



Tresawson Farm, Pelynt, Cornwall

Archaeological assessment of proposed wind turbine



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This study was commissioned by Claire Roberts of Capture Energy Ltd. and carried out by Historic Environment Projects, Cornwall Council.

The viewshed mapping was carried out by Francis Shepherd.

The Project Manager was Adam Sharpe.

The views and recommendations expressed in this report are those of Historic Environment Projects and are presented in good faith on the basis of professional judgement and on information currently available.

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Cover illustration

Looking south west from the proposed turbine site at Tresawson towards Woodford. The late prehistoric enclosed settlement of Bake Rings lies in this direction, behind the hill spur in the middle distance, centre left of shot.

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Abbreviations

EH	English Heritage
HER	Cornwall and the Isles of Scilly Historic Environment Record
HE	Historic Environment, Cornwall Council
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OD	Ordnance Datum – height above mean sea level at Newlyn
OS	Ordnance Survey

1 Summary

Historic Environment Projects, Cornwall Council, was approached by Claire Roberts of Capture Energy Ltd in late May 2013 with a request to provide costs for an archaeological assessment of a proposed wind turbine at Tresawson Farm, near Pelynt, as part of a proposed planning application.

The proposal is for a 500kW wind turbine with a hub height of 50m and a maximum blade tip height of 77m to be sited at Tresawson Farm in the eastern part of the civil parish of Lanreath, at SX 18879 56753. The site chosen for the wind turbine lies at a height of approximately 150m OD just to the south of a hilltop within an area of dissected plateau backing the south coast of Cornwall and is likely to be visible over an extensive range of the surrounding countryside. The predominant historic landscape character of the surrounding farmland suggests a farming landscape laid out during the medieval period.

The assessment consisted of a desk-based assessment, viewshed analysis out to 10km from the turbine locations and a walkover survey. Photomontages supplied by the client were also consulted.

Given the nature of the location chosen for the wind turbine, it was anticipated that there was some potential for negative impacts on the settings of a number of important Scheduled Monuments and high grade Listed Buildings within a 10km radius; particularly close to the proposed site are elements of the Giants Hedge, the late prehistoric hillfort of Bury Down, the Grade I Listed church of St Manarck and St Dunstan and the Grade II* Listed Court Barton at Lanreath. The Conservation Area at Lanreath is less than 1km to the north west. Some impacts on the Historic Landscape Character of the landscape surrounding the proposed wind turbine were also anticipated.

A geophysical survey of the proposed development site indicated the potential for substantial surviving below ground archaeological features. In particular, a possible roundhouse, enclosure and a group of ferrous pits immediately east of the proposed turbine site were tentatively identified

Following the results of the viewshed analysis and a walkover survey, setting impacts resulting from the development were considered likely to be predominantly **negative/minor**, but with some potential for **negative/substantial** impact in the case of the Giants Hedge, which runs to the east of the site and is around 200m distant at its closest point.

A report summarising the results of the assessment and its conclusions was prepared for the client.

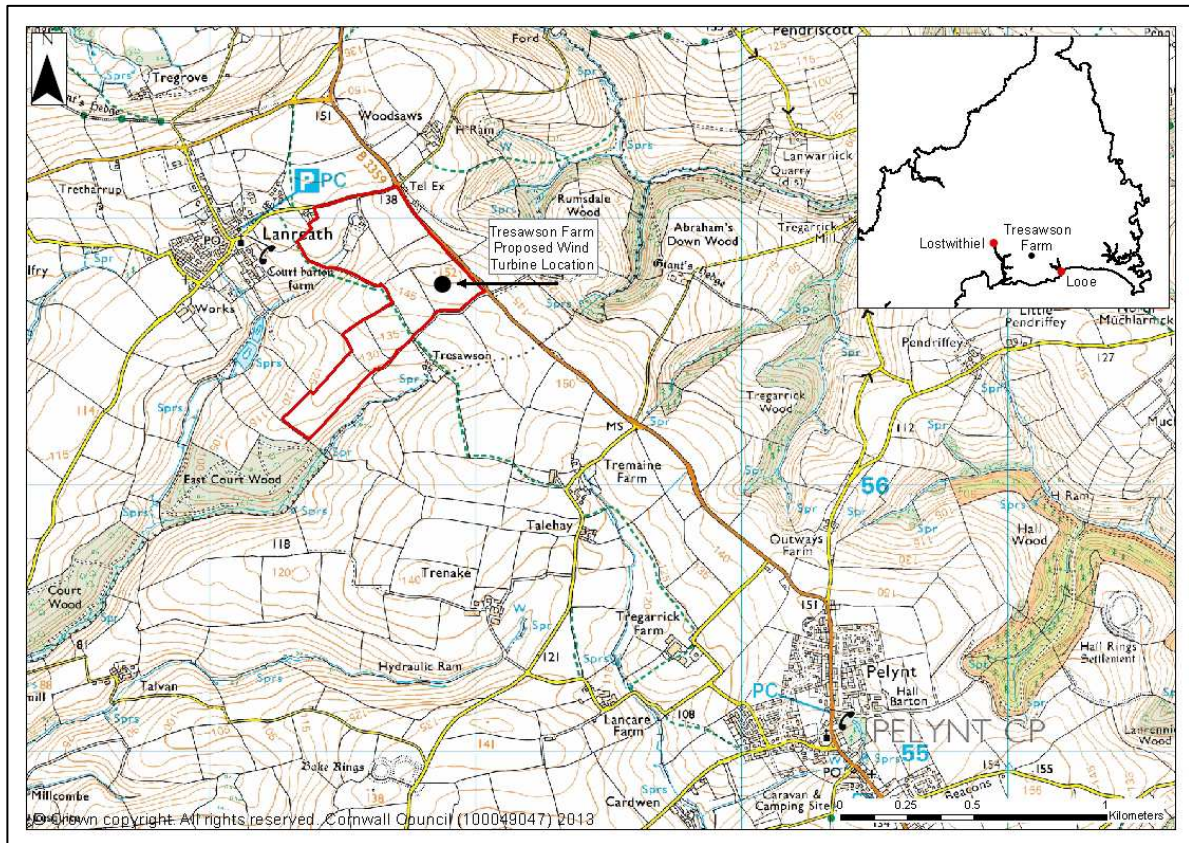


Fig 1 The Location of Tresawson Farm and the site of the proposed wind turbine

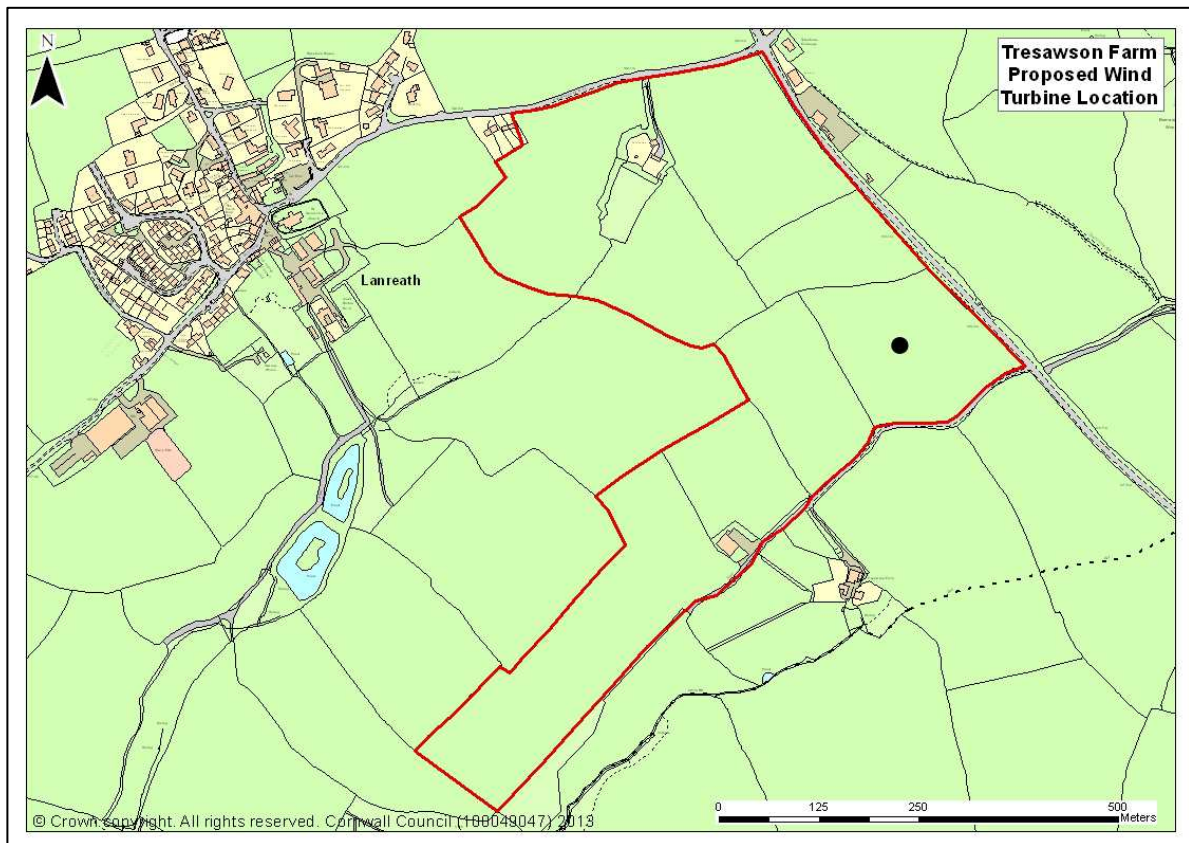


Fig 2 The location proposed for the wind turbine at Tresawson Farm

2 Introduction

2.1 Project background

Historic Environment Projects, Cornwall Council, were approached by Claire Roberts of Capture Energy Ltd in late May 2013 with a request to provide costs for an archaeological assessment of a proposed wind turbine at Tresawson Farm, near Pelynt, as part of a proposed planning application.

The proposal is for a 500kW wind turbine with a hub height of 50m and a maximum blade tip height of 77m to be sited at Tresawson Farm in the eastern part of the civil parish of Lanreath, at SX 18879 56753. The site chosen for the wind turbine lies at a height of approximately 150m OD just to the south of a hilltop within an area of dissected plateau backing the south coast of Cornwall and is likely to be visible over an extensive range of the surrounding countryside. The predominant historic landscape character of the surrounding farmland suggests a farming landscape laid out during the medieval period.

The assessment consisted of a desk-based assessment, viewshed analysis out to 10Km from the turbine locations and a walkover survey. Photomontages supplied by the client were also consulted.

Given the nature of the location chosen for the wind turbine, it was anticipated that there was some potential for negative impacts on the settings of a number of important Scheduled Monuments within a 10km radius; principally elements of the Giants Hedge, the late prehistoric hillforts of Bury Down and Hall Rings, the late prehistoric 'Round' of Bake Rings, a group of ten barrows at Wilton Down and a group of three barrows near Hendra and Cartole, all lying within 3km of the site, the stone circle at Duloe around 4.9km to the north east, Mabel bowl barrow around 4.6km to the south west, several barrow groups situated on the hillcrests around 9km to the north west, the Roman fort at Restormel, around 9.5km to the north west, and the late prehistoric hillfort at Castle Dore, around 8.5km to the west.

Also within the 10km radius are a significant number of Listed Buildings, which were anticipated as having at least partial intervisibility with the proposed development site from certain points, with some potential for negative impact on their settings. Particularly close to the site are the Grade I Listed church of St Manarck and St Dunstan and the Grade II* Listed Court Barton at Lanreath, with the Grade I Listed church of St Nonna, at Pelynt, around 2.2km to the south east, and the Grade I Listed church of St Cuby, at Duloe, around 4.75km to the north north east. The Conservation Area at Lanreath is less than 1km to the north west.

The Registered Battlefield at Braddock Down is around 6.5km to the north. Three Registered Parks and Gardens at Bocconoc, Lanhydrock and Menabilly intersect the 10km radius viewshed, though the orientation of any designed landscapes within these, their topography and the distance away from the proposed development site will most likely limit any negative impacts on their settings. Some impacts on the Historic Landscape Character of the landscape surrounding the proposed wind turbine were also anticipated.

Generally, the visible impact of the proposed wind turbine was considered to be greatest within a 1km radius, there being likely to be fairly extensive intervisibility out as far as 3km and from the north west round to the southwest out to between 5km and 10km. The nature of the local topography, however, significantly constrains the limit of potential vistas, with large areas within the 10km radius excluded from the ZTV in all directions, predominantly the lower valley slopes. Additional factors such as vegetation cover and buildings presence will most likely restrict potential views further still in some instances.

The potential for cumulative impacts was considered and the following judgement made in a pre-application assessment:

A turbine (size undetermined) was granted at Lancare Park, Pelynt, around 1.6km to the south east of Tresawson, in 2007, under decision notice number E2/06/01649/FUL, and is currently operational. A turbine (size undetermined) was granted for The Telephone Exchange, Lanreath, in 2004, under planning application number E2/04/01657/FUL, but planning permission has now lapsed. A pre-application for a 50 metre turbine at Tremaine, around 360m to the south east, was submitted in 2012 under planning application number PREAPP12/00913; a further application for a 50m turbine at Tremaine, PA13/02350, is currently under consideration. Two applications for a 44 metre and a 55 metre turbine at Bocaddon Farm, around 1.7km and 1.4km to the north west, were given screening opinions in 2011 and 2012 under planning application numbers PA11/02309 and PA12/06011; a further application for a 55 metre turbine at Bocaddon Farm was refused permission in 2012 under decision notice number PA12/09363 but is currently under appeal. An application for a 36 metre turbine at Trewen Farm, around 2.8km to the north east of Tresawson Farm, was given screening opinion in August 2013 under planning application number PA13/07541. An application for a 50 metre turbine at Bosuen Manor Farm, around 2.7km to the north east of Tresawson Farm was given screening opinion in October 2012 under planning application number PA12/08969; a further application for a 50 metre turbine at Bosuen Manor Farm, around 2.4km north east of Tresawson, had screening opinion withdrawn in September 2012 under planning application number PA12/07701. It is therefore considered that there is currently some potential for significant or adverse culmination with other development in this particular location, pending the outcome of current applications, both already approved and in process.

A model brief prepared by Mr Phil Copleston, Historic Environment Planning Advice Officer (East), Cornwall Council, was used to guide this archaeological assessment, in conjunction with the advice on assessing the impacts of such developments on the settings of designated sites provided by English Heritage (2011).

2.2 Aims and objectives

The principal aim of the study is to gain a better understanding of the impacts which would result from the construction of a wind turbine at Tresawson Farm, in the civil parish of Lanreath, near Pelynt.

The overall project aims are to:

- Draw together historical and archaeological information about the development site and its surroundings, including relevant information held within the Cornwall Historic Environment Record.
- Review and analyse historic map evidence for the site.
- Follow the approach outlined in Section 3 of the English Heritage guidance on setting.
- Identify the construction, use and 'end of life' impacts of the current proposals on the significance of the setting of these assets and on the proposal site.

The site specific project aims are to:

- Produce a report containing the desk based assessment and survey in interpreted form.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains or other mitigation is recommended.

The objective of the project is to produce a report setting out the likely range of impacts (both direct and on settings) of the development on heritage assets within the site or the surrounding locality, as defined above. A further objective is to create an entry for the OASIS/Online database.

2.3 Methods

2.3.1 Desk-based assessment

As part of the desk-based assessment (DBA), historical databases and archives were consulted in order to obtain information about the history of the site and its surroundings, and the structures and features recorded within the site boundaries. The main sources consulted were as follows:

- Published sources available in the Cornwall and Scilly HER.
- Historic maps including
 - Norden's Map of Cornwall (printed in 1728 but mapped *circa* 1600)
 - Joel Gascoyne's map of Cornwall (1699)
 - Thomas Martyn's map of Cornwall (1748),
 - OS 1 inch survey (*circa* 1810)
 - Lanreath Tithe Map (*circa* 1840),
 - 1st and 2nd Editions of the OS 25 inch maps (*circa* 1880 and *circa* 1907).
- Modern maps.
- National Mapping Programme transcripts from aerial photographs.
- Other aerial photographs in the Cornwall and Scilly HER.
- Historic Landscape Characterisation mapping.
- Cornwall and Scilly Historic Buildings, Sites and Monuments Record (HBSMR).
- Information held as GIS themes as part of the Cornwall and Scilly HER.

The historical and landscape context of the site was also considered during this stage of the assessment in order to establish the nature of the heritage assets which are located within the area surrounding the proposed wind turbines.

2.3.2 Viewshed analysis

An assessment of the impacts of the proposals was made from the surrounding area using the guidelines and methodological approaches set out in English Heritage's recent consultation draft guidance on the setting of heritage assets. This was based on GIS-based viewshed mapping produced using a model of theoretical inter-visibility between the wind turbine proposed for the site and significant heritage assets within the surrounding landscape; the viewshed (ZTV or Zone of Theoretical Visibility) was generated using ArcGIS software. The methodology employs a Digital Terrain Model (DTM), which ignores potentially temporary surface features such as buildings, woodland, vegetation, etc. to provide a surface model of potential intervisibility between the proposed wind turbine and key heritage assets within the surrounding landscape. A viewshed was generated for an 'observer point' based on the location of the proposed wind turbine.

When performing viewshed analyses, several variables are used to limit or adjust the calculation including offset values, limitations on horizontal and vertical viewing angles (azimuth) and distance parameters (radius) for each observer point. For the proposed wind turbine at Tresawson, the viewsheds were based on 'overall observer elevation values' made up of the 'elevation values' or heights above sea level of the ground at the observer viewpoint, with added to this additional offsets of 50m to represent the heights of the turbine hub and 77m to represent that of its blades.

These viewsheds were checked on the ground, given that vegetation and other factors may substantially block views to and from key sites, whilst significant heritage assets within the theoretical viewsheds were visited (where access was possible) and the

landscape within which they sit considered to determine intervisibility with the proposed development site and the natures of their settings, both locally and at a distance. This informed the likely scales and types of any visual impacts which might affect their settings, as required by English Heritage (2011). Viewshed radii of either 10Km, 5km or 3Km were used to determine potential impacts on designated heritage assets (as appropriate) and a radius of 1Km for undesignated heritage assets (Figures 17 to 48).

Sites identified through intersection of the ZTV modelling with GIS layers containing designated and undesignated heritage assets produced data sub-sets which were further filtered according to their intersection with ZTV zones representing 1km, 3km, 5km and 10km from the site, as required by the HEPAO model brief and English Heritage guidance.

The site types within these data sets were then analysed to determine their likely sensitivity to impacts on their settings. Those site types which had no setting (documented sites) were excluded from further analysis, as were those which by their nature have very localised settings (for example, milestones, wayside crosses and fingerposts) except where in very close proximity to the application site. The resultant site lists were further filtered by close examination of the ZTV data and a 2005 vertical aerial photograph GIS layer to remove from the lists those sites where mature vegetation or proximal buildings would almost certainly block intervisibility and where intrusion into key views was unlikely. Designated sites with limited settings (most Grade II Listed Buildings) and those with local settings such as associated urban development which were more than 2Km from the application site tended to be excluded from assessment at this stage unless specific reasons such as wholly unimpeded intervisibility were identified for their retention. The assessment process was assisted by photomontages of some key locations that were made available by the client; these were examined to further evaluate potential intervisibility and the degree to which the proposed wind turbine would impinge on views of sensitive sites, and hence their settings.

The resultant site list consisted of a mixture of designated landscapes with substantial intervisibility with the proposal site, Scheduled Monuments whose original settings were intended to include large areas of the surrounding landscape (for example, prominent hilltop barrows, hillforts, standing stones and stone rows), or which were designed to function as part of intervisible elements of larger groups with landscape settings (for instance barrow cemeteries), other high grade designated historic structures which were intended when built to be highly prominent within the landscape (predominantly church towers), and upstanding undesignated sites in close proximity to the development site. This filtered site group was assessed to determine impact (see below).

2.3.3 Fieldwork

In order to check the validity of the Zone of Theoretical Visibility (ZTV) indicated by the viewshed analysis, and thus the potential impacts on key heritage assets within the ZTV, site visits were made to both the site proposed for the wind turbine, and to the selected key locations within the surrounding landscape. A visual check and photographic record were made of intervisibility (or the lack of it) between the proposed development site and heritage assets indicated by the ZTV mapping as being likely to be within the viewshed and whose settings were assessed as vulnerable to impacts from the development where public access was available. Where this was not the case, the nearest possible vantage point from which views including both the heritage asset and the development proposal site was utilised, preferably one in which the proposed development site formed the backdrop to a view of the designated heritage site or was within the same view.

A walkover survey of the site proposed for the wind turbine and for its cabling was also undertaken; the site was examined for upstanding archaeology and the natures of the

boundary types which might be impacted upon during the development were recorded. A list of sites visited is contained within Section 9 of this report.

2.3.4 Post-fieldwork

On completion of the project and following review with the HE Project Manager the results of the study were collated as an archive in accordance with: *Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006*. The site archive will initially be stored at ReStore, with the eventual aim of deposition at Cornwall Record Office.

An archive report (this report) has been produced and supplied to the Client. This report will be lodged with the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation once a planning application for the site has been made. A copy of the report will be supplied to the National Record of the Historic Environment (NRHE) in Swindon, to the Courtney Library of the Royal Cornwall Museum and to the Cornish Studies Library. All digital records will be filed on the Cornwall Council network.

An English Heritage/ADS online access to the index of archaeological investigations (OASIS) record has been made covering this assessment project.

3 Location and setting

The site proposed for the wind turbine at Tresawson is located at SX 18879 56753, just to the south of a hilltop within an area of dissected plateau backing the south coast of Cornwall, at about 150m OD. The parent bedrock underlying the application site consists of Lower Devonian mudstones, siltstones and sandstones; no superficial (drift) deposits are recorded by the British Geological Survey. The agricultural classification of this land is Grade 2.

The site lies within a predominantly rural area to the south east of Lanreath, with the area immediately surrounding the proposed turbine site recorded as Anciently Enclosed Land (Farmland Medieval). The boundaries enclosing the site field are largely traditional low Cornish hedges, the boundary bordering the road being a combination of low wooden fencing and recently planted hedging. Ground level views to the north are limited to a skyline view of Bury Down and its late prehistoric hillfort, now neighboured by a substantial telecommunications mast to its east (Fig 54). Ground level views to the north east round to the east are closed off by the field boundaries (Fig 55), whilst ground level views from the east round to the south east again limited to skyline views of the hillcrests over the hedged boundaries of the site field and the neighbouring field to the south east at Tremaine (Figs 56 and 57), where a further proposed turbine site is located. In this south easterly direction, the upper section of the Grade I Listed church tower of St Nonna, Pelynt, is visible over the hedge boundaries (Fig 57). From the south round to the west, ground level views out from the site are more open, providing views across the deeply dissected hillsides and along the upper parts of the valley slopes. The valley floors are obscured from view, however, and substantial tracts of woodland further reduce visibility in some instances (Figs 58 and 59). Ground level views to the west and north west are closed by the crest of the hill (Figs 60 and 61).

The settlement history of Tresawson and its surrounding landscape suggests it may have been extensively settled and farmed since prehistory. Around 1.8km to the south west of Tresawson lies the substantial late prehistoric and Romano-British enclosed settlement, or 'round' at Bake Rings, while around 2.8km to the south east, and 2.7km to the north east, are the late prehistoric hillforts of Hall Rings and Bury Down. Continuity of settlement is indicated by the numerous hamlets and farmsteads, including Tresawson itself, whose early medieval place names suggest at least 12th or 13th century origins, but which, in all probability, have much earlier origins.

Within the surrounding area, the National Mapping Programme has recorded some evidence for surviving sub-surface archaeology showing as cropmarks or soil marks,

including ploughed-out field boundaries and early settlement-related features. The remains of relict early medieval and medieval field systems are suggested at Polventon, to the north west, Tresawson itself, and Tremaine, to the south east (Fig 13). The Domesday settlement of Lanreath lies around 750m to the north west; the 15th century church of St Manarck and St Dunstan is Grade I Listed (1136993) and was originally the site of an early Christian 'Lann' (an enclosed churchyard), as suggested by the 'Lan' place-name element. The early 17th century Court Barton farmhouse, to the west of the church is Grade II* Listed (1137024) and has a well-preserved 18th century walled rabbit warren, which is Grade II Listed (1146528).

4 Project extent

The archaeological assessment was focussed on those heritage assets (whether designated or not) which might be physically impacted upon by activities associated with the erection of the wind turbine, including cable trenching, siting of temporary compounds, cranes or other equipment and with any associated semi-permanent infrastructure.

The assessment also takes into account and quantifies impacts on the settings of heritage assets (both designated and undesignated) within the viewshed of the proposed turbine site in line with paragraph 129 of the 2012 National Planning Policy Framework (NPPF), sections 16(2) and 66(1) of the Planning (Listed Buildings and Conservations Areas) Act 1990 Chapter 9, and English Heritage guidance relating to the setting of historic assets (2011) and on wind energy and the historic environment (2005), namely:

- Non-designated heritage assets – 1km radius.
- Scheduled Monuments, Grade I and Grade II* Listed Buildings – 10km radius.
- Grade II Listed Buildings – 5km radius.
- Conservation Areas – 3km radius.
- Registered Parks and Gardens – 10km radius.

5 Designations

5.1 International

None apply to the site.

5.2 National

No national designations apply to the site proposed for the development.

The 10km radius viewshed includes 27 potentially intervisible Scheduled Monuments (Fig 34. See also Figs 16 and 21).

The 10km radius viewshed intersects three Registered Parks and Gardens (Figure 45. See also Figs 46 and 47).

The 10km radius viewshed includes 8 Grade I Listed Building and 8 Grade II* Listed Buildings (Fig 40, also Figs 27, 31, 41, 42, 43 and 44).

The 3km radius viewshed mapping contains one Conservation Area (Fig 20).

Within the 3km radius viewshed, the wind turbine would be theoretically intervisible to some degree with a number of Grade II Listed Buildings or groups of Grade II Listed Buildings, including the farmhouses at nearby Trenake and Talehay, a number of buildings at Pelynt, including Pelynt House and the Old Schoolhouse, and two at Lanreath, both of which also fall within the Conservation Area (Fig 26).

Parts of the Cornwall South Coast - Eastern Area of Outstanding Natural Beauty (AONB) lies between the 5km and 10km radii to the south west and to the south of Tresawson, along the coast. The strip of coastline between Polruan and Polperro, around 6km to the south of Tresawson, is also a designated Site of Specific Scientific Interest (SSSI).

