on the edge of a Registered Park and Garden that falls within a world Heritage Site.

Listed Buildings

A Listed building is an occupied dwelling or standing structure which is of special architectural or historical interest. These structures are found on the *Statutory List of Buildings of Special Architectural or Historic Interest*. The status of Listed buildings is applied to 300,000–400,000 buildings across the United Kingdom. Recognition of the need to protect historic buildings began after the Second World War, where significant numbers of buildings had been damaged in the county towns and capitals of the United Kingdom. Buildings that were considered to be of ‘architectural merit’ were included. The Inspectorate of Ancient Monuments supervised the collation of the list, drawn up by members of two societies: The Royal Institute of British Architects and the Society for the Protection of Ancient Buildings. Initially the lists were only used to assess which buildings should receive government grants to be repaired and conserved if damaged by bombing. The *Town and Country Planning Act 1947* formalised the process within England and Wales, Scotland and Ireland following different procedures. Under the 1979 *Ancient Monuments and Archaeological Areas Act* a structure cannot be considered a Scheduled Monument if it is occupied as a dwelling, making a clear distinction in the treatment of the two forms of heritage asset. Any alterations or works intended to a Listed Building must first

acquire Listed Building Consent, as well as planning permission. Further phases of 'listing' were rolled out in the 1960s, 1980s and 2000s; English Heritage advise on the listing process and administer the procedure, in England, as with the Scheduled Monuments.

Some exemption is given to buildings used for worship where institutions or religious organisations (such as the Church of England) have their own permissions and regulatory procedures. Some structures, such as bridges, monuments, military structures and some ancient structures may also be Scheduled as well as Listed. War memorials, milestones and other structures are included in the list, and more modern structures are increasingly being included for their architectural or social value.

Buildings are split into various levels of significance: Grade I (2.5% of the total) representing buildings of exceptional (international) interest; Grade II* (5.5% of the total) representing buildings of particular (national) importance; Grade II (92%) buildings are of merit and are by far the most widespread. Inevitably, accuracy of the Listing for individual structures varies, particularly for Grade II structures; for instance, it is not always clear why some 19th century farmhouses are Listed while others are not, and differences may only reflect local government boundaries, policies and individuals.

Other buildings that fall within the curtilage of a Listed building are afforded some protection as they form part of the essential setting of the designated structure, e.g. a farmyard of barns, complexes of historic industrial buildings, service buildings to stately homes etc. These can be described as having *group value*.

Conservation Areas

Local authorities are obliged to identify and delineate areas of special architectural or historic interest as Conservation Areas, which introduces additional controls and protection over change within those places. Usually, but not exclusively, they relate to historic settlements, and there are c.7000 Conservation Areas in England.

Scheduled Monuments

In the United Kingdom, a Scheduled Monument is considered an historic building, structure (ruin) or archaeological site of '**national importance**'. Various pieces of legislation, under planning, conservation, etc., are used for legally protecting heritage assets given this title from damage and destruction; such legislation is grouped together under the term 'designation', that is, having statutory protection under the *Ancient Monuments and Archaeological Areas Act 1979*. A heritage asset is a part of the historic environment that is valued because of its historic, archaeological, architectural or artistic interest; those of national importance have extra legal protection through designation. Important sites have been recognised as requiring protection since the late 19th century, when the first 'schedule' or list of monuments was compiled in 1882. The conservation and preservation of these monuments was given statutory priority over other land uses under this first schedule. County Lists of the monuments are kept and updated by the Department for Culture, Media and Sport. In the later 20th century sites are identified by English Heritage (one of the Government's advisory bodies) of being of national importance and included in the schedule. Under the current statutory protection any works required on or to a designated monument can only be undertaken with a successful application for Scheduled Monument Consent. There are 19,000-20,000 Scheduled Monuments in England.

Registered Parks and Gardens

Culturally and historically important 'man-made' or 'designed' landscapes, such as parks and gardens are currently "listed" on a non-statutory basis, included on the 'Register of Historic Parks and Gardens of special historic interest in England' which was established in 1983 and is, like Listed Buildings and Scheduled Monuments, administered by Historic England. Sites included on this register are of **national importance** and there are currently 1,600 sites on the list, many associated with stately homes of Grade II* or Grade I status. Emphasis is laid on 'designed' landscapes, not the value of botanical planting. Sites can include town squares and private gardens, city parks, cemeteries and gardens around institutions such as hospitals and government buildings. Planned elements and changing fashions in landscaping and forms are a main focus of the assessment.

Registered Battlefields

Battles are dramatic and often pivotal events in the history of any people or nation. Since 1995 Historic England maintains a register of 46 battlefields in order to afford them a measure of protection through the planning system. The key requirements for registration are battles of national significance, a securely identified location, and its topographical integrity – the ability to 'read' the battle on the ground.

