

LAND AT WHEAL JANE

BALDHU

KEA

CORNWALL

Results of a Desk-Based Appraisal, Walkover Survey
and Historic Visual Impact Assessment



South West Archaeology Ltd. report no. 170803



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Land at Wheal Jane, Baldhu, Kea, Cornwall

Results of a Desk-Based Appraisal, Walkover Survey and Historic Visual Impact Assessment

By N. Boyd & J. Bampton
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Work undertaken by SWARCH for Wheal Jane Ltd.

SUMMARY

This report presents the results of a desk-based appraisal, walkover survey and Historic Visual Impact Assessment carried out by South West Archaeology Ltd. on land at Wheal Jane, Baldhu, Kea, Cornwall, in order to inform a proposed development of the site. The site is comprised of a single field within the property boundary of the Wheal Jane Earth Science Park.

The proposed site lies on the edge of the Gwennap Mining District World Heritage Site, which includes Grade II and Grade II Listed buildings and Scheduled Ancient Monuments.*

*Due to the location of the site, within a basin near the bottom of a valley with made ground to its north and east there are very few designated heritage assets that could be impacted upon by the development, if at all. The combination of topography and local blocking by trees and hedge banks makes its impact on all of the considered assets **neutral**.*

*With this in mind, the overall impact of the proposed development can be assessed as **negative/minor**, although this can be further offset through the knowledge that there is no permanent structure being put in place, and that any buried archaeological resource, will be preserved in-situ beneath the made-ground used to level the site. The impact on the buried archaeological resource would be neutral. The visual impact of the development will be **temporary/reversible**.*



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1.0 INTRODUCTION

LOCATION:	LAND AT WHEAL JANE
PARISH:	ST. AUSTELL
COUNTY:	CORNWALL
NGR:	CENTRED ON SW 77002 42583
SWARCH REF:	KWJ17

1.1 PROJECT BACKGROUND

This report presents the results of a desk-based appraisal, walkover survey and historical visual impact assessment carried out by South West Archaeology Ltd. (SWARCH) on Land at Wheal Jane, Baldhu, Kea, Cornwall (Figure 1). The work was commissioned by Wheal Jane Ltd. in order to establish the historic background for the site and assess the potential impact of a proposed development of the area for the deposition and storage of transitory material.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The proposed site comprises a trapezoidal area of land with an access track running along the south of the consultancy buildings and solar farm. The site lies approximately 1.4km to the south of Threemilestone and 5km south-west of Truro at approximately 60m AOD (Figure 1). The soils of this area are the well drained fine loamy or fine silty soils over rock of the Manod Association (SSEW 1983), which overlie the slate and siltstone of the Mylor Slate Formation (BGS 2016).

1.3 HISTORICAL & ARCHAEOLOGICAL BACKGROUND

The site is located within the parish of Kea, in the union of Truro and west division of the hundred of Powder. The nearby village of Baldhu derives its name from the Cornish for 'Black Mine' and there is a tradition of mining in this area which dates back to the 18th century. Lysons notes that the earliest successful copper mines in Cornwall were located in the parish of Kea. An archaeological assessment was carried out by Cornwall Archaeological Unit in 2010 (Sharpe) in advance of the installation of the solar farm on the former mill site at Wheal Jane. No other archaeological work has been carried out in the immediate vicinity. The HER records that the assets in the area are related to post-medieval mining activity, with the exception of a few medieval fieldsystems and dams that were either observed as cropmarks on aerial photography or determined through documentary evidence.

1.4 METHODOLOGY

The desk-based appraisal follows the guidance as outlined in: *Standard and Guidance for Archaeological Desk-Based Assessment* (ClfA 2014, Revised 2017) and *Understanding Place: historic area assessments in a planning and development context* (Historic England 2017).

The historic visual impact assessment follows the guidance outlined in *The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning: 3* (Historic England 2015). But also takes account of 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* (English Heritage 2011a), *Seeing History in the View* (English Heritage 2011b),

Managing Change in the Historic Environment: Setting (Historic Scotland 2010), *Guidelines for Landscape and Visual Impact Assessment 3rd edition* (Landscape Institute 2013), *Photography and Photomontage in Landscape and Visual Impact Assessment* (Landscape Institute 2011).



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

2.0 DESK-BASED APPRAISAL AND CARTOGRAPHIC ANALYSIS

2.1 PREVIOUS ASSESSMENT

An archaeological assessment was carried out on land just to the east of the proposed development site ahead of the installation of a solar farm. The assessment was carried out by Cornwall Archaeological Unit (CAU) in 2010 (Sharpe) and included a desk-based assessment and walkover survey as well as a consideration of the impact on heritage assets in the surrounding area. The survey concluded that in their study area, the historic mining features (shafts, openworks, etc.) had been largely eradicated during the 20th century operation of the mine and the landscaping following its closure. Those which remained (e.g. Beecher's Shaft) were recommended for retention as features.

2.2 DOCUMENTARY HISTORY

The cartographic record for the area shows the historic mining which developed in this area between 1840 and 1880 and suggests that expansion and further exploitation of the minerals was carried out into the early 20th century. The tin mine was reopened following a period of exploration in the mid 1960s and reached full production between 1969 and 1972, with an official opening day in 1971. Profits were impacted considerably following the crash in the price of tin in 1985 and despite best efforts, the mine closed in 1991. The mill continued to process the ore of the sister mine at South Crofty until 1998 when that mine was also closed. Since 1998 the site has been occupied by a number of subsidiary companies which had been formed as part of the Wheal Jane and South Crofty mining venture and which include laboratory and consultancy services. In 2001 the first draft of the Wheal Jane Masterplan was published in order to secure the future of the site in the long term.

2.3 CARTOGRAPHIC SOURCES

The earliest map available to this study is the 1" to the mile Ordnance Surveyor's Draft Map of c.1809 (Figure 2). The map does not contain much detail, but the network of lanes around the site can be seen, with Baldue Common to the east.

The Kea Tithe Map of 1842 (Figure 3) shows the site as an enclosed plot of irregular shape, surrounded by fields on all sides. The fields to the north-west appear to be consistent with the pattern we would expect to see for medieval enclosures. The other fields are larger and many are more regular, indicating later enclosure. The plot in which the proposed site is located is called 'Croft', which is a term usually associated with a dwelling, but there are no buildings indicated in any of the fields in the immediate area. The plot is surrounded by other fields with the name 'Croft' and moorland. No mining activity appears to have been recorded on the Tithe.



FIGURE 2: OS SURVEYOR'S DRAFT MAP OF 1809, 1" TO THE MILE. THE APPROXIMATE SITE LOCATION IS INDICATED (BL).



FIGURE 3: EXTRACT FROM THE 1842 KEA TITHE MAP. THE APPROXIMATE LOCATION OF THE SITE IS INDICATED.

No	Land owner	Occupier	Plot name
2508	The Earl of Falmouth and Timothy Giles, his lessee	Timothy Giles	Moor
2509	The Earl of Falmouth and Thomas Letcher, his lessee	Thomas Letcher	Croft
2510			Moor
2511			Croft
2383			Higher Moor
2389			Croft Close
2513	The Earl of Falmouth, Hon. Anna Maria Hill, Jane Hill and James Dunstan, their lessee	William Cock	Square Close
2585	Croft		
2586	Earl of Falmouth	Himself	Baldue Common

TABLE 1: EXTRACT FROM THE 1842 KEA TITHE APPORTIONMENT (CRO).

The First Edition OS Map of 1880 indicates that a number of fields immediately east of the site have been stripped of their field boundaries and have been repurposed for mining. The whole landscape to the east of the site appears to have been changed with the development of mining at Wheal Jane, West Wheal Jane, Wheal Whidden and Nangiles. The proposed site itself appears to be rough ground, perhaps indicating its prior use for mining or tipping of spoil. The fields surrounding the site have been reorganised, with a number of boundaries apparently removed, creating larger fields.