5.3 Regional/county

None apply to the site.

The proposed turbine site at Tresawson borders the Looe and Seaton Valleys Area of Great landscape Value (AGLV), which extends eastwards beyond the 10km radius. The Bocconoc and Mid Fowey AGLV extends across the north west area of the 10km radius zone around Tresawson, with the Caradon Hill AGLV intersecting the 10km radius zone to the north east.

5.4 Local

None apply to the site.

5.5 Rights of Way

No rights of way traverse the site proposed for the wind turbine, nor the remainder of the area across which the cabling will be undergrounded. This area is not registered as open access land under the CROW Act 2005.

6 Results of desk-based assessment

The site proposed for the wind turbine at Tresawson lies just to the south of a low hill, at around 150m OD (Figs 1, 2 and 12). The wider landscape takes the form of a deeply dissected plateau backing Cornwall's south coast, with the historic landscape in the vicinity of Tresawson predominantly characterised by field patterns of evolved medieval form set around farms, many of which are documented by the 12th to 13th centuries, although their origins may well be far older. Place-name evidence suggests a diverse settlement history for the surrounding area, with place-names being a mixture of those of both Cornish and English derivation, and variously influenced by the nature of their origin or aspects of their physical location within the surrounding landscape. Tresawson, for example, derives from the Cornish element 'Tre', indicating a farmstead of early medieval origin, and the suffix *zowzon*, 'Englishman'. The neighbouring settlement of Tremaine also contains the 'Tre' prefix and the Cornish place-name element *men*, 'stones'. The early medieval settlement of Telhay, on the other hand, is first documented earlier in the 14th century than either Tresawson and Tremaine, but is of English derivation and contains the place-name element *hay*, 'clearing'; the whole meaning 'at the clearing'. The larger settlements of Pelynt to the south east, and Lanreath to the north west, are documented as secular manors at Domesday, but their place-names indicate earlier ecclesiastical origins. Pelynt is recorded as 'Plunant', combining the place-name element of 'Plu', 'people of the parish', with the Saints' name *Nonna*, after which the parish church is dedicated. Lanreath contains the prefix 'Lan', suggesting the site of an early Christian centre, with the suffix *reath* possibly indicating a personal name (Padel 1985; 1988), but stated by Tonkin, in Gilbert (1838, 394), to be old English for 'law'. Numerous smaller farming settlements of early medieval or earlier origin are represented by 'bod', 'bos' or 'bot' place-names, whilst within the wider landscape are many settlements with place-name elements derived from local topographical features, such as Pendriscott, 'pen', 'head', dres, across, beyond and 'cos', wood, or Penadlake, originally 'Benathelec', 'place of the broom plants'.

Clearly, the rural landscape surrounding Tresawson demonstrates a considerable time depth of farming settlement. Because it has been a focus for human activity over a long period, the archaeological potential of such land is regarded as high. The evidence for a continuum of settlement and farming since at least later prehistory can be inferred by

the local prominence of late prehistoric/Romano-British enclosed settlements, or 'rounds', such as nearby 'Bake Rings', and late prehistoric hillforts, such as nearby 'Hall Rings' and 'Bury Down'. Located along the high ridges and hilltops, sites such as these would have dominated the social infrastructure of the Iron Age and into the Roman period. Hillforts, in particular, are thought to have been significant places within Iron Age communities, possibly used as the focii for a variety of activities such as feasting and ritual celebration, but also likely to represent centres of commerce and trade, hierarchical display and social organisation, as well providing a possible respite in times of trouble. They were designed to be visible in the wider landscape, both as focii for the local communities they served and as a demonstration of the status, power and wealth of local ruling elites to others.

The Roman period itself remains poorly understood in Cornwall, but, in addition to the pantheon of native 'Romano-British' rural settlement within the county, past and recent evidence is demonstrating that the valleys and headlands bordering the Rivers Camel and Fowey were clearly areas with a significant Roman military presence; the recently discovered Roman fort at Restormel is situated around 9.5km to the north west of Tresawson, at a strategic location above the River Fowey, close to the later Norman castle.

Distinct evidence for even earlier settlement is also to be found in the locality, with numerous Bronze Age barrow cemeteries situated on the higher ground to the south of Tresawson, at Wilton, Hendra and Cartole, for example, and on the prominent ridge of hills to the north west on Bofarnel Downs and in the vicinity of Grey Mare Lodge, West Taphouse, Penadlake, Ironmine Plantation and Fairy Cross. In addition, a Bronze age stone circle at Duloe, the smallest of its kind recorded in Cornwall, is located below a west facing hill crest around 4.9km to the north north east of Tresawson.

The first mapping depicting this area is John Norden's map, drawn up at the end of the 17th century, though not published until 1728 (Fig 3). The map depicting West Hundred showed the principal churches, settlements and great houses; Lanreath and Pelynt were shown on this map, as were Tregarrick and Landwarnick, complete with the names of their contemporary landowners. Court Barton Farm at Lanreath was shown in the ownership of Charles Grills, a name which also appeared on Joel Gascoyne's more detailed map of Cornwall in 1699 (Fig 4). Gilbert (1838, 394) stated that Grills sold the Court Barton to John Buller, the Buller family were also shown as owners of Tresawson lands in the 1840 tithe apportionment. Gascoyne's map also showed Lanreath, Pelynt and Tregarrick, but additionally named Trenake, or *Trenack*, to the south of Tresawson. Thomas Martyn's map (Fig 5), drawn up a few decades later, showed a rather more detailed landscape again, though the reprint copy for this area is rather poor quality. The named farmsteads differ slightly from Gascoyne's map, however; Tresawson was named for the first time, as were Polventon, to the north, and Tremaine, to the south.

The 1st Edition of the Ordnance Survey 1" to a mile mapping (Fig 6), dating to the first decade of the 19th century, is more topographical than the earlier examples, indications of terrain and areas of woodland being included, in addition to the network of settlement and roads. Lanreath and Pelynt were both named, as were the settlements of Tresawson, Polventon, Tremaine, Tregarrick, Trenake and Telhay, though the spelling of settlement names differ in some instances; Trenake was here spelt as *Trenaix*, for example.

The site proposed for the wind turbine at Tresawson lies within the Tresawson holdings in the ecclesiastical and civil parish of Lanreath. The field within which the proposed site lies is shown as a large, comparatively regular agricultural enclosure at the time of the *circa* 1840 Tithe Map (Fig 7), as distinct from some of the smaller, more irregular fields and curvilinear field boundaries surrounding the farmsteads at Tresawson and Polventon, to either side. The morphology of the immediate agricultural fieldscape, combined with the evidence surmised from National Mapping Programme (NMP) data (Fig 13) and the field names recorded in the tithe apportionment, suggests the site potentially lies within an area of secondary, possibly early to mid 19th century,

enclosure, which replaced an early medieval or medieval field pattern whilst retaining some elements of earlier field and strip field boundaries. The study area for Tresawson incorporates parts of the holdings for Tresawson and Polventon (see Fig 7), as recorded in the tithe apportionment for Lanreath. William and John Harris were recorded as lessees of Tresawson, with John Harris also recorded as the occupier. William Bunny was recorded as the lessee to Polventon, with John Jones the occupier. The field numbers, names, acreage and land use of the fields incorporated within the study area were recorded as follows:

Tresawson:

• 1033	Mares Field	Arable	2 acres, 2 poles, 0 perches
• 1034	Cole Hill	Arable	4 acres, 2 poles, 23 perches
• 1035	Well Park	Arable	4 acres, 3 poles, 12 perches
• 1036	Folly Abovetown	Arable	3 acres, 3 poles, 12 perches
• 1037	Folly Homestead		0 acres, 2 poles, 13 perches
• 1038	Church Park	Arable	4 acres, 0 poles, 20 perches
• 1039	Broad Park	Arable	4 acres, 3 poles, 37 perches
• 1040	Ewes Field	Arable	6 acres, 0 poles, 24 perches
• 1041	Lane Field	Arable	8 acres, 2 poles, 6 perches

Polventon:

• 1042	Great Hill Park	Arable	4 acres, 3 poles, 10 perches
• 1043	Higher Abovetown	Arable	4 acres, 3 poles, 10 perches
• 1018	Lower Abovetown	Arable	4 acres, 2 poles, 31 perches
• 1020	Higher Meadow	Arable	1 acres, 0 poles, 4 perches
• 1021	Homestead		1 acre, 1 pole, 1 perch
• 1022	Lower Meadow	Arable	0 acres, 3 poles, 24 perches
• 1023	West Park	Arable	4 acres, 2 poles, 10 perches
• 1024	Off Park	Arable	3 acres, 2 poles, 5 perches
• 1025	Lady Park	Arable	6 acres, 1 pole, 33 perches

The land use information indicates that almost all of the fields making up the holdings had been in arable use within the seven years prior to the 1840 tithe assessment, as would have been expected within this part of Cornwall's agricultural heartland. The boundaries of these eighteen fields remained comparatively unchanged during the late 19th century (Fig 8) and into the first decade of the 20th century (Fig 9). The site proposed for the wind turbine lies towards the centre of field 1041, recorded as 'Lane Field' in the *circa* 1840 tithe apportionment (Fig 7).

Current OS mapping (see Figs 12 and 13) and the 2005 Cornwall Council aerial photography (Fig 10) show that the essential morphology of field boundaries at Tresawson and Polventon, where they fall within the study area, continue to broadly reflect the 19th and early 20th century pattern of enclosure, though some field boundaries at Polventon have subsequently been removed (see Figs 10, 12, and 13).

7 Results of geophysical survey

See Figures 49 to 53

A gradiometer survey was undertaken by Substrata (Dean 2013) on 9 September 2013, this covering a 1.4Ha area around the site originally proposed for the wind turbine and a 30m wide access corridor centred on the proposed cable connection route.

The results of the survey was summarised by Dean 2013, p1 as follows:

The magnetic contrast across the survey area was relatively good and was sufficient to distinguish between anomalies representing potential archaeology and natural deposits.

Thirty-two magnetic anomaly groups were identified as representing potential archaeological deposits. One of these groups may represent a round house and small enclosures but the anomaly groups are highly disrupted by ferrous deposits and recent soil disturbance necessarily making such a characterisation uncertain. The other groups are typical of anomaly patterns representing former field boundaries, tracks and enclosures from earlier, multiple phases of archaeological deposition. Anomaly groups probably representing past ridge-and furrow ploughing were also recorded.

The most obvious feature recorded by the geophysical survey appears to represent a ploughed out Cornish hedge boundary that aligns with the current field system, suggesting a boundary removed before the date of the *circa* 1840 tithe map (Figs 49 to 52). Underlying this are a number of linear and curvilinear features that suggest the remnants of multi-phase field boundaries, potentially dating between the later prehistoric through to the medieval period (see Figs 49 to 52). A number of curvilinear features and ferrous pits identified by Substrata (Dean 2013, 6) immediately to the east of the proposed turbine site may indicate more complex human activity here during later prehistory, and may include the remains of a round house. Of additional interest is a large curvilinear feature to the north east, which appears to align with a similar boundary shown by the National Mapping Programme (NMP) data, and which may suggest some form of terracing along the hillcrest (Fig 50). In addition, the group of curvilinear features in the adjacent field to the north suggest a relationship with those shown on the geophysical survey, potentially reflecting wider contemporary activity in this area (Figs 50 and 52).

8 Results of site walkover

See figures 54 to 79

A site walkover was undertaken on 25 and 27 September 2013. The first visit was in fair weather to begin with but this rapidly declined into low cloud and drizzly rain, followed by heavier rain and fog. The second visit was made to reassess the site in better conditions; the day was bright and breezy with clearer visibility, although haze was evident in distant views.

The proposed turbine site is located relatively centrally within a field currently under a low fodder crop. The site lies just below a hill crest, from where the ground slopes away to the south (see Fig 58). Where visible, the field boundaries are predominantly low traditional Cornish hedges, except on the roadside boundary to the east, where the boundary comprises low wooden fencing and what appeared to be more recently planted hedging (Fig 55). Generally, the views from the proposed turbine site are relatively local and closed in by the lay of the land, particularly to the north and east. There are some partial skyline views to the east towards Bury Down, and south towards Pelynt, with more open views to the south west across the deeply dissected ridges and plateaux bordering the Fowey estuary. A rapid walkover of the site revealed no apparent above ground features; the present crop cover obscured the ground surface and no artefacts were recovered from the soil.

There were no impediments to the second site walkover, with relatively good visibility possible in all directions. To the north there was a narrow skyline view across the hillcrest towards Bury Down; the upper part of a prominent telecommunications mast close to the hillfort was clearly visible, but Bury Down itself was not clearly identified

from ground level at this distance, possibly due to the slightly hazy visibility (Fig 54). To the north east and east the views were closed by the field boundaries, bar a glimpsed skyline view due east (Figs 55 and 56). To the south east there were views across the neighbouring field where an additional turbine application is also in process, towards Pelynt where the upper half of the church tower of St Nonna church (Grade I Listed) was visible from ground level (Fig 57). From the south round to the west there were more open views across the upper slopes and hilltops bordering the Fowey estuary. In general the valley bottoms were not visible; there was some woodland cover in places that further obscured views in this direction (Figs 58 and 59). To the west and north west in the direction of Lanreath, the skyline was formed by the crest of slope (Figs 54). All these observations were made at eyeline view from ground level.

9 Results of viewshed analysis

See Figures 17 to 48.

Given the topography of the site and its surroundings and the height of the turbine tower, the viewshed analysis suggests that it is likely to be visible over a fairly large proportion of the surrounding countryside, although its Zone of Theoretical Visibility (ZTV) may be constrained in some areas due to the deeply dissected nature of this section of coastal plateau. In line with the requirements of English Heritage guidance, the ZTV has been mapped to a distance of 10km from the site. The visibility of the turbine will diminish with distance and will, at many sites, be blocked by topographical features, intervening buildings within settlements, or farmsteads or by mature groups of trees (albeit on a temporary basis, should such trees subsequently be felled).

9.1 1 km radius ZTV

See Figures 17 to 20.

Given the nature of the local topography and the relatively high elevation of the proposed wind turbine, the ZTV suggests that the turbine mast or blades will potentially be visible from approximately 99% of this zone, the exception being some small sections of lower valley slope to the north and west (see Figs 17 and 18). The zone extends to the far edges of Lanreath to the northwest, to the ford at Crooksball in the north east, to a section of the Giants Hedge at Abrahams Wood in the west, to Tremaine in the south east and to the centre of East Court Wood in the south west. The zone includes the Giants Hedge Scheduled Monument (Fig 17) and the Conservation Area of Lanreath, which includes the Grade I Listed Church of St Manarck and St Dunstan, the Grade II* Listed Court Barton, and one Grade II Listed 18th century house (Figs 18 to 20).

9.2 1km to 3km radius ZTV

See Figures 21 to 29.

The wind turbine will potentially be visible from around 60% of the 1km to 3km radius area around it, its visibility being notably limited by local topography, particularly within the steeper valleys and hillsides facing away from the site. This zone extends to beyond Bury Down in the north, to Muchlarnick in the east, to the far edge of Pelynt in the south east, to Penkelly in the south, and to Botallick in the north west.

This zone contains seven potentially intervisible Scheduled Monuments: Bury Down, Hall Rings, Bake Rings, several sections of the Giants Hedge, and the barrow groups at Wilton, Hendra and Cartole. Of these, some sections of the Giants Hedge may be most susceptible to potential impact on its setting (Fig 21).

The zone contains no Registered Parks and Gardens, no Conservation Areas and no Registered Battlefields. The zone does, however, contain the Grade I Listed Church of

St Nonna, Pelynt, as well as numerous Grade II Listed Buildings, the majority of which intersect with, or are wholly within, the ZTV (Figs 26 to 29).

9.3 3km to 5km radius ZTV

See Figures 30 to 33

The proposed wind turbine will potentially only be visible from around 35% of the 3km to 5km zone, with large areas excluded from potential intervisibility by the nature of the surrounding topography (Fig 30). This zone extends to the edges of Bocconoc in the north west, to beyond Herodsfoot in the north east, to Duloe in the east, the near edge of Lansallos in the south, and to Lerryn in the west.

Potential intervisibility with the proposed wind turbine appears to be intermittent across the 3km to 5km zone, given the deeply dissected nature of the local topography, with only the upper valley slopes and hilltops likely to intersect with the ZTV. Sections of the Giants Hedge Scheduled Monument continue across the west of this zone and the Scheduled Monument of Hall Rings intersects with this zone to the west (but see above).

The zone intersects the Conservation Area at Lerryn and the Registered Park and Garden at Bocconoc, though there is only minimal intersection with the ZTV along some of Bocconoc's south eastern edges within this radius (see Figs 45 and 46). There are a small number of high Grade Listed Buildings within the 3km to 5km radius, though only the Grade I Listed Church of St Cuby, Duloe (Fig 31), and the Grade II* Listed Penellick Farmhouse appear to intersect with the ZTV. Additionally, there are numerous Grade II Listed Buildings (Fig 30) contained within this zone, though only a small number of these, such as Hillhead and Polpever in the south east, appear to fall wholly within the ZTV (Figs 32 and 33).

9.4 5km to 10km radius ZTV

See Figures 34 to 48.

The proposed wind turbine will potentially only be visible from around 25% of the 5km to 10km zone; as before, large areas are excluded from the ZTV by the nature of the surrounding topography, whilst the southern part of this zone extends beyond the coastline (Fig 34). The greatest potential intervisibility with the proposed wind turbine appears to be to the east and west, though generally the ZTV coverage within this zone is patchy and limited in extent (Figs 34 and 40). In addition, although there may be some degree of intervisibility with the wind turbine, a pronounced fall-off in its visual prominence will occur.

This zone contains a substantial number of Scheduled Monuments (Fig 34). Whilst not all of these intersect the ZTV, a number of barrow cemeteries towards the farthest extent of the 10km radius in the north west (Fig 37), the late prehistoric hillfort of Castle Dore (Fig 38) and the Roman Fort at Restormel (Fig 39), in particular, will potentially be intervisible with the proposed wind turbine at Tresawson. Whilst all of these sites were intended to have relatively wide landscape settings any impact on them is likely to be nullified by their distance from the proposed development site and by the blocking effects of intervening landscape features.

Three Registered Parks and Gardens, at Lanhydrock, Bocconoc and Menabilly, intersect the 5km to 10km radius ZTV (Fig 45), though only at Bocconoc is there the potential for substantial intervisibility with the proposed turbine site (Fig 46). The heavily wooded topography of Bocconoc significantly reduces any negative impact on its setting; should any significant felling of trees occur during the lifespan of the proposed turbine, however, the degree of impact might increase. The 5km to 10km zone contains six Conservation Areas, which lie outside the remit of this assessment. The zone also contains the Registered Battlefield of Braddock Down to the north of Tresawson, where

it intersects the ZTV; the mapping suggests there would be potential intervisibility with the proposed wind turbine on the high ground across its middle section (Fig 48).

A small number of High Grade Listed Buildings fall within the 5km to 10km radius and intersect the ZTV. To the west and south west of Tresawson, in particular, there would be potential intervisibility between the proposed wind turbine and the Grade I Listed churches of Sts Ciricus and Julitta at St Veep (Fig 41), St Sampson at Golant (Fig 42) and St Willow at Lanteglos by Fowey (Fig 43), and the Grade II* Listed St Nectan's Chapel (Fig 44).

9.5 Scheduled Monuments within the 10 km radius ZTV

See Figure 34, also Figures 17 and 21.

There are 27 Scheduled Monuments within 10km of the proposed wind turbine site at Tresawson and falling within its ZTV, as follows:

Note – some of these sites have multiple entries in the Schedule of Monuments.

- 2 individual barrows
- 11 barrow groups
- 1 stone circle
- 3 hillforts
- 1 late prehistoric 'round'
- 1 Roman fort
- 1 chapel
- 1 early Christian memorial stone
- 4 crosses, cross base or cross heads
- 1 early medieval linear earthwork (the Giants Hedge)
- 1 Norman castle

Some of these potentially intervisible Scheduled Monuments consist of structures such as wayside crosses, churchyard crosses, memorial stones or chapels, whose settings are inherently very local. None are close to the sites proposed for the wind turbines, and in line with English Heritage guidance, no assessment on impacts on their settings therefore needs to be made.

Hillforts, barrows, standing stones and stone circles, in contrast, were intended when constructed to have far-ranging settings, whilst the Giant's Hedge was intended to be a major component of the local landscape when constructed. Some of the Scheduled Monuments within the 10km viewshed consist of monuments of these types, and assessments of impacts on the settings of a number of these were judged to be required where they lay relatively close to the site proposed for the wind turbine, where substantial intervisibility was likely, where they were judged to have sensitive settings or where impacts on or intrusion into key views of these sites appeared likely to occur.

Although there is likely to be some degree of intervisibility between these sites and the proposed wind turbine, in some cases views of it will tend to be distant, in some partial and in others locally blocked by nearby vegetation or structures. Although, given the topography of the site selected for the Tresawson wind turbine, negative impacts on the settings of most Scheduled Monuments are likely to be neutral or minor in extent, there are a number of Scheduled Monuments within the 3km radius where negative impacts on their settings may increase to moderate or substantial in extent. This is particularly the case for the Giants Hedge, an early medieval linear defensive earthwork that runs to the west of the proposed site and is only 200m distant at its closest point.

9.6 Registered Parks and Gardens and Registered Battlefields within the 10km radius ZTV

See Figures 45 to 48.

Three Registered Parks and Gardens fall within the 10km radius ZTV: Lanydrock, Bocconoc and Menabilly (Fig 45). There is minimal intersection between the Grade II* Registered Parks and Gardens at Lanhydrock and Menabilly and the ZTV (Figs 45 and 47) and their distance from the proposed wind turbine site suggests there will be either limited or no impact on their settings. There is greater potential for intervisibility with the Grade II* Registered Park and Garden at Bocconoc, with some potential for intrusion into aspects of its designed landscape, though this may be limited to glimpsed views of the wind turbine in most instances (see Fig 46). Furthermore, the natural topography of the Park and the substantial level of tree and vegetation cover should greatly reduce any potential negative impact on its setting, although this could change if any significant felling of trees or clearance of vegetation occurs during the lifespan of the turbine.

There is one Registered Battlefield within 10km of the proposed turbine site. Braddock Down lies around 6.3km to the north of Tresawson and the ZTV suggests there may be some intervisibility with the proposed wind turbine along the crests of two hills that form the centre of the designated area (Fig 48), though this may only be with the upper parts of the mast or with the blades, as the proposed turbine would be sited on the far side of a hill from the direction of Braddock Down. These hilltops are also the sites of two Scheduled barrow groups (1004433/1004435). Although these lie at some distance from the proposed turbine site, the combined impact on the settings of these and the Registered Battlefield could potentially lie between neutral to negative/minor in extent.

9.7 Grade I and II* Listed Buildings within the 10km radius ZTV

See Figure 40.

There are 54 Listed Buildings of all grades within 10km of the proposed wind turbine at Tresawson within the ZTV.

The following buildings intersected by the 10km ZTV are Listed at Grade I:

- 113693 – Church of St Manarck and St Dunstan, Lanreath
- 1161660 – Church of St Nonna, Pelynt
- 1312202 – Church of St Cuby, Duloe
- 1312492 – Church of St Willow, Lanteglos by Fowey
- 1140311 – Church of St Ciricus and St Julitta, St Veep
- 1158982 – Church of St Sampson, Golant
- 1282854 – Church of St Martin by Looe, Looe
- 1140324 – Church of St Mary the Virgin, Broadoak

The following buildings (or groups of buildings) intersected by the 10km ZTV are Listed at Grade II*:

- 1137024 – Court Barton Farmhouse, Lanreath
- 1138175– Chapel of St Nectans, St Winnow
- 1329407 – Cartuther Barton and courtyard buildings to east, Menheniot
- 1311893 – Ethy House, including garden walls to north and east, Lerryn
- 1140728 – Penellick Farmhouse, Pelynt
- 1203150 – Stuart House, Liskeard

- 1140332 – Stone cross south of south porch of Church of St Willow
- 1203204 – Stone cross south east of Pendean House, Liskeard

Designated features such as crosses have relatively local settings and all are at a sufficient distance from the wind turbine for no impacts on their settings to occur.

The Grade I Listed Church of St Manarck and St Dunstan and the Grade II* Listed Court Barton, both at Lanreath, lie within 1km of Tresawson and are both almost wholly within the 1km ZTV. The Grade I Listed Church of St Nonna, Pelynt lies within 3km of Tresawson and is partially intersected by the 3km ZTV; the upper section of its tower is visible from the proposed wind turbine site at ground level (see Fig 52). All three of these buildings were judged to be potentially vulnerable to impacts on their settings given that church towers were intended to be landmarks within the landscape when constructed, although it is likely that these impacts will be reduced to some degree by the local topography and vegetation cover.

9.8 Conservation Areas within the 3km radius ZTV

See Figure 20.

The Conservation Area of Lanreath falls within the 3km radius ZTV. At under 1km distance from Tresawson, its setting was judged to be potentially vulnerable to impact, though the topography surrounding Lanreath, the blocking effect of both the urban and wider rural landscape, together with the level of tree and vegetation cover within and around the Conservation Area, might be expected to reduce setting impacts to some extent.

9.9 Grade II Listed Buildings within the 5km radius ZTV

See Figure 30 and Figures 18 and 19, 26 to 29 and 31 to 33.

There are 39 Listed Buildings of all grades within 5km of the proposed wind turbine at Tresawson within the ZTV. Of these, 34 are Grade II Listed, as follows:

- 10 farmhouses
- 1 schoolhouse
- 1 lodge
- 5 houses
- 1 cottage
- 2 groups of cottages
- 2 rabbit warren walls
- 1 ha ha
- 5 milestones
- 1 guidepost
- 1 headstone
- 1 tombchest
- 2 groups of tombchests
- 1 drinking trough

Impacts on the settings of these feature types are very unlikely unless they are in very close proximity to the proposed wind turbine. These include structures like guideposts, milestones, headstones or chest tombs, a trough, crosses and a school house. Others such as houses, farmhouses and lodges have rather more extensive local settings but the majority of the Grade II Listed features noted above would not be considered

vulnerable to impacts on their settings. Impacts on potentially sensitive Grade II Listed Buildings have only been evaluated within an area extending out to approximately 2km from the proposal site (though this has been varied according to local topography, taking in the openness and general orientation of views). As a result, the following Grade II Listed Buildings are considered potentially vulnerable to impacts on their settings:

- The rabbit warren walls at Court Barton, Lanreath (1146528) lie within 1km of Tresawson and fall almost wholly within the 1km radius ZTV (see Fig 19). As the proposed turbine would be sited over the crest of the hill away from this building, intervisibility may only occur between parts of the upper hub and /or blades and this site. The photomontage provided by Capture-Energy (Fig 80) gave some indication of the possible extent of intervisibility between the proposed turbine and areas of Lanreath; the level of localised vegetation cover may also reduce any impacts on its settings, but this would potentially alter were this vegetation to be cut back or removed.
- The Grade II Listed 18th century house at Lanreath (1140331) lies within 1km of Tresawson and is almost wholly within the 1km turbine tip ZTV, suggesting it may be intervisible with the upper turbine hub or blades; there may also be additional blocking in this instance from Court Barton to the south east (Fig 19).
- The Grade II Listed Farmhouse at Trevawden, around 2km north of Tresawson falls wholly within the 3km ZTV (Fig 29). The nature of the local topography suggests there may be views along the valley slopes towards Tresawson, though these may be blocked or reduced by the level of intervening tree cover. This could not be ascertained during the site visit.