World Heritage Sites

Arising from the UNESCO World Heritage Convention in 1972, Article 1 of the Operational Guidelines (2015, no.49) states: ‘Outstanding Universal Value means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity’. These sites are recognised at an international level for their intrinsic importance to the story of humanity, and should be accorded the highest level of protection within the planning system.

Value and Importance

While every heritage asset, designated or otherwise, has some intrinsic merit, the act of designation creates a hierarchy of importance that is reflected by the weight afforded to their preservation and enhancement within the planning system. The system is far from perfect, impaired by an imperfect understanding of individual heritage assets, but the value system that has evolved does provide a useful guide to the *relative* importance of heritage assets. Provision is also made for heritage assets where value is not recognised through designation (e.g. undesignated ‘monuments of Schedulable quality and importance’ should be regarded as being of *high* value); equally, there are designated monuments and structures of *low* relative merit.

TABLE 3: THE HIERARCHY OF VALUE/IMPORTANCE (BASED ON THE DMRB VOL.11 TABLES 5.1, 6.1 & 7.1).

Hierarchy of Value/Importance	
Very High	Structures inscribed as of universal importance as World Heritage Sites; Other buildings of recognised international importance; World Heritage Sites (including nominated sites) with archaeological remains; Archaeological assets of acknowledged international importance; Archaeological assets that can contribute significantly to international research objectives; World Heritage Sites inscribed for their historic landscape qualities; Historic landscapes of international value, whether designated or not; Extremely well preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s).
High	Scheduled Monuments with standing remains; Grade I and Grade II* (Scotland: Category A) Listed Buildings; Other Listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the Listing grade; Conservation Areas containing very important buildings; Undesignated structures of clear national importance; Undesignated assets of Schedulable quality and importance; Assets that can contribute significantly to national research objectives. Designated historic landscapes of outstanding interest; Undesignated landscapes of outstanding interest; Undesignated landscapes of high quality and importance, demonstrable national value; Well-preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	Grade II (Scotland: Category B) Listed Buildings; Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations; Conservation Areas containing buildings that contribute significantly to its historic character; Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures); Designated or undesignated archaeological assets that contribute to regional research objectives; Designated special historic landscapes; Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value; Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s).
Low	Locally Listed buildings (Scotland Category C(S) Listed Buildings); Historic (unlisted) buildings of modest quality in their fabric or historical association; Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures); Designated and undesignated archaeological assets of local importance; Archaeological assets compromised by poor preservation and/or poor survival of contextual associations; Archaeological assets of limited value, but with potential to contribute to local research objectives; Robust undesignated historic landscapes; Historic landscapes with importance to local interest groups; Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.
Negligible	Buildings of no architectural or historical note; buildings of an intrusive character; Assets with very little or no surviving archaeological interest; Landscapes with little or no significant historical interest.
Unknown	Buildings with some hidden (i.e. inaccessible) potential for historic significance; The importance of the archaeological resource has not been ascertained.

Concepts – Conservation Principles

In making an assessment, this document adopts the conservation values (*evidential, historical, aesthetic and communal*) laid out in *Conservation Principles* (English Heritage 2008), and the concepts of *authenticity* and *integrity*

as laid out in the guidance on assessing World Heritage Sites (ICOMOS 2011). This is in order to determine the relative importance of *setting* to the significance of a given heritage asset.

Evidential Value

Evidential value (or research potential) is derived from the potential of a structure or site to provide physical evidence about past human activity, and may not be readily recognised or even visible. This is the primary form of data for periods without adequate written documentation. This is the least equivocal value: evidential value is absolute; all other ascribed values (see below) are subjective. However,

Historical Value

Historical value (narrative) is derived from the ways in which past people, events and aspects of life can be connected via a place to the present; it can be *illustrative* or *associative*.

Illustrative value is the visible expression of evidential value; it has the power to aid interpretation of the past through making connections with, and providing insights into, past communities and their activities through a shared experience of place. Illustrative value tends to be greater if a place features the first or only surviving example of a particular innovation of design or technology.

Associative value arises from a connection to a notable person, family, event or historical movement. It can intensify understanding by linking the historical past to the physical present, always assuming the place bears any resemblance to its appearance at the time. Associational value can also be derived from known or suspected links with other monuments (e.g. barrow cemeteries, church towers) or cultural affiliations (e.g. Methodism).

Buildings and landscapes can also be associated with literature, art, music or film, and this association can inform and guide responses to those places.

Historical value depends on sound identification and the direct experience of physical remains or landscapes. Authenticity can be strengthened by change, being a living building or landscape, and historical values are harmed only where adaptation obliterates or conceals them. The appropriate use of a place – e.g. a working mill, or a church for worship – illustrates the relationship between design and function and may make a major contribution to historical value. Conversely, cessation of that activity – e.g. conversion of farm buildings to holiday homes – may essentially destroy it.

Aesthetic Value

Aesthetic value (emotion) is derived from the way in which people draw sensory and intellectual stimulation from a place or landscape. Value can be the result of *conscious design*, or the *fortuitous outcome* of landscape evolution; many places combine both aspects, often enhanced by the passage of time.