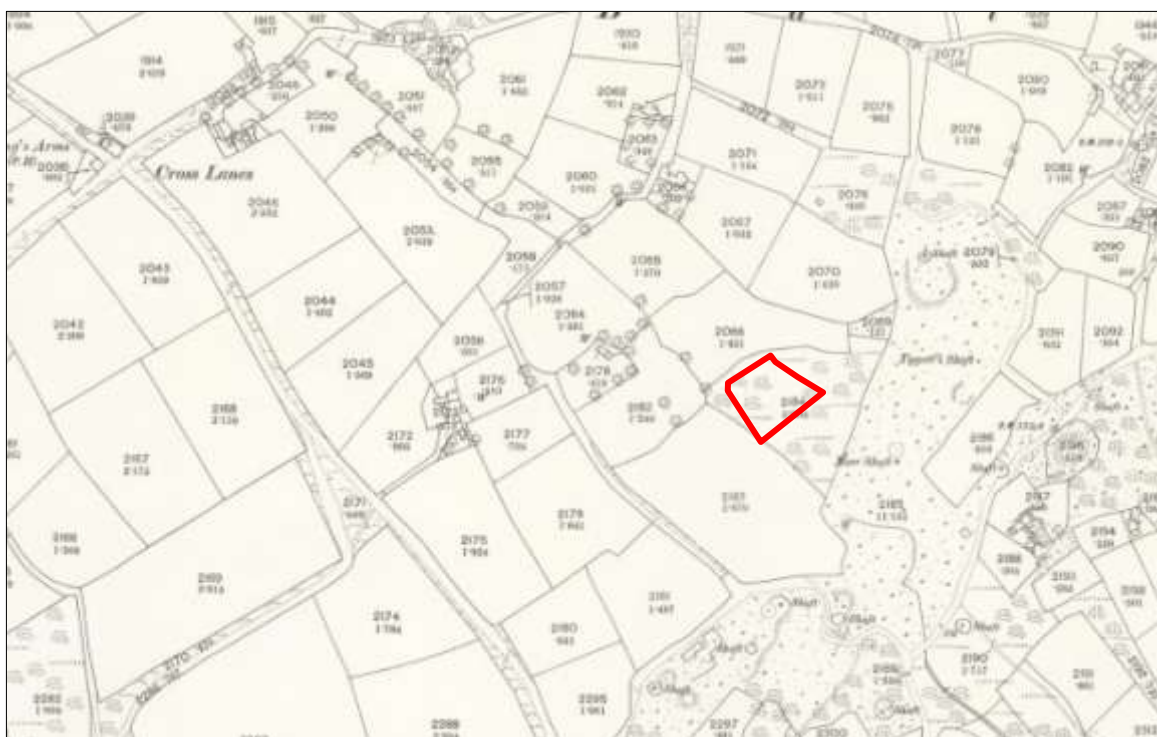


FIGURE 4: EXTRACT FROM THE FIRST EDITION 25 INCH OS MAP, 1880; THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (CRO).

The site remains unchanged in the Second Edition OS Map, still being illustrated as rough ground (Figure 5). A small enclosure to the west, which appears to have been a small house in its own garden, has been removed, the hedgebanks opened up giving a larger field. The extent of mining activity appears to have expanded fairly comprehensively between 1880 and 1907 in the general vicinity of the site.



FIGURE 5: EXTRACT FROM THE SECOND EDITION 6 INCH OS MAP, 1907; THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (CRO).

RAF aerial photography of Wheal Jane taken in the summer of 1946 shows the pock marks and craters which litter the landscape and clearly indicate the mining activity which was carried out historically in this area. Although the plot in which the proposed site lies is only partially included, the roughland nature of the site is clear, along with its proximity to the mine workings. There are no visible traces of pits and shafts visible in the proposed site.



FIGURE 6: RAF AERIAL PHOTOGRAPH OF WEST WHEAL JANE IN 1946, THE FIELD WHICH CONTAINS THE PROPOSED SITE IS INDICATED (106G/UK1663, FRAME 4075, 12TH JULY 1946).



FIGURE 7: AERIAL PHOTOGRAPH FROM 2006 FOLLOWING THE REMOVAL OF THE PROCESSING PLANT AND A GREENING OF THE WHEAL JANE SITE. THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (WHEAL JANE GROUP).



FIGURE 8: AERIAL PHOTOGRAPH OF THE EARTH SCIENCE PARK; THE APPROXIMATE LOCATION OF THE SITE IS INDICATED.

3.0 WALKOVER SURVEY

The proposed development site was visited on the morning of the 31st of July 2017 and a walkover survey undertaken. Additional photographs can be found in Appendix 1.

The site is located in the north-west of the part of the Wheal Jane Earth Science Park; south of the reception areas, west of the solar farm and north-west of Tailings Dam. It constitutes a rectangular field, with its long axis orientated north-west by south-east.

The south-west boundary is defined by a drain with a Cornish hedgebank on its far side with trees along its length. The north-west boundary was defined by a thick, plantation of bushy woodland on a probable natural bank/slope that ran up to the north-west: it had a stoned access track at its north-east end. The north-east boundary comprised a man-made bund, c.4m high with a bushy wooded plantation at its north-west end. The south-east boundary is defined by a bund of stony soil, with tracks beyond and drains beyond that ran southwards: it had a stoned access track at its north-east end.

The majority of the site had been made-up and levelled using stone rubble (Figure 9) by up to c.1m in its south corner and by c.0.25m in its west corner. Evidently, from the area of grass surviving along the south-west boundary, adjacent to the drain, the original soil does not appear to have been stripped down to weathered natural prior to the ground being made-up. The bunds about the site may be partially comprised of the soil from the site, or material introduced from elsewhere in the complex. A line of trees and scrubby bushes survive along the north-west side of the site. There are no visible earthworks on the site.



FIGURE 9: THE SITE VIEWED FROM THE EAST CORNER; LOOKING WEST (NO SCALE).

4.0 HISTORIC VISUAL IMPACT ASSESSMENT

4.1 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 or archaeological monument (the ‘heritage asset’); secondly, to assess the likely effect of a proposed development on these heritage assets (direct impact) and their setting (indirect impact). The 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. Sections 3.2-3.6 discuss policy, concepts and approach; section 3.7 covers the methodology, and section 3.8 individual assessments.

4.2 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 2012). The relevant guidance is reproduced below:

Paragraph 128

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 129

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.

4.3 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.

4.3.1 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*.

4.3.2 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.

4.3.3 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.

4.3.4 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.

4.3.5 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.

4.3.6 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.

4.3.7 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 2: 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;

Hierarchy of Value/Importance	
	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.

4.4 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.

4.4.1 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,

4.4.2 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.

4.4.3 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 proposed developments usually have 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.

4.4.4 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.

4.4.5 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 farmbuildings, for instance, survive in good condition, but are drained of the authenticity of a working farm environment.

4.4.6 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.

4.4.7 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.

4.5 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.

4.5.1 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.

4.5.2 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 4), 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 4 (below).

4.6 METHODOLOGY

The methodology adopted in this document is based on that outlined in *The Setting of Heritage Assets* (English Heritage 2011 and 2015 Guidance Note). The assessment of visual impact at this stage of the development is an essentially subjective one, and is based on the experience and professional judgement of the authors.

Visibility alone is not a clear guide to 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 4), some of which are seasonal or weather-related.

The principal consideration of this assessment is not visual impact *per se*. It is an assessment of the likely magnitude of effect, the importance of setting to the significance of heritage assets, and the sensitivity of that setting to the visual intrusion of the proposed development. The schema used to guide assessments is shown in Table 4 (below). A key consideration in these assessments is the concept of *landscape context* (see below).