Although at the farthest extent of the 5km radius zone, the Grade II Listed Buildings at Polpever and Hillhead also fall wholly within the ZTV (Figs 32 and 33); Hillhead falling within the ZTV of the blade tip alone (Fig 33). A drive by during the site visit confirmed some open views across the hilltops and along the valley sides in the direction of Tresawson, although relatively poor visibility due to low cloud and fog did not allow the quality of any potential intervisibility to be determined. Given the distance from the proposed turbine site at Tresawson, and the reducing effects of the local topography and tree cover, it is not anticipated that there would any major impact on the settings of these two sites, although this could not be absolutely verified.

Given their distances from the site of the proposed wind turbine, the local topography and vegetation and the site types (and hence their sensitivities), no impacts on the settings of the remaining sites are likely.

9.10 Undesignated sites within the 1km ZTV

See Figure 14.

The ZTV mapping suggests that around 99% of the landscape within a 1km radius of Tresawson will be intervisible with all or part of the proposed wind turbine. Within this zone, the Cornwall and Scilly Historic Environment Record (HER) records 15 intervisible sites, as follows:

Early medieval

- MCO26457 – Lanreath –lann (documented site)
- MCO40094 – Lanreath –field boundary (cropmark)
- MCO40095 – Polventon –field boundary (cropmark)
- MCO17690 – Tresawson – settlement (documented site)

Medieval

- MCO10547 – Lanreath - dovecote (documented site)
- MCO40096 – Polventon – field boundary (extant)
- MCO40097– Polventon – field boundary (extant)
- MCO40091– Tremaine –field system (cropmark)
- MCO40092 – Tresawson – field boundary (cropmark)

Post-medieval/modern

- MCO40100 – Lanreath – bowling green (extant)
- MCO53409 – Lanreath – milestone (extant)

Undated

- MCO40093 – Lanreath – undated hollow (cropmark)

Given the nature of these sites, the proposal for a wind turbine at Tresawson would have no significant impact on the majority of their settings.

10 Field verification of ZTV

See Figures 54 to 79

The viewshed mapping and potential impacts were, wherever possible (given constraints on public access) ground checked from a number of locations, including sites at, adjacent to or overlooking Lanreath, Pelynt, Duloe, Bocconoc, St Nectan's Chapel, St Veep and Golant, together with adjacent monuments, near Bury Down, Bake Rings, Duloe stone circle, Braddock Down, the barrow groups on and around Bofarnel Down, Restormel Roman Fort and Castle Dore.

At each accessible designated heritage site the potential visibility (and proportional visibility) of the proposed wind turbine was considered. Views out from the site towards key heritage assets were checked from the application site itself. Though true levels of intervisibility were impossible to determine from ground level given that the turbine has not yet been constructed and views were only available from ground level, the general degree of openness of the views out from the site could be assessed.

Where possible, photographs were taken from key locations within the surrounding landscape and from the location at Tresawson back to these sites. Whilst views from the surrounding ground allowed the location of the proposed wind turbine to be determined within the landscape, in the lower lying areas, field hedges, woods and other tree plantings blocked views back towards the site; within settlements, groups of buildings and mature trees and shrubs also blocked many views back to the site. During the initial site visit, poor visibility obscured distant views in most instances, but where sites were considered particularly vulnerable, or where the potential for suitable photographs was anticipated, these were subsequently revisited. The visibility cut-off imposed by the local topography suggested by the DTM viewshed mapping was broadly confirmed; from ground level some areas of suggested intervisibility were inevitably closed off by woods and other tree plantings, which were not included within this type of ZTV modelling.

Field verification broadly confirmed the viewshed mapping. This suggests that much of the 1km zone falls within the ZTV and that most identified sites within this zone may be intervisible with all, or part, of the constructed turbine. Assessed from ground level, the area of potential intervisibility also seems fairly comprehensive out to the 3km radius for areas of higher ground but generally excludes the lower valley slopes and valley bottoms. To the north east, east and south, distant views may be narrower in extent, limited in places to skyline views across intervening ridge tops and will be further blocked by intermittent tree cover in some instances. From the proposed turbine site at ground level, both Bury Down and Pelynt church tower were visible in these directions (Figs 55 and 57). To the south west and west views out to around 3km are more open,

though intervening hill spurs and tree cover may also have a blocking effect in some instances.

Beyond the 3km radius, the viewshed mapping suggests that potential intervisibility will be much more intermittent and limited to areas of high ground, many of the steeper valley slopes and low ground falling outside the ZTV. Beyond the 3km radius, the topography and heavily wooded nature of many of the valley slopes also suggests that most views towards and from the proposed turbine site will be partial or glimpsed; a possible exception to this is to the west, where views across the Fowey estuary are more open and far reaching, with less apparent blocking by tree and vegetation cover on the higher ridge tops. In some instances there may be views along the valley sides towards the proposed turbine; this was observed from the road below Hillhead to the southeast (Fig 67) and from the Roman fort at Restormel to the west (Fig 39). Unfortunately, whilst both these examples were noted on the first site visit, the poor visibility meant that the true extent of potential intervisibility could not be ascertained. Given the positioning of the proposed turbine site, it seems likely that potential intervisibility will be limited in most directions to partial views of the upper turbine hub and blades; the exception to this may be within an arc broadly from the south east to the west, up to the 3km radius and, possibly, within a smaller arc broadly from the south west to the west out as far as the 10km radius. However, the generally reduced ZTV coverage observed for this distance, as above, will be a factor.

As a result of these observations, setting impacts beyond 3km from the proposed development site were considered unlikely or minimal in most directions.

11 Cumulative impacts

Recent English Heritage guidance requires assessments of renewables applications to take account of cumulative impacts, as well as those relating to specific proposals.

Given the current number of both small and large-scale wind turbines operational, at application or pre-application stages or proposed at some time within a 3km radius of the Tresawson site, there is some potential for cumulative impacts (see above): at Lancare Park, Pelynt (size undetermined, operational), The Telephone Exchange, Lanreath (size undetermined, planning lapsed), Tremaine (77m to tip, pre-application available), Tremaine (77m to tip, under consideration), Bocaddon Farm (two, 61m to tip and 79m to tip, screening opinion given), Bosuen Manor Farm (77m to tip, screening opinion given), Trewen Farm (47m to tip, screening opinion given). A 75.75m to tip wind turbine was previously refused permission at Bocaddon Farm in 2012 but is under appeal. A further 77m to tip wind turbine at Bosuen Manor Farm had its screening opinion withdrawn in 2012.

There are, therefore, currently no areas within the 3km locality where wind turbines of any height are prominent within local views, though this may change in the future given the range of current applications and those which may subsequently be proposed. There is presently one small wind turbine (25m to tip) at Botelet around 3.5km to the north of Tresawson.

12 Synthesis

The desk-based assessment identified a curvilinear feature in the north eastern corner of the field proposed for the wind turbine at Tresawson, with additional complex curvilinear features in the field to the north (Fig 13). The walkover survey was unable to identify any visible upstanding earthworks in the vicinity of the proposed development site, although the geophysical survey results (Figs 49 to 54) indicate the possible survival of substantial multi-phase archaeological features below ground level, including a possible roundhouse and enclosure, which would be directly impacted by the proposed wind turbine and cabling works. The potential for below ground archaeology in the field

at Tresawson, and its possible relationship with the cropmark features identified by the National Mapping Programme to the north and north east of the proposed development site, would significantly contribute to understanding the nature and extent of human activity within the immediate area, and the time depth of this.

Impacts on both designated and undesignated heritage assets within the local landscape resulting from the construction of the wind turbine on land at Tresawson will vary with their distance from the turbine site, their state of preservation, their nature, and the effects of reduced or blocked intervisibility due to local topography, vegetation (including hedge plantings) or the presence of other buildings. In the case of some designated assets around the application site out to 10km away, even where intervisibility will occur, the distance from Tresawson will significantly reduce any impacts.

There is the potential for between minor and substantial negative impact on the settings of sensitive receptors within the local landscape out to three kilometres from the site, principally the Scheduled Monuments of the Giants Hedge, Bury Down, Bake Rings and the barrow groups to the south near Hendra, the Conservation Area of Lanreath and the high grade Listed Buildings at Lanreath and Pelynt. Beyond this zone, any impacts are likely to be minor or neutral in character.

There is also some potential for some impacts on the Historic Landscape Character of the surrounding landscape at Tresawson. Whilst there are a number of wind turbine applications in progress, there is currently little precedent for operational turbines within a 3km radius of this site and the proposed turbine at Tresawson would constitute a clearly visible modern feature within a relatively closed-in agricultural landscape whose character reflects its medieval origins.

13 Policies and guidance

The following section brings together policies and guidance (or extracts from these) used in the development of the assessment and its methodology.

13.1 National Planning Policy Framework 2012

The following paragraphs within the above document frame planning policy relating to the historic environment and are germane to this assessment:

128. *In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any 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 have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which 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.*

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

132. *When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be.*

Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*

133. *Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:*

- *the nature of the heritage asset prevents all reasonable uses of the site; and*
- *no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and*
- *conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and*
- *the harm or loss is outweighed by the benefit of bringing the site back into use.*

134. *Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.*

135. *The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.*

139. *Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.*

13.2 Former Caradon Local Plan

Although now part of Cornwall Council, Caradon District Council's policies listed in its local plan continue to be relevant. Relevant policies concerning the historic environment are listed below.

The Caradon Local Plan contains policies designed to protect the archaeological resource, using the following elements of policy framework:

Policy CL19

High priority will be given to the protection, preservation and enhancement of nationally important scheduled and unscheduled monuments and other sites and buildings of archaeological and historic significance in the plan area through the following measures:-

(i) Development proposals which would prejudice the preservation of nationally important archaeological remains, whether scheduled or not, and their settings, will not be allowed unless the development is also of national importance and there is no alternative site.

(ii) If there is evidence to suggest that significant remains may exist on the site of a proposed development, the extent and importance of which are unknown, the Local Planning Authority will request the developer to arrange for an archaeological

evaluation to be carried out before the planning application is determined, thus enabling an informed planning decision to be made.'

(iii) Where preservation in-situ is not possible the Local Authority will not allow development to take place until satisfactory provision has been made for a programme of archaeological investigation and recording prior to the commencement of the development.

Policy CL20

Where proposed development is likely to significantly affect sites of County or local archaeological importance, they should be protected in situ, unless the significance of the remains is not sufficient, when weighed against the need for development, to justify their physical preservation. Where retention of remains is not possible, the council may impose conditions or seek planning obligations to ensure that adequate archaeological records are prepared before development commences.

Policy CL21

Proposals for development affecting the historic parks and gardens listed by English Heritage and shown on the proposals map will not be approved unless all of the following criteria can be satisfied:

- (i) That the important historic and architectural features, layout and ornamentation of the garden are preserved.
- (ii) That the character of the parkland setting is preserved or enhanced and
- (iii) That the trees and woodland that contribute towards the character of the historic garden are retained.

Policy CL22

Planning permission for development in the historic battlefield site of Braddock Down, identified on the proposals map, will not be granted if it would demonstrably harm the integrity of the site, its topography, or an appreciation of the site through views obtained across it.

14 Likely impacts of the proposed development

14.1 Types and scale of impact

Two general types of archaeological impact associated with wind turbine developments have been identified as follows.

14.1.1 Types of impact, construction phase

The construction of wind turbines can have direct, physical impacts on the buried archaeology of development sites through the construction of their foundations, through the undergrounding of cables, and through the provision of any temporary works compound, together with any permanent or temporary vehicle access ways into and within the site. In the case of Tresawson, the geophysical survey results indicate significant potential for surviving underlying archaeology on site. In the event of any such impacts occurring, these would be **permanent** and **irreversible**.

14.1.2 Types of impact, operational phase

The proposed wind turbine at Tresawson might be expected to have some visual impact on the settings of some key heritage assets within its viewshed during its operational phase, given its height (77m to tip), the topography of the site and the nature of the local landscape. Such factors also make it likely that the development would have an impact on Historic Landscape Character. These impacts would be **temporary** and

reversible should the turbine subsequently be dismantled and not re-powered or replaced.

14.1.3 Scale and duration of impact

The impacts of the wind turbine on the historic environment may include positive as well as adverse effects. For the purposes of assessment these are evaluated on a seven-point scale:

positive/substantial

positive/moderate

positive/minor

neutral

negative/minor

negative/moderate

negative/ substantial

Negative/unknown is used where an adverse impact is predicted but where, at the present state of knowledge, its degree cannot be evaluated satisfactorily.

The assessment also distinguishes where possible between **permanent** and **temporary** effects, or between those that are **reversible** or **irreversible**, as appropriate, in the application of the scale of impacts.

14.1.4 Potential and residual impacts

Potential adverse impacts may be capable of mitigation through archaeological recording or other interventions. A proposed mitigation strategy is outlined below in Section 15.

14.2 Assessment of impact

Overall, the impacts of the proposed wind turbine on the archaeological resource within 3km from the proposed turbine site are assessed as having a potential scored as **negative/moderate**, principally dependant on proximity to the proposed turbine site and intervisibility with it. The impact of the current proposal is assessed as **negative/minor** on the Scheduled Monuments of Bury Down, Bake Rings and the barrow groups to the south near Hendra, the Conservation Area of Lanreath, the Grade I Listed churches of St Manarck and St Dunstan, Lanreath and St Nonna, Pelynt, and the Grade II* Listed Court Barton at Lanreath. A caveat to this, however, is that there is a substantial telecommunications mast adjacent to Bury Down that already impacts on its setting. Whilst it could be argued that the proposed wind turbine at Tresawson will add to the cumulative impact on the setting of this Scheduled Monument, it could also be argued that setting impacts have already occurred owing to the mast's proximity. There is therefore potential to downgrade the impact on Bury Down to **neutral** on this basis. The impact of the current proposal is, however, assessed as potentially **negative/substantial** on the Scheduled Monument of the Giants Hedge, given its proximity to the proposed development site at Tresawson, its intended nature as a distinct and visibly dominant landscape feature, and the visual prominence which the wind turbine will exhibit within views of this Scheduled Monument.

Impacts on the settings of designated heritage sites between 3km and 10km from the proposed turbine sites have been assessed as **neutral** to **negative/minor** overall.

There is a significant potential for negative impacts on sub-surface archaeology within the development site, given the evidence from the geophysical survey. This has the potential to range from **minor** to **substantial** in scope, given the character of the feature types which showed up in the data. Means by which these impacts might be mitigated are addressed in the mitigation strategy in Section 15.

The assessments supporting this general statement are outlined in the following sub-sections. To comply with current policies and guidance (Section 13) these provide assessments of impact in terms of different aspects of the archaeological resource - its individual sites, the settings of sites, Historic Landscape Character, and field boundaries. There are inevitably areas of overlap between these categories of impact; the assessment is adjusted accordingly to avoid 'double counting' of impacts.

14.2.1 Impacts on archaeological sites within the development area

Ground disturbance associated with the installation of foundations for the wind turbine, cable trenching or ancillary works during the construction phase could result in permanent, irreversible loss of below ground remains of archaeological sites within the development area, or of elements of these. The works, if deeper than current ground levels, might affect undetected buried cut features.

Scales of impact will vary with the degree of significance of individual sites, and with the proportion of each site that would be affected. The presence of a possible roundhouse and enclosure immediately east of the site proposed for the wind turbine at Tresawson considerably raises the potential for impacts on potentially significant sub-surface archaeology taking place. The geophysical survey undertaken by Substrata (2013) suggests that the scale and nature of any such impacts **may** require further determination at the discretion of the HEPAO.

14.2.2 Impacts on the settings of surrounding key heritage assets

The proposed wind turbine is considered likely to have an impact on the setting of key surrounding heritage assets, this being summarised as **negative/minor**, in particular in relation to the Scheduled Monuments of Bury Down, Bake Rings, the barrow groups to the south near Hendra, the Grade I Listed churches of St Manark and St Dunstan, Lanreath and St Nonna, Pelynt, the Grade II* Listed Court Barton at Lanreath and on the setting of some parts of the Conservation Area of Lanreath, though not necessarily to all of its individual components. The impact on the setting of the Scheduled Monuments of the Giants Hedge is summarised as **negative/substantial**, due to its proximity to the proposed development site, its intended nature as a substantial visible landscape feature and the visual prominence which the wind turbine will exhibit within views of this Scheduled Monument. Owing to the proximity of the adjacent telecommunications mast to Bury Down, however, the impact on the setting of this site may be downgraded from **negative/minor** to **neutral**.

Such impacts will be **temporary/reversible** overall should the wind turbine be dismantled in the future and not be replaced:

- There are a number of Scheduled sites located within 5km of the site proposed for the wind turbine that would have been intended, when constructed, to be important focal points within the local landscape. These include the prehistoric barrows and barrow groups to the south of Tresawson, at Wilton, Hendra and Cartole, the prehistoric stone circle at Duloe and the late prehistoric hillfort enclosures of Bury Down and Hall Rings. Whilst there may not be substantial intervisibility between some of these sites and the proposed wind turbine, they will occupy the same general area of the local landscape, and the construction of the wind turbine may alter visitors' perceptions of the area and of the significance of these sites.
- These impacts are likely to be mitigated at most of these sites by current levels of vegetation cover, the presence of other structures near Listed Buildings and the nature of the local topography. Hall Rings, for example, is predominantly situated on a hillcrest facing away from Tresawson, so that only its upper north east facing edges may be impacted on by potential intervisibility with the proposed turbine. The turbine will, however, appear in some views of Hall Rings and may, therefore produce negative impacts on its setting. The barrow groups to the south, at Wilton, Hendra and Cartole, are situated on lower hillslopes

facing north towards Tresawson, but impacts on their settings may be reduced by the presence of intervening hilltops and ridges and by vegetation cover, although this could not be adequately verified by ground survey, due to access issues. The stone circle at Duloe is situated on a west facing slope around 4.9km from the proposed turbine site at Tresawson, but views towards the proposed development site may be partially blocked by the near presence of buildings and intervening valley slopes and vegetation cover. Visitors approaching the stone circle will do so in a direction facing away from the proposed development site; conversely, views back across the stone circle may well include glimpses of the wind turbine. Bury Down, while only around 3km distant, is likely to be intervisible with the proposed turbine only along its southern face (see Fig 23); its setting has already been compromised by the adjacent telecommunications mast. In contrast, however, a section of the Giants Hedge runs from north west to south east just 200m to the east of the proposed development site. The setting of the Giants Hedge is likely to be substantially impacted by the proposed turbine at Tresawson, although the effects may be reduced from some viewpoints within the immediate landscape by the lay of the land and by intervening tree cover.

- There are currently no visible individual wind turbines or wind farms within a 3km radius of Tresawson, and as a result the long-standing agricultural character of the surrounding landscape preserves its integrity. It could therefore be argued that given the absence of such modern, visually prominent developments within the landscape, the construction of a wind turbine at Tresawson will result in enhanced impacts on the settings of some Scheduled Monuments and Listed Buildings in the immediate locality should the turbine be constructed. As noted above, the proposed site also lies adjacent to an Area of Great Landscape Value, which merits sensitive development within its confines, but is also susceptible to impacts from developments adjacent to its perimeter. The cumulative effect of wind turbine development in the area local to Tresawson is therefore an issue for consideration.
- Other Scheduled Monuments within the 3km to 10km viewshed are either types which have only limited settings or are at distances from the proposed wind turbine where their settings are less likely to be impacted upon to any great extent. However, the Scheduled barrow groups to the north west of Tresawson, the Roman fort at Restormel, and the later prehistoric hillfort of Castle Dore would all originally have been intended to command dominating positions within the local landscape. Despite being situated towards the 10km extent (see Fig 34), there is potentially substantial intervisibility with the proposed turbine site and some impact on their settings may occur.
- During the operational phase the wind turbine is likely to impact to some degree on the settings of some of the Listed Buildings within its viewshed, particularly within 1km of it. However, intervisibility at these sites may well be constrained by trees and by modern farm buildings. The Grade I Listed church of St Manarck and St Dunstan, the Grade II* Listed Court Barton and additional Grade II Listed Buildings at Lanreath all fall within the 1km ZTV for Tresawson. An assessment from ground level suggests that only the upper part of the turbine mast and its blades may be intervisible with these sites, as the proposed development site lies on the far side of a hillcrest. Furthermore, views towards the proposed turbine are likely to be blocked in places by the presence of buildings, the lay of the land and by intervening vegetation cover. There are points within Lanreath, however, where views across the churchyard or across Court Barton may include partial views of the proposed turbine (Figs 63 and 64); the main approach through Lanreath, in particular, may contain a view of the proposed turbine, which would substantially impact on the view towards the church and its tower (Fig 62). The Grade I Listed church tower of St Nonna, Pelynt, is partially visible from the proposed turbine site above the hedgeline, although a ground survey

suggested that views towards the church from within Pelynt or outwards from the churchyard in the direction of the proposed development site would be unlikely to be impacted by any intervisibility at ground level. There is, however, the potential for some views within the local landscape to incorporate both the church tower and the proposed turbine, although this could not be verified from a ground survey.

- There are a number of additional high grade Listed Buildings within the 10km radius viewshed, although their distance from the proposed turbine site, and the nature of the intervening topography and vegetation cover, will limit potential impacts on the majority of their settings.
- There is one Registered Battlefield within the 10km radius viewshed of the proposed wind turbine, at Braddock Down around 6.5km to the north of Tresawson (Fig 48). The proposed turbine site is likely to be intervisible with the high ground across its middle section, which also contains a number of Scheduled barrows. The site could not be adequately accessed during the ground survey, and views across its extent towards the proposed turbine site were not achieved. The viewshed analysis for this site, however, suggests that any impact on its setting would be limited by the distance from the proposed development site, and the nature of the intervening topography.
- There are three Registered Parks and Gardens within the 10km radius viewshed, although only that of Bocconoc is considered likely to experience any impact on its setting. At this location, intervisibility will probably be only partial, and unlikely to be experienced from any designed landscape aspects. The topography of the Park and the substantial plantings of trees and vegetation are likely to create a blocking effect from within it, although this might change if the cover was reduced in the future through dieback or vegetation clearance. Views across Bocconoc from the road to the north (Fig 70) will potentially include views of the proposed turbine, although any impact is likely to be significantly reduced by the nature of the local topography and intervening vegetation cover.
- There are a relatively high number of Conservation Areas within a 10km radius of Tresawson, although only the Conservation Area at Lanreath falls within the 3km radius ZTV. Its relatively close proximity to the proposed turbine site suggests there would potentially be between **minor** to **moderate** impact on its setting in some places. Whilst it is likely that only the upper parts of the turbine mast and its blades would be visible from the majority of viewpoints within the village, their proximity to the Conservation Area means they could still be visibly distracting in sensitive views. The impact may, however, be limited by the local lay of the land and the blocking effect of intervening vegetation cover and buildings presence.
- Any impacts on heritage assets within the landscape surrounding the proposed wind turbine would be temporary and reversible should it be dismantled in the future.

14.2.3 Designated heritage assets within the 10km radius viewshed

Preliminary filtering of the potential for the likelihood of impacts on these sites is discussed above (Section 9). Only those for which it was considered that some level of impact might occur are listed below and assessments of impact made.

Scheduled Monuments (SM) – see Figure 34.

Identifier	Site	Impact
1006681	Giants Hedge, Lerryn to Lanreath	Negative/substantial
1017682	Bake Rings later prehistoric-Roman round	Negative/minor
1004621	Group of three round barrows, N of Hendra	Negative/minor
1004465	Ten barrows S of Wilton Mill	Negative/minor
1004373	Round barrows SE of Cartole	Negative/minor

Identifier	Site	Impact
1006682	Hall Rings	Negative/minor
1006635	Bury Down Camp	Negative/minor
1006691	Castle Dore (camp)	Neutral to negative/minor
1004660	Earthwork 250m S of Restormel Castle	Neutral to negative/minor
1006714	Stone Circle, Duloe	Neutral to negative/minor
1004433	Group of round barrows SE of Middle Taphouse	Neutral to negative/minor
1004435	Round barrow S of Middle Taphouse	Neutral to negative/minor
1004617	Round barrows W of West Taphouse	Neutral to negative/minor
1003080	Group of round barrows N of Grey Mare Lodge	Neutral to negative/minor
1004436	Group of round barrows S of Penadlake	Neutral to negative/minor
1004437	Bofarnel Down round barrows	Neutral to negative/minor
1006683	Mabel Barrow	Neutral
1017574	Restormel Castle, motte, bailey and shell keep	Neutral
1004438	Ironmine Plantation round barrows	Neutral
1004439	Two round barrows NE of Fairy Cross	Neutral

The distance of some of these sites from Tresawson, combined with the intervening topography and vegetation cover, suggests that the impact on their settings will probably be **neutral**. The impact on the settings of a number of barrow groups to the north west of Tresawson, the Roman fort at Restormel, the later prehistoric hillfort at Castle Dore, the early prehistoric stone circle at Duloe and the later prehistoric hillfort at Bury Down is assessed to lie between **neutral** and **negative/minor** in extent. This assessment considers their original intended function as dominant landscape features and the likely level of intervisibility with the proposed turbine site, but recognises that some sites lie towards the 10km extent and that most will probably have other potentially closer set modern features visible from them that already impact on their settings. It is considered that there is a greater risk of potential impact on the settings of a number of Scheduled Monuments within the 3km radius viewshed, which fall within the ZTV and which have been assessed as potentially vulnerable through ground survey; this includes the Scheduled Monument of Hall Rings, which is potentially impacted across its originally intended key views, despite relatively limited intersection by the ZTV coverage. The impact on these have largely been assessed as **negative/minor**, except for the section of the Giants Hedge running immediately east of the proposed turbine site, which is assessed as **negative/substantial**.