Design value relates primarily to the aesthetic qualities generated by the conscious design of a building, structure or landscape; it incorporates composition, materials, philosophy and the role of patronage. It may have associational value, if undertaken by a known architect or landscape gardener, and its importance is enhanced if it is seen as innovative, influential or a good surviving example. Landscape parks, country houses and model farms all have design value. The landscape is not static, and a designed feature can develop and mature, resulting in the ‘patina of age’.

Some aesthetic value developed *fortuitously* over time as the result of a succession of responses within a particular cultural framework e.g. the seemingly organic form of an urban or rural landscape or the relationship of vernacular buildings and their materials to the landscape. Aesthetic values are where a proposed development usually has their most pronounced impact: the indirect effects of most developments are predominantly visual or aural, and can extend many kilometres from the site itself. In many instances the impact of a development is incongruous, but that is itself an aesthetic response, conditioned by prevailing cultural attitudes to what the historic landscape should look like.

Communal Value

Communal value (togetherness) is derived from the meaning a place holds for people, and may be closely bound up with historical/associative and aesthetic values; it can be *commemorative*, *symbolic*, *social* or *spiritual*.

Commemorative and symbolic value reflects the meanings of a place to those who draw part of their identity from it, or who have emotional links to it e.g. war memorials. Some buildings or places (e.g. the Palace of Westminster) can symbolise wider values. Other places (e.g. Porton Down Chemical Testing Facility) have negative or uncomfortable

associations that nonetheless have meaning and significance to some and should not be forgotten. *Social value* need not have any relationship to surviving fabric, as it is the continuity of function that is important. *Spiritual value* is attached to places and can arise from the beliefs of a particular religion or past or contemporary perceptions of the spirit of place. Spiritual value can be ascribed to places sanctified by hundreds of years of veneration or worship, or wild places with few signs of modern life. Value is dependent on the perceived survival of historic fabric or character, and can be very sensitive to change. The key aspect of communal value is that it brings specific groups of people together in a meaningful way.

Authenticity

Authenticity, as defined by UNESCO (2015, no.80), is the ability of a property to convey the attributes of the outstanding universal value of the property. 'The ability to understand the value attributed to the heritage depends on the degree to which information sources about this value may be understood as credible or truthful'. Outside of a World Heritage Site, authenticity may usefully be employed to convey the sense a place or structure is a truthful representation of the thing it purports to portray. Converted farm buildings, for instance, survive in good condition, but are drained of the authenticity of a working farm environment.

Integrity

Integrity, as defined by UNESCO (2015, no.88), is the measure of wholeness or intactness of the cultural heritage and its attributes. Outside of a World Heritage Site, integrity can be taken to represent the survival and condition of a structure, monument or landscape. The intrinsic value of those examples that survive in good condition is undoubtedly greater than those where survival is partial, and condition poor.

Summary

As indicated, individual developments have a minimal or tangential effect on most of the heritage values outlined above, largely because almost all effects are indirect. The principle values in contention are aesthetic/designed and, to a lesser degree aesthetic/fortuitous. There are also clear implications for other value elements (particularly historical and associational, communal and spiritual), where views or sensory experience is important. As ever, however, the key element here is not the intrinsic value of the heritage asset, nor the impact on setting, but the relative contribution of setting to the value of the asset.

Setting – The Setting of Heritage Assets

The principle guidance on this topic is contained within two publications: *The Setting of Heritage Assets* (Historic England 2015) and *Seeing History in the View* (English Heritage 2011). While interlinked and complementary, it is useful to consider heritage assets in terms of their *setting* i.e. their immediate landscape context and the environment within which they are seen and experienced, and their *views* i.e. designed or fortuitous vistas experienced by the visitor when at the heritage asset itself, or those that include the heritage asset. This corresponds to the experience of its wider landscape setting.

Where the impact of a proposed development is largely indirect, *setting* is the primary consideration of any HIA. It is a somewhat nebulous and subjective assessment of what does, should, could or did constitute the lived experience of a monument or structure. The following extracts are from the Historic England publication *The Setting of Heritage Assets* (2015, 2 & 4):

The NPPF makes it clear that the setting of a heritage asset is the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve.

Setting is not a heritage asset, nor a heritage designation. Its importance lies in what it contributes to the significance of the heritage asset. This depends on a wide range of physical elements within, as well as perceptual and associational attributes, pertaining to the heritage asset's surroundings.

While setting can be mapped in the context of an individual application or proposal, it does not have a fixed boundary and cannot be definitively and permanently described for all time as a spatially bounded area or as lying within a set distance of a heritage asset because what comprises a heritage asset's setting may change as the asset and its surroundings evolve or as the asset becomes better understood or due to the varying impacts of different proposals.

The HIA below sets out to determine the magnitude of the effect and the sensitivity of the heritage asset to that effect. The fundamental issue is that proximity and visual and/or aural relationships may affect the experience of a

heritage asset, but if setting is tangential to the significance of that monument or structure, then the impact assessment will reflect this. This is explored in more detail below.