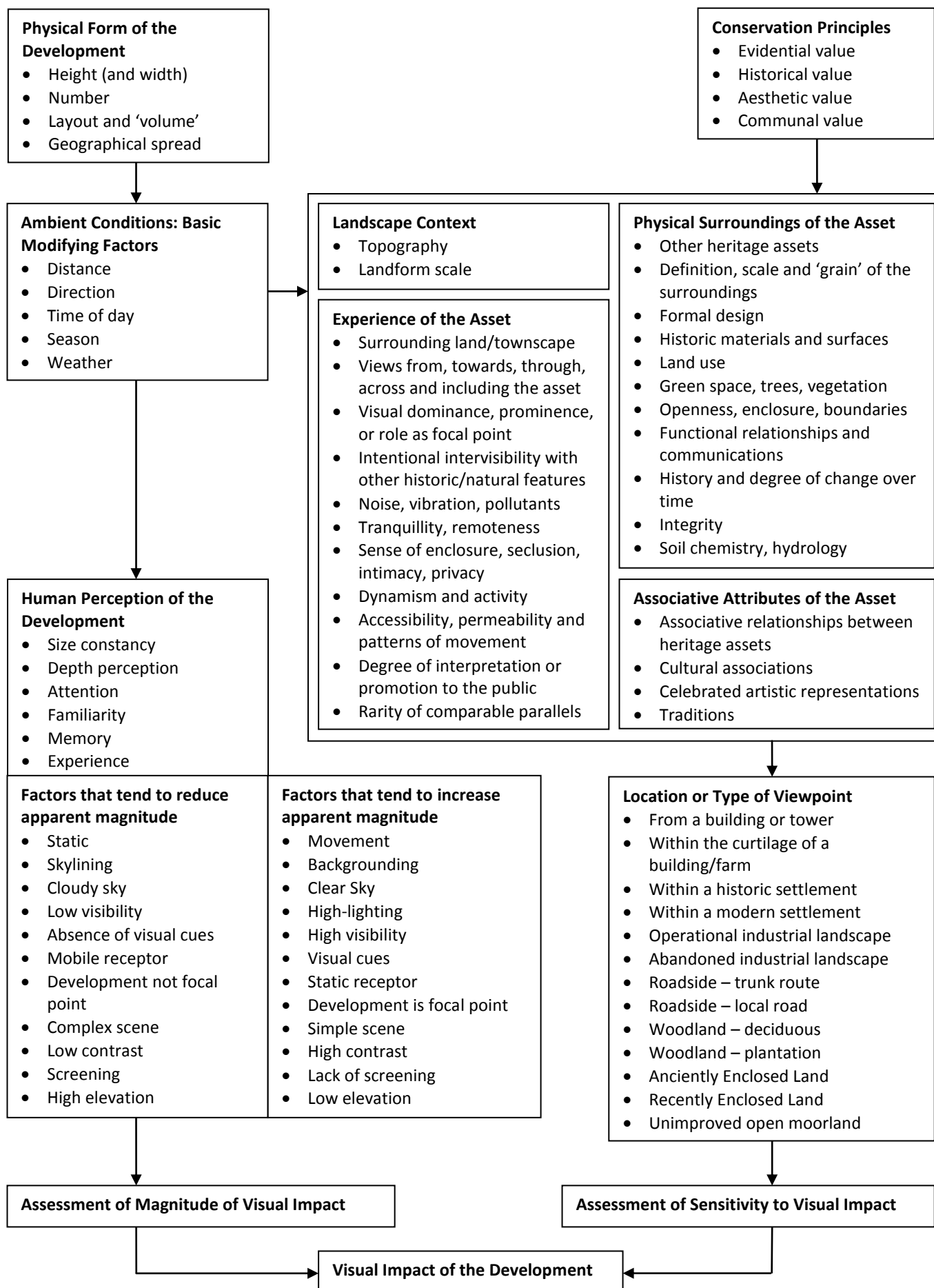


TABLE 3: THE CONCEPTUAL MODEL FOR VISUAL IMPACT ASSESSMENT PROPOSED BY THE UNIVERSITY OF NEWCASTLE (2002, 63), MODIFIED TO INCLUDE ELEMENTS OF ASSESSMENT STEP 2 FROM THE SETTING OF HERITAGE ASSETS (ENGLISH HERITAGE 2011, 19).

4.6.1 ASSESSMENT AND 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.

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.

4.7 THE STRUCTURE OF ASSESSMENT

The proposed development concerns the assignment of an area for deposition and storage of transitory material. The scale of the works and their location within a trough in the landscape surrounded by a relict mine and adapted landscape mean that the visual impact of the works will be restricted primarily to the immediate area of the science park. However, the proximity to a World Heritage Site (WHS); two Scheduled Ancient Monuments (SAM); a Grade II* Listed church and Grade II Listed structures necessitated the need for this assessment.

The designated assets covered by this assessment are:

- Melody House, formerly a vicarage adjacent to St Michaels Church (Grade II Listed)
- St Michaels Church (Grade II* Listed)
- Baldhu Methodist Church and Sunday School (Grade II Listed)
- A boundary stone at SW766 427 (Grade II Listed)
- A well head at St Michaels Church (Grade II Listed)
- The Grave of Billy Bray at St Michaels Church (Grade II Listed)
- A Round Barrow known as Goodern Barrow, 550m east of St Michael's Church (SAM)
- A Round Barrow 230m south-east of Chapel Farm (SAM)
- The Gwennap Mining District (WHS)

The majority of these structures are, or appear to be, in good or excellent condition.

The initial discussion (below) establishes the baseline sensitivity of the categories of assets to the projected change within their visual environment, followed by a site-specific narrative. It is essential the individual assessments are read in conjunction with the overall discussion, as the impact assessment is a reflection of both. Supporting photographs can be seen in Appendix 1.

4.8 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.

4.8.1 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 5-6), 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, parcels or components, visual change to many key aspects of the historic landscape, noticeable differences in noise or sound quality, considerable changes to use or access; resulting in moderate changes to historic landscape character.
Minor	Changes to few key historic landscape elements, parcels 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 limited 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 Heritage 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. This is, as is stressed in planning guidance and case law, a very high bar and is almost never achieved.

4.9 SENSITIVITY BY CLASS OF MONUMENT OR STRUCTURE

4.9.1 LISTED COTTAGES AND STRUCTURES WITHIN HISTORIC SETTLEMENTS

Clusters of Listed Buildings within villages or hamlets; occasionally Conservation Areas

The context of the (usually) Grade II Listed buildings within settlement is defined by their setting within the village settlement. Their significance is determined by their architectural features, historical interiors or role/function in relation to the other buildings. The significance of their setting to the experience of these heritage assets is of key importance and for this reason the curtilage of a property and any small associated buildings or features are often included in the Listing and any changes must be scrutinised under relevant planning law.

Most village settlements have expanded significantly during the 20th century, with rows of cottages and modern houses and bungalows being built around and between the older 'core' Listed structures. The character of the settlement and setting of the heritage assets within it are continually changing and developing, as houses have been built or farm buildings have been converted to residential properties. The setting of these heritage assets within the village can be impacted by new residential developments especially when in close proximity to the settlement. The relationships between the houses, church and other Listed structures will not be altered, and it is these relationships that define their context and setting in which they are primarily to be experienced.

The larger settlements and urban centres usually contain a large number of domestic and commercial buildings, only a very small proportion of which may be Listed or protected in any way. The setting of these buildings lies within the townscape, and the significance of these buildings, and the contribution of their setting to that significance, can be linked to the growth and development of the individual town and any associated industries. The original context of any churches may have changed significantly since construction, but it usually remains at the heart of its settlement. Given the clustering of numerous individual buildings, and the local blocking this inevitably provides, a distant development is unlikely to prove particularly intrusive.