Grade I Listed Buildings - see Figure 40 and Figures 18, 19, 27, 31 and 41 to 43.

Identifier	Site	Impact
1136993	Church of St Manarck and St Dunstan	Negative/minor to negative/moderate
1161660	Church of St Nonna	Neutral to negative/minor
1140311	Church of St Ciricus and St Julitta	Neutral to negative/minor
1158982	Church of St Sampson	Neutral to negative/minor
1312202	Church of St Cuby	Neutral
1140324	Church of St Mary the Virgin	Neutral
1282854	Church of St Martin by Looe	Neutral
1312492	Church of St Willow	Neutral

The Church of St Manarck and St Dunstan is situated around 780m north west of the proposed turbine site. Although this would be located over the crest of an intervening hill, it is likely that at least the upper parts of the turbine mast and blades will be intervisible with the church and will impact on views from and towards its tower and churchyard. The impact on its setting is therefore considered to lie between **negative/minor** and **negative/moderate** in extent. The Grade I Listed churches of St Nonna, Pelynt, St Ciricus and St Julitta, St Veep, and St Sampson, Golant, are also considered to be at risk of between **neutral** and **negative/minor** impact on their settings, given either their proximity to the proposed turbine site or the relative openness of views in their direction. Some degree of blocking by intervening hillslopes

or vegetation cover in certain instances may act as limiting factors. The remaining Grade I Listed churches are considered to lie at sufficient distance from the proposed turbine site, or to have sufficient levels of blocking by intervening topography, vegetation cover or proximal buildings to result in **neutral** impacts on their settings.

Grade II* Listed Buildings - see Figure 40, and Figures 18, 19 and 44

Identifier	Site	Impact
1137024	Court Barton Farmhouse	Negative/minor to negative/moderate
1138175	Chapel of St Nectans	Neutral to negative/minor

The Grade II* Listed Court Barton Farmhouse at Lanreath is situated around 750m to the north west of the proposed turbine site. Views across the farm complex from the road to the north (Fig 64) suggest that at least the upper parts of the mast and the blades of the proposed turbine may be intervisible with the farm complex and in some views of it. The potential impact on its setting is therefore assessed as lying between **negative/minor** and **negative/moderate** in extent. The Grade II* Listed Chapel of St Nectans commands partially open views towards the proposed turbine site, although it lies around 6.8km distant and there is currently partial blocking by localised tree cover (Fig 72). Views towards the chapel from the approach road are currently unlikely to be impacted by the proposed turbine, although some views out from the chapel and from its gateway may include partial intervisibility with the upper parts of the turbine and its blades. At present the potential impact on its setting is assessed as **neutral**, but this could rise to **negative/minor** should any of the trees in front of the chapel die or be felled. Several additional Grade II* Listed farmhouses fall within the 10km radius ZTV, but the level of likely intervisibility between them and the wind turbine is considered sufficiently negligible to result in little potential for impacts on their settings.

14.2.4 Designated heritage assets within the 3km radius viewshed.

Grade II Listed Buildings - see Figure 26 and Figures 18, 19, and 27 to 29.

Identifier	Site	Impact
1146528	Rabbit Warren Walls South of Court Barton	Negative/minor to negative/moderate
1140331	18 th century house, Lanreath	Negative/minor to negative/moderate
1137617	Trevawden	Neutral to negative/minor
1140262	Jaffers Cottage	Neutral to negative/minor
1329080	Talehay Farmhouse	Neutral
1161601	Trenake Farmhouse	Neutral
1161832	North Muchlarnick	Neutral
1140697	Hall Barton Farmhouse	Neutral
1309922	The Old School House	Neutral
1329086	Pelynt House	Neutral
1329078	Bake Farm	Neutral

The settings of the Grade II Listed Buildings at Lanreath are assessed as being at risk of between **negative/minor** and **negative/moderate** impact from the proposed turbine site, given their relative proximity and the likely level of intervisibility between them and the wind turbine. The Grade II Listed farmhouse at Trevawden (Fig 29) and the Grade II Listed Jaffers Cottage are situated around 1.8km north north east and east north east of Tresawson, respectively, and fall wholly within the ZTV coverage. Although not ground checked, the risk of any impact on their settings has been assessed on this basis as potentially lying between **neutral** and **negative/minor**. Setting impacts on the remaining Grade II Listed Buildings within the 3km radius viewshed are assessed as **neutral**, given either the low level of suggested intervisibility

or the high level of potential blocking by the intervening topography, buildings or vegetation cover, as checked at ground level.

Conservation Areas

See Figure 20.

Identifier	Site	Impact
DCO151	Lanreath	Negative/minor to negative/moderate

The Conservation Area of Lanreath is situated around 750m north west of the proposed turbine site at Tresawson and substantial sections of the settlement within the designation boundary fall within the ZTV coverage, including the main approach from the north, which incorporates views of the church and churchyard, the core of original settlement around the church and areas of the Court Barton farm and manor complex. The location of the proposed turbine is below a hillcrest facing away from Lanreath and it is probable that only the upper parts of the mast and the turbine blades will be visible from most locations (see Fig 80). Nonetheless, the proximity of the Conservation Area to the proposed development site, the potential levels of intervisibility, the significance of vulnerable receptors within the Conservation Area and the visual intrusion of the wind turbine into views of and from the Conservation Area lead to the assessment of the potential impact on its setting as falling between **negative/minor** and **negative/moderate**.

Registered Parks and Gardens

See Figures 45 to 47.

Identifier	Site	Impact
1000350	Bocconoc	Neutral to negative/minor

Three Registered Parks and Gardens fall within the 10km radius viewshed but only Bocconoc is assessed as likely to experience any potential impact on its setting from the construction of the proposed wind turbine at Tresawson. As discussed above, the nature of the topography at Bocconoc and the present level of vegetation cover across this designated landscape suggest that any potential impact on its setting will be significantly reduced, as long as the current level of vegetation pertains. There is little likelihood of any designed aspect of the Bocconoc landscape being impacted on through potential intervisibility with the proposed turbine, but it is possible that views across Bocconoc from the road to the north will incorporate at least partial views of the upper parts of the turbine and its blades. Currently the potential impact on the setting of Bocconoc is assessed as **neutral**, but this may rise to **negative/minor** should any tree plantings or vegetation be substantially cleared, especially if this results in the wind turbine becoming visible from planned elements of the Park.

Registered Battlefields

See Figure 48.

Identifier	Site	Impact
1000005	Battle of Braddock Down	Neutral to negative/minor

The Registered Battlefield of Braddock Down is situated around 6.5km north of Tresawson, and falls partially within the ZTV coverage on the high ground across its central extent. There are also a number of barrow groups across this central area, these being considered separately, above. The high ground of the battlefield would no doubt have been intended to be visually prominent within the surrounding landscape and to imply a position of strength and dominance. The site is also a memorial to those who fought and died there and, as such, is significant both for its historic context and as a place of conflict and burial. There are many arguments as to its sensitivity as a receptor

to potential impact from intrusive modern constructions, such as wind turbines, but it does lie at a relative distance from Tresawson and is likely to experience only partial intervisibility with the upper sections of the turbine mast and its blades. The level of potential impact could not be easily ground checked, due to problems of access and safe parking, but the viewshed analysis suggests that the intervening topography between Braddock Down and the proposed turbine site may have some blocking effect on intervisibility, which may be further reduced by the level of vegetation cover. The impact on its setting is therefore assessed as potentially lying between **neutral** and **negative/minor** in extent.

14.2.5 Undesignated heritage assets within the 1km radius viewshed

See Figure 14.

None are likely to be affected given that the majority are either cropmark sites, milestones, or documented sites/place names.

14.2.6 Impacts on Historic Landscape Character

The installation of a wind turbine at Tresawson can be predicted to have some degree of negative impact on the historic character of the immediate surrounding landscape. The expected effect on HLC has been assessed as **negative/moderate**. Factors contributing to this assessment are as follows:

- Some significant visual impact throughout the operational phase would occur, affecting the integrity of the immediate surrounding area as former medieval farmland through the introduction of a highly visible modern feature into this landscape.
- There are presently very few highly-visible modern features within the immediate local landscape, which by and large retains its historic landscape character.
- There would be no impacts in terms of physical loss during the construction phase of features which form the visible components of this type of HLC.
- There is some potential for significant impacts in terms of physical loss during the construction phase of surviving below ground features that could potentially inform the historic processes of agricultural change in the local area, and possibly confirm a substantial time depth of human activity on the site, back into later prehistory. There is the potential, through further investigation, for these features to more greatly contextualise the visible above ground components of this type of HLC. Their loss as a result of an unmitigated development proposal would, conversely, result in a further negative impact on HLC.
- Any impacts on the legibility of HLC would be temporary and reversible should the wind turbine be dismantled in the future. Any loss to surviving below ground archaeological features that would potentially inform and contextualise the HLC of the site would be permanent and irreversible.

15 Mitigation Strategy

A range of means to mitigate the potential impacts identified in this assessment may be considered by the Historic Environment Planning Advice Officer (HEPAO), who may choose to recommend one or more of the following.

15.1 Archaeological works in advance of construction

Given the potential for sub-surface archaeological remains within the area which might be affected by the construction of the wind turbine and associated activities and the potential ambiguity of the evidence relating to the possible roundhouse and enclosure, the HEPAO may consider that, in this instance, some degree of further investigation through evaluation trenching may be required to determine the presence or absence of

this feature, and thus the nature and scale of any potential sub-surface archaeological impacts that might result within this part of the field as a result of the proposed construction activities before a recommendation for the granting of planning permission could be made.

15.2 Site redesign

Given the nature of the site selected for the proposed wind turbine and the topography of the local landscape, there would seem to be little potential for reducing the potential impacts on the setting of the Giants Hedge, the Conservation Area of Lanreath and its Listed components, together with other relatively closely-set Scheduled Monuments through relocation of the wind turbine to another site within its immediate environs. There may be some scope for micro-relocation to mitigate the potential for impacts on the potential sub-surface archaeology of this site, given the proximity of a possible roundhouse – a site type which detailed investigation elsewhere in Cornwall has shown to rarely exist in isolation and to often be associated with extra-mural features such as unenclosed settlement features, field systems, etc.

15.3 Archaeological recording during site works

In a case where the finalised site design would seem likely to result in unavoidable physical impacts on below-ground or earthworks, a brief for work to mitigate these impacts would be prepared by Cornwall Council's Historic Environment Advice Officer (East), setting out its scope. A Written Scheme of Investigation (WSI) to meet the brief would need to be prepared and agreed to establish and direct a programme of mitigating archaeological work.

Archaeological recording may be required in the form of the recording of elements of the site that might be negatively impacted upon by the works, through a controlled soil strip and watching brief (observation by an archaeologist during mechanical ground reduction activities). This is likely to be required either where any significant features or areas of ground are to be disturbed (for instance excavation for the foundations for the turbine or during cable trenching), in areas where significant features had been identified through the site walkover or geophysical survey, or where the balance of probability suggested that sub-surface archaeology might survive. This approach provides for preservation by record of upstanding or buried archaeological features or artefacts and reduces any impacts on the archaeology of the sites to **negative/minor**. Any resultant impacts would be reduced to **permanent** and **irreversible**.

In the instance of the site at Tresawson, given the proximity of a possible roundhouse and enclosure, a group of ferrous pits and additional curvilinear and linear features that may reflect multi-period agricultural activity on the site, there is a possibility of at-present unrecorded below ground remains being directly impacted upon by the proposal, as suggested by the geophysical survey. The Historic Environment Planning Advice Officer may require archaeological recording of sites or features revealed during groundworks associated with the construction of the wind turbine as a condition of the granting of planning permission for the proposal in addition to or as an alternative to any evaluation trenching noted above.

16 References

16.1 Primary sources

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16.2 Publications

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16.3 Websites

http://www.heritagegateway.org.uk/gateway/English_Heritage's_online_database_of_Sites_and_Monuments_Records,_and_Listed_Buildings

17 Project archive

The HE project number is **146285**

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration.
2. Digital photographs stored in the directory R:\Historic Environment (Images)\SITES.Q-T\Tremaine and Tresawson Site Visit_Digital Images
3. English Heritage/ADS OASIS online reference: cornwall2-161841
4. This report text is held in digital form as: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites T\Tresawson wind turbine assessment 2013\Report\2013R074 Tresawson Wind Turbine Assessment Report.doc



Fig 3 The proposed turbine site and its surroundings, as shown on John Norden's Map of Cornwall. The project area is circled in red.



Fig 4 The project area and its surroundings, shown on Joel Gascoyne's 1699 Map of Cornwall. The project area is circled in red.



Fig 5 The proposed turbine site and its surroundings, as shown on Martyn's 1748 Map of Cornwall. The project area is circled in red.



Fig 6 The project area and its surroundings as shown on the around 1807 1st Edition OS mapping. The turbine project area is slightly offset because of the differing projections used by the 19th century OS surveyors and modern mapping.

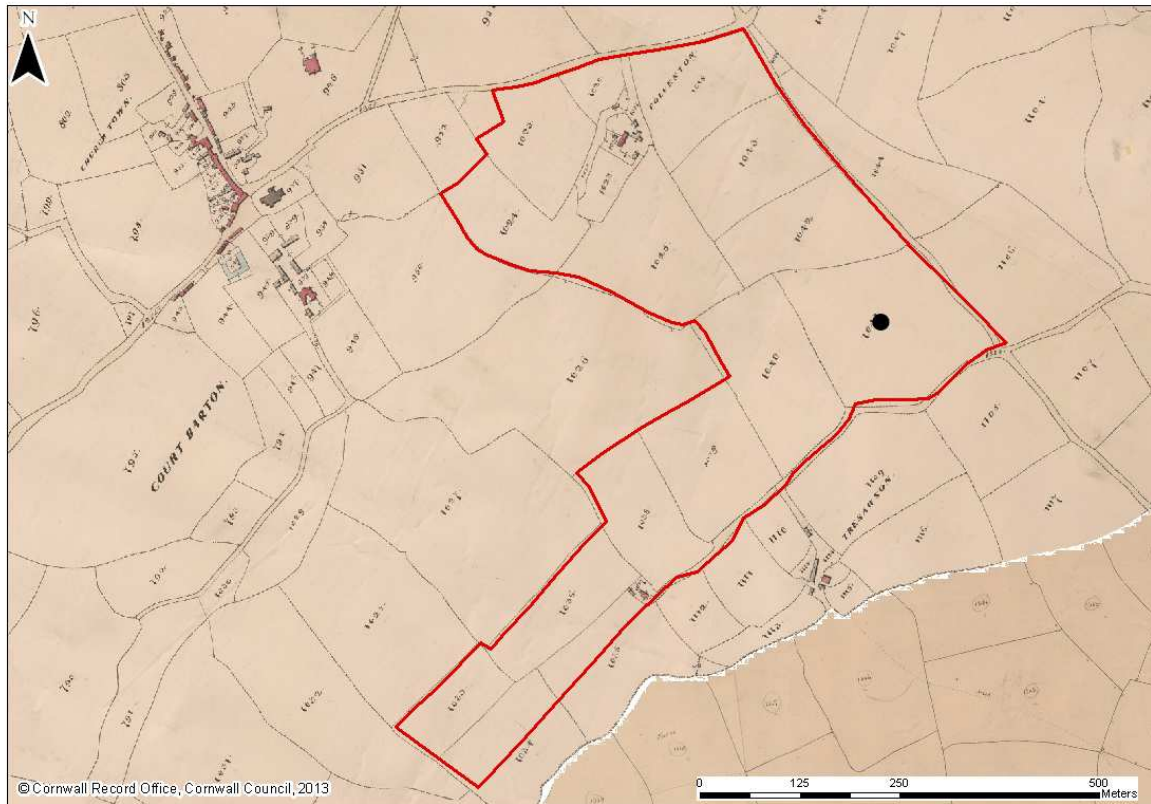


Fig 7 The project area as shown on the circa 1840 Lanreath Tithe Map. The proposed turbine is indicated by a black dot.

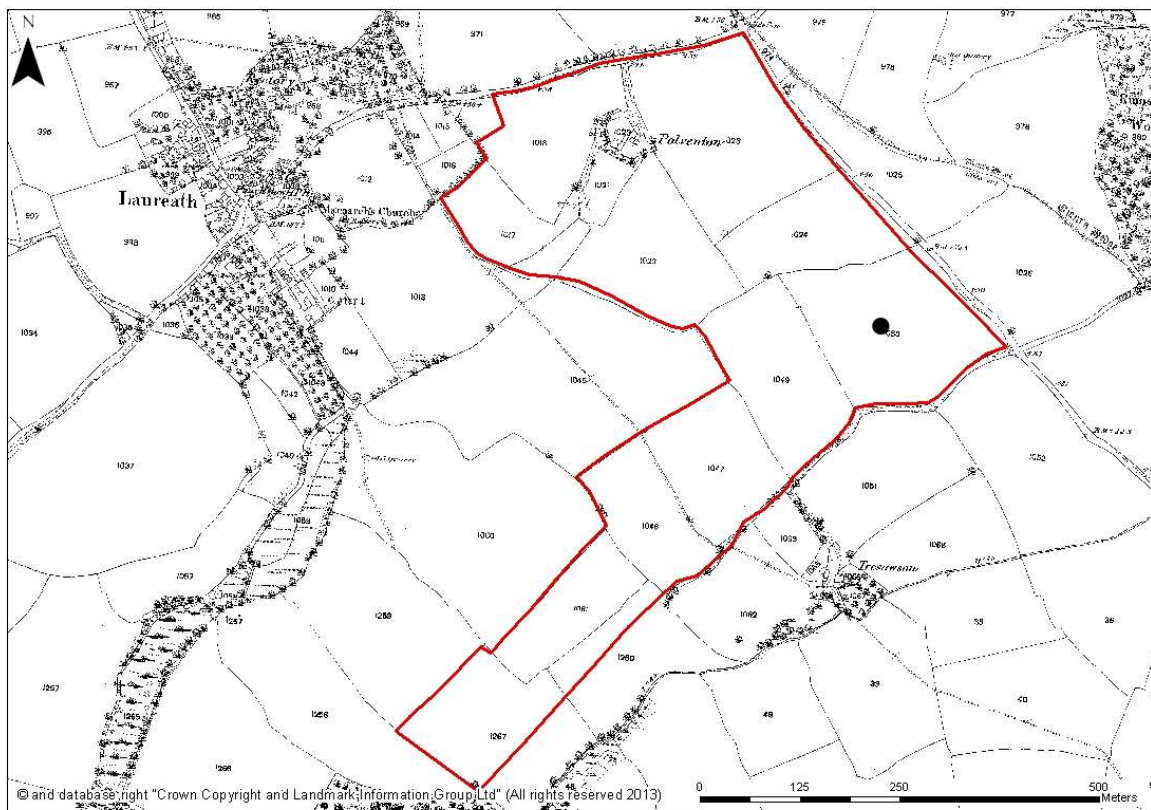


Fig 8 The project area as shown on the circa 1877 1st Edition OS 25" to the mile mapping.

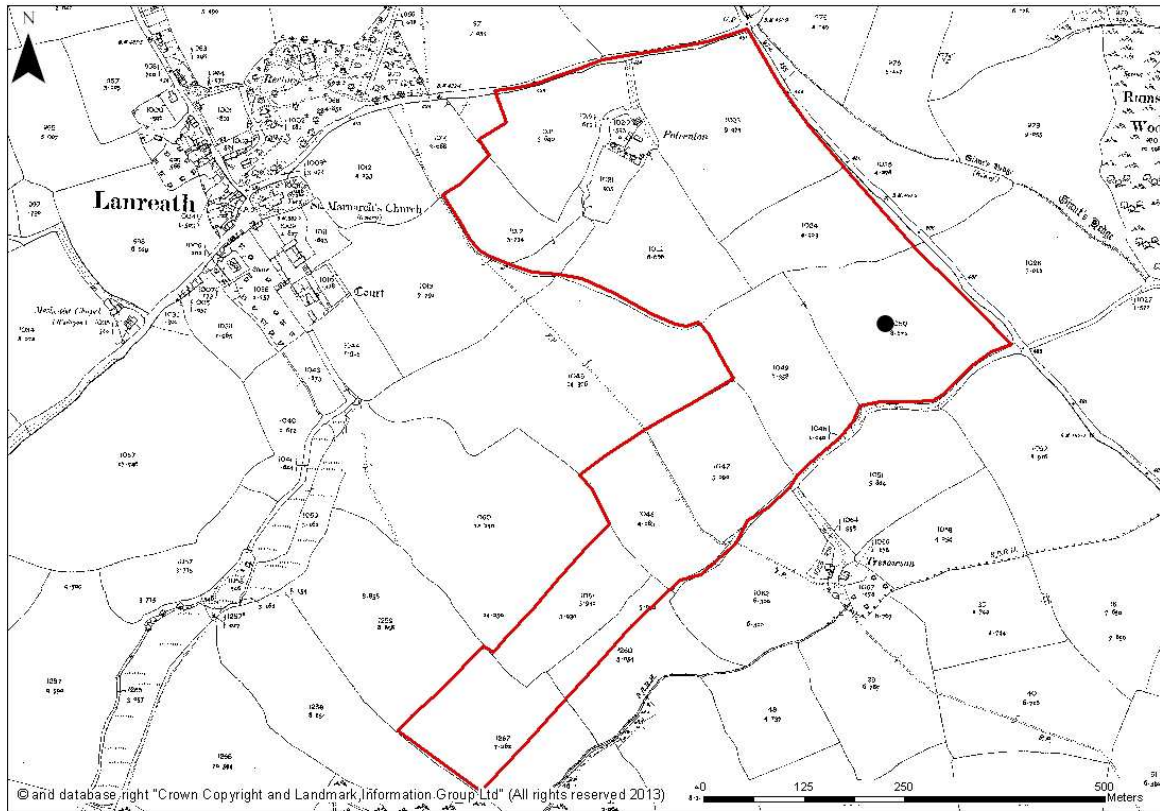


Fig 9 The project area as shown on the circa 1908 OS 25" to the mile mapping.



Fig 10 The project area as shown on a 2005 CCC aerial photograph.

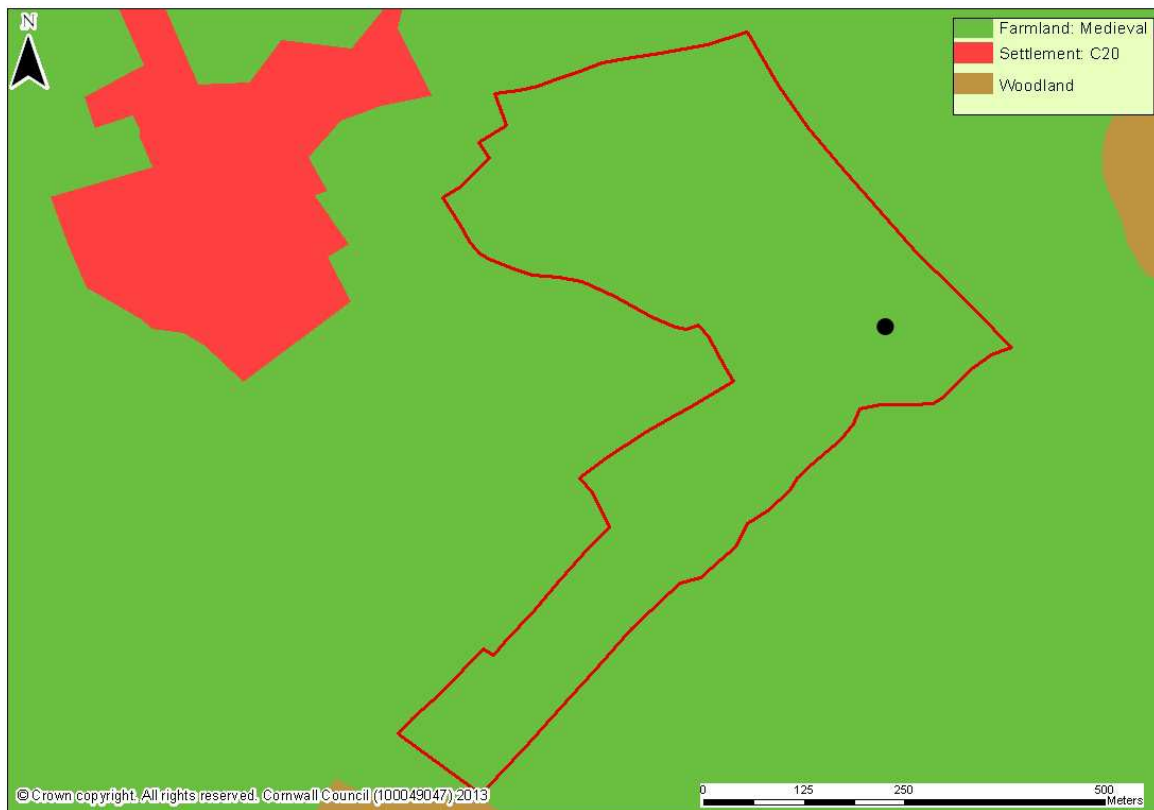


Fig 11 Historic Landscape Character mapping showing how this area of countryside is derived from land enclosed during the medieval period.

