

**PINES TIP
SUMMERCOURT
ST. ENODER
CORNWALL**

RESULTS OF A HERITAGE IMPACT ASSESSMENT



South West Archaeology Ltd. report no. 190426



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Pines Tip, Summercourt, St. Enoder, Cornwall

Results of a Heritage Impact Assessment

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Work undertaken by SWARCH for a Cleanearth (the Client)

SUMMARY

The results of a Heritage Impact Assessment carried out by South West Archaeology Ltd. (SWARCH) for the installation of a proposed solar farm at Pines Tip, Summercourt, St. Enoder, Cornwall.

The proposed site lies at the summit of Pines Tip. This formed part of the Wheal Remfry china clay workings which had historically been part of the Wheal Edith iron mines. In the 1870s, these workings were acquired by Henry Remfry, John James and George Rogers. In 1906 The Wheal Remfry Clay Brick and Tile Company was listed. The works were later sold to English China Clays Ltd. (ECC)/English Clays Lovering Pochin and Company (ECLP), before being sold to IMERYS.

Keeping the array as low level as is functionally possible and setting the panels in from the edge of the tip will minimise visibility, as the maturing gorse on the slopes will partly screen views. By leaving a generous band around the top of the summit, the site will maintain its community use, although this will need to be carefully fenced for safety. If this is impossible and the sites now established foliage is to be reduced and grazing management stopped, then the impact of undermining the good work achieved here of regenerating a landscape must be weighed up against the benefit of natural energy production.

*With this in mind, the overall impact of the proposed development can be assessed as **negligible to negative/minor**. The impact of the development on the buried archaeological resource would be **permanent/irreversible**.*



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1.0 INTRODUCTION

LOCATION: PINES TIP
PARISH: ST. ENODER
COUNTY: CORNWALL
CENTROID NGR: SW 91792 57006
PLANNING REF: PA19/01156 (SCREENING OPINION)
SWARCH REF: SEP19

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Cleanearth (the Client) to undertake a heritage impact assessment for Pines Tip, St. Enoder, Cornwall, in advance of the proposed construction installation of a 3.5MW solar farm. This work was undertaken in accordance with best practice and CifA guidelines.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site lies on a disused china clay tip to the west of the Wheal Remfrey China Clay Works, to the west of the River Fal, to the south of the A30 and the settlement of Penhale. The soils of this area are the loamy permeable upland soils over rock with a wet peaty surface horizon and bleached subsurface horizon of the Hafren Association (SSEW 1983); these overlie the igneous aplitic microgranite of the St. Austell Intrusion (BGS 2019).

1.3 HISTORICAL BACKGROUND

The proposed site lies at the summit of Pines Tip. This formed part of the Wheal Remfry china clay workings which had historically been part of the Wheal Edith iron mines. In the 1870s, these workings were acquired by Henry Remfry, John James and George Rogers. In 1906 The Wheal Remfry Clay Brick and Tile Company was listed. The works were later sold to English China Clays Ltd. (ECC)/English Clays Lovering Pochin and Company (ECLP), before being sold to IMERYS.

The site lies within an area identified on the Historic Landscape Characterisation (HLC) as Industrial: Disused: only extensive areas of industrialised land are placed in this Type. Most will be the sites of extractive industry (mining and quarrying) and only a few will still be active.

1.4 METHODOLOGY

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

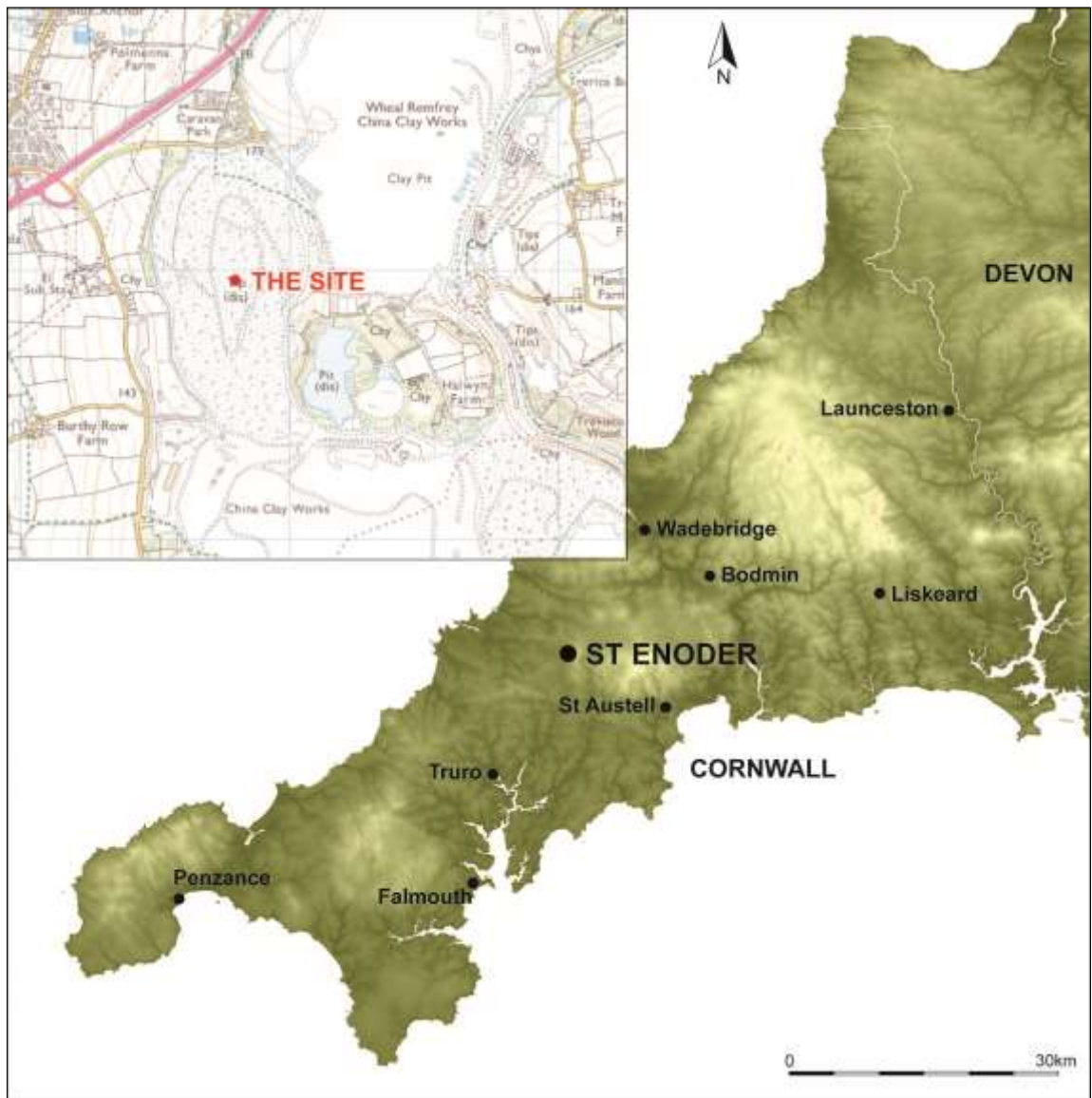


FIGURE 1: SITE LOCATION (THE SITE IS INDICATED).