Landscape Context

The determination of *landscape context* is an important part of the assessment process. This is the physical space within which any given heritage asset is perceived and experienced. The experience of this physical space is related to the scale of the landform, and modified by cultural and biological factors like field boundaries, settlements, trees and woodland. Together, these determine the character and extent of the setting.

Landscape context is based on topography, and can vary in scale from the very small – e.g. a narrow valley where views and vistas are restricted – to the very large – e.g. wide valleys or extensive upland moors with 360° views. Where very large landforms are concerned, a distinction can be drawn between the immediate context of an asset (this can be limited to a few hundred metres or less, where cultural and biological factors impede visibility and/or experience), and the wider context (i.e. the wider landscape within which the asset sits).

When new developments are introduced into a landscape, proximity alone is not a guide to magnitude of effect. Dependant on the nature and sensitivity of the heritage asset, the magnitude of effect is potentially much greater where the proposed development is to be located within the landscape context of a given heritage asset. Likewise, where the proposed development would be located outside the landscape context of a given heritage asset, the magnitude of effect would usually be lower. Each case is judged on its individual merits, and in some instances the significance of an asset is actually greater outside of its immediate landscape context, for example, where church towers function as landmarks in the wider landscape.

Views

Historic and significant views are the associated and complementary element to setting, but can be considered separately as developments may appear in a designed view without necessarily falling within the setting of a heritage asset *per se*. As such, significant views fall within the aesthetic value of a heritage asset, and may be *designed* (i.e. deliberately conceived and arranged, such as within parkland or an urban environment) or *fortuitous* (i.e. the graduated development of a landscape ‘naturally’ brings forth something considered aesthetically pleasing, or at least impressive, as with particular rural landscapes or seascapes), or a combination of both (i.e. the *patina of age*, see below). The following extract is from the English Heritage publication *Seeing History in the View* (2011, 3):

Views play an important part in shaping our appreciation and understanding of England’s historic environment, whether in towns or cities or in the countryside. Some of those views were deliberately designed to be seen as a unity. Much more commonly, a significant view is a historical composite, the cumulative result of a long process of development.

The Setting of Heritage Assets (2015, 3) lists a number of instances where views contribute to the particular significance of a heritage asset:

- Views where relationships between the asset and other historic assets or places or natural features are particularly relevant;
- Views with historical associations, including viewing points and the topography of battlefields;
- Views where the composition within the view was a fundamental aspect of the design or function of the heritage asset;
- Views between heritage assets and natural or topographic features, or phenomena such as solar and lunar events;
- Views between heritage assets which were intended to be seen from one another for aesthetic, functional, ceremonial or religious reasons, such as military or defensive sites, telegraphs or beacons, Prehistoric funerary and ceremonial sites.

On a landscape scale, views, taken in the broadest sense, are possible from anywhere to anything, and each may be accorded an aesthetic value according to subjective taste. Given that terrain, the biological and built environment, and public access restrict our theoretical ability to see anything from anywhere, in this assessment the term *principal view* is employed to denote both the deliberate views created within designed landscapes, and those fortuitous views that may be considered of aesthetic value and worth preserving. It should be noted, however, that there are distance thresholds beyond which perception and recognition fail, and this is directly related to the scale, height, massing and nature of the heritage asset in question. For instance, beyond 2km the Grade II cottage comprises a single indistinct component within the wider historic landscape, whereas at 5km or even 10km a large stately home or castle may still

be recognisable. By extension, where assets cannot be seen or recognised i.e. entirely concealed within woodland, or too distant to be distinguished, then visual harm to setting is moot. To reflect this emphasis on recognition, the term *landmark asset* is employed to denote those sites where the structure (e.g. church tower), remains (e.g. earthwork ramparts) or – in some instances – the physical character of the immediate landscape (e.g. a distinctive landform like a tall domed hill) make them visible on a landscape scale. In some cases, these landmark assets may exert landscape *primacy*, where they are the tallest or most obvious man-made structure within line-of-sight. However, this is not always the case, typically where there are numerous similar monuments (multiple engine houses in mining areas, for instance) or where modern developments have overtaken the heritage asset in height and/or massing.

Yet visibility alone is not a clear guide to visual impact. People perceive size, shape and distance using many cues, so context is critically important. For instance, research on electricity pylons (Hull & Bishop 1988) has indicated scenic impact is influenced by landscape complexity: the visual impact of pylons is less pronounced within complex scenes, especially at longer distances, presumably because they are less of a focal point and the attention of the observer is diverted. There are many qualifiers that serve to increase or decrease the visual impact of a proposed development (see Table 8), some of which are seasonal or weather-related.

Thus the principal consideration of assessment of indirect effects cannot be visual impact *per se*. It is an assessment of the likely magnitude of effect, the importance of setting to the significance of the heritage asset, and the sensitivity of that setting to the visual or aural intrusion of the proposed development. The schema used to guide assessments is shown in Table 8 (below).