What is important and why

Historic settlements constitute an integral and important part of the historic landscape, whether they are hamlets, villages, towns or cities. The physical remains of previous occupation may survive beneath the ground, and the built environment contains a range of vernacular and national styles (evidential value). Settlements may be archetypal, but development over the course of the 20th century has homogenised most, with streets of terraced and semi-detached houses and bungalow growths arranged around the medieval core (limited historical/illustrative value). As dynamic communities, there will be multiple historical/associational values relating to individuals, families, occupations, industry, retail etc. in proportion to the size and age of the settlement (historical/associational). Settlements that grew in an organic fashion developed fortuitously into a pleasing urban environment (e.g. Ledbury), indistinguishable suburbia, or degenerate urban/industrial wasteland (aesthetic/fortuitous). Some settlements were laid out quickly or subject to the attention of a limited number of patrons or architects (e.g. late 19th century Redruth and the architect James Hicks, or Charlestown and the Rashleigh family), and thus strong elements of design and planning may be evident which contribute in a meaningful way to the experience of the place (aesthetic/design). Component buildings may have strong social value, with multiple public houses, clubs, libraries (communal/social), chapels and churches (communal/spiritual). Individual structures may be commemorative, and whole settlements may become symbolic, although not always in a positive fashion (e.g. the Valleys of South Wales for post-industrial decline) (communal/symbolic). Settlements are complex and heterogeneous built environments filled with meaning and value; however, beyond a certain size threshold distant sight-lines become difficult and local blocking more important.

- *Baldhu*: Melody House; medium significance; Grade II Listed; condition: fair to good. Distance to site c.505m. Melody House is a mid 19th century former Rectory. Melody house has views, although partially screened by trees, across the valley to the south. The site is within a trough in this valley context and completely screened by the topography and/or existing elements of the Wheal Jane complex. The screening by trees effectively blocks views of the house from the opposing side of the valley. There is a large native woodland plantation north of the house which will comprehensively block views from the north, across the asset and of the site; impact: **neutral**.

4.9.2 CHURCHES AND PRE-REFORMATION CHAPELS

Church of England parish churches and chapels; current and former places of worship

Most parish churches tend to be associated with a settlement (village or hamlet), and therefore their immediate context lies within the setting of the village (see elsewhere). Church buildings are usually Grade II* or Grade I Listed structures, on the basis they are often the only surviving medieval buildings in a parish, and their nature places of religious worship.

In more recent centuries the church building and associated structures functioned as *the* focus for religious devotion in a parish. At the same time, they were also theatres of social interaction, where parishioners of differing social backgrounds came together and renegotiated their social contract.

In terms of setting, most churches are still surrounded by their churchtowns. Viewed within the context of the settlement itself, churches are unlikely to be affected by the construction of a wind turbine unless it is to be located in close proximity. The location of the church within its settlement, and its relationship with these buildings, would remain unchanged: the church often being the visual focus on the main village street.

This is not the case for the church tower. While these structures are rarely open to the public, in rural communities they are frequently the most prominent visual feature in the landscape, especially where the church is itself located in a topographically prominent location. The towers of these structures were clearly *meant* to be highly visible, ostentatious reminders of the presence of the established church with its message of religious dominance/assurance. However, churches were often built and largely maintained by their laity, and as such were a focus for the *local* expression of religious devotion. It was this local devotion that led to the adornment of their interiors and the elaboration of their exteriors, including the tower.

As the parishes in Devon and Cornwall can be relatively small (certainly in comparison with the multi-township parishes of northern Britain) the tower would be visible to the residents of multiple parishes. This would have been a clear expression of the religious devotion – or rather, the competitive piety – of a particular social group. This competitive piety that led to the building of these towers had a very local focus, and very much reflected the aspirations of the local gentry. If the proposed turbine is located within the landscape in such a way to interrupt line-of-sight between towers, or compete with the tower from certain vantages, then it would very definitely impact on the setting of these monuments.

As the guidance on setting makes clear, views from or to the tower are less important than the contribution of the setting to the significance of the heritage asset itself. The higher assessment for the tower addresses the concern it will be affected by a new and intrusive vertical element in this landscape. However, if the turbine is located at some distance from the church tower, it will only compete for attention on the skyline from certain angles and locations.

- St Michaels Church, Baldhu; high significance; Grade II* Listed; condition: good. Distance to site c.570m. The church is 19th century in date, with a walled churchyard completely wrapped around with trees, blocking all views out. The village/hamlet setting is on a south-east slope, looking south-east down a valley. The site lies within the trough of this valley landscape context, within the perimeter of Wheal Jane. The screening by trees effectively blocks views of the church from the opposing side of the valley. There is a large native woodland plantation north of the village/hamlet which will comprehensively block views from, across the asset towards the site; impact: **neutral**.

4.9.3 NONCONFORMIST CHAPELS

Non-Conformist places of worship, current and former

Non-Conformist chapels are relatively common across the whole of Devon and Cornwall. They tend to be fairly modest structures in all but the largest settlements, lacking towers and many of the ostentatious adornments of older Church of England buildings. They are usually Grade II Listed structures, most dating from the 19th century, and adjudged significant more for their religious and social associations than necessarily any individual architectural merit. They can be found in isolated locations, but are more often encountered in settlements, where they may be associated with other Listed structures. In these instances, the setting of these structures is very local in character and references the relationship between this structure and other buildings within the settlement. The impact of a wind turbine is unlikely to be particularly severe, unless it is built in close proximity.

- Baldhu Methodist Church, Baldhu; medium significance; Grade II Listed; condition: good. Distance to site c.780m. An early 19th century Wesleyan Methodists Chapel that became a Sunday school when attached chapel with 1889 datestone was built. The chapel is within a modest walled enclosure with farmhouses to its south-east and west. The landscape context of the chapel is limited to the village of Baldhu, and the local dispersed mining and farming community. The topography of the land denies any intervisibility with the site or of wider views associated with the chapel and the site; impact: **neutral**.

4.9.4 GRAVESTONES, MILESTONES, CROSSES, WAR MEMORIALS, WELLS AND BRIDGES

Most medieval 'wayside' crosses are *ex-situ*. Many examples have been moved and curated in local churchyards, often in the 18th or 19th century, and the original symbolism of their setting has been lost. Therefore, context and setting is now the confines of the church and churchyard, where they are understood as architectural fragments associated with earlier forms of religious devotion. Therefore wind turbines, when visible at a distance, do not affect their relationships with their new surroundings or public understanding of their meaning and significance.

This is not the case for those few wayside crosses that survive at or near their original location. This class of monument was meant to be seen and experienced in key spiritual locations or alongside main routeways, so the significance of the remaining few *in situ* examples is enhanced.

Listed (or Scheduled) gravestones/box tombs almost always lie within the graveyard of churches or chapels, and their setting is extremely local in character. Local blocking, whether from the body of the church, church walls, shrubs and trees, and/or other buildings, will always play an important role. As such, the construction of a wind turbine is unlikely to have a negative impact.

- Well-Head 20m SW of Baldhu Church; Billy Bray's Grave 4m S of Baldhu Church; both medium significance and Grade II Listed; conditions: fair to good. Distance to site c.550-570m. These

assets lie within a walled churchyard. The walled churchyard is completely wrapped around with trees, blocking all views out. Billy Bray died in 1868 and his grave has a memorial obelisk. The well-head is a stone built structure over a spring built in c.1847. The screening by trees blocks views of the assets from the wider landscape; impact: **neutral**.

4.9.5 PREHISTORIC RITUAL/FUNERARY MONUMENTS

Stone Rows, Barrows and barrow cemeteries

These monuments undoubtedly played an important role in the social and religious life of past societies, and it is clear they were constructed in locations invested with considerable religious/ritual significance. In most instances, these locations were also visually prominent, or else referred to prominent visual actors, e.g. hilltops, tors, sea stacks, rivers, or other visually prominent monuments. The importance of indivisibility between barrows, for instance, is a noted phenomenon. As such, these classes of monument are unusually sensitive to intrusive and/or disruptive modern elements within the landscape. This is based on the presumption these monuments were built in a largely open landscape with clear lines of sight; in many cases these monuments are now to be found within enclosed farmland, and in varying condition. Sensitivity to turbines is lessened where tall hedgerows restrict line-of-sight.