2.0 HERITAGE IMPACT ASSESSMENT

2.1 HERITAGE IMPACT ASSESSMENT - OVERVIEW

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

2.2 NATIONAL POLICY

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

Paragraph 189

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

Paragraph 190

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

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

In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

2.3 LOCAL POLICY

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

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

Great weight will be given to the conservation of Cornwall's heritage assets... Any harm to the significance of a designated or non-designated heritage asset must be justified... In those exceptional circumstances where harm to any heritage assets can be fully justified, and the development would result in the partial or total loss of the asset and/or its setting, the applicant will be required to secure a programme of recording and analysis of that asset, and archaeological excavation where relevant, and ensure the publication of that record to an appropriate standard in public archive.

2.4 DIRECT AND INDIRECT IMPACTS

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

3.0 DIRECT IMPACTS

3.1 INTRODUCTION

For the purposes of this assessment, the *direct effect* of a development is taken to be its direct physical effect on the buried archaeological resource. In most instances the effect will be limited to the site itself. However, unlike designated heritage assets (see Section 4.0) the archaeological potential of a site, and the significance of that archaeology, must be quantified by means of a staged programme of archaeological investigation.

3.2 ARCHAEOLOGICAL POTENTIAL

3.2.1 Setting

The site sits on Pines Tip, a former clay mining waste dump. This stands on the north-western edge of the vast Parkandillick and Treviscoe IMERYS clay works. The open scar of the workings frames the landscape to east, south-east and south. The setting of the site is *working industrial* or *natural resource exploitation*. Its character for several centuries was of mining, with a number of post-medieval heritage assets in the area, such as engine houses and conical tip mounds, which relate to mining. There is a secondary subservient 'relict' working agricultural character to the west of the site, within the wide shallow valley towards Summercourt, to the west and south-west, where blocks of fields remain. Despite the presence of both active and historic tips, the area is generally a lot greener and more 'natural' in appearance than would be expected due to ecological regeneration offset schemes employed by the multi-national conglomerates which run the works. Much of the landscape is now low level scrub and lowland heath, dominated by rough grazing and gorse. Up on the exposed windy summit of Pines Tip, the aural intrusion from the clay works, to the east and south and the adjacent A30 trunk route to the north does not allow for peaceful enjoyment of the newly regenerated landscape, despite its pleasing ecological richness and diversity. The views from Pines Tip exhibit numerous existing solar arrays, particularly to the south-west, in the low lying green pasture fields near Summercourt; to the south near Trendeal and St Stephen, there are also the visually dominant profiles of wind turbines, a particularly large one just off the south-western edge of Pines Tip and the large wind farm on Carland Downs dominating all views west.

3.2.2 Consideration of the Proposals

The proposal is for a solar array to be located on the relatively level summit of Pines Tip, within a fenced enclosure currently used for animal grazing and seeded with gorse, rushes and rough grazing heathland grass species. The array is expected to be visible from a vast area to the west and south-west in the low-lying wide and shallow valley, as well as being visible to a more restricted area to the east. Two areas of grids would be set up; to the north a smaller area, beyond a deeply incised track way which bisects the summit, to the south a much larger area, but leaving the very open and flat southern end clear of any installation.

The site is currently open to the public as permissive land, accessed via a small car park and fenced footpaths. The top of the tip is a secure fenced enclosure, with post and wire animal fencing, accessed via stile. The regeneration of the landscape and community access benefits have been used to offset many of the negative impacts of the clay works. If the solar array will cause the access to be restricted, or the seeded native species plants to be removed, cut back or reduced, this will undo all of the good work and have social and environmental impacts.

As it is, if these things are managed, the creation of a solar array here continues man's history of exploitation of this area's natural resources, in this case sunlight, fitting in with the wind turbines and clay mining as broadly similar activities.

3.2.3 Walkover

The site comprises a relatively flat, elongated wedge-shaped summit on Pines Tip, a vast manmade hill ridge, a former clay waste 'tip'. This tip reached maximum height some time ago, on the intensively worked, active Clay works and was regenerated as lowland heathland by Imerys, winning an award from Natural England in 2017, as part of their "Tomorrow's Heathland Heritage Project – Putting the Wild Heart Back into Cornwall" which re-established lowland heathland to almost 2,000 acres across 26 main sites.

The site lies at the top of the 'tip' within the fenced rough pasture of gorse, grass and rush species. The enclosure is bounded by timber post and wire sheet fencing, accessed via stile and footpath to the west and hardcore farm track and secured five bar gate to the east. This is now permissive walking route land and during the walkover was seen to be actively used by the community. A deeply incised track bisects the summit to the north end, serving the hardcore track and shallow outer vehicle tracks line the fence line, leaving the central portion of the tip summit untouched and undamaged, allowing wildlife and plants to flourish. Water butts and storage tanks show that animals, likely sheep, are used to maintain the landscape via natural grazing management and it is expected it is run under an environmental scheme, with Natural England.

The summit is very exposed and windy, all foliage low lying, the largest merely scrub species, even the slopes are quite sparsely populated, trees hugging the lower slopes more successfully. There are vast 360 degree views from this summit across the landscape and long views along the summit itself from north and south.

3.2.4 Archaeological Potential

When considering the archaeological potential of the site, the nature of the 'made' ground of the 'tip' negates there being features of any kind. Having said that, as this is a historic tip, there is some chance of historic mining waste including broken tools, lost personal items or objects, etc.. The likelihood of ever finding such inclusions is so minor as to make this a neutral and barren a site for archaeology.

4.0 INDIRECT IMPACTS

4.1 INTRODUCTION

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

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

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

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

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

4.2 QUANTIFICATION

The size of the proposal site, as well as the local topography, would indicate that a search radius of approximately 5km is sufficient for this study.

There are four designated heritage assets in category 2 which have been deemed to require detailed consideration. These are the parish churches of St. Enoder and St. Dennis, Trewheela Farm and Parkandillick Engine House.

4.3 IMPACT BY CLASS OF MONUMENT OR STRUCTURE

4.3.1 Farmhouse and Farm Buildings

Listed farmhouses with Listed agricultural buildings and/or Curtilage; some may have elements of formal planning/model farm layout

These have been designated for the completeness of the wider group of buildings or the age or survival of historical or architectural features. The significance of all of these buildings lies within the farmyard itself, the former historic function of the buildings and how they relate to each other. For example, the spatial and functional relationships between the stables that housed the cart horses, the linhay in which the carts were stored, the lofts used for hay, the threshing barn to which the horses brought the harvest, or to the roundhouse that would have enclosed a horse engine and powered the threshing machine. Many of these buildings were also used for other mechanical agricultural processes, the structural elements of which are now lost or rare, such as apple pressing for cider or hand threshing, and may hold separate significance for this reason. The farmhouse is often listed for its architectural features, usually displaying a historic vernacular style of value; they may also retain associated buildings linked to the farmyard, such as a dairy or bake house, and their value is taken as being part of the wider group as well as the separate structures.