Type and Scale of Impact

The effect of a proposed development on a heritage asset can be direct (i.e. the designated structure itself is being modified or demolished, the archaeological monument will be built over), or indirect (e.g. a housing estate built in the fields next to a Listed farmhouse, and wind turbine erected near a hillfort etc.); in the latter instance the principal effect is on the setting of the heritage asset. A distinction can be made between construction and operational phase effects. Individual developments can affect multiple heritage assets (aggregate impact), and contribute to overall change within the historic environment (cumulative impact).

Construction phase: construction works have direct, physical effects on the buried archaeology of a site, and a pronounced but indirect effect on neighbouring properties. Direct effects may extend beyond the nominal footprint of a site e.g. where related works or site compounds are located off-site. Indirect effects are both visual and aural, and may also affect air quality, water flow and traffic in the local area.

Operational phase: the operational phase of a development is either temporary (e.g. wind turbine or mobile phone mast) or effectively permanent (housing development or road scheme). The effects at this stage are largely indirect, and can be partly mitigated over time through provision of screening. Large development would have an effect on historic landscape character, as they transform areas from one character type (e.g. agricultural farmland) into another (e.g. suburban).

Cumulative Impact: a single development will have a physical and a visual impact, but a second and a third site in the same area will have a synergistic and cumulative impact above and beyond that of a single site. The cumulative impact of a proposed development is particularly difficult to estimate, given the assessment must take into consideration operational, consented and proposals in planning.

Aggregate Impact: a single development will usually affect multiple individual heritage assets. In this assessment, the term aggregate impact is used to distinguish this from cumulative impact. In essence, this is the impact on the designated parts of the historic environment as a whole.

Scale of Impact

The effect of development and associated infrastructure on the historic environment can include positive as well as negative outcomes. However, all development changes the character of a local environment, and alters the character of a building, or the setting within which it is experienced. change is invariably viewed as negative, particularly within respect to larger developments; thus while there can be beneficial outcomes (e.g. positive/moderate), there is a presumption here that, as large and inescapably modern intrusive visual actors in the historic landscape, the impact of a development will almost always be **neutral** (i.e. no impact) or **negative** i.e. it will have a **detrimental impact** on the setting of ancient monuments and protected historic buildings.

This assessment incorporates the systematic approach outlined in the ICOMOS and DoT guidance (see Tables 4-6), used to complement and support the more narrative but subjective approach advocated by Historic England (see Table 7). This provides a useful balance between rigid logic and nebulous subjectivity (e.g. the significance of effect on a Grade II Listed building can never be greater than moderate/large; an impact of negative/substantial is almost never achieved). This is in adherence with GPA3 (2015, 7).

TABLE 4: MAGNITUDE OF IMPACT (BASED ON DMRB VOL.11 TABLES 5.3, 6.3 AND 7.3).

Factors in the Assessment of Magnitude of Impact – Buildings and Archaeology	
Major	Change to key historic building elements, such that the resource is totally altered; Change to most or all key archaeological materials, so that the resource is totally altered; Comprehensive changes to the setting.
Moderate	Change to many key historic building elements, the resource is significantly modified; Changes to many key archaeological materials, so that the resource is clearly modified; Changes to the setting of an historic building or asset, such that it is significantly modified.
Minor	Change to key historic building elements, such that the asset is slightly different; Changes to key archaeological materials, such that the asset is slightly altered; Change to setting of an historic building, such that it is noticeably changed.
Negligible	Slight changes to elements of a heritage asset or setting that hardly affects it.
No Change	No change to fabric or setting.
Factors in the Assessment of Magnitude of Impact – Historic Landscapes	
Major	Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit.
Moderate	Changes to many key historic landscape elements or components, visual change to many key aspects of the historic landscape, noticeable differences in noise quality, considerable changes to use or access; resulting in moderate changes to historic landscape character.
Minor	Changes to few key historic landscape elements, or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality; slight changes to use or access: resulting in minor changes to historic landscape character.
Negligible	Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.
No Change	No change to elements, parcels or components; no visual or audible changes; no changes arising from in amenity or community factors.

TABLE 5: SIGNIFICANCE OF EFFECTS MATRIX (BASED ON DRMB VOL.11 TABLES 5.4, 6.4 AND 7.4; ICOMOS 2011, 9-10).

Value of Assets	Magnitude of Impact (positive or negative)				
	No Change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate/Large	Large/Very Large	Very Large
High	Neutral	Slight	Moderate/Slight	Moderate/Large	Large/Very Large
Medium	Neutral	Neutral/Slight	Slight	Moderate	Moderate/Large
Low	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/Moderate
Negligible	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

TABLE 6: SCALE OF IMPACT.