- Round barrow known as Goodern barrow, 550m east of St. Michaels Church; high significance; Scheduled Monument; condition: excellent. Distance to site c.909m. Upstanding barrow set in a large pasture field, just east of a farmstead. The barrow is presently quite overgrown. The barrow has lost its functional relationship with the wider landscape as it is now enclosed but it does have views out of its enclosure as it is a tall mound. There are wide views from the barrow especially to the north across the level landscape and where the land drops away. Although the barrow retains some landscape presence, this is now more limited due to its inclusion within the field system. Structures and a woodland plantation on the northern ridge of the valley in which the site is located separate the barrow from the sites landscape context. These features and the topography of the valley completely screen the site from the barrow. The site stands outside of the landscape context of the barrow, which occupies an east-west high ridge with other associated barrows in the landscape and the site will not be visible in any vistas including- or from the barrow; impact: **neutral**.
- Round barrow 230m south-east of Chapel Farm; high significance; Scheduled Monument; condition: excellent. Distance to site c.980m. Upstanding barrow set in a large pasture field, just east of a farmstead. The barrow is presently quite overgrown. The barrow has lost its functional relationship with the wider landscape as it is now enclosed but it does have views out of its enclosure as it is a tall mound. There are wide views from the barrow especially to the south and east across the valley landscape and where the land drops away. Parts of Wheal Jane can be seen from the barrow. Although the barrow retains some landscape presence, this is now more limited due to its inclusion within the field system. Although the site lies within the landscape context of the barrow the sites secluded location means that it would not be visible in any views associated with the barrow; impact: **neutral**.

4.9.6 WORLD HERITAGE SITE

The Cornwall and West Devon Mining Landscape

The Cornwall and West Devon Mining Landscape was granted UNESCO World Heritage Site status in July 2006. This was in recognition of the contribution made by Cornish and Devonian miners and engineers to the Industrial Revolution. There is, however, an inherent conflict between the protection and preservation of these mining landscapes, and the duty to 'protect, conserve and

enhance historical authenticity, integrity and historic character’, and the need to appreciate these are living landscape that continue to evolve and where sustainable development must be encouraged (see the *WHS Management Plan 2005-10*). Anything that detracts from that comes into conflict with the need to conserve and enhance historic character.

- Gwennap Mining District, around Baldhu and Bissoe; very high significance; World Heritage Site; condition: good to fair. Distance to site c.2.5-10km. This large area of primarily open rough unenclosed land has numerous spoil tips and extensive mining remains including; chimneys, engine houses, drying areas, kilns, shafts, etc. There will be views to Wheal Jane Earth Science Park from across the area generally, although the proposed site is screened by the existing landscaping about the site and trees. This is a post industrial mining landscape, of which Wheal Jane is an example that falls just outside the WHS, although part of the same environment. The proposed site is not visible from any public routeways given local screening by trees and hedgebanks and views from within the WHS across and towards other designated heritage assets the site was never visible. In any views that may include the site, from private land, it would appear as a relatively unobtrusive part of the ongoing post-industrial utilisation of the Wheal Jane and the post-mining landscape; impact: **neutral to negligible/minor**.

4.9.7 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 Devon and Cornwall into roughly 15 ‘character areas’ based on topography, biodiversity, geodiversity and cultural and economic activity. Both councils, AONBs and National Parks have undertaken similar exercises, as well as Historic Landscape Characterisation.

Some character areas are better able to withstand the visual impact of particular developments than others. Rolling countryside with wooded valleys and restricted views can withstand a larger number of above ground, visually intrusive, structures 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, quarries and other turbines, but the question of cumulative impact must be considered. The aesthetics of individual developments is open to question, but as intrusive new elements within the landscape, they can only be **negative**, if **temporary/reversible**.

- The site proposals will effect a single field within the Wheal Jane Earth Science Park within the *Redruth, Cambourne and Gwennap Landscape Character Area* (LCA No. C11). This is described as *‘The area is a small scale rolling landscape with underlying slates and siltstones running from the exposed north coast to the Fal ria in the south. The strong influence of over 300 years of tin and copper mining has affected both the present day land use and landscape pattern of this area. This is reflected in the Gwennap and Redruth and Camborne mining districts. Extensive areas of disturbed or derelict land from this earlier industrial activity are evident with many developing into fragmented semi-natural habitats with scrub, bracken and heath. Extensive areas of Lowland Heathland occur along the narrow coastal strip between Portreath and Porthowan. Pasture is the dominant land use. Small irregular fields of anciently enclosed land predominate in more sheltered valleys and hillsides with the often rather larger, straight sided fields of recently enclosed land on more exposed, marginal ground, containing both improved and rough pasture. Woodland occurs in semi-natural form in the valley floors and as mixed plantations on the upper valley sides. The Camborne-Pool-Redruth urban area is extensive and a military airfield lies east of Portreath on the coast. Outside these areas, settlement is dispersed but dense with small farms and some estate land. Miners’*

smallholdings have influenced the distinct field pattern.' The overall sensitivity of these LCAs to developments varies depending on scale and visual impact of the development, although any development will have an impact; in this instance it would be **negative/minor** and **temporary/reversible**.

- One issue, in a landscape sense, is that of cumulative impact. There are industrial and post-industrial aspects to the landscape, which is within a prominent mining district, however, such assets have afforded the adjacent Gwennap mining district as a World Heritage Site (WHS). The site proposals would not impact on the surrounding prehistoric, industrial or settlement landscape character as it will be screened by topography, trees from public routeways and surrounding assets and difficult to differentiate from existing deposits within Wheal Jane from private land in the landscape. In terms of this single site, the overall impact on the character of the historic landscape is likely to be **neutral**; taking into consideration the potential cumulative impact, there is unlikely to be an increased impact.
- The site proposal will have a **neutral** affect on the immediate archaeology and will be a **temporary/reversible** effect on the wider landscape and the heritage assets it contains as it can technically be removed.

4.10 THE SITE SETTING ASSESSMENT

The immediate setting of the site is within an industrial disused area associated with mining in a wider setting of post-medieval enclosed land. The Historic Landscape Characterisation (HLC) describes this as '*Land enclosed in the 17th, 18th and 19th centuries, usually from land that was previously Upland Rough Ground and often medieval commons. Generally in relatively high, exposed or poorly-drained parts of the county.*' This landscape is one of various ridges, valleys and hills and includes dispersed farmsteads and chapels associated with the village of Baldhu and its agricultural and industrial history. The key features of the immediate surroundings are the 19th century St Michael's Church, the 19th century Baldhu Chapel and Bronze Age Barrows on ridges in the surrounding landscape. The wider landscape, particularly to the west, north-west and north of the site also includes the World Heritage Site of the Gwennap mining district, which borders the Wheal Jane Earth Science Park property boundary.

The setting of a heritage asset is not static, and is subject to change through time. The enclosure of field systems through the centuries has affected the agricultural landscapes. The exploitation of mineral resources across the landscape resulted in its industrialisation and both above and below ground impacts. Prehistoric monuments have had their setting challenged by such processes adapting topography and landscape prominence and changes in climate effecting vegetation. The adaptation of the site over the last c.20 years into research and the utilisation of a post-mining landscape/site is a continued sign of this process by a constructive approach.

The site itself is subject to landscaping associated with historic mining and post-mining works and has effectively been preserved by being buried beneath rubble stone on which materials can be stored. The sites boundaries are relatively well defined by existing features and boundaries of Wheal Jane, including aspects that are likely to be preserved for functional reasons, such as the drain along the south-west boundary.