The setting of the farmhouse is in relation to its buildings or its internal or structural features; farmhouses were rarely built for their views, but were practical places of work, developed when the farm was profitable and neglected when times were hard. In some instances, model farms were designed to be viewed and experienced, and the assessment would reflect this. Historic farm buildings are usually surrounded by modern industrial farm buildings, and if not, have been converted to residential use, affecting the original setting.

What is important and why

Farmhouses and buildings are expressions of the local vernacular (evidential) and working farms retain functional interrelationships (historical/associational). Farms are an important part of the rural landscape, and may exhibit levels of formal planning with some designed elements (aesthetic/designed but more often aesthetic/fortuitous). Working farms are rarely aesthetically attractive places, and often resemble little more than small industrial estates. The trend towards the conversion of historic farm buildings and the creation of larger farm units severely impacts on historical/associational value.

Asset Name: Trewheela Farmhouse	
<i>Parish:</i> St Enoder, Cornwall	<i>Value:</i> Medium
<i>Designation:</i> GII	<i>Distance to Development:</i> less than 1km
<p><i>Description:</i> Listing text - Farmhouse. Early - mid C17; altered circa mid C19, with C20 alterations. Granite rubble with granite quoins. Slurried scantle slate hipped roof with ridge tiles; partly asbestos slate. Gable end to right with gable end stack with granite rubble shaft. Stack with brick shaft at the left side. Plan: What remains of the lower end room of a formerly larger house; the room is heated from a gable end stack at the right end, and the passage is at the left side. Probably in circa mid C17 a 2-storey porch was added to the front of the passage. In circa mid C19, the upper left-hand end was replaced by a 2-room plan cross-wing, with a larger room at the front, heated from a stack at the left side, and a small unheated dairy at the rear. A straight stair was inserted in the passage. At the rear of the passage the wall is slightly curved, which may represent the site of an earlier stair. Probably also in the C19 a small lean-to pantry was added at the left side of the porch, and a lean-to was added at the right end.</p> <p>Exterior: 2 storeys, asymmetrical front with 2-storey porch and one bay to each side. The porch has a hipped roof; the doorway is in granite, with 2-centred arch, hollow-moulded with run-out stops and hood mould; C20 door. Single storey lean-to at the left side with casement at the left side. To left, the C19 range has C20 window at first floor. To right, a C20 window at ground and first floor. Attached to right is a single</p>	

storey lean-to with C20 window to front and C20 door at the right side. The lean-to is built around a large external stack. At the rear, there is a 4-pane sash at ground floor and 2-light casement at first floor left; the gable end of the C19 wing has C19 12-pane sash at ground and first floor.

Supplemental Comments: Large farmhouse and yard of traditional stone barns, within a block of agricultural fields, next to the busy A30 trunk-route which cuts through the wide shallow valley at Fraddon/Summercourt. The house cannot be seen clearly from the road, but there is direct intervisibility with the summit of Pines Tip. The farm does not look to be purely agricultural in nature any more as the yard is clustered with caravans, lorries and lots of other vehicles, both scrap and usable. Some of the barns are infilled with relatively modern metal framed sheds which may be semi industrial in use or rural enterprise business use.

Conservation Value: The farmhouse, even at great distance, looks to be of more complex phasing than the Listing suggests. It will undoubtedly contain further information on build and development, as well as related information on the occupants over time. The farmhouse will seal historic floor layers and potentially deposits in the ground beneath. Aesthetically, the building is quirky and of good historic character but much compromised by the adjacent large road, landscaping/lighting and consequent drop in status that has led to its somewhat eclectic yard setting, filled with vehicles and scrap. No known historical associative or communal value.

Authenticity and Integrity: The building and its context among its barns, physically projects historical farming authenticity, but is compromised by its current mixed use and seemingly no longer a farm. Its historical integrity seems high, as suggested by the listing.

Setting: The farm sits to the north of its courtyard of barns, framed to north, east and west by fields. It looks as if there may be gardens around the farmhouse to north and south. The fields which frame the house are laid to grass pasture with mature hedgebank boundaries. To the north, further away, is the banking and landscaping of the A30, with all of its lighting and constant aural intrusion into the fieldscape. To the south-east on higher slopes, near the entrance drive to the farm is a massive substation and large line of pylons. These add cumulatively to the noise by strongly inserting modern visuals into what was intended to be a simple agricultural setting.

Contribution of Setting to Significance of Asset: The current setting wholly undermines the reading of this building, as a larger house of some notable status, reworked into a farmhouse, of 1600s date or earlier. Modern visual and aural impacts are eroding the intended fieldscape setting of this building and its mixed use and accumulation of vehicles is very negative to its experience. The house is now effectively divorced from its setting, both wider afield and immediately within its own yard, consequently detracting from its significance.

Magnitude of Effect: There are several large solar installations in the immediate vicinity of the farm, to the south, south-west and west. However these are all on the same low undulating valley bottom as the farm and effectively screened with trees and hedgebanks. The solar farm would be visible on the top of Pines Tip or the upper part of the grid installations. This would only be visible through the substation and pylon, across the road, and framed by the open scar of the China Clay workings. There could be considered to be a cumulative impact of further modern, non-agricultural elements appearing in views, enclosing the farmhouse further in an 'alien' environment. There is little direct impact and indirect impact is somewhat negated by the closer to home visual intrusions.

Magnitude of Impact: Medium value asset + Negligible change

Overall Impact Assessment: **Negligible Impact; Negative/minor cumulative Impact**

4.3.2 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, many 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.

Where parishes are relatively small, 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 development is located within the landscape in such a way to interrupt line-of-sight between church 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 element in this landscape.

Churchyards often contained Listed gravestones or box tombs, and associated yard walls and curtilage are usually also Listed. The setting of all of these assets is usually extremely local in character, and local blocking, whether from the body of the church, church walls, shrubs and trees, and/or other buildings, always plays an important role. As such, the construction of a wind turbine is unlikely to have a negative impact.

What is important and why

Churches are often the only substantial medieval buildings in a parish, and reflect local aspirations, prosperity, local and regional architectural trends; they usually stand within graveyards, and these may have pre-Christian origins (evidential value). They are highly visible structures, identified with particular geographical areas and settlements, and can be viewed as a quintessential part of the English landscape (historical/illustrative). They can be associated with notable local families, usually survive as places of worship, and are sometimes the subject of paintings. Comprehensive restoration in the later 19th century means many local medieval churches are associated with notable ecclesiastical architects (historical/associational). The 19th century also saw the proliferation of churches and parishes in areas like Manchester, where industrialisation and urbanisation went hand-in-hand. Churches are often attractive buildings that straddle the distinction between holistic design and piecemeal/incremental development, all overlain and blurred with the ‘patina of age’ (aesthetic/design and aesthetic/fortuitous). They

have great communal value, perhaps more in the past than in the present day, with strong commemorative, symbolic, spiritual and social value.