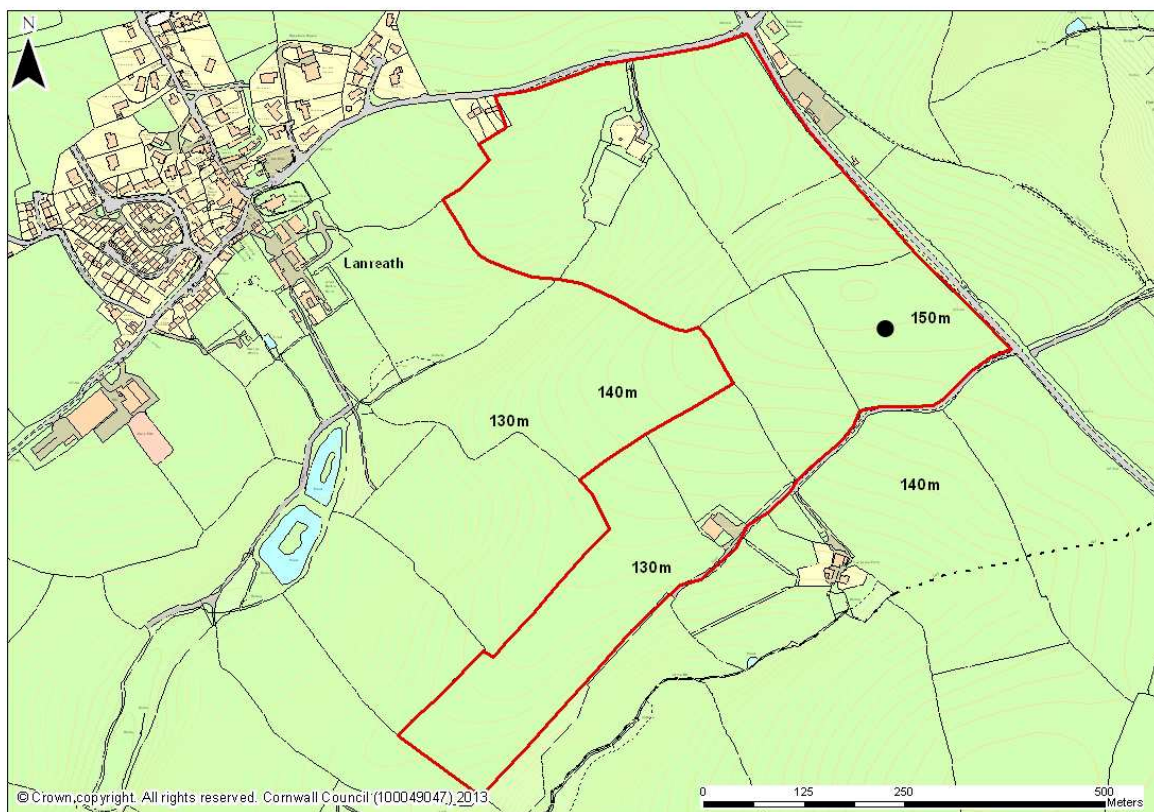


Fig 12 OS contour data for the area immediately surrounding the proposed wind turbine shows its site located on the southern slopes of a small hill.

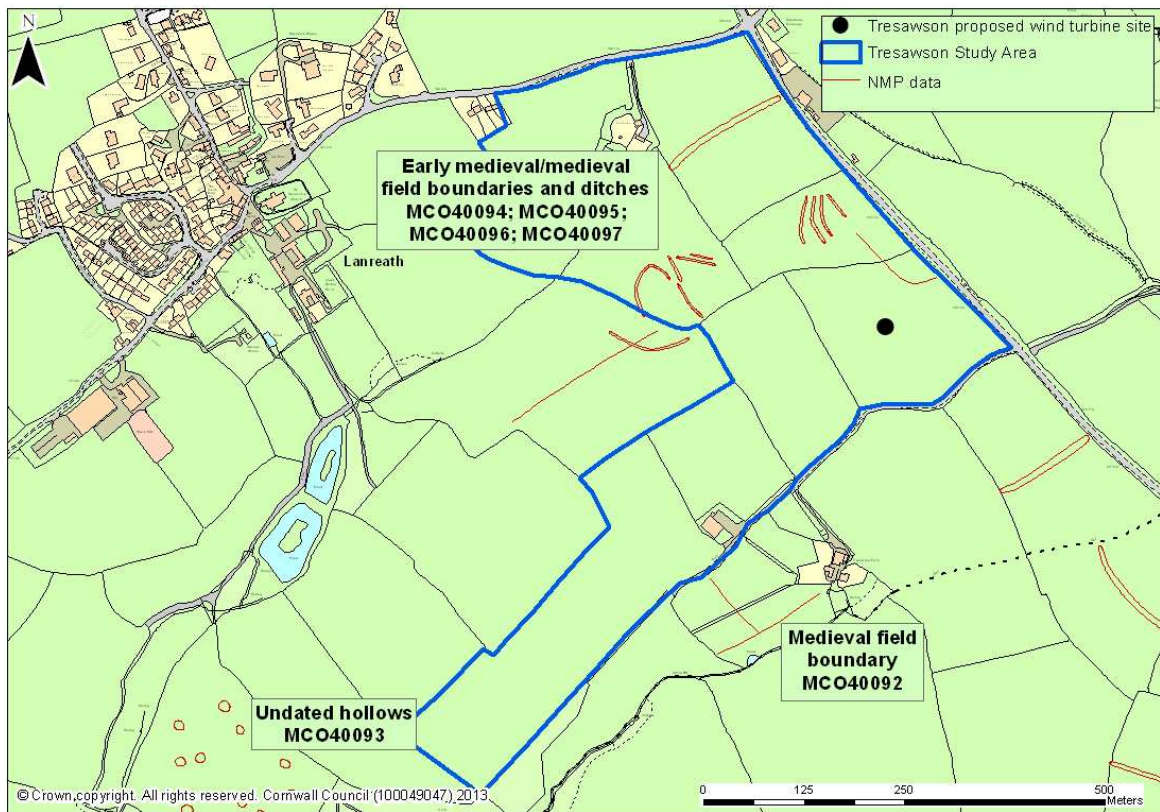


Fig 13 Cropmark archaeological sites within the vicinity of the site at Tresawson recorded by the National Mapping Project. NMP mapping ©English Heritage

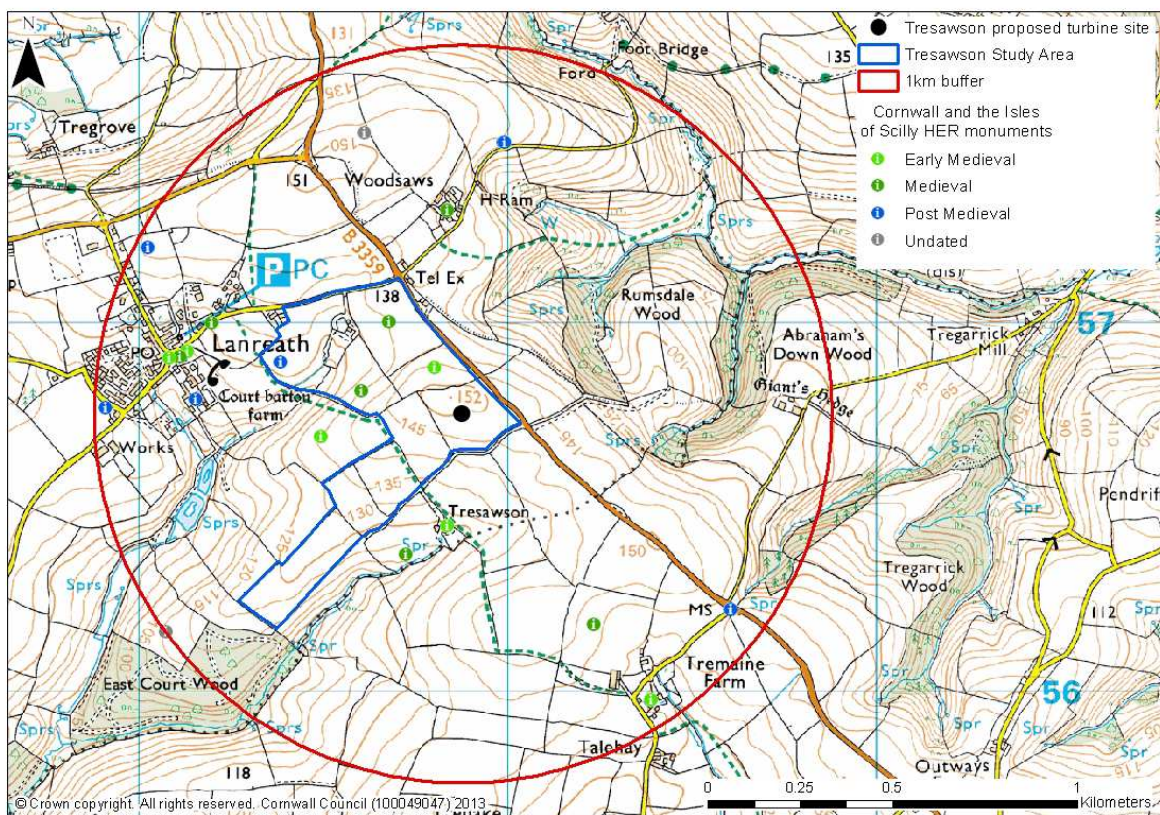


Fig 14 Sites within a 1km radius of Tresawson recorded in the Cornwall and Scilly HER.

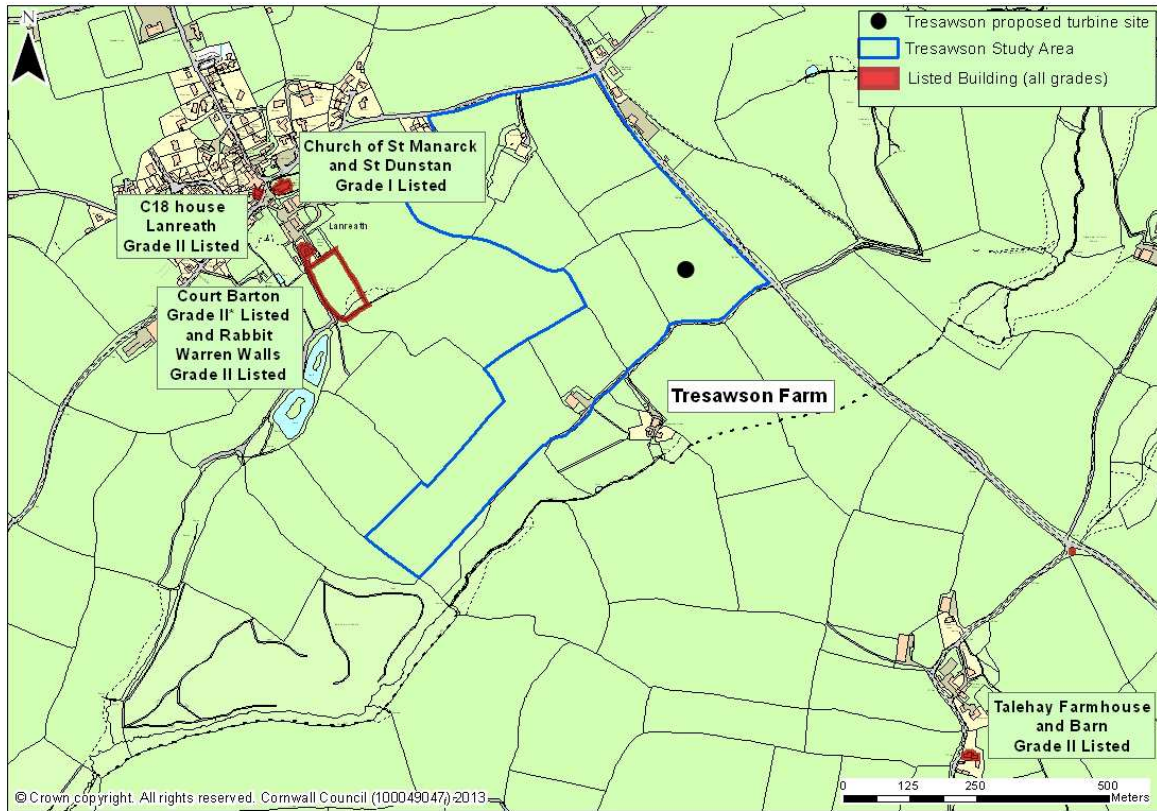


Fig 15 Listed Buildings within the landscape immediately surrounding Tresawson, at Lanreath and Talehay.

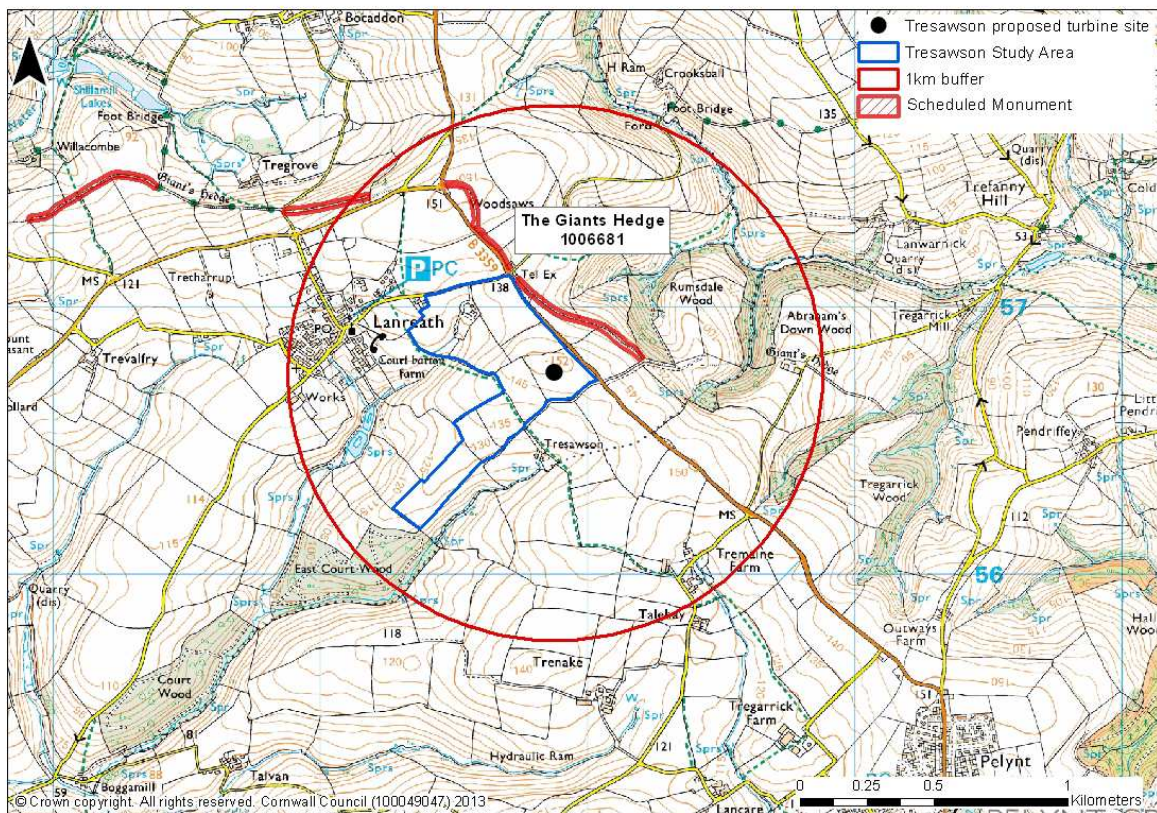


Fig 16 National Monument Numbers for Scheduled Monuments within the landscape immediately surrounding Tresawson.

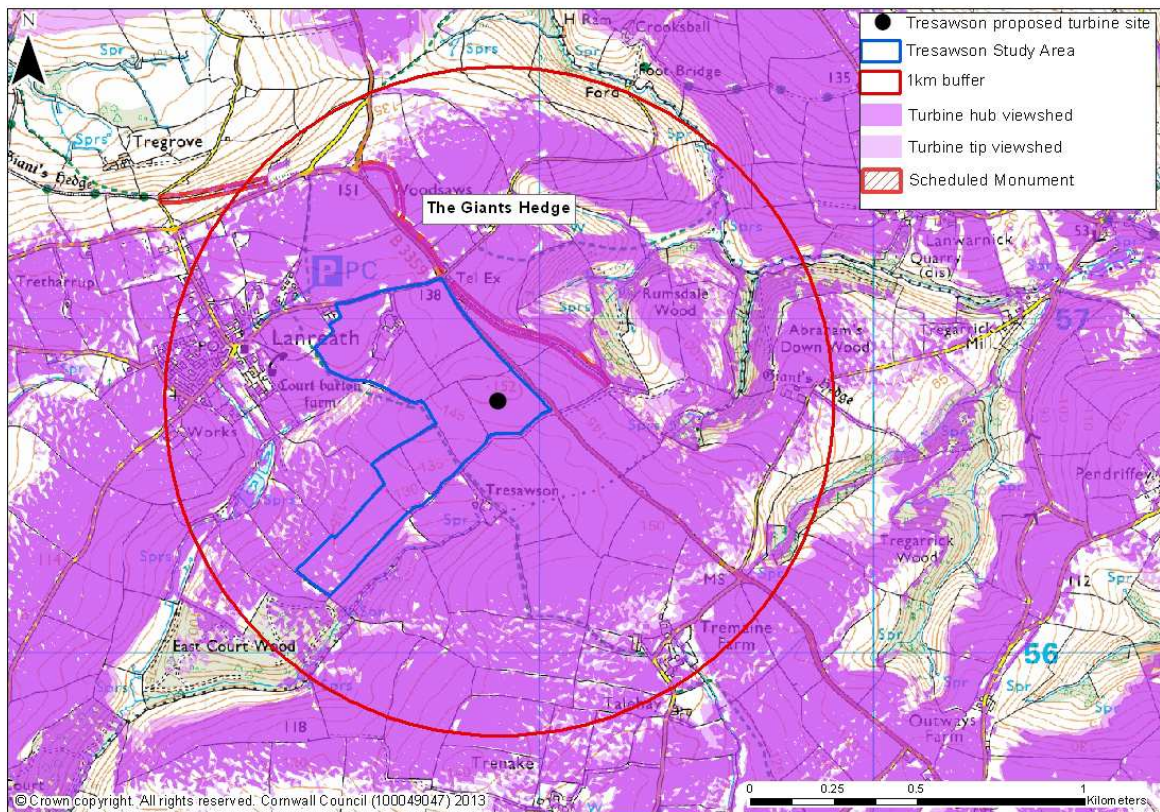


Fig 17 Mapping showing potentially intervisible Scheduled Monuments within the 1Km radius ZTV of the proposed wind turbine site.

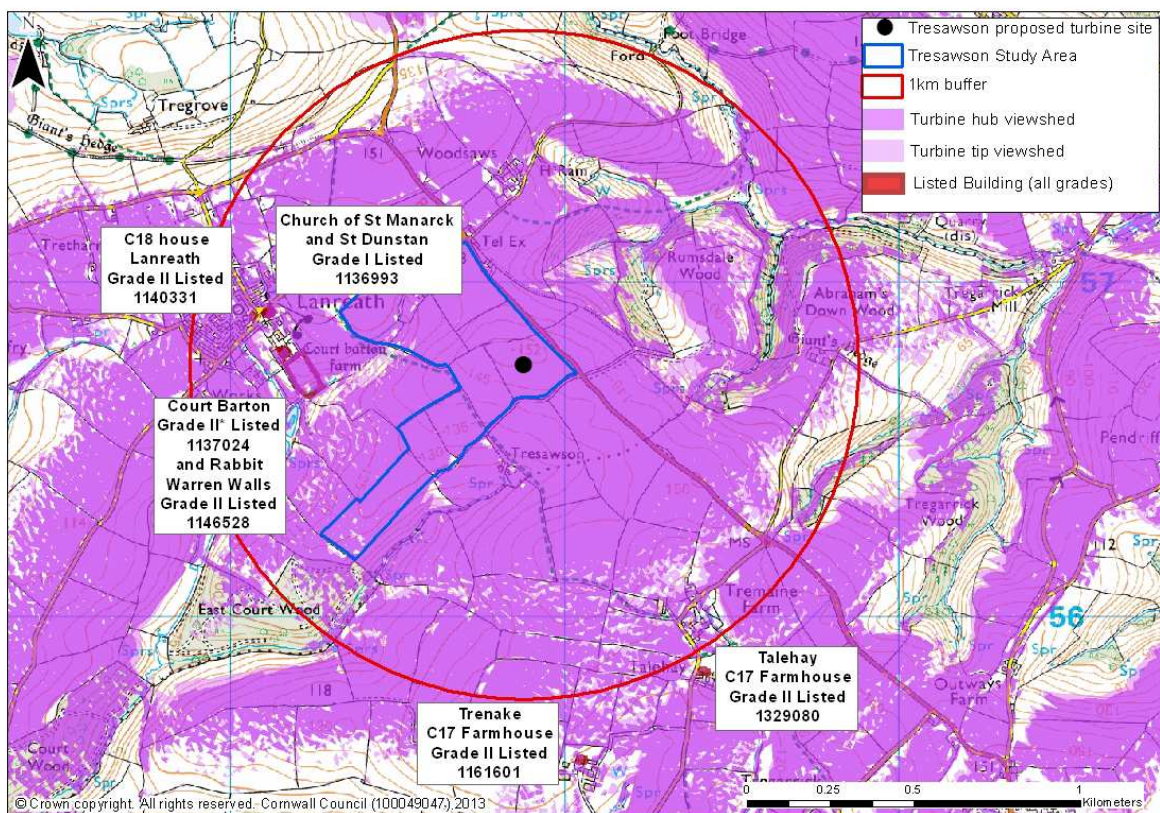


Fig 18 Mapping showing potentially intervisible Listed Buildings within and close to the 1Km radius ZTV of the proposed wind turbine site.

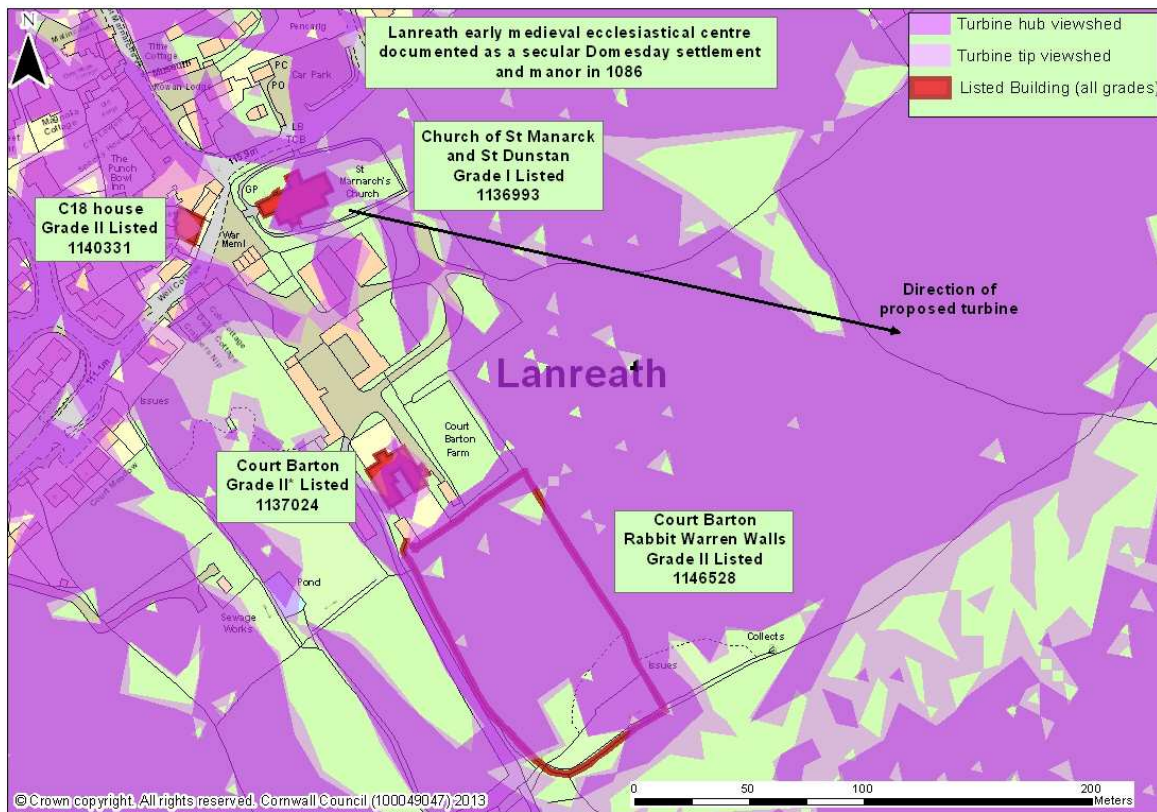


Fig 19 Detail of the ZTV mapping for Listed Buildings at Lanreath, all of which lie within the ZTV at less than 1km distance from the proposed wind turbine at Tresawson. The arrow shows the direction in which the proposed turbine would lie.

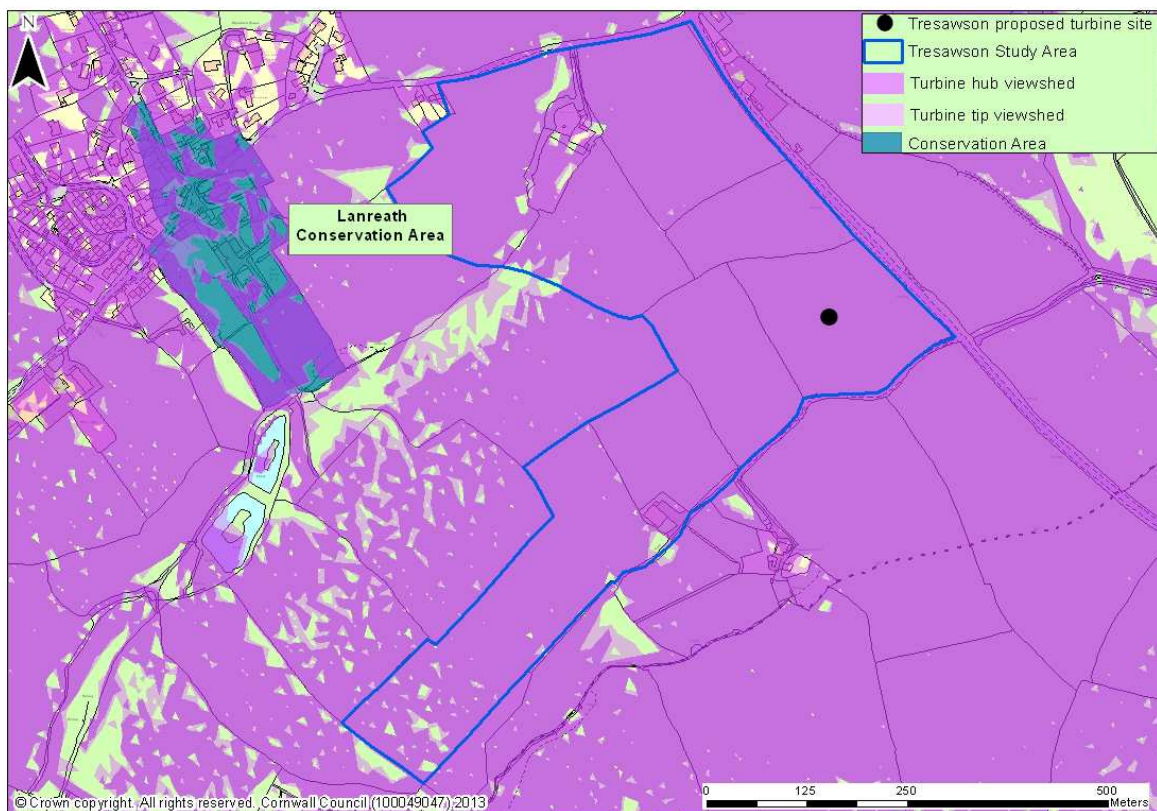


Fig 20 Mapping showing the Conservation Area at Lanreath, within 1km of the site proposed for the wind turbine at Tresawson and potentially intervisible with it.