The closest designated features are the Grade II* Listed St Michael's Church, Grade II Listed Badhu Chapel, the Grade II Listed Melody House, a Grade II Listed grave, well-head and boundary stone and two Scheduled barrows. None of these assets have indivisibility of the site and are not shared in any views from public routes within the landscape due to screening by trees and the topography of the site, being within a trough in the landscape, surrounded by aspects of Wheal Jane, such as Tailing's Dam. Any development on the site would not detract from their values or significance as heritage assets.

5.0 CONCLUSION

The proposed development would take place in the north-west corner of a post-medieval mining site, Wheal Jane. Relatively little archaeological fieldwork has taken place in the immediate area, although an archaeological assessment was carried out by Cornwall Archaeological Unit in 2010 (Sharpe) in advance of the installation of the solar farm on the former mill site at Wheal Jane. The HER records that the assets in the area are related to post-medieval mining activity, with the exception of a few medieval fieldsystems and dams that were either observed as cropmarks on aerial photography or determined through documentary evidence. Apart from aspects of ground disturbance or deposits associated with mining the archaeological potential of the site is considered low.

The site is adjacent to the World Heritage Site of the Gwennap Mining District, which includes Grade II* and Grade II Listed buildings and Scheduled Ancient Monuments. The sites location within a trough in a valley with trees and the extant structures/earthworks associated with Wheal Jane means that that there will be no significant impact upon the setting of the World Heritage Site, although it may be discernible from some private property away from public route ways.

Due to the location of the site, within a basin near the bottom of a valley with made ground to its north and east there are very few designated heritage assets that could be impacted upon by the development, if at all. The combination of topography and local blocking by trees and hedge banks makes its impact on all of the considered assets **neutral**.

With this in mind, the overall impact of the proposed development can be assessed as **negative/minor**, although this can be further offset through the knowledge that there is no permanent structure being put in place and that any buried archaeological resource, although slight, will be preserved in situ beneath the made-ground used to level the site. The impact on the buried archaeological resource would be **neutral**. The visual impact of the development will be **temporary/reversible**.

No further archaeological works are necessary for this development.

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APPENDIX 1: SUPPORTING PHOTOGRAPHS

WALKOVER SURVEY



VIEW FROM THE WEST CORNER OF THE SITE; LOOKING SOUTH-EAST (1M SCALE).



VIEW FROM THE WEST CORNER OF THE SITE; LOOKING EAST (NO SCALE).



VIEW FROM THE WEST CORNER OF THE SITE; LOOKING NORTH-EAST (NO SCALE).



SECTION OF THE HEDGEBANK BEYOND THE DRAIN ALONG THE SOUTH-WEST BOUNDARY OF THE SITE; LOOKING SOUTH-WEST (NO SCALE).



VIEW FROM THE WEST CORNER OF THE SITE ALONG THE DRAIN; LOOKING SOUTH-EAST (NO SCALE).



VIEW FROM THE MIDDLE OF THE SITE; LOOKING NORTH-WEST (NO SCALE).



VIEW FROM THE MIDDLE OF THE SITE; LOOKING NORTH-EAST (NO SCALE).



VIEW FROM THE MIDDLE OF THE SITE; LOOKING SOUTH-EAST (NO SCALE).



VIEW FROM THE MIDDLE OF THE SITE; LOOKING SOUTH-WEST (NO SCALE).



VIEW FROM THE EAST CORNER OF THE SITE; LOOKING NORTH-WEST (1M SCALE).



VIEW FROM THE EAST CORNER OF THE SITE; LOOKING SOUTH-WEST (NO SCALE).



VIEW FROM THE SOUTH CORNER OF THE SITE ALONG THE DRAIN; LOOKING NORTH-WEST (NO SCALE).



VIEW FROM THE SOUTH CORNER OF THE SITE; LOOKING NORTH (1M SCALE).

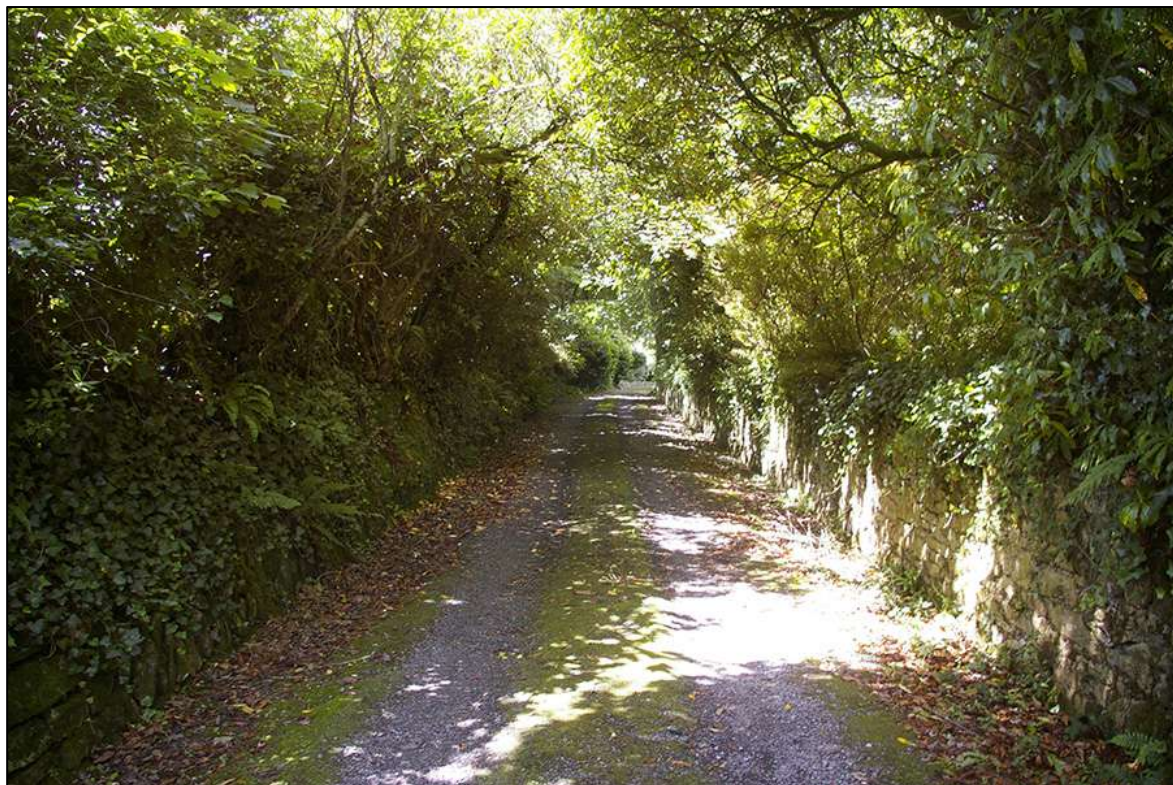


VIEW FROM THE SOUTH CORNER OF THE SITE; LOOKING NORTH-EAST (NO SCALE).



VIEW FROM THE SOUTH CORNER OF THE SITE TOWARDS TAILING'S DAM; LOOKING SOUTH-EAST (NO SCALE).