Asset Name: Church of St Enoder	
<i>Parish:</i> St Enoder, Cornwall	<i>Value:</i> Very High
<i>Designation:</i> GI	<i>Distance to Development:</i> c.2.5km
<p><i>Description:</i> Listing text - Parish church. C14 origin; mid - late C15 additions including the south aisle and the south porch. In 1686 the tower collapsed; the south aisle is dated 1886, when it was substantially rebuilt, and the tower dated 1711 at the time of its rebuilding. Restoration dated 1869, and ICBS board dating restoration of 1951. Squared granite rubble with granite dressings; some granite ashlar, including the tower. C19 slate roofs with crested ridge tiles and gable ends. Plan: Nave and chancel in one, with north and south aisle. The original church probably had a north transept, which was incorporated in the north aisle in C15. The south aisle appears to be of C15 at the east end, substantially rebuilt in the same style in 1686, with the south porch of C15. The west tower is of 1711, probably incorporating materials from an earlier west tower. Exterior: The nave is concealed by the aisles. The chancel's east end is on chamfered plinth, with 3-light C19 Perpendicular window. The south aisle is in stone rubble at the east end, the rest in squared granite rubble; there are 3 bays to east without plinth and 5 bays to west including the south porch, on a moulded plinth with quatrefoil panels. The early bays have three 3-light C19 Perpendicular windows to south and doorway with 4-centred arch, roll-moulded with recessed spandrels and hood mould, C19 door. The east end has 4-light C15 Perpendicular window with Y tracery. The west bays have a moulded cornice and parapet with quatrefoil panels and battlements; there are 3 windows to east, of 4-lights with Y tracery, 4-centred arch and hood mould, and one similar window to west of the porch. The west end has similar 3-light window. The merlons of the battlements have carved panels which include the date 1686 and the initials WSV. The south porch is 2-storey, on moulded plinth with quatrefoil panels, set-back buttresses with carved shields, cornice and parapet with carved merlons to battlements and crocketed pinnacles. 4-centred arched doorway with wave and hollow moulding, demi-figures of angels as springers. C19 double doors. Stone bracket above as image stand. The interior of the porch has slate floor with granite benches to sides. C19 roof. 4-centred arched doorway to the porch stair with C19 door. Remains of holy water stoup to right. Inner doorway is hollow-moulded with 4-centred arch and hood mould, fine panelled door of early C18. The north aisle is on hollow-moulded plinth, in granite ashlar; of 6 bays including the wide shallow north transept. All windows are of late C17 - early C18, 4-light with Y tracery, rounded arch and hood mould. Between the 2 bays to west is a roll-moulded doorway with recessed spandrels, 4-centred arch and hood mould, C19 door. The east end has large 5-light window, probably of C15, with cusped lights and 4-centred arch. The west end has 3-light C19 Perpendicular window. The north transept has a slurried scantle slate roof with raised coped verges to the gable; in rubble with granite quoins. 3-light north window of C19 in Early English style. The west tower is in 3 stages, on chamfered plinth, angle buttresses with baroque scrolled set offs, moulded string courses and embattled parapet with obelisk finials. 4-centred arched hollow-chamfered west doorway with hood mould and voussoirs and floating cornice. 2-light west window with hollow-chamfered mullions, rounded arch and keystone, dated 1711, with hood mould. Second stage has a lancet to west with slate ventilator. Lancets to north for stair. Third stage has single round-arched bell-openings with keystones and wooden louvres. Interior: Plastered walls and tiled floors except for the north east aisle, which is granite paved. The nave has an unceiled wagon roof, possibly of the C18. North and south aisles have C15 wagon roofs with carved ribs, bosses and wall-plates; same roof in north transept. The east end of the south aisle and the chancel have C19 arched-brace roofs with windbraces. The tower arch is rounded with imposts. Nave has 4-bay north and south arcade; the south arcade is of the C14, with 2-centred arches with octagonal piers, convex and concave moulded arches. North arcade has Pevsner A-type piers with carved capitals, 4-centred arches; similar arch to north transept. The chancel has a 3-bay north and south arcade with Pevsner A-type piers with carved capitals and 4-centred arches. The chancel has C19 paired cusped recesses to right and left of the altar. In the north wall of the north aisle, there is an unexplained niche to right and left of the window to west of the transept. Fittings: C12 font in south aisle, with circular bowl and criss-cross pattern around the rim, 2 masks remaining and circular stem. Slate sundial with gnomon dated 1766 in south aisle. C19 benches in nave and aisles, with C15 bench ends. Panelled C19 pulpit in nave, incorporating some C15 carving. C19 Gothic style rood screen also incorporating some C15 carving. Good C19 Gothic altar table with clustered shafts. Royal Arms of Charles II in north aisle. Painting in north transept, probably of early C19, oil on canvas. Monuments in north transept: 3 marble monuments to</p>	

Richard Retallack, 1831, Elizabeth Lawer, 1851 and Elizabeth Basset, 1854. In north aisle: 3 slate ledger stones, to Anthony Carvinack, 1744, Anthony Tanner, 1708 and John Treseyse, C17. Fine slate monument with 2 arches and 3 kneeling figures in low relief, with mottoes and verses to Dorothy Tanner, 1634. Oil on board memorial in chancel, to Frances Flamank, 1785. In south aisle, 3 slate monuments, to Richard Hoblyn, 1765, John Bassett, 1787 and John Bassett, early C19. Fragments of medieval glass in the east window of the south aisle. Sources: Pevsner, N.: Buildings of England: Cornwall 1970.

Supplemental Comments: This is a large church of fine decorated style, with a better than average survival of its medieval fabric, with a more superficial 19th century restoration.

Conservation Value: The building is of immense aesthetic value being one of the finest decorated churches in its area. It will also contain much evidential value, both beneath its floors and in its structure, but also in archaeological evidence which may be sealed beneath its footprint or within the churchyard. It has immense communal value as the heart of a large parish community. Some ascribed historical value as there are memorials to members of notable local families, including the Bassets, Tanners, etc.

Authenticity and Integrity: The church is extremely authentic, still being the working building at the heart of a large and busy parish community. It is of very high structural integrity and contains many internal historic features from the medieval to 19th century, its completeness reflected in its Grade I Listing.

Setting: The church sits in a small, irregular, wedge-shaped walled churchyard, framed by tall mature trees, including oaks, ashes and chestnuts. To the east is a small field, bounded by hedgebanks, to the north-west a large 20th century burial ground extension. To the south-east, south and south-west the church is enclosed by its churchtown settlement, with larger stone or rendered houses and smaller, more recent terraced cottages, all framed by further mature fields and hedgebanks, quite an enclosed character to the setting.

The wider setting has experienced a lot of change, many of the fields combined hedgebanks grubbed out creating large open enclosures with wide views. To the immediate south is the busy A30 roadway, with all of its associated road noise, light pollution and inherent division of the landscape impacts, which are imposed on the setting of the church and settlement.

Contribution of Setting to Significance of Asset: The immediate setting within its unspoilt churchyard and framed by the churchtown setting is beneficial, in providing a contiguous and little changed context in which to understand this community building. However the wider changes to the landscape from more intensive farming, from the A30 road and further afield large windfarms, solar farms and vast modern clay workings is indirectly, but inherently negative in a cumulative sense.