Scale of Impact	
<i>Neutral</i>	No impact on the heritage asset.
<i>Negligible</i>	Where the developments may be visible or audible, but would not affect the heritage asset or its setting, due to the nature of the asset, distance, topography, or local blocking.
<i>Negative/minor</i>	Where the development would have an effect on the heritage asset or its setting, but that effect is restricted due to the nature of the asset, distance, or screening from other buildings or vegetation.
<i>Negative/moderate</i>	Where the development would have a pronounced impact on the heritage asset or its setting, due to the sensitivity of the asset and/or proximity. The effect may be ameliorated by screening or mitigation.
<i>Negative/substantial</i>	Where the development would have a severe and unavoidable effect on the heritage asset or its setting, due to the particular sensitivity of the asset and/or close physical proximity. Screening or mitigation could not ameliorate the effect of the development in these instances.

TABLE 7: IMPORTANCE OF SETTING TO INTRINSIC SIGNIFICANCE.

Importance of Setting to the Significance of the Asset	
Paramount	Examples: Round barrow; follies, eyecatchers, stone circles
Integral	Examples: Hillfort; country houses
Important	Examples: Prominent church towers; war memorials
Incidental	Examples: Thatched cottages
Irrelevant	Examples: Milestones

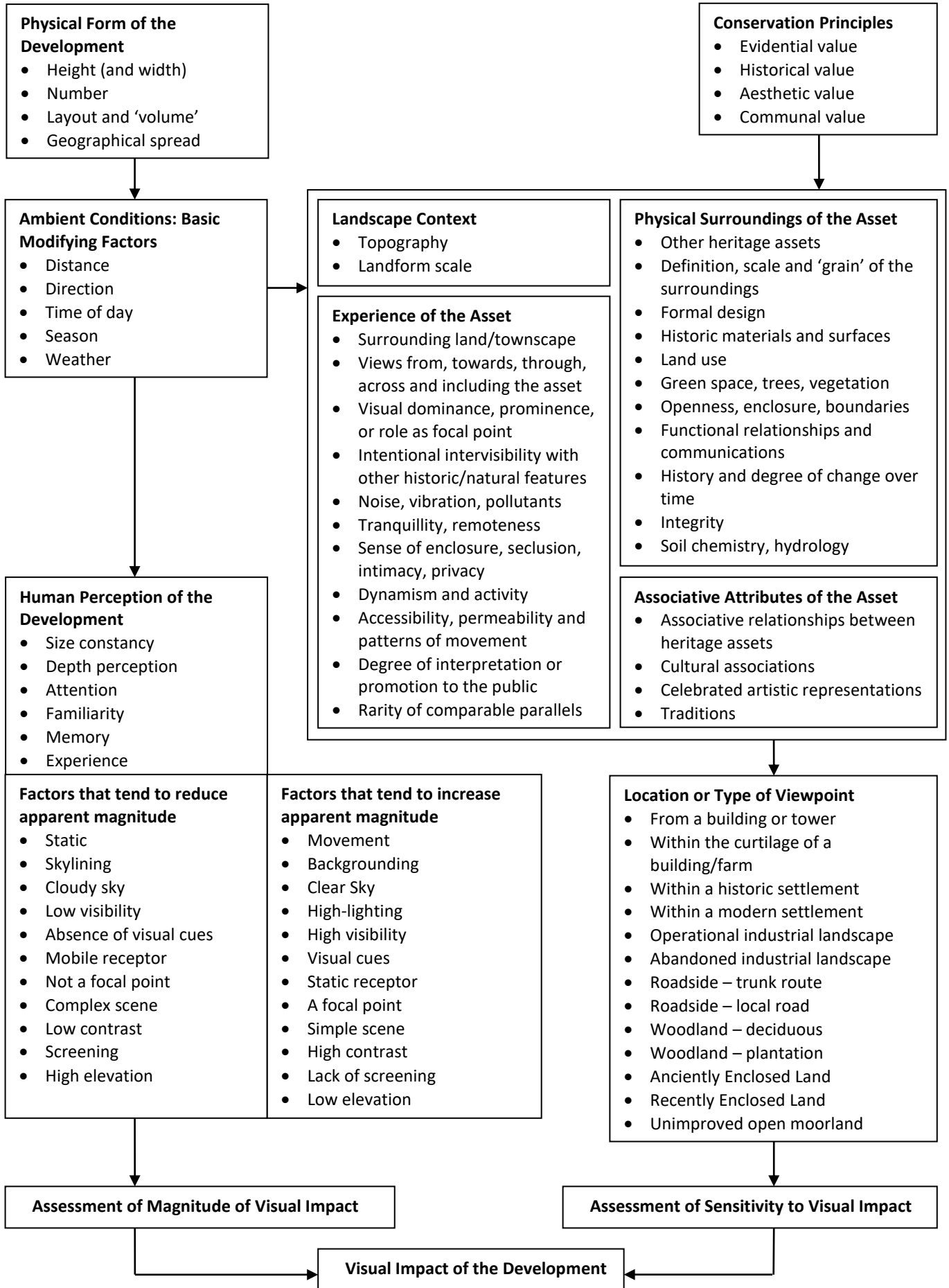


TABLE 8: THE CONCEPTUAL MODEL FOR VISUAL IMPACT ASSESSMENT PROPOSED BY THE UNIVERSITY OF NEWCASTLE (2002, 63), MODIFIED TO INCLUDE ELEMENTS OF ASSESSMENT STEP 2 FROM THE SETTING OF HERITAGE ASSETS (HISTORIC ENGLAND 2015, 9).