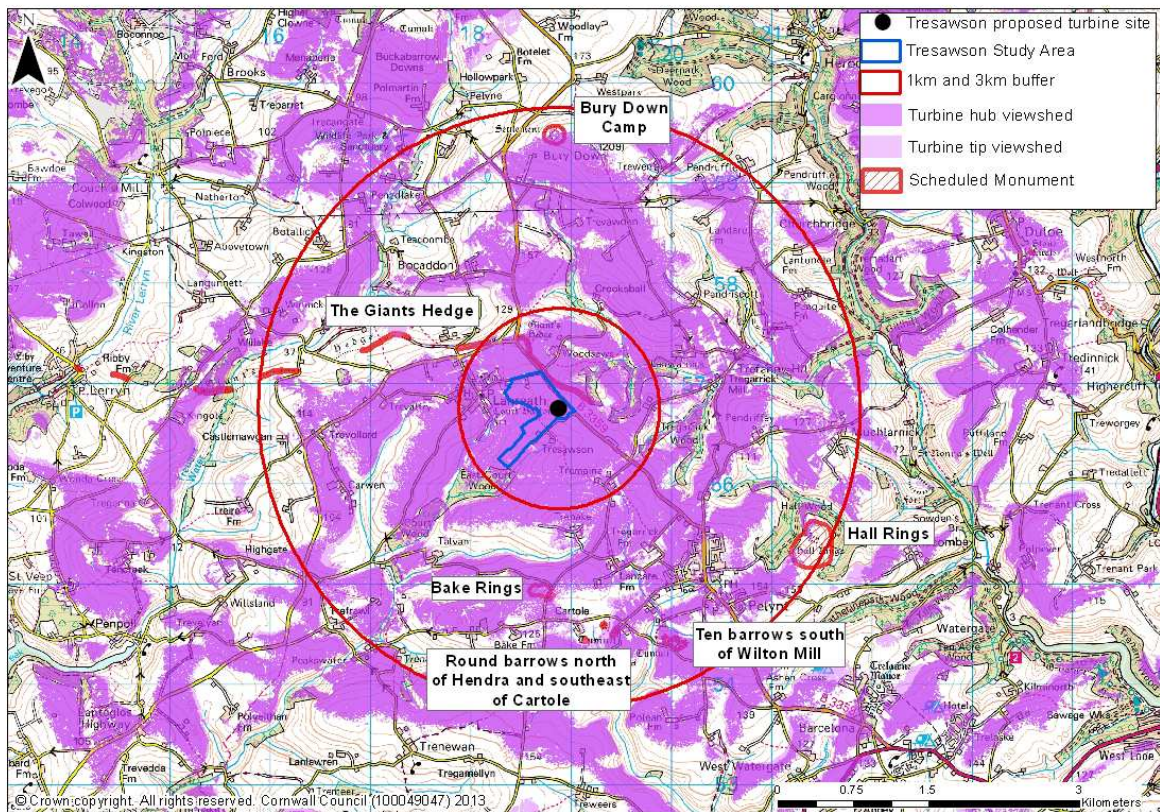


Fig 21 Mapping showing significant and potentially intervisible Scheduled Monuments between 1km and 3km radius ZTV of the proposed wind turbine site.

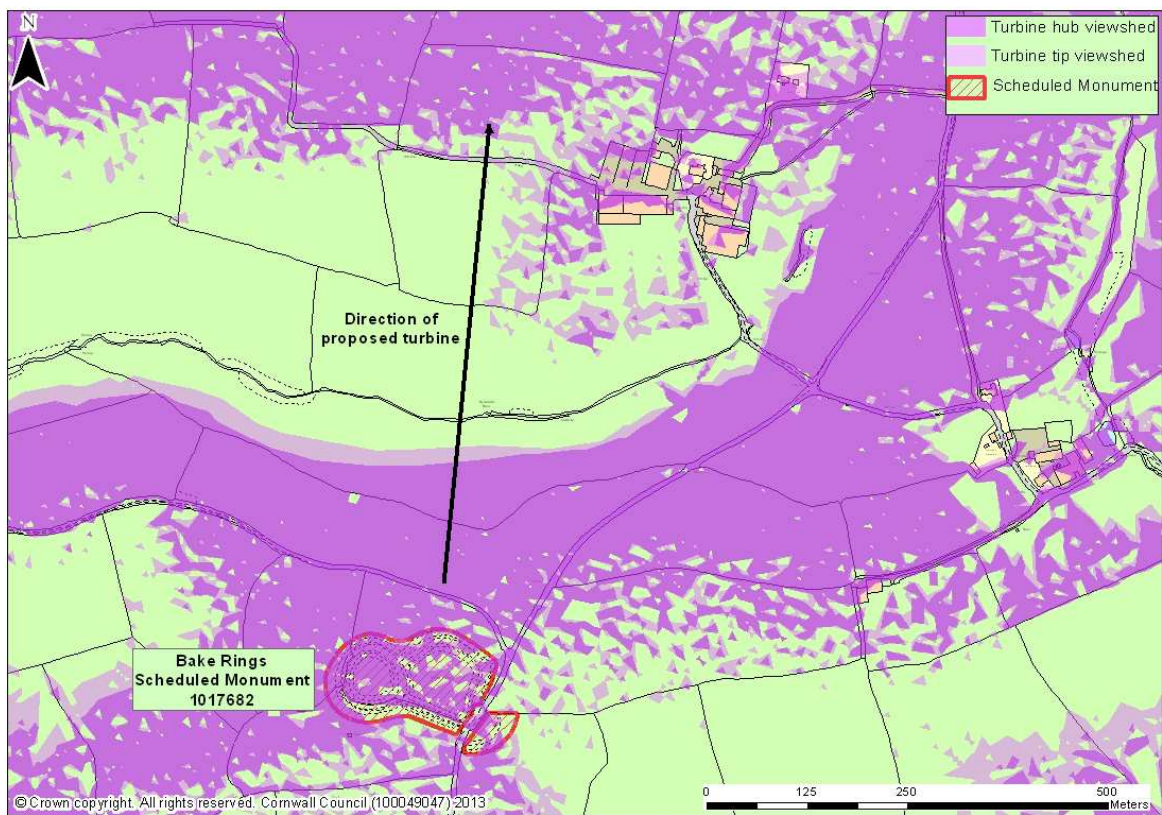


Fig 22 Mapping showing the Scheduled Monument of Bake Rings and the substantial extent of potential intervisibility with the proposed wind turbine site.

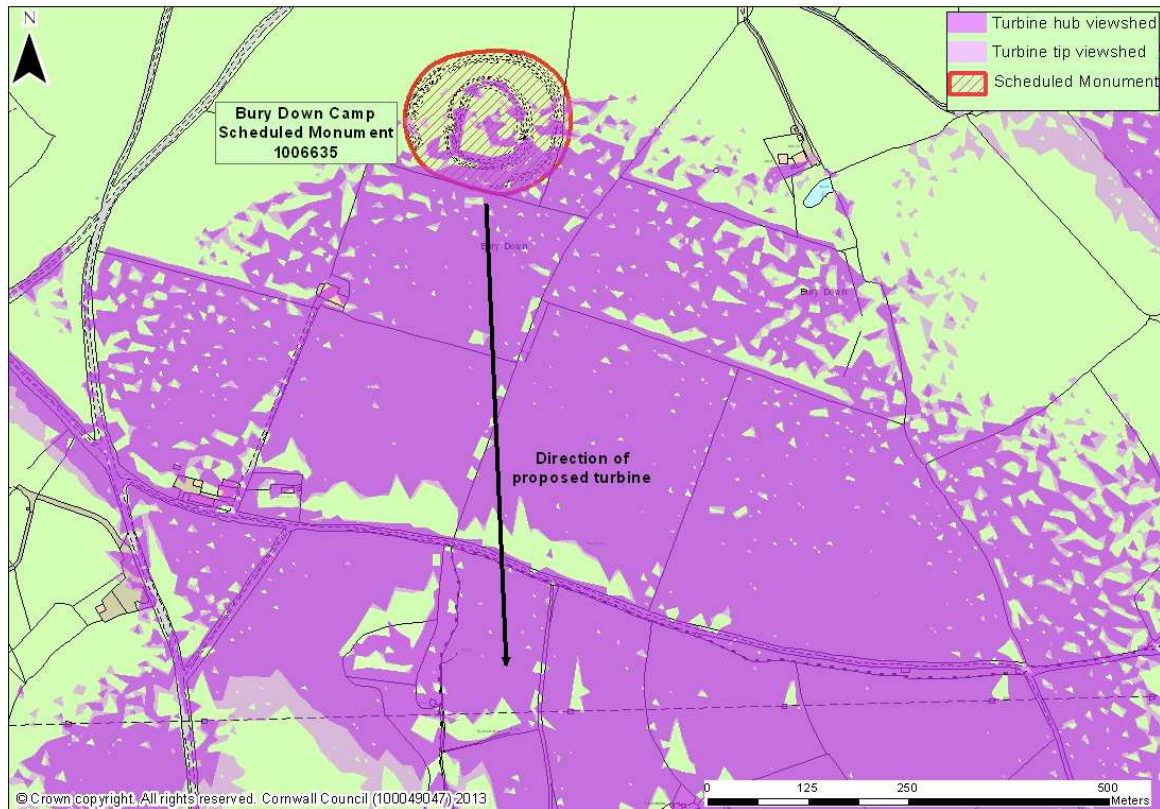


Fig 23 Mapping showing the Scheduled Monument of Bury Down Camp and the limited intervisibility with the proposed wind turbine site. The view south across the valley from this site was probably an important one when it was constructed.

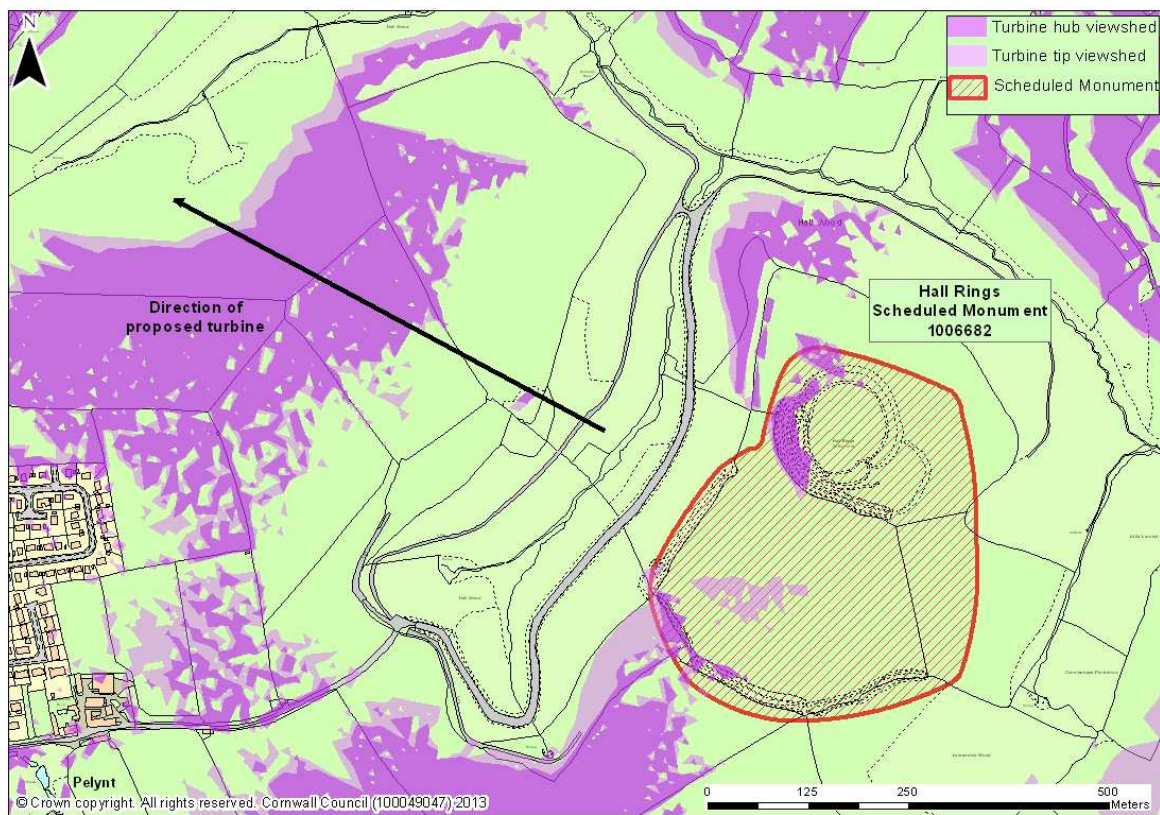


Fig 24 Mapping showing the Scheduled Monument of Hall Rings; although there is limited intervisibility with the proposed wind turbine site, the view west along the valley from this site was probably an important one when it was constructed.

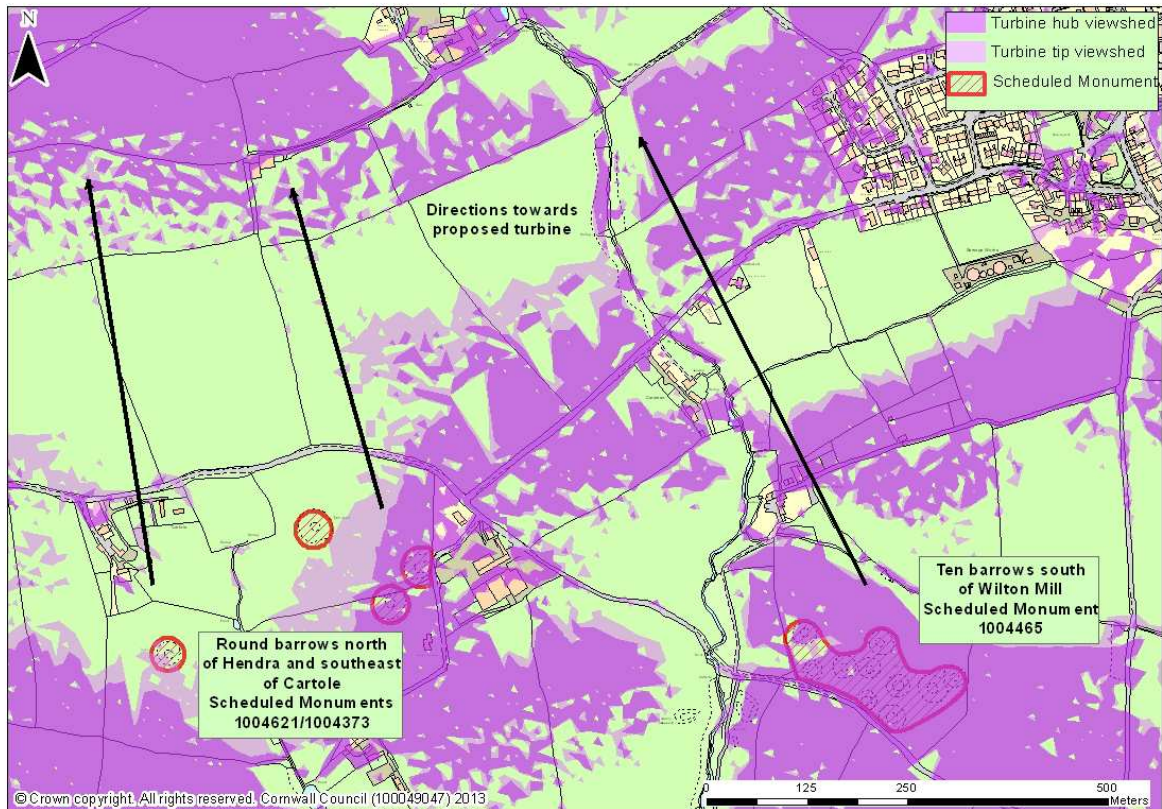


Fig 25 Mapping showing the Scheduled Monuments of the barrow groups at Wilton Mill, Hendra and Cartole and likely intervisibility with the proposed wind turbine site. The barrows were probably intended to be visible from the landscape to their north.

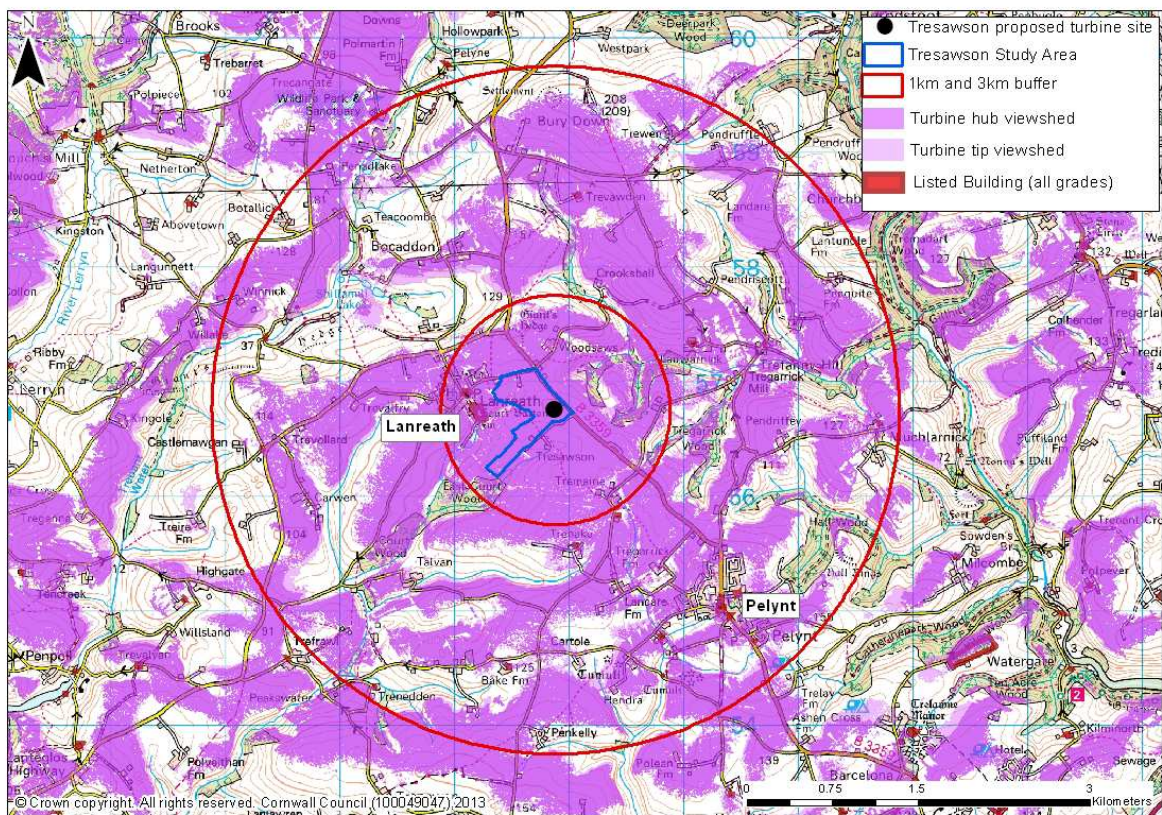


Fig 26 Mapping showing potentially intervisible Listed Buildings within and close to the 3km radius ZTV of the proposed wind turbine site.

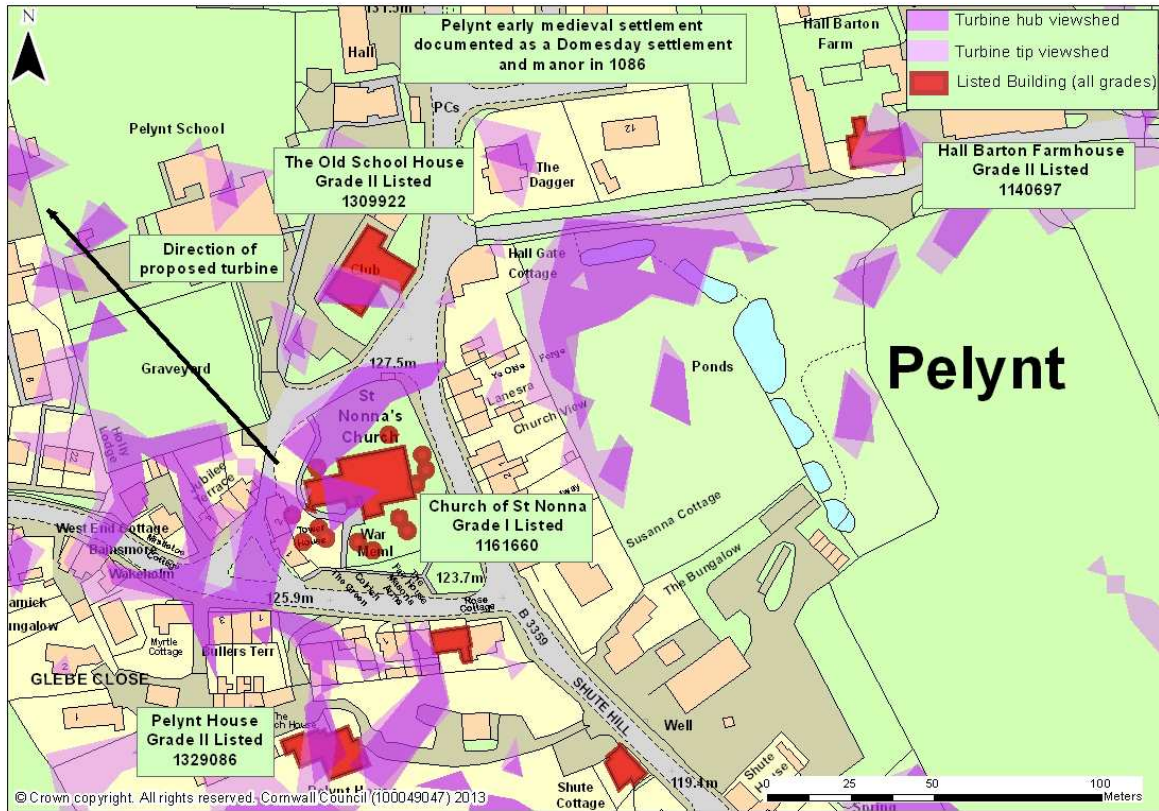


Fig 27 Mapping showing the Listed Buildings at Pelynt, including the Grade I Listed St Nonna Church, and the extent of potential intervisibility with the proposed wind turbine site.

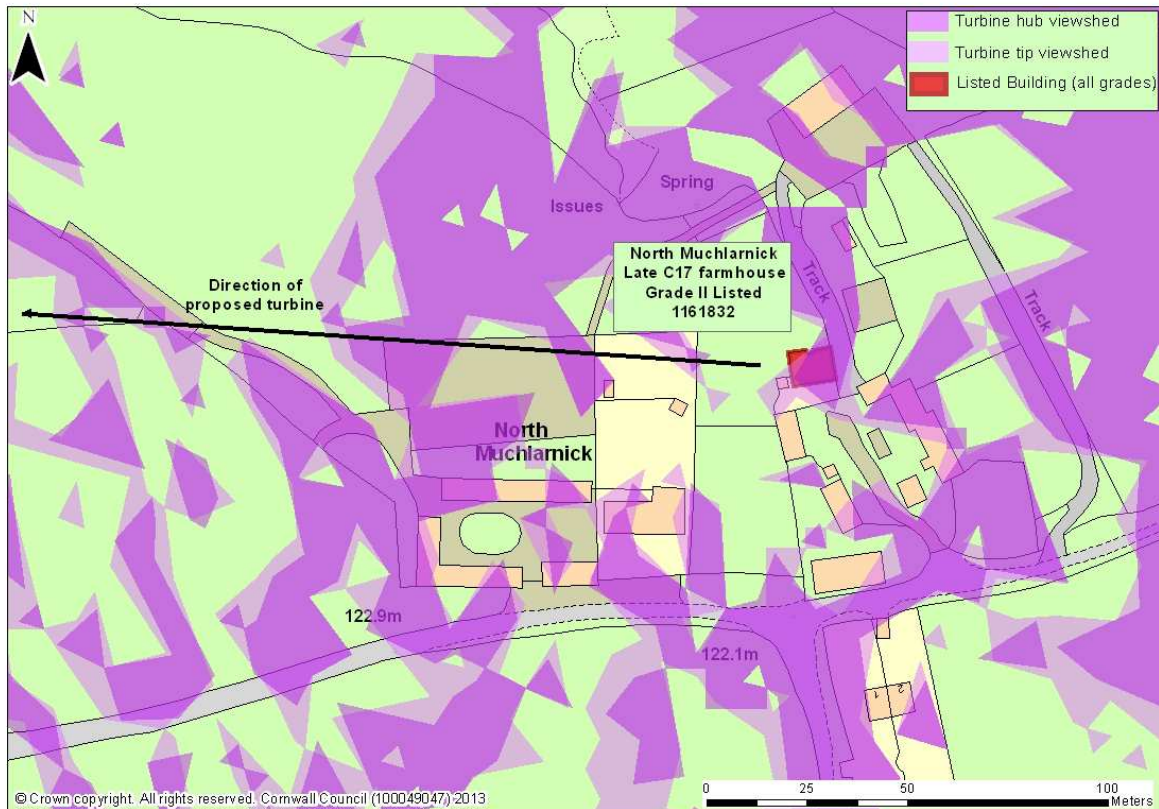


Fig 28 Mapping showing the 17th C Grade II Listed farmhouse at North Muchlarnick and the extent of potential intervisibility with the proposed wind turbine site.