Magnitude of Effect: The solar array will probably be visible on the top of Pines Tip, at least the upper portion, the rest screened by gorse bushes which occupy the slopes. This will add to metal-based built form, modern structural outlines on the skyline and emphasise the ongoing and pervasive modernisation of this landscape; with intensive building to the east at Fraddon and Penhale, as well as the industry at the Clay works. The tip itself is a manmade feature. Between the tip and church are the massive substation and pylons, as well as a large kinetic profile of a wind turbine, so that may help to minimise any effects. Overall an indirect cumulative impact will be felt on the church and other features of the relict agricultural landscape as this process of modernisation progresses. No direct impact.

Magnitude of Impact: High Value Asset + Negligible change (Slight Negative Cumulative Impact)

Overall Impact Assessment: Negligible Impact

Asset Name: Church of St Dennis	
Parish: St Denis, Cornwall	Value: High
Designation: GII*	Distance to Development: c.3.5km
<p><i>Description Summary:</i> Parish church. Probably late C14 - early C15, with later C15 tower; dated 1847 when the church was substantially rebuilt. The church was badly damaged by fire and is in the course of rebuilding at the time of survey (July 1987). Squared granite rubble with granite dressings. Granite ashlar tower. C20 slate roof with ridge tiles, gable ends with raised coped verges and cross finials. Plan: Nave and chancel in one, rebuilt in 1847 under the same gable with the south aisle, and a south porch of 1847. North aisle, rebuilt C19. West tower probably of late C15. Exterior: The east end includes the chancel and the south aisle; there are two 3-light windows with cusped lights, 4-centred arches and hood moulds, of the C19 rebuilding. The north side of the nave has two 2-light C19 windows with cusped lights and square</p>	

heads. The south aisle is of 5 bays with the porch in the second bay from the west. All windows are C19, 2-light, with cusped lights and triangular hood moulds. West end blind, rebuilt probably in circa late C15 in granite ashlar. Gabled south porch has 4-centred arched outer doorway with moulded shafts to sides with caps and C19 cast iron gates. Pedimental panelled gable with datestone 1847 and obelisk finials. Interior of the porch has stone benches to sides and inner 4-centred arched doorway with roll-mouldings and cushion stops. The north aisle is of 2 bays, with 2-light and 3-light window with cusped lights and square hood moulds. Similar 2-light east window. The west tower is of 2 stages on chamfered plinth, without buttresses, with moulded string courses, embattled parapet with circular panelled pinnacles. Circular stair tower to north with lancets, parapet with coping. 4-centred arched west doorway forming a shallow internal porch; paired lancet above with Y tracery and hood mould. Second stage has 2-light bell-openings with cusped lights, Y tracery louvres and hood moulds. Second stage to north has single cusped light. Pyramidal lead roof. Interior: Plastered walls, and C20 5-bay arched-brace roof rising from stone corbels in the nave, chancel and south aisle, all in one. 4-centred tower arch, with inner arch with carved figures as springers. Stone newel stair in the stair tower. There is a 3-bay arcade to the north aisle, rebuilt C20, with octagonal piers. Fittings: Only the font remains, in the nave, in granite, with panelled sides and stem, probably C19. The church is built on the site of an Iron Age hill fort and is a prominent local landmark. The boundary wall of the churchyard is circular, following the outline of the fort and retains a good collection of C19 monuments, not all individually listed. Sources: Pevsner, N.: Buildings of England: Cornwall 1970.

Supplemental Comments: Small, much adapted and largely rebuilt church, on a prominent outcrop, with 360 degree views across a landscape much altered by the post-medieval mining industry. The medieval fabric of this building relates to an earlier relict agricultural landscape which predates its complex and diverse historic and modern setting. After 19th century rebuilding, a late 20th century fire further ravaged the building, all roofs now 1980s in date. Despite this, the exposed setting of the church has weathered the building and the church and churchyard are a cohesive grouping.

Conservation Value: Very high aesthetic and evidential value, as the building itself will contain further detailed phasing and seal historic ground surfaces beneath its floors as well as hundreds of years of historic burials. It is of good historic character with particularly fine carvings. Historically, it is important for its early date and influence in the cultural landscape of Cornwall. Also of high communal value, still actively functioning as the focal point of a large parish.

Authenticity and Integrity: The church is of historic character and still a working parish church, of good ecclesiastical authenticity. It is of good historic integrity, for a heavily restored 19th century rebuild, its tower is the only fully medieval element.

Setting: The church sits on a tall rocky outcrop, within two consecutive stone hedgebank-framed enclosures, a small one to the north, a larger enclosure to the south, now a grassed park with public benches, paths, etc. The smaller enclosure is the original medieval churchyard, with granite posts to gateways; this has a strong mature tree boundary which obscures outwards views and on a landscape level screens the squat medieval tower. The banks here may be adapted from an early multivallate enclosure settlement, although likely 19th century in date. The largely 18th and 19th century character settlement wraps around the south and west sides of the steep hillside below the church.

Contribution of Setting to Significance of Asset: The church was located atop the outcrop to emphasise the importance of the church as a focal point for the parish. It stamped Christianity on the landscape quite literally, building a church on one of its natural highest points and within a hillfort, showing a desire to link to an ancient past, the place being recognised as important for early peoples. The landscape presence of the church has now been totally undermined by the wider historic mining landscape and the conical and pyramidal elongated mining tips which have created a false 'mountainous' impression across this landscape.

Magnitude of Effect: This small rural church, tied to scattered working agricultural settlements is now totally enclosed by a complex landscape of a mix of historic mining and modern industry, with the vast open scars of the clay works to the south and south-west and conical grassed tip mounds to south and south-east. The industrial settlements of Fraddon and Indian Queens sprawl across the landscape in linear form, following the road routes and the wider landscape to north and north-east, truncated by the raised A30 trunk route, with all of its aural and lighting intrusion. In this landscape, with wind turbines and solar farms adding to the visual complexity, another solar farm is unlikely to really register on the visual scale. However it will be located atop Pines Tip, directly opposite, to the west and in a very elevated position. Rather than direct or even indirect, the effect is somewhat cumulative on all collective medieval and early

features which relate to a very different relict agricultural landscape. It is right to focus change in areas already scarred by historic and modern activity, but it does put added strain on assets which survive in those locations.