APPENDIX 2: PHOTOGRAPHIC ARCHIVE



1. VIEW ALONG STATION ROAD WITHIN THE KELLY BRAY CONSERVATION AREA, PART OF THE WHS, SHOWING THE TRADITIONAL VICTORIAN VILLA-STYLE HOUSES, OPPOSITE THE REDEVELOPED STATION SITE; FROM THE EAST, NORTH-EAST.



2. VIEW ALONG STOKE ROAD IN KELLY BRAY, SHOWING ROWS OF LARGER TERRACED HOUSES AND INSERTED SMALLER 20TH CENTURY BUNGALOWS AND LARGER DETACHED HOUSES; FROM THE SOUTH.



3. VIEW OF THE MAIN BUSY ROAD JUNCTION IN KELLY BRAY, FRAMED BY VICTORIAN BUILDINGS AND THE LARGE PUBLIC HOUSE WHICH SITS ON THE JUNCTION; FROM THE NORTH.



4. VIEW ALONG THE FORMER TURNPIKE ROAD TO LAUNCESTON WITHIN KELLY BRAY, SHOWING THE LINEAR CHARACTER OF MUCH OF THE SETTLEMENT; FROM THE SOUTH, SOUTH-EAST.



5. VIEW FROM FLORENCE ROAD ACROSS THE FORMER QUARRY SITE AND OUT TO THE VALLEYS BEYOND TO THE WEST, DEMONSTRATING THE LACK OF LANDSCAPE PRESENCE OF THE SITE; FROM THE NORTH-EAST.



6. VIEW TO KELLY BRAY FROM KIT HILL; FROM THE EAST.



7. VIEW OF KIT HILL AND THE MONUMENT, ON A MISTY DAY WITH LOW CLOUD; FROM THE NORTH.



8. DETAIL OF ONE OF THE SHAFTS FORMING PART OF THE IMPRESSIVE SURVIVING MINING EVIDENCE ON KIT HILL; FROM THE WEST.



9. VIEW OF THE IMPRESSIVE COLUMNAR MONUMENT ON KIT HILL; FROM THE NORTH, NORTH-WEST.



10. DETAIL OF THE UNDESIGNATED LATER VICTORIAN FOUNTAIN AT THE ENTRANCE TO THE QUARRY SITE; FROM THE SOUTH.



11. DETAIL OF THE FRONT OF THE FOUNTAIN AND ITS CARVED INSCRIPTION STONES; FROM THE WEST.



12. VIEW OF THE FOUNTAIN AND LISTED MILESTONE, DEMONSTRATING THEIR ROADSIDE SETTING ON THE WEST BOUNDARY OF THE QUARRY; FROM THE SOUTH-WEST.



13. DETAIL OF THE LISTED MILESTONE; FROM THE WEST.



14. SETTING SHOT, SHOWING THE VIEW ALONG THE FORMER TURNPIKE ROAD AS IT HEADS INTO CALLINGTON; FROM THE NORTH.



15. DETAIL OF THE SOUTHERN GATEWAY INTO THE QUARRY SITE, SET WITHIN THE WESTERN BOUNDARY BANK; FROM THE EAST, SOUTH-EAST.



16. DETAIL OF THE WESTERN EARTHEN BANK BOUNDARY; FROM THE SOUTH.



17. DETAIL OF THE NORTHERN GATEWAY INTO THE QUARRY SITE, SET WITHIN THE WESTERN BOUNDARY; FROM THE SOUTH-EAST.



18. DETAIL OF THE SLUMPS OF QUARRY WASTE AGAINST THE HISTORIC BOUNDARY BANK IN THE NORTH-WEST CORNER OF THE SITE; FROM THE SOUTH.



19. THE NORTHERN HERRINGBONE STONE-FACED BANK BOUNDARY WITH NORTHERN QUARRY PIT AT ITS EASTERN END; FROM THE WEST, SOUTH-WEST.



20. DETAIL OF THE NORTHERN BOUNDARY SHOWING THE NORTHERN QUARRY PIT, AND POST AND WIRE FENCE TO THE FIELD BEHIND; FROM THE WEST, SOUTH-WEST.



21. THE MATURE HEDGE TO THE EAST OF THE SITE, ON AN IDENTICAL HERRINGBONE STONE-FACED BANK; FROM THE WEST.



22. VIEW ALONG THE MATURE EASTERN BOUNDARY, DEMONSTRATING THAT IT IS LESS ALTERED BY QUARRY WORKINGS; FROM THE NORTH-WEST.