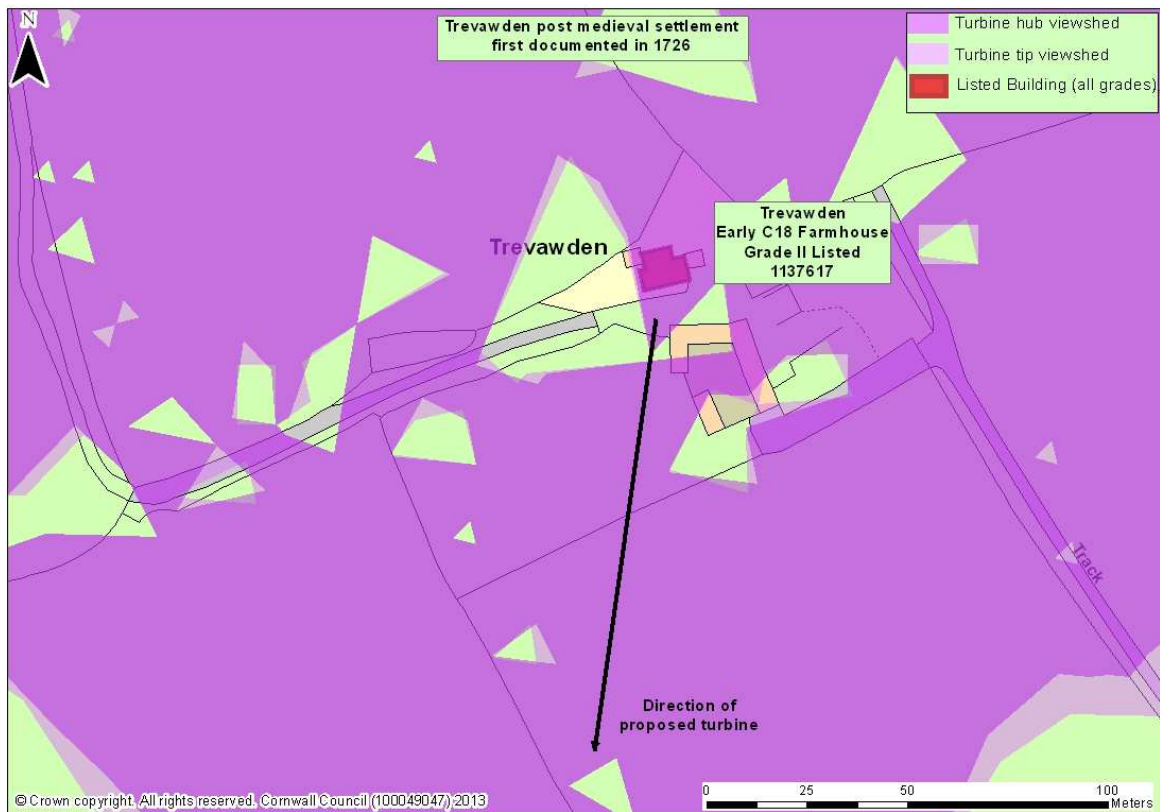


Fig 29 Mapping showing the 18th century Grade II Listed farmhouse at Trevawden and the extent of potential intervisibility with the proposed wind turbine site.

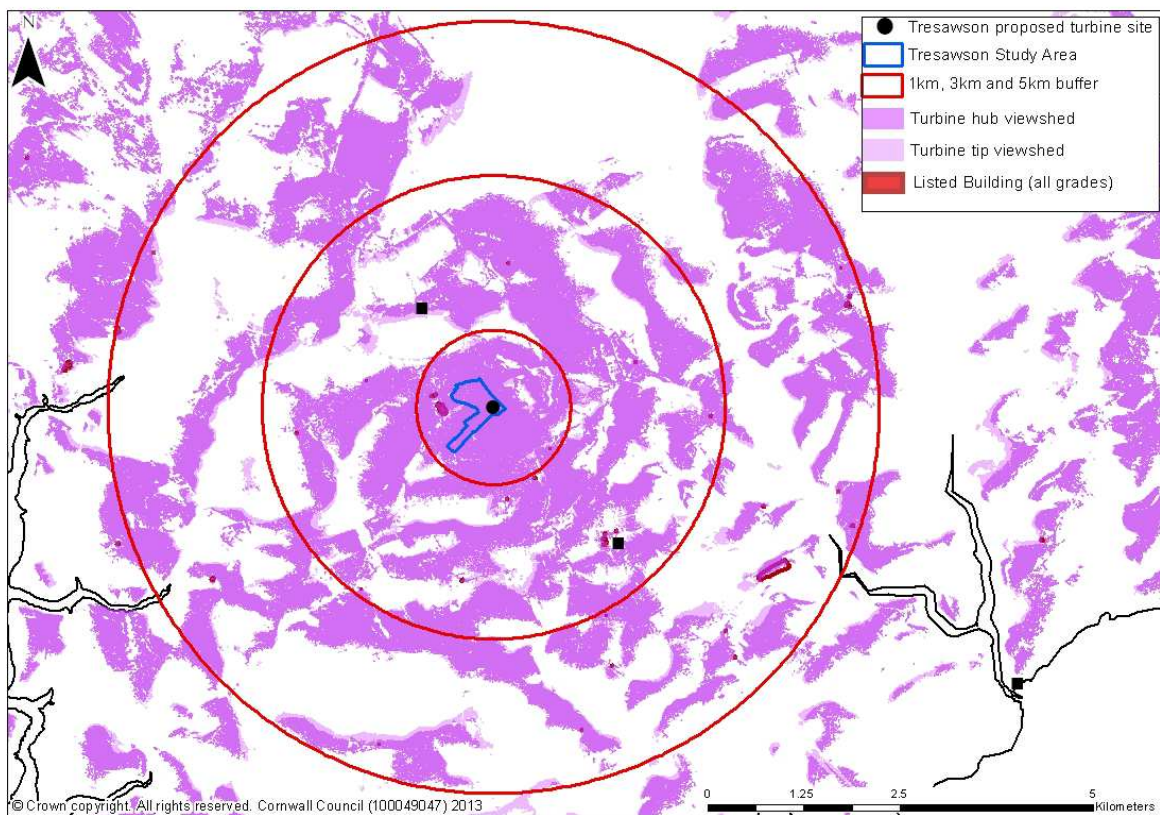


Fig 30 Mapping showing potentially intervisible Listed Buildings within and close to the 5km radius ZTV of the proposed wind turbine site.

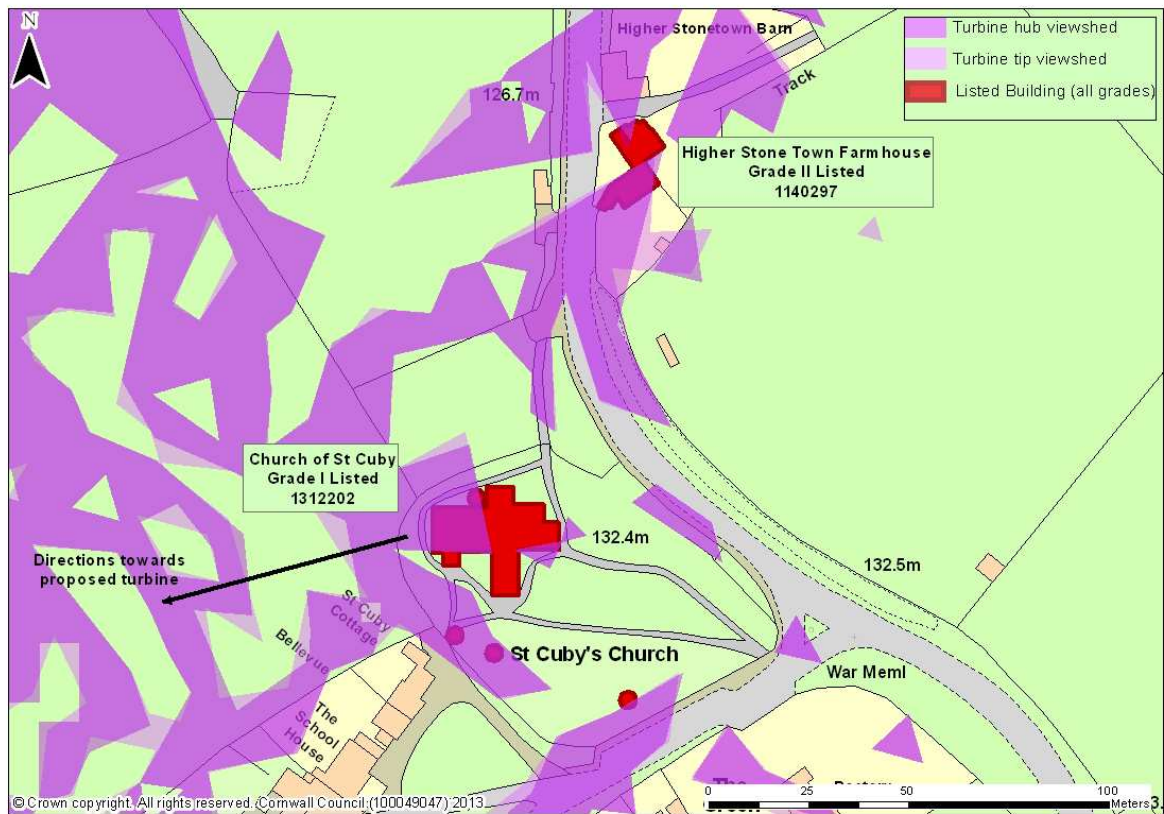


Fig 31 Mapping showing the Listed Buildings at Duloe, including the Grade I Listed St Cuby's Church, and the extent of potential intervisibility with the proposed wind turbine site.



Fig 32 Mapping showing the 17th century Grade II Listed farmhouse at Polpever and the extent of potential intervisibility with the proposed wind turbine site.

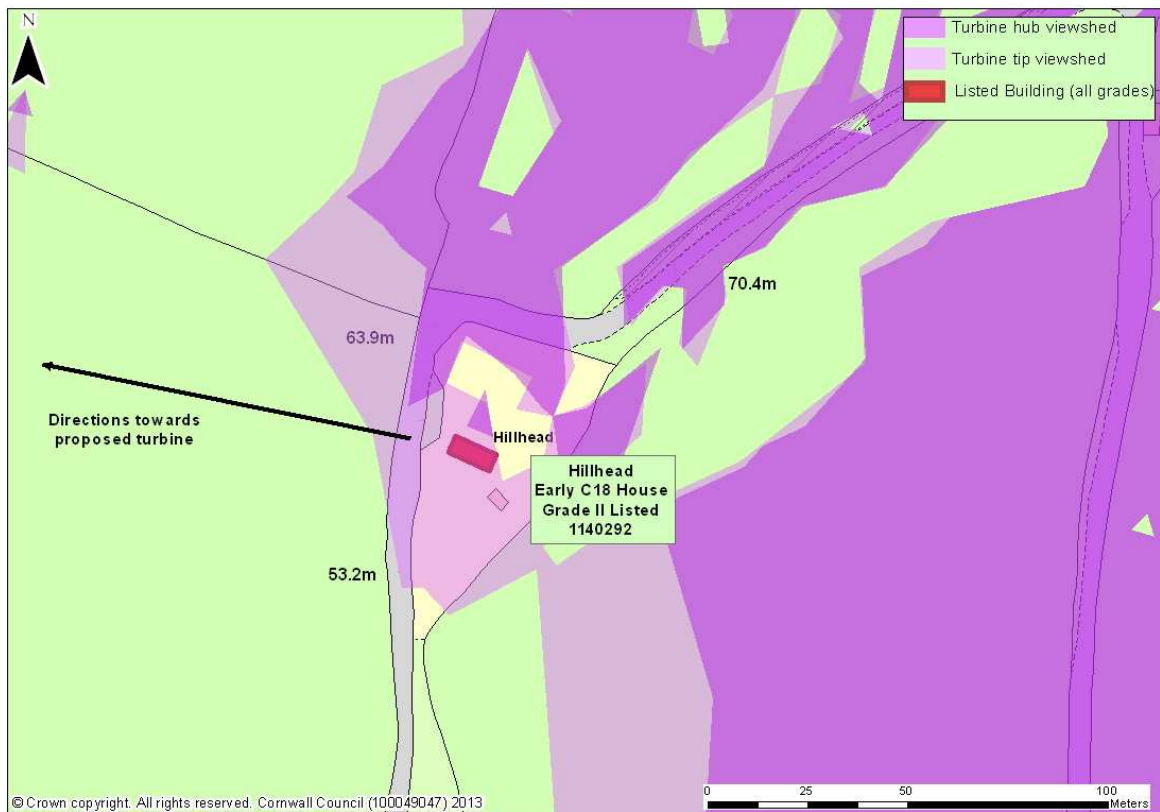


Fig 33 Mapping showing the 18th century Grade II Listed house at Hillhead and the extent of potential intervisibility with the proposed wind turbine site.

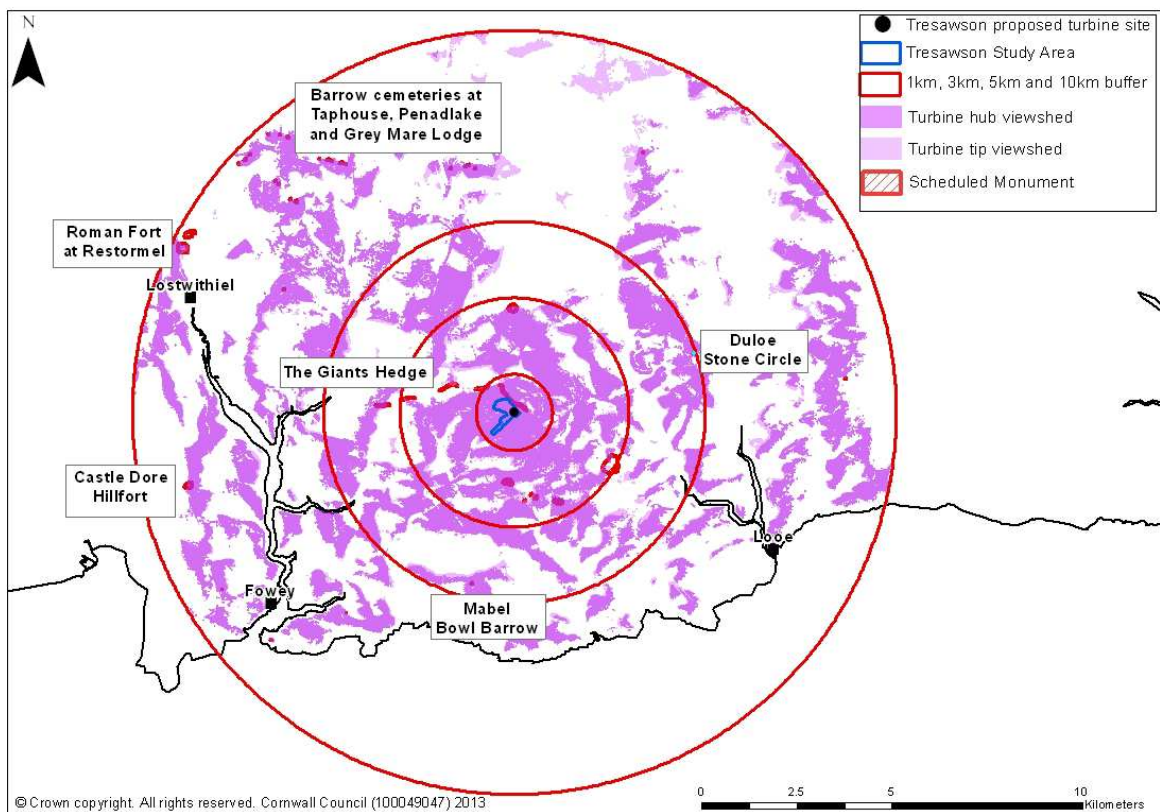


Fig 34 Mapping showing potentially intervisible Scheduled Monuments within and close to the 10km radius ZTV of the proposed wind turbine site.

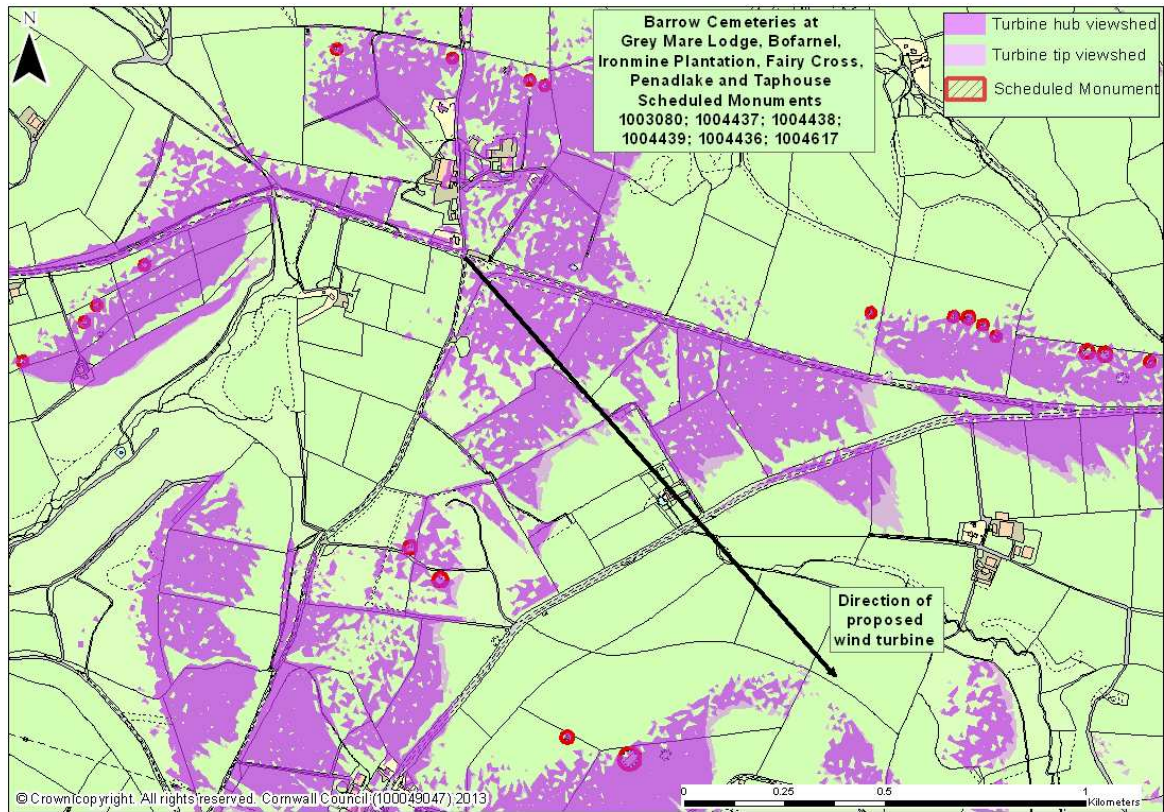


Fig 35 Mapping showing the Scheduled Monuments of several barrow groups to the north west of Tresawson and their likely intervisibility with the proposed turbine site. The barrows were probably intended to be visible on the hilltops from the valley to the south.

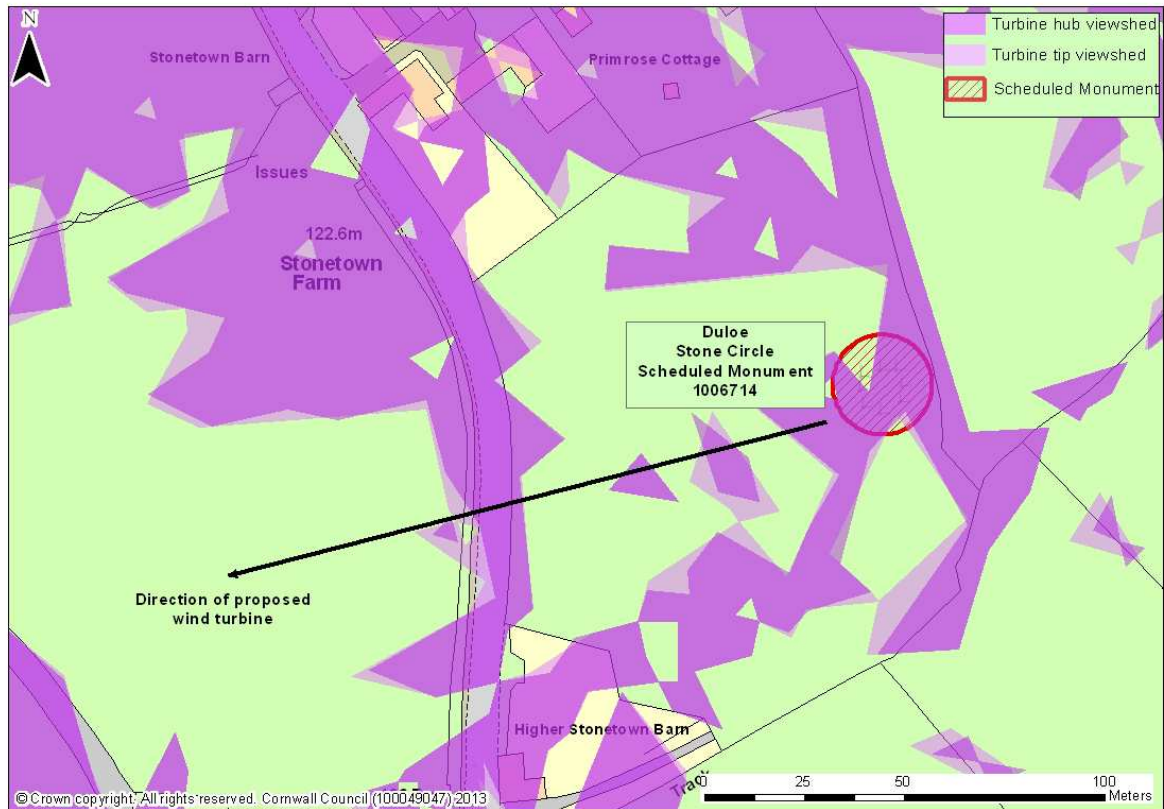


Fig 36 Mapping showing the Scheduled Monument of Duloe Stone Circle and the extent of potential intervisibility with the proposed wind turbine site.

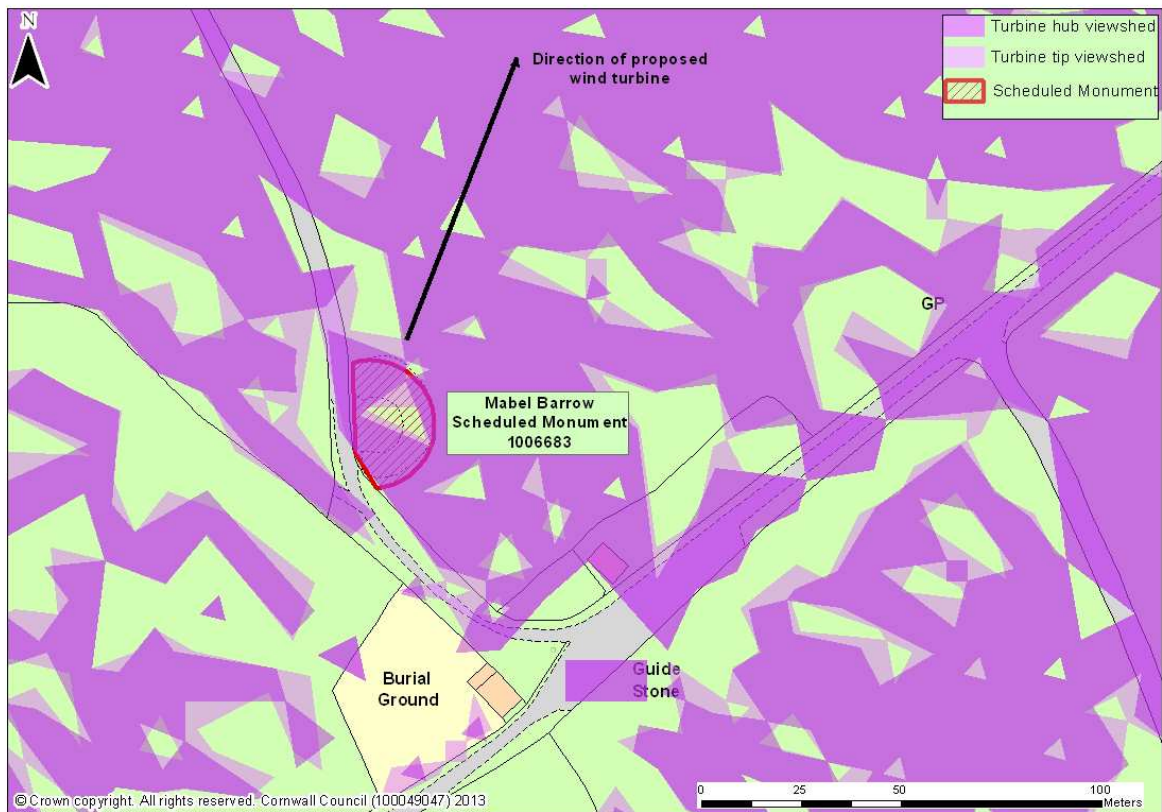


Fig 37 Mapping showing the Scheduled Monument of Mabel Bowl Barrow and the extent of potential intervisibility with the proposed wind turbine site.

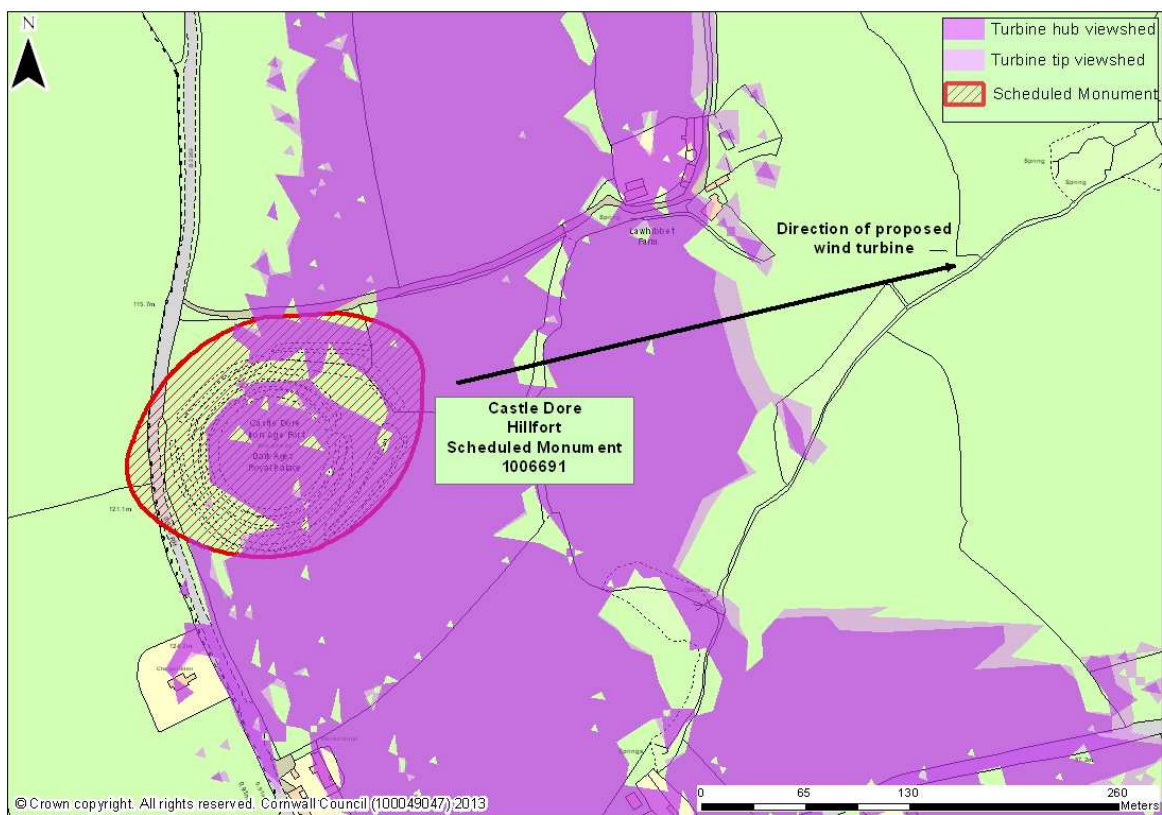


Fig 38 Mapping showing the Scheduled Monument of Castle Dore hillfort and its likely intervisibility with the proposed wind turbine site. The view out to the east from Castle Dore across the Fowey estuary would originally have been a key one.