Magnitude of Impact: High value asset + slight negative cumulative change

*Overall Impact Assessment: **Negative/minor Cumulative Impact***

4.3.3 Industrial Buildings and Infrastructure

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

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

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

What is important and why

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

Asset Name: Parkandillick Engine House	
<i>Parish:</i> St Denis, Cornwall	<i>Value:</i> High
<i>Designation:</i> GII*	<i>Distance to Development:</i> c.3km
<i>Description: Listing text</i> - Engine house with attached boiler house and detached chimney. C19. Granite rubble with brick dressings. Slate roof with ridge tiles and gable ends. Plan: Rectangular plan engine house, with the front gable end to south east and the bob wall at the rear gable end. The boiler house is attached at the right side, to north east, and the chimney is about 10 metres away to south east. The engine house has a 50 inch bore pumping engine and retains all machinery: Exterior: 3-storey engine house, with a symmetrical front gable end; ground floor has wide round-arched doorway with brick arch, half-glazed door with sidelights and overlight. First and second floors have C19 12-pane sash with round brick arch. The boiler house is attached to right, and projects to front right, single storey with a 6-pane window at rear at the inner side and blind gable end. The chimney is to front right, detached; of circular plan, tapered, in rubble, with brick cornice. At the right side the boiler house has 9-pane window and plank door, with 6-pane light to rear. The right side of the engine house has round-arched 12-pane sash at first floor level. At the left side, engine house is blind, with small single storey shed attached, with door and blocked window opening to front. At the rear, at ground floor there is a half-glazed door with fanlight and round brick arch.	

The upper bob opening is weather boarded, with a platform to each side of the beam. Interior: The engine house retains complete machinery with a 50 inch beam engine. From ground floor to first floor there is a straight stair at the right-hand side, with scrolled string.

Supplemental Comments: Large, well preserved engine house on the Parkandillick IMERYS Clay works site. This once visually dominant building is totally subsumed into the modern industrial environment and whilst it is broadly of the same ongoing mining character, the traditional local vernacular materials of the engine house and smaller historic scale allowed it to blend far better than the steel and concrete structures which now dominate the skyline. Indeed, outside of its immediate setting the engine house is no longer visible at all in a landscape sense. Instead, the visible reminders of the centuries of mining here are the large conical tips, overgrown, but providing a unique manmade topography. Access is limited to the site except via a poor condition footpath from Hendra village, its setting still a dangerous working industrial environment.

Conservation Value: The engine house is Listed Grade II* for its good architectural details and regionally specific vernacular materials, oddly pleasing with its distinctive vertical profile and tapering detached chimney. It is of historical value as an element in the wider relict industrial landscape of Cornwall. There is also communal value to such structures in that the communities such as Hendra and Nanpean grew up around these historic mines, people moved to Cornwall en masse from other locales to work for these companies and strong societies were formed. Mining is still the primary employer in these districts and many will have been involved with Parkandillick for generations. In and around the building will be buried deposits from mining and within the study of the form of the building information on mining practice and engine house design.

Authenticity and Integrity: The engine house is now a heritage asset, no longer a working building, but was Listed at a high level for its good structural integrity and authenticity/completeness.

Setting: The engine house lies on the active and massively upscaled Parkandillick mine site, run by multi-national conglomerate IMERYS. Truncated rustic roads access the site, but the public are restricted. Some historic farmhouses or 19th century mine buildings or cottages remain within the complex, which is otherwise of concrete and steel. The engine house sits between the open workings and the 19th century mining village of Hendra, in a fringe area of scrubby overgrowth and abandoned grassed over tips, a landscape imitating natural undulating lowland heathland, re-generated by the mining companies to offset their environmental impact. Framed by distinctive conical tip profiles on the skyline.

Contribution of Setting to Significance of Asset: Whilst its setting on a working modern mining site is damaging to its former landscape presence, it is a continuity of use in the landscape, which does help ground the building, despite its somewhat vernacular historic appearance in "industry".

Magnitude of Effect: So all encompassing and enclosing is the modern mining site that Parkandillick does not really relate to the wider landscape and in some ways that is correct; it was always a building specific in function and location to the mine itself. The setting to the east, overgrown, more naturalised fringe of the mine site and 19th century Hendra village, with rows of attached cottages or larger grey stone villas is the only relevant context for this engine house, to which it can still spatially and visually relate. The tip at Pines does relate to this historic mining landscape but is so divided from the setting as to have no real connection in the landscape. The solar farm will likely be visible on this more open side, but viewed across the massive scar of the active open workings, it will have little meaningful effect. There may be a cumulative slight impact of further modernisation, change etc, but this is expected to be negligible.

Magnitude of Impact: High Value Asset + Negligible change

Overall Impact Assessment: Negligible Impact

4.3.4 Historic Landscape

General Landscape Character

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

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

The proposed site would be constructed within the *St. Austell or Hensbarrow China Clay Area* Landscape Character Area (LCA):

- This LCA is a varied, dramatic landscape of china clay waste tips and areas of rough vegetation, characterised by open pit mining. The mix of active and disused sites creates a dramatic 'lunar' landscape of huge, light-coloured waste tips and settling ponds within a relict pastoral farming landscape. The development will sit on one of the large tips in this LCA, continuing the modern use of this landscape. On that basis, the impact is assessed as **neutral**.

4.3.5 Aggregate Impact

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

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

4.3.6 Cumulative Impact

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

The Setting of Heritage Assets 2011a, 25

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

GLVIA 2013, 123

An assessment of cumulative impact is, however, very difficult to gauge, as it must take into account existing, consented and proposed developments. The threshold of acceptability has not, however, been established, and landscape capacity would inevitably vary according to landscape character. The visual impact of the array on the wider landscape is individually fairly negligible, but it will have a **negative/slight cumulative impact**, furthering the intensive redevelopment and modernisation seen in and around Fraddon and Indian Queens, down to St Stephens, both from natural energy schemes, housing and modern mining activity.

TABLE 1: SUMMARY OF INDIRECT IMPACTS.

Asset	Type	Distance	Value	Magnitude of Impact	Assessment	Overall Assessment
Trewheela Farm	GII	<1km	Medium	Negligible	Slight	Negligible to Negative/Minor
St. Enoder Church	GI	c.2.5km	High	Negligible	Slight	Negligible
St. Dennis Church	GII*	c.3.5km	High	Minor	Slight	Negative/Minor
Parkandillick Engine House	GII*	c.3km	High	Negligible	Slight	Negligible
Historic Landscape	-	-	High	No change to negligible	Neutral/Slight	Neutral
Aggregate Impact	-	-	-	No change	Neutral/Slight	Neutral
Cumulative Impact	-	-	-	Negligible	Slight	Negligible

5.0 CONCLUSION

The proposed site lies at the summit of Pines Tip. This formed part of the Wheal Remfry china clay workings which had historically been part of the Wheal Edith iron mines. In the 1870s, these workings were acquired by Henry Remfry, John James and George Rogers. In 1906 The Wheal Remfry Clay Brick and Tile Company was listed. The works were later sold to English China Clays Ltd. (ECC)/English Clays Lovering Pochin and Company (ECLP), before being sold to IMERYS.

Keeping the array as low level as is functionally possible and setting the panels in from the edge of the tip will minimise visibility, as the maturing gorse on the slopes will partly screen views. By leaving a generous band around the top of the summit, the site will maintain its community use, although this will need to be carefully fenced for safety. If this is impossible and the sites now established foliage is to be reduced and grazing management stopped, then the impact of undermining the good work achieved here of regenerating a landscape must be weighed up against the benefit of natural energy production.

With this in mind, the overall impact of the proposed development can be assessed as **negligible to negative/ minor**. The impact of the development on the buried archaeological resource would be **permanent/irreversible**.