23. VIEW ACROSS THE SITE FROM THE NORTHERN BOUNDARY, SHOWING THE OPEN VIEWS TO CALLINGTON; FROM THE NORTH.



24. VIEW FROM THE NORTH-EAST CORNER, SHOWING THE TOPS OF THE SPOIL BUNDS IN VIEWS TO THE WIDER LANDSCAPE; FROM THE NORTH-EAST.



25. VIEW ACROSS THE SITE AND TO THE VALLEYS OF THE WIDER LANDSCAPE TO THE WEST, DEMONSTRATING HOW OPEN THE SITE IS ALONG THIS SIDE; FROM THE NORTH-EAST.



26. VIEW ACROSS THE SITE FROM THE NORTH-EAST CORNER; FROM THE EAST.



27. VIEW OF THE PART DUMPED EARTH AND QUARRY WASTE; PART HERRINGBONE STONE-FACED SOUTHERN BOUNDARY BANK; FROM THE WEST.



28. VIEW ALONG THE SOUTHERN LOW BANK BOUNDARY, SHOWING THE LOOSE UPLAND GRASS TOPPING AND ABSENCE OF HEDGE; FROM THE WEST, NORTH-WEST.



29. VIEW OF MODERN STRUCTURES AND OPENING FORCED IN THE HISTORIC BANK OF THE SOUTHERN BOUNDARY TO PROVIDE ACCESS TO STABLES AND PONY Paddock IN THE FIELDS SOUTH OF THE SITE; FROM THE NORTH-WEST.



30. VIEW ALONG THE EASTERN BOUNDARY, SHOWING THE WELL PRESERVED STONE FACED BANK, WITH MATURE TREES AND POST AND WIRE FENCING; FROM THE SOUTH.



31. VIEW ALONG THE SOUTHERN BOUNDARY; FROM THE EAST.



32. VIEW ACROSS THE SITE FROM THE SOUTH-EAST CORNER, SHOWING HOW MUCH MORE PREVALENT THE ARTIFICIAL TOPOGRAPHY OF SPOIL TIPS AND BUNDS IS FROM THIS SIDE; FROM THE EAST, SOUTH-EAST.



33. VIEW ACROSS THE HIGH ROUGH GRASSLAND MEADOW WHICH PARTIALLY SURVIVES TO THE SOUTH AND SOUTH-EAST CORNER OF THE SITE;
FROM THE EAST.



34. VIEW FROM THE EDGE OF THE PROPOSAL SITE TO THE ADJACENT FOUNTAIN FARM; FROM THE NORTH-EAST.



35. VIEW INTO THE LARGER MIDDLE QUARRY PIT; FROM THE WEST.



36. DETAIL OF THE SCALE OF THE LARGER MIDDLE QUARRY PIT; FROM THE WEST.



37. DETAIL OF THE QUARRY ROCK FACE OF THE MIDDLE QUARRY PIT; FROM THE SOUTH-WEST.



38. DETAIL OF THE ROCK FACE OF THE MIDDLE QUARRY PIT, DEMONSTRATING THE LIMITED RETURN TO NATURE, BUT STILL CLEARLY IDENTIFIABLE; FROM THE WEST, NORTH-WEST.



39. DETAIL OF THE SLUMPING QUARRY WASTE DUMPS WHICH CREATE THE IRREGULAR TOPOGRAPHY OF THE SITE; FROM THE NORTH.



40. VIEW OF THE RELATIVELY MODERN OPENING CUT IN THE SLUMPED QUARRY WASTE DUMP LEADING TO THE SMALLER SOUTHERN PIT; FROM THE NORTH-EAST.



41. VIEW OUT OF THE MAIN NORTHERN QUARRY PIT, SHOWING THE PRESENT BUT LIMITED VIEW OUT TO THE LANDSCAPE TO THE WEST; FROM THE EAST.



42. VIEW OF THE SMALLER SOUTHERN OF THE TWO MAIN QUARRY PITS AND THE CUT THROUGH LINK TO THE MAIN AREA; FROM THE WEST.



43. VIEW OF THE NARROW, STEEP, CURVING TRACK INTO THE SMALLER PIT; DEMONSTRATING LIMITED VIEWS OUT; FROM THE NORTH-EAST.



44. VIEW OF THE UPPER MEADOW AREA AROUND THE SOUTH-EAST SIDE OF THE SITE; FROM THE WEST, SOUTH-WEST.



45. VIEW ACROSS THE BASE OF THE SOUTHERN QUARRY PIT TO THE SPOIL MOUND; FROM THE SOUTH.



46. VIEW INTO THE QUARRY PITS, FROM THE TOP OF THE MIDDLE QUARRY PIT; FROM THE NORTH.



47. VIEW OF THE WASTE TIP/BUND BETWEEN THE MIDDLE AND SOUTHERN QUARRY PITS, FROM THE TOP OF THE MIDDLE PIT; FROM THE NORTH, NORTH-EAST.



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