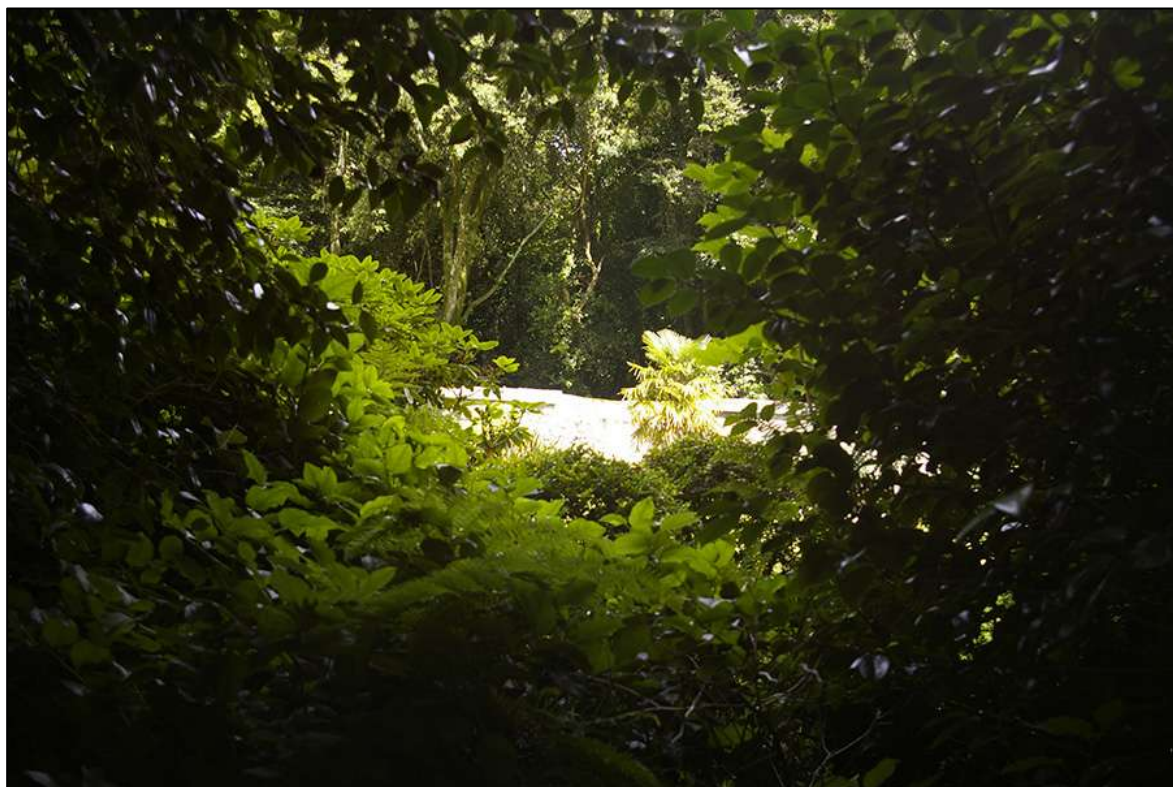
HVIA



ACCESS TO MELODY HOUSE SHOWING SCREENING OF THE HOUSE AND ADJACENT CHURCH; LOOKING WEST (NO SCALE).



MELODY HOUSE; LOOKING WEST (NO SCALE).



VIEW FROM DRIVE-WAY TO MELODY HOUSE TOWARDS THE SITE; LOOKING SOUTH (NO SCALE).



WESTERN ENTRANCE TO MELODY HOUSE; LOOKING SOUTH (NO SCALE).



SECOND WESTERN, SOUTH SIDE OF PROPERTY ENTRANCE TO MELODY HOUSE; LOOKING SOUTH-EAST (NO SCALE).



VIEW FROM CROSS LANES, ADJACENT TO OVERGROWN BOUNDARY STONE, TOWARDS THE SITE; LOOKING EAST-SOUTH-EAST (NO SCALE).



VIEW FROM THE ENTRANCE TO ST MICHAEL'S CHURCH LOOKING TOWARDS THE SITE; LOOKING SOUTH (NO SCALE).



ST MICHAEL'S CHURCH AND BILLY BRAY'S GRAVE; LOOKING NORTH-WEST (NO SCALE).



VIEW TOWARDS THE SITE FROM ST MICHAEL'S CHURCH; LOOKING SOUTH (NO SCALE).



WELL-HEAD AND ST MICHAEL'S CHURCH; LOOKING NORTH-EAST (NO SCALE).



BALDHU CHAPEL; LOOKING SOUTH-WEST (NO SCALE).



BALDHU CHAPEL; LOOKING WEST (NO SCALE).



VIEW FROM BALDHU CHAPEL TOWARDS WHEAL JANE; LOOKING WEST-SOUTH-WEST (NO SCALE).



THE WELL-HEAD IN ST MICHAEL’S CHURCH YARD; LOOKING SOUTH-WEST (NO SCALE).



BILLY BRAY’S GRAVE AND MEMORIAL; LOOKING WEST (NO SCALE).



VIEW TOWARDS THE SITE FROM ST MICHAEL'S CHURCH AND BILLY BRAY'S GRAVE; LOOKING SOUTH (NO SCALE).



GOODERN BARROW; LOOKING SOUTH-WEST (1M SCALE).



VIEW FROM GOODERN BARROW ACROSS THE PLATEAUX TO THE NORTH; LOOKING NORTH-NORTH-EAST (NO SCALE).



VIEW FROM GOODERN BARROW TOWARDS WHEAL JANE; LOOKING SOUTH (NO SCALE).



GOODERN BARROW VIEWED FROM FIELD ACCESS TO THE EAST; LOOKING WEST (NO SCALE).



VIEW GOODERN BARROW FIELD ACCESS TOWARDS THE SITE; LOOKING SOUTH-WEST (NO SCALE).



THE BARROW 230M SOUTH-EAST OF CHAPEL FARM; LOOKING WEST (1M SCALE).



VIEW FROM THE BARROW 230M SOUTH-EAST OF CHAPEL FARM; LOOKING SOUTH (NO SCALE).



VIEW FROM THE WEST CORNER OF THE FIELD CONTAINING BARROW 230M SOUTH-EAST OF CHAPEL FARM, TOWARDS WHEAL JANE; LOOKING WEST (NO SCALE).



VIEW FROM THE WEST CORNER OF THE FIELD CONTAINING BARROW 230M SOUTH-EAST OF CHAPEL FARM, TOWARDS WHEAL JANE; LOOKING WEST (NO SCALE).



VIEW FROM BARROW 230M SOUTH-EAST OF CHAPEL FARM, TOWARDS SITE; LOOKING WEST (NO SCALE).



VIEW FROM THE MAIN ROAD, SOUTH OF THE SITE, NEAR BISSOE, TOWARDS WHEAL JANE; LOOKING NORTH (NO SCALE).



VIEW OF SCREENING BY WOODLAND FROM THE MAIN ROAD NORTH OF BALDHU TOWARDS THE SITE ACROSS WHAT WOULD BE ST MICHAEL'S CHURCH; LOOKING SOUTH (NO SCALE).



VIEW OF WHEAL JANE FROM A FIELD ACCESS ALONG THE ROAD BETWEEN *CROSS LANES* AND *BISSOE*; THE SITE IS SCREENED BY TREES; LOOKING EAST (NO SCALE).



VIEW FROM A PUBLIC FOOTPATH SOUTH OF MELODY HOUSE TOWARDS WHEAL JANE; LOOKING SOUTH (NO SCALE).

APPENDIX 2: HVIA ASSET LISTING TEXT

1. Melody House; Grade II Listed

List UID: 1310954

Vicarage, now private house. Circa 1848. Built for the Reverend William Haslem and possibly designed by him or helped by William White who designed the church, Killas rubble walls with shallow rubble arches over openings and slatehanging to side wall (south west). Scantle slate roofs with brick chimneys over gable ends with external breast to right and lateral shaft over side wall, left, and hip to front (south east) projection of cross wing. Irregular plan of overall L-shape with 2 unequal reception rooms flanking through passage leading to stair behind left-hand room within integral wing kitchen beyond and integral lean-to at kitchen gable end. Roof sweeps slightly lower to rear of right-hand room with narrow room behind. 2 storeys. Irregular 3-window south east front with 1-window hipped shallow projecting wing, left, with wider ground floor window with 3-light casement and 2- light casement over. 2-window part, set back to right has doorway to far left, adjoining angle, with C20 top-glazed door and window over. Wider window to ground floor right has 2-light transomed window with marginal panes. Otherwise windows are original 1-, 2- or 3-light casements with small panes, except some C20 windows to rear. A C19 engraving by Butterworth and Heath shows a conservatory/verandah with a 3-bay arcade, flush with and to right front wing. Interior is little altered with original narrow open-well open string stair with mahogany handrail wreathed over newel with curtail step. Moulded ceiling cornices to reception rooms and to stair ceiling also with moulded band. Original doors and architraves.