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APPENDIX 1: IMPACT ASSESSMENT METHODOLOGY

Heritage Impact Assessment - Overview

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

National Policy

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

Paragraph 189

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

Paragraph 190

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

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

In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

Cultural Value – Designated Heritage Assets

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

Listed Buildings

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

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

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

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

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

Conservation Areas

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

Scheduled Monuments

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

Registered Parks and Gardens

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

Registered Battlefields

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

World Heritage Sites

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

Value and Importance

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

TABLE 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; Assets with very little or no surviving archaeological interest; Landscapes with little or no significant historical interest.
Unknown	Buildings with some hidden (i.e. inaccessible) potential for historic significance; The importance of the archaeological resource has not been ascertained.

Concepts – Conservation Principles

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

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

Evidential Value

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

Historical Value

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

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

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

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

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

Aesthetic Value

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

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

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

Communal Value

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

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

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

Authenticity

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

Integrity

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

Summary

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

Setting – The Setting of Heritage Assets

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

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

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

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

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

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

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

Landscape Context

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

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

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

Views

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

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

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

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

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

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

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

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

Type and Scale of Impact

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

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

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

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

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

Scale of Impact

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

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

TABLE 3: MAGNITUDE OF IMPACT (BASED ON DMRB VOL.11 TABLES 5.3, 6.3 AND 7.3).

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

TABLE 4: SIGNIFICANCE OF EFFECTS MATRIX (BASED ON DRMB VOL.11 TABLES 5.4, 6.4 AND 7.4; ICOMOS 2011, 9-10).

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

TABLE 5: SCALE OF IMPACT.

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

TABLE 6: IMPORTANCE OF SETTING TO INTRINSIC SIGNIFICANCE.

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

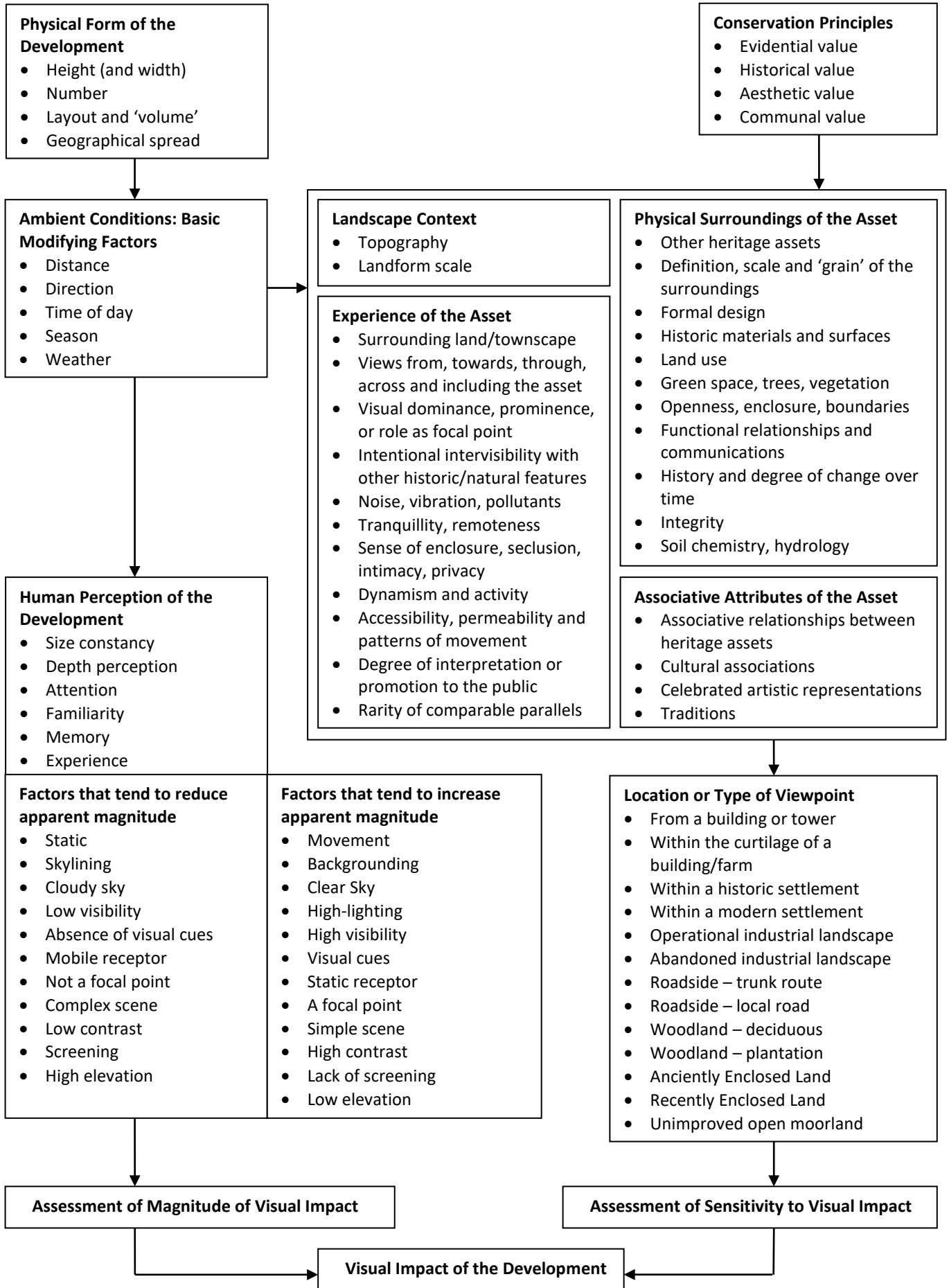


TABLE 7: THE CONCEPTUAL MODEL FOR VISUAL IMPACT ASSESSMENT PROPOSED BY THE UNIVERSITY OF NEWCASTLE (2002, 63), MODIFIED TO INCLUDE ELEMENTS OF ASSESSMENT STEP 2 FROM THE SETTING OF HERITAGE ASSETS (HISTORIC ENGLAND 2015, 9).

APPENDIX 2: PHOTOGRAPHIC ARCHIVE



THE VIEW TO PINES TIP FROM ST DENIS CHURCH, WITH THE OPEN ACTIVE WORKINGS IN BETWEEN; FROM THE EAST, SOUTH-EAST.



THE VIEW TO THE VAST AND VISUALLY DOMINANT PARKANDILLICK CLAY WORKS, SOUTH-WEST OF ST DENIS; FROM THE NORTH-EAST.



VIEW OF ROSTOWRACK AND TRELAVOUR DOWNS, WITH THE ELONGATED PYRAMIDAL AND TYPICAL CONICAL FORMS OF HISTORIC MINING WASTE TIPS WHICH DEFINE THE CHARACTER OF THE LANDSCAPE NOW IN AND AROUND ST DENIS; FROM THE NORTH.



VIEW OF ST DENIS CHURCH; FROM THE SOUTH.



VIEW OF THE CHURCH WITHIN ITS SETTING OF THE TWO ENCLOSURES, ON THE SITE OF THE FORMER HILLFORT, WITH PARK-LIKE SETTING, A PUBLIC AMENITY SPACE; FROM THE SOUTH, SOUTH-EAST.