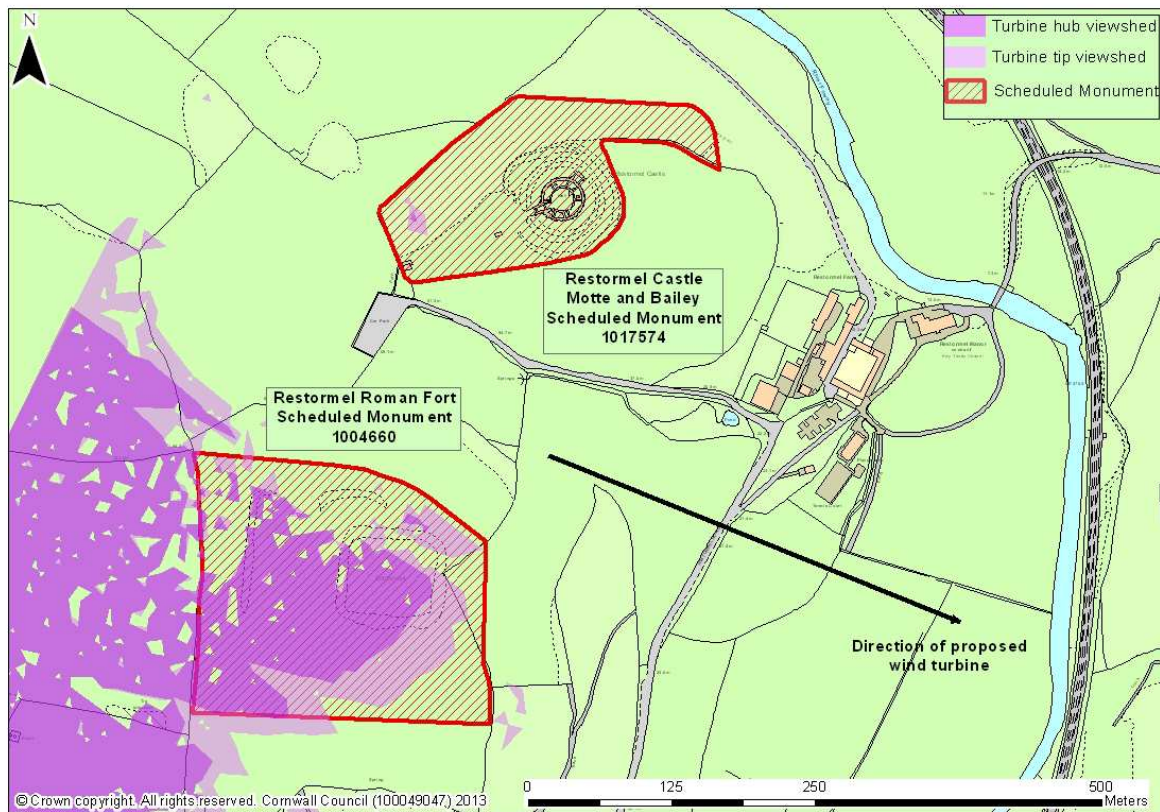


Fig 39 Mapping showing the Scheduled Monuments of the Roman fort and Norman Castle at Restormel and the extent of potential intervisibility with the proposed wind turbine site.

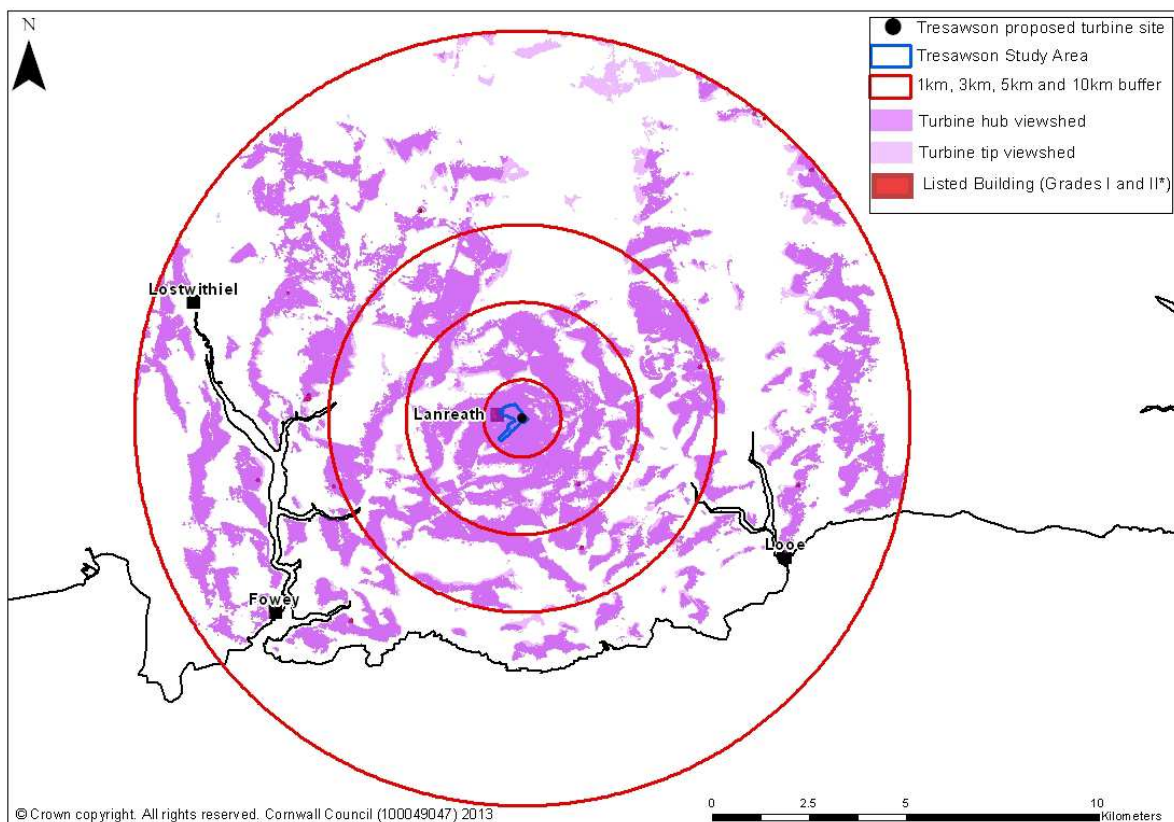


Fig 40 Mapping showing potentially intervisible Grade I and Grade II* Listed Buildings within and close to the 10km radius ZTV of the proposed wind turbine site.



Fig 41 Mapping showing the Grade I Listed St Ciricus and St Julitta, St Veep, and the extent of potential intervisibility with the proposed wind turbine site.

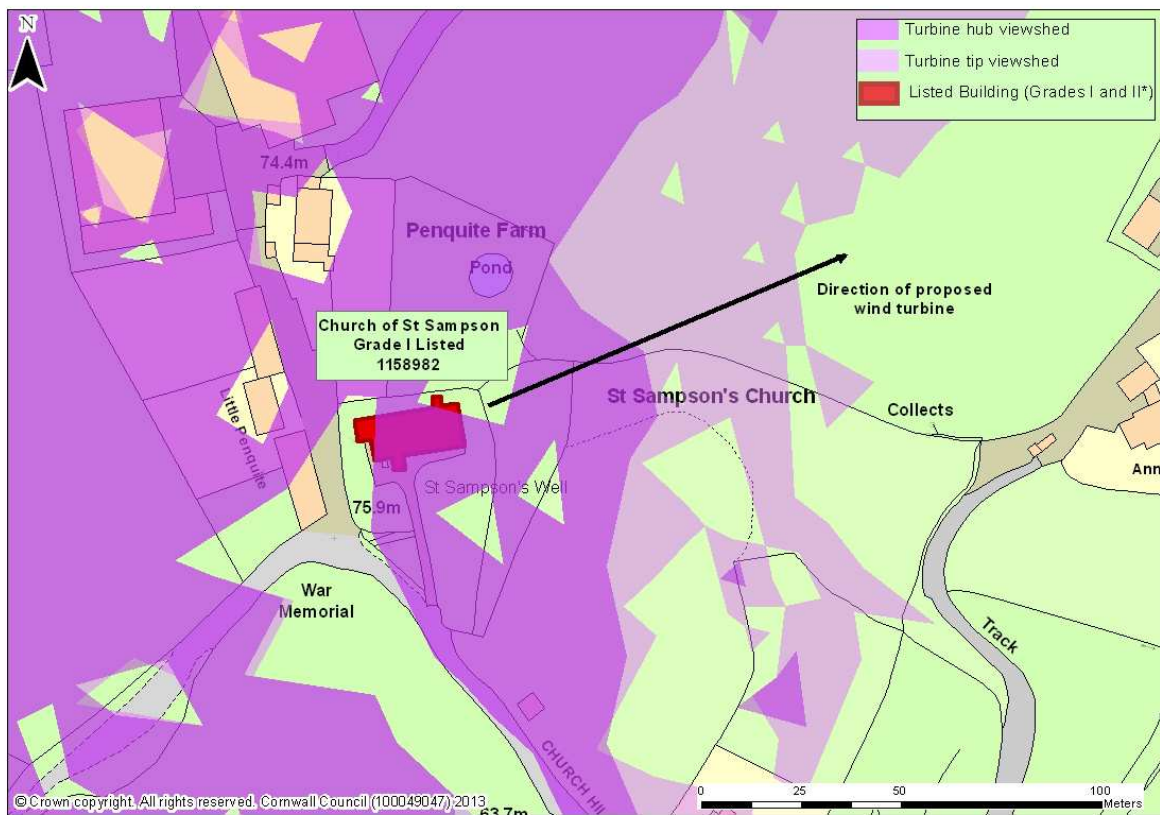


Fig 42 Mapping showing the Grade I Listed St Sampson, Golant and the extent of potential intervisibility with the proposed wind turbine site.

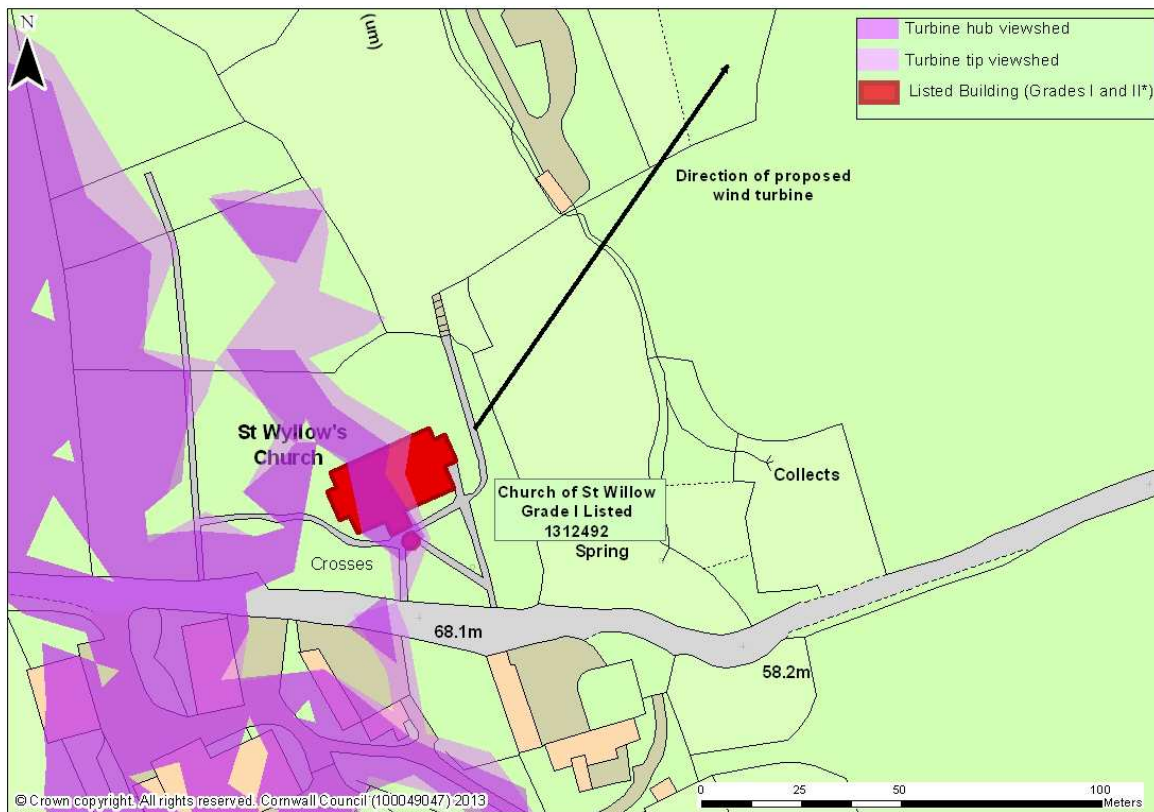


Fig 43 Mapping showing the Grade I Listed St Willow, Lanteglos by Fowey, and the extent of potential intervisibility with the proposed wind turbine site.

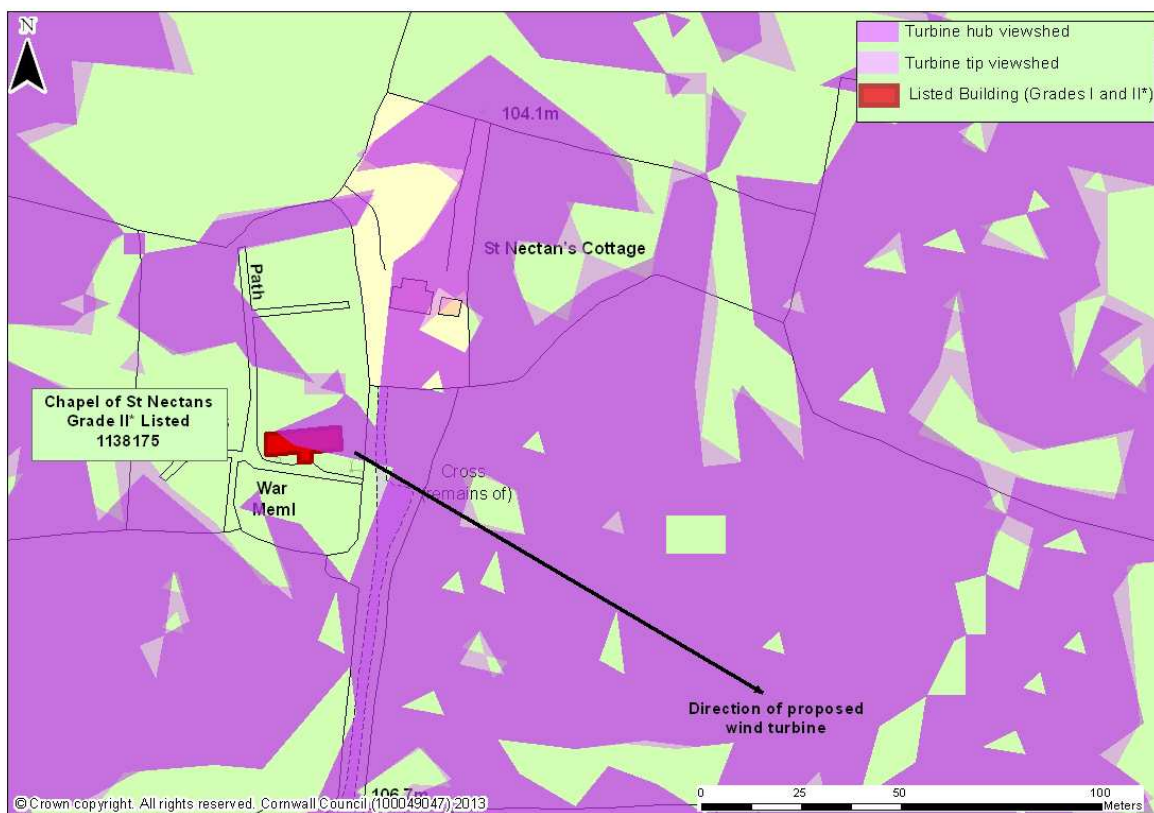


Fig 44 Mapping showing the Grade II* Listed St Nectan's Chapel, and the extent of potential intervisibility with the proposed wind turbine site.

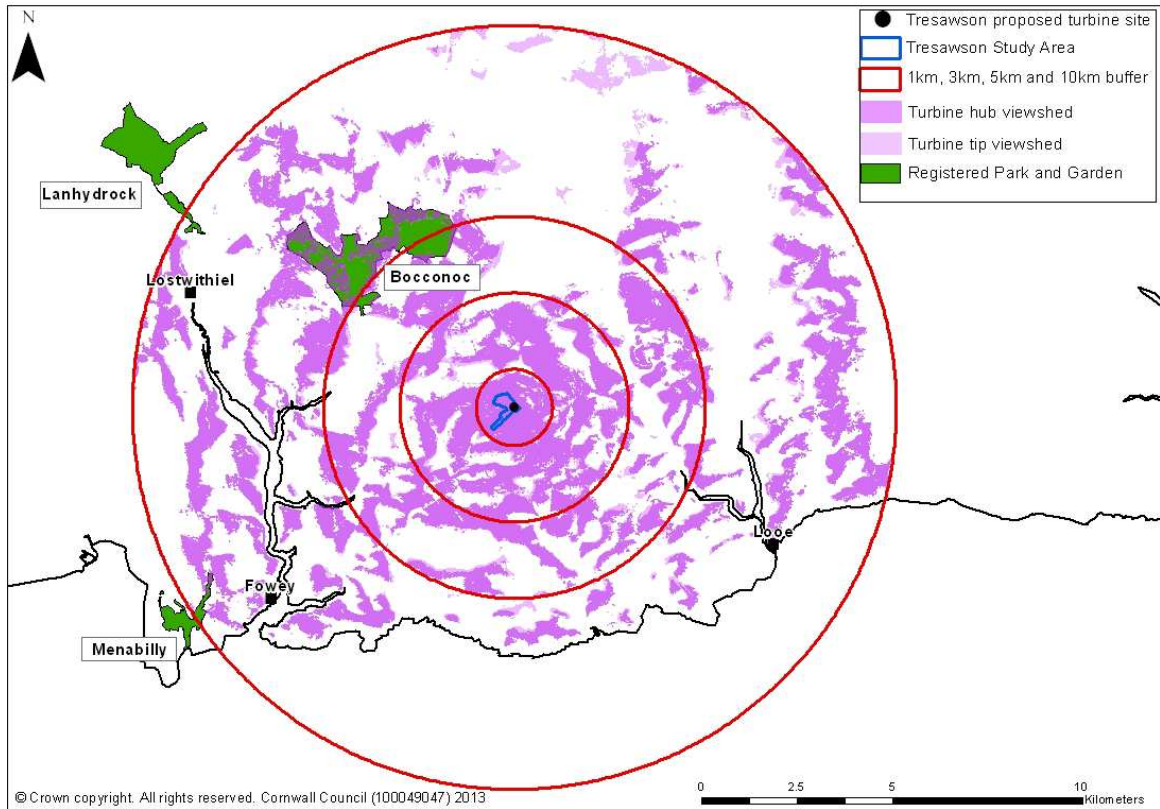


Fig 45 Mapping showing potentially intervisible Registered Parks and Gardens within and close to the 10km radius ZTV of the site proposed for the wind turbine.

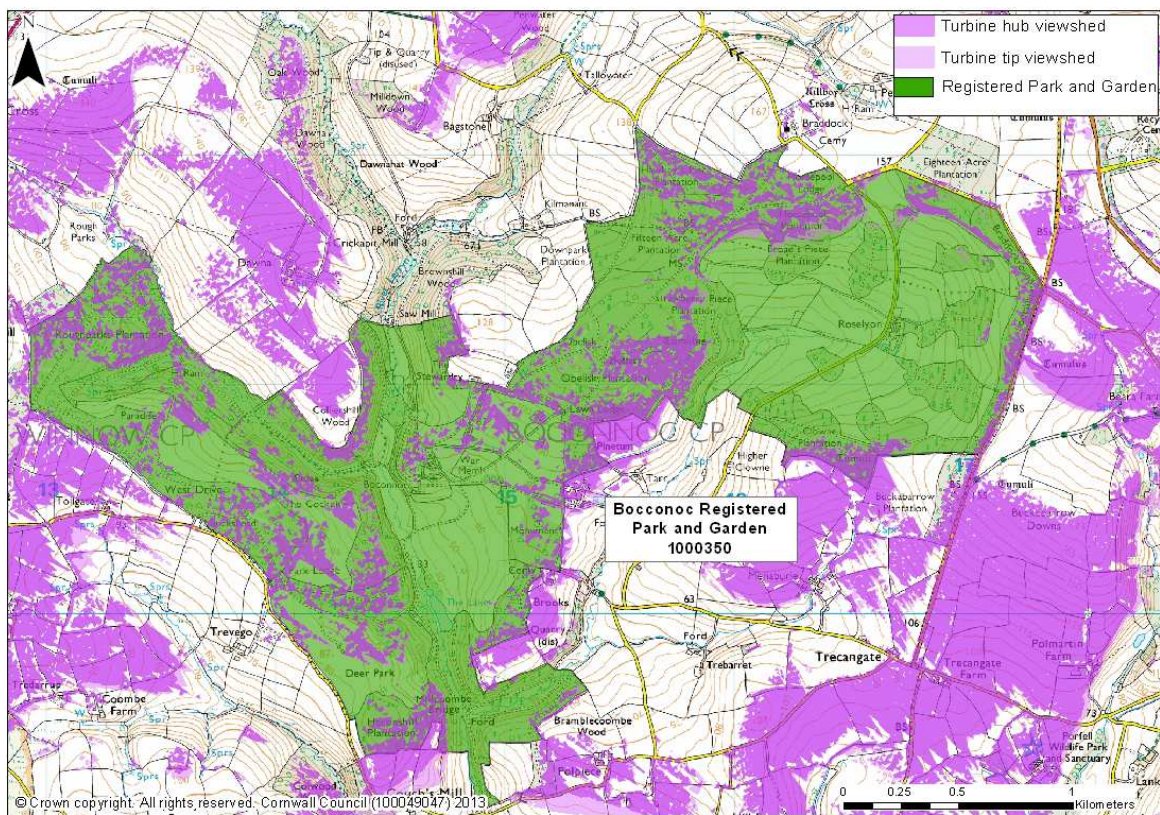


Fig 46 Mapping showing the Registered Park and Garden of Bocconoc and the extent of potential intervisibility with the proposed wind turbine site. The ZTV is rather patchy and intervisibility will probably be limited by topography and intervening vegetation.

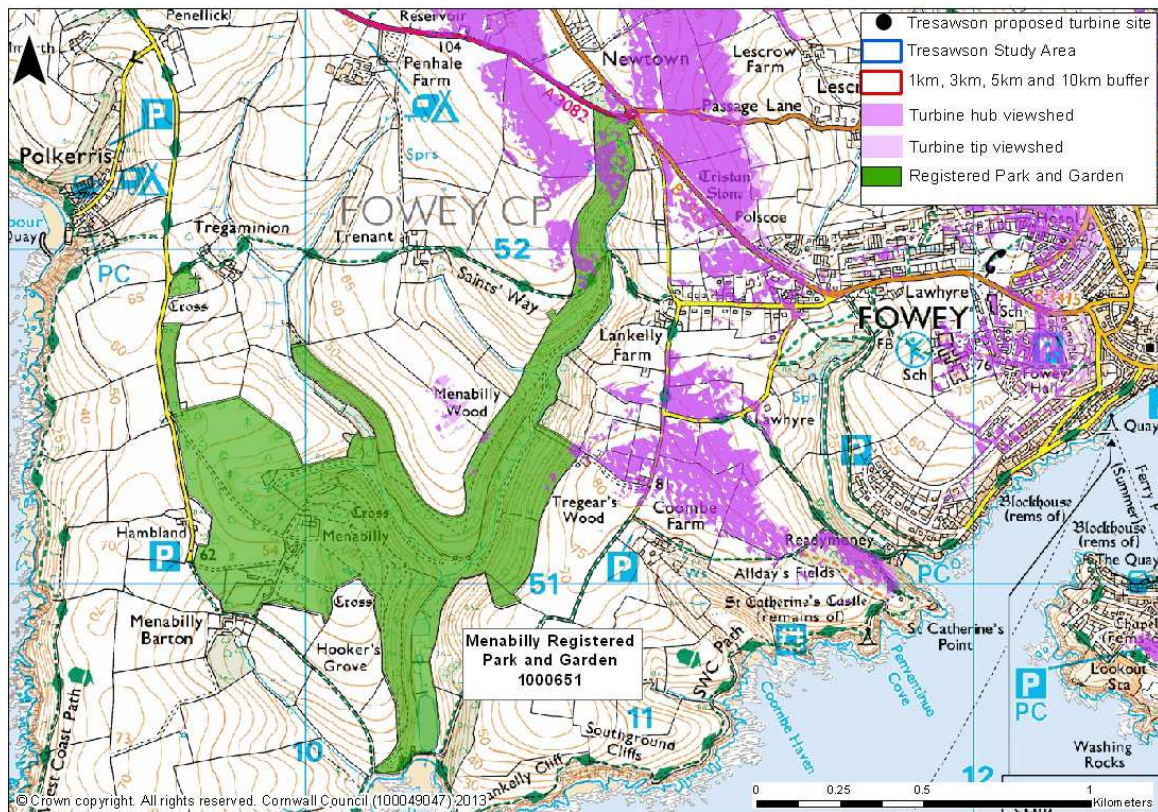


Fig 47 Mapping showing the Registered Park and Garden of Menabilly and the extent of potential intervisibility with the proposed wind turbine site, which is negligible.