2. St Michael's Church; Grade II* Listed

List UID: 1329026

Anglican church, now disused. 1847. Designed by William White. Elvan rubble with dressed white limestone for doorways, windows and strings. Dry Delabole slate roofs with coped gable ends except broach spire to tower of dressed limestone ashlar. Plan of nave/chancel under one roof, south aisle under parallel roof, south porch towards west end and north tower. Decorated style. Windows have 3 cusped lights with reticulated Decorated style tracery and latticed leaded glazing except to 3-stage tower which has single-light cusped openings to second stage and 2-light louvred openings to spire. Stages divided by moulded strings. Hoodmoulds to doorways and larger window openings. Plinth. West wall has nave gable, left, and slightly lower aisle gable right, each with central window. North wall: 2 windows to right of tower with pointed-arched doorway between, with original door with elaborate cast iron hinges; projecting tower, with 3-light window to lower stage; octagonal stair turret with shouldered headed doorway with original door clasping north east corner. Lean-to vestry, left, in angle between tower and chancel with pointed doorway with original door and ashlar chimney with trefoil gablets over angle. East gable of chancel projects 1 bay beyond south aisle gable; each gable with central window. South wall: 1 window to left of porch and 4 windows to right. Pointed-arched porch doorway and pointed-arched inner south doorway with original doorway with very ornate cast iron hinges. Further doorway, similar to north doorway, to right of third south window. Interior has pointed-arched bay limestone arcade between nave and south aisle and original pine arch-braced roof structure, octagonal limestone font with quatrefoils and C19 pitch pine pews with shaped ends with traceried carving. One of White's first buildings in Cornwall and rather restrained but pleasingly simple and with prominent spire which is a notable local landmark.

3. Baldhu Methodist Chapel and Sunday School; Grade II Listed

List UID: 1386529

Baldhu Methodist Church and Sunday School II Wesleyan chapel later becoming Sunday School when Methodist Chapel built. Early C19 and 1889 inscription to present chapel. Original chapel is slurried rubble and there are 2 parallel slurried scantle slate hipped roofs with red clay ridge and hip tiles; cast-iron ogee gutters and downpipes. Present chapel is roughly-coursed killas rubble with granite dressings, painted rubble to sides and rear; scantle slate roof with red clay alternate crested ridge tiles the front gable with moulded coping and kneelers. Original chapel is a rectangular plan with porch at the front end and what appears to be an integral or slightly later schoolroom alongside on its left. Alternatively, it may be that the chapel was in the front part of this and there was a schoolroom or vestry behind. The right-hand corner of the 1889 chapel adjoins the rear left-hand corner of the schoolroom and this chapel has a small rectangular aisle-less plan. 1889 chapel has round-arched openings and a symmetrical 2-window front. There is a date and name plaque to the gable above a rose window with quatrefoil glazing. The doorway has a Y-traceried fanlight with leaded glazing over a panelled door. Tall 2-light windows on either side have Y-traceried heads. The 2-window side elevations have similar windows. The original chapel has segmental brick arches over 3 original 16-pane hornless sashes to its right-hand side and there is a lean-to trap house to far right. The hip-roofed porch has a window to the left-hand side and there is a blocked doorway to its right-hand side. Left of the porch is an original tall 24-pane sash. Left-hand return has original sash with glazing bars on the left but with heightened sill to fit later C19 panelled door under, and there is a hornless 4-pane sash on the right. INTERIOR of present chapel not inspected except to note that it appears to retain its original fittings. The original chapel with schoolroom is divided by 3-bay colonnade (under the roof valley) with iron stanchions and the inner bay is divided by a wooden screen. There is a staging at the left-hand end and a rostrum in front of this. FITTINGS: mid C19 rostrum with turned balustrade and panelled end piers in early C19 chapel; 1889 chapel retains pews and rostrum with decorative railing to low partition across front of choir

area, 1925 organ. This represents a good example of an evolved group, the original chapel expressing all the vernacular qualities one associates with a simple Cornish wayside chapel.

4. Round Barrow known as Goodern Barrow, 550m east of St Michaels Church; SAM
List UID: 1019501
The round barrow known as Goodern barrow, 550m east of St Michael's Church survives well. Despite evidence for some relatively recent modification of its top, the mound remains substantially intact. The underlying old land surface, and any surviving original deposits associated with the mound and old land surface, will also remain. The scheduling includes a prehistoric round barrow, situated on level ground on top of a ridge north of the Carnon River valley. The barrow has a sub-circular earth and stone mound measuring approximately 18.2m WNW-ESE by 16.5m NNE-SSW and 2m high. It has a regular profile with fairly steep sides and a flat top around 9.3m across. A roughly square concrete plinth some 1.4m across is set in the edge of the top on the south side. The barrow is closely associated with a group of round barrows beyond this scheduling, together forming a ridge-top barrow cemetery.

5. Round Barrow 230m south-east of Chapel Farm; SAM
List UID: 1019158
The scheduling includes a prehistoric round barrow, situated on the gentle upper slopes of a spur running south from the Baldhu ridge towards the Carnon valley. The barrow has an earth and stone mound approximately 12.7m in diameter and 1.2m high, with a regular, gently sloping profile to its sides. A roughly central hollow, 5.3m in diameter and up to 1m deep, is considered to result from an antiquarian excavation. This barrow is associated with other round barrows beyond this scheduling, which together form a small ridge-top barrow cemetery.

6. Boundary Stone at SW766 427; Grade II Listed
List UID: 1311013
Tin boundary stone. Circa early C19. Dressed round-headed rectangular-on-plan granite monolith. Incised inscription to south road side, near crossroads, of WWJ with serifs. M 1 Once numerous, these stones originally marked the boundaries between mineral rights claims.

7. Well-Head over Spring; Grade II Listed
List UID: 1140858
Well-head over spring. Circa 1847. Possibly by William White who designed the church but may be by the Reverend W. Haslam. Dressed elvan with corbelled elvan roof with cross finial to east gable. Rectangular-on-plan with steps down to doorway at east end. In the style of a C15 holy well. East doorway has shouldered flat-headed arch. Roof has straight eaves cornice and corbelled roof stones are laid with slightly overhanging courses to resemble slates or tiles. Roll moulding to ridge. An attractive and functionally designed well-head in Gothic revival style.

8. Billy Bray's Grave and Memorial; Grade II Listed
List UID: 1159615
Grave with memorial obelisk. Finely dressed granite. Circa late C19 to Billy Bray, died 1868. Rectangular grave with low chamfered border, and with obelisk on inscribed pedestal with moulded base and cornice at west end. Inscription in incised thick grotesque lettering to east, north and south. East inscription: IN MEMORY OF WILLIAM BETTER KNOWN AS BILLY BRAY WHO DIED AT TWELVEHEADS, MAY 25TH 1868 AGED 73 YEARS. South inscription: BY HIS SANCTIFIED WIT, CHRISTIAN SIMPLICITY, FERVENT FAITH AND MANY SELF-DENYING LABOURS, HE COMMENDED HIMSELF TO A WIDE CIRCLE OF FRIENDS WHILE LIVING, AND THE PUBLISHED RECORD SINCE HIS DEATH OF HIS MEMORABLE SAYINGS AND DOINGS HAS MADE HIS NAME FAMILIAR AS A HOUSEHOLD WORD IN OUR OWN AND OTHER LANDS. North inscription: HE WAS A LOCAL PREACHER WITH THE BIBLE CHRISTIANS FORTY-THREE YEARS. Alongside is grave to Sarah, wife of James Bray.



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