LANDSCAPE VIEW INCLUDING ST DENIS CHURCH ON ITS SMALL OUTCROP IN A WOODED ENCLOSURE TO THE RIGHT, AND THE EDGE OF THE STILL WORKED SLOPES OF PINES TIP TO THE LEFT, WITH THE COMPLEX WORKING INDUSTRIAL LANDSCAPE IN BETWEEN; FROM THE SOUTH.



VIEW TO ST DENIS ON ITS WOODED SUMMIT TO THE EAST OF PINES TIP, FROM ITS SUMMIT; FROM THE WEST.



VIEW TO THE WORKING PARKANDILLICK CLAY WORKS SITE, WITH THE HISTORIC CHIMNEY OF THE 19TH CENTURY ENGINE HOUSE, VISIBLE IN THE FOREGROUND, SET AGAINST THE METAL CLAD BUILDINGS BEHIND, SHOWING IT HAS NO LANDSCAPE PRESENCE OR ALMOST VISIBILITY AT ALL LEFT; FROM THE SOUTH.



THE ENTRANCE TO THE STILL WORKING IMERYS PARKANDILICK CLAY WORKS; FROM THE SOUTH.



THE CLAY WORKS SITE FROM THE SUMMIT OF PINES TIP, SHOWING THE SHEER VISUAL DOMINANCE OF THE VAST MODERN BUILDINGS; FROM THE WEST, NORTH-WEST.



LANDSCAPE VIEW TO ST ENODER CHURCH, SHOWING STRONG VISUAL PROFILE OF THE TOWER; FROM THE EAST.



VIEW OF ST ENODER CHURCH WITHIN ITS SMALL CHURCHTOWN SETTING; FROM THE SOUTH-EAST.



VIEW OF THE CHURCH WITHIN ITS RAISED WALLED CHURCHYARD; FROM THE SOUTH-EAST.



VAST LANDSCAPE VIEW TO ST ENODER FROM THE SUMMIT OF PINES TIP, SHOWING IT SAT IN TREES BEYOND THE A30, WITH IN THE FOREGROUND, LYING BETWEEN EXTANT SOLAR ARRAYS; FROM THE EAST.



WIDER LANDSCAPE VIEW TO THE WEST, SHOWING ST ENODER IN THE DISTANCE WITH CARLAND DOWNS WIND TURBINES BEYOND AND IN THE FOREGROUND THE LARGE SUBSTATION, PYLONS AND TREWHEELA FARM, JUST IN FRONT OF THE A30 AND PENHALE SERVICES; FROM THE SUMMIT OF PINES TIP, EAST, SOUTH-EAST.



TREWHEELA FARM, ALMOST COMPLETELY ENCIRCLED BY SIGNIFICANT MODERN VISUAL IMPACTS AND INTRUDED UPON AURALLY BY THE ROAD AS WELL AS SIGNIFICANT LIGHTING IMPACTS; FROM THE SUMMIT OF PINES TIP; FROM THE SOUTH-EAST.



CLOSER VIEW OF TREWHEELA FARM, SHOWING THE BUILD-UP OF VEHICLES IN AND AROUND THE BARN, JUST SOUTH OF THE HOUSE; FROM THE EAST, SOUTH-EAST.



LANDSCAPE VIEW TO PINES TIP, FROM THE WEST, THE ROAD TO ST ENODER; FROM THE WEST.



DETAILED VIEW OF PINES TIP, SHOWING ITS SKYLINE PROFILE, WHICH WILL BE ALTERED BY THE SOLAR ARRAY INSTALLATION; FROM THE WEST.



VIEW NORTH ALONG THE SUMMIT OF PINES TIP, ALONG THE TRACKWAY WHICH RUNS AROUND THE FENCED EDGE; FROM THE SOUTH.



VIEW SOUTH-EAST ACROSS THE CENTRAL SECTION OF THE SUMMIT OF PINES TIP, SHOWING GORSE AND ROUGH GRASSES, THE SURFACE IS QUITE UNEVEN AND UNDULATING AT LOCALISED LEVEL HERE; FROM THE WEST, NORTH-WEST.



VIEW SOUTH ALONG THE EASTERN EDGE OF PINES TIP AND SHOWING STILE ENTRY TO FENCED ENCLOSURE; FROM THE NORTH.



LANDSCAPE VIEW WEST FROM THE SUMMIT OF PINES TIP; FROM THE EAST.



VIEW TO THE SLIGHTLY RAISED NORTHERN PROMONTORY HEAD OF PINES TIP, WHERE THE GORSE HAS NOT TAKEN AS WELL AND IT IS MORE HILLOCKY MOLINIA STYLE UPLAND GRASSES; FROM THE SOUTH-WEST.



THE DEEPLY INCISED TRACK WHICH CURVES AND BISECTS THE SUMMIT, OFFSET TO THE NORTH END; FROM THE EAST.



THE VAST OPEN WORKING OF THE CLAY WORKS, TO THE EAST OF PINES TIP; FROM THE SOUTH-WEST.



VIEW ALONG THE NORTH-WESTERN SECTION OF THE SUMMIT OF PINES TIP, AGAIN SHOWING A SLIGHT RAISE AT THIS END; FROM THE SOUTH-EAST.



VIEW ALONG THE SUMMIT FROM THE VERY SOUTHERN END OF PINES TIP; FROM THE SOUTH, SOUTH-EAST.



VIEW ALONG THE SUMMIT FROM THE VERY SOUTHERN END OF PINES TIP; FROM THE SOUTH.



VIEW ALONG THE SUMMIT FROM THE VERY SOUTHERN END OF PINES TIP; FROM THE SOUTH, SOUTH-WEST.



VIEW TO AN ACTIVE TIP TO THE SOUTH, WHICH EXPLAINS THE STEPPED ELONGATED PYRAMIDAL FORM OF PINES TIP; AS WELL AS SHOWING ADJACENT WIND TURBINE; FROM THE NORTH.



LONG VIEW ALONG THE EASTERN FLANK OF PINES TIP SUMMIT; SHOWING THE PROFILE OF THE TIP; FROM THE SOUTH.



LONG VIEW ALONG THE WESTERN FLANK OF PINES TIP SUMMIT; SHOWING THE PROFILE OF THE TIP; FROM THE SOUTH.



PANORAMIC VIEW ALONG THE EXTENT OF THE SUMMIT OF PINES TIP; PHOTO 1; FROM THE SOUTH, SOUTH-WEST.



PANORAMIC VIEW ALONG THE EXTENT OF THE SUMMIT OF PINES TIP; PHOTO 2; FROM THE SOUTH-WEST.



PANORAMIC VIEW ALONG THE EXTENT OF THE SUMMIT OF PINES TIP; PHOTO 3; FROM THE WEST.



PANORAMIC VIEW ALONG THE EXTENT OF THE SUMMIT OF PINES TIP; PHOTO 4; FROM THE WEST, NORTH-WEST.



PANORAMIC VIEW ALONG THE EXTENT OF THE SUMMIT OF PINES TIP; PHOTO 5; FROM THE NORTH-WEST.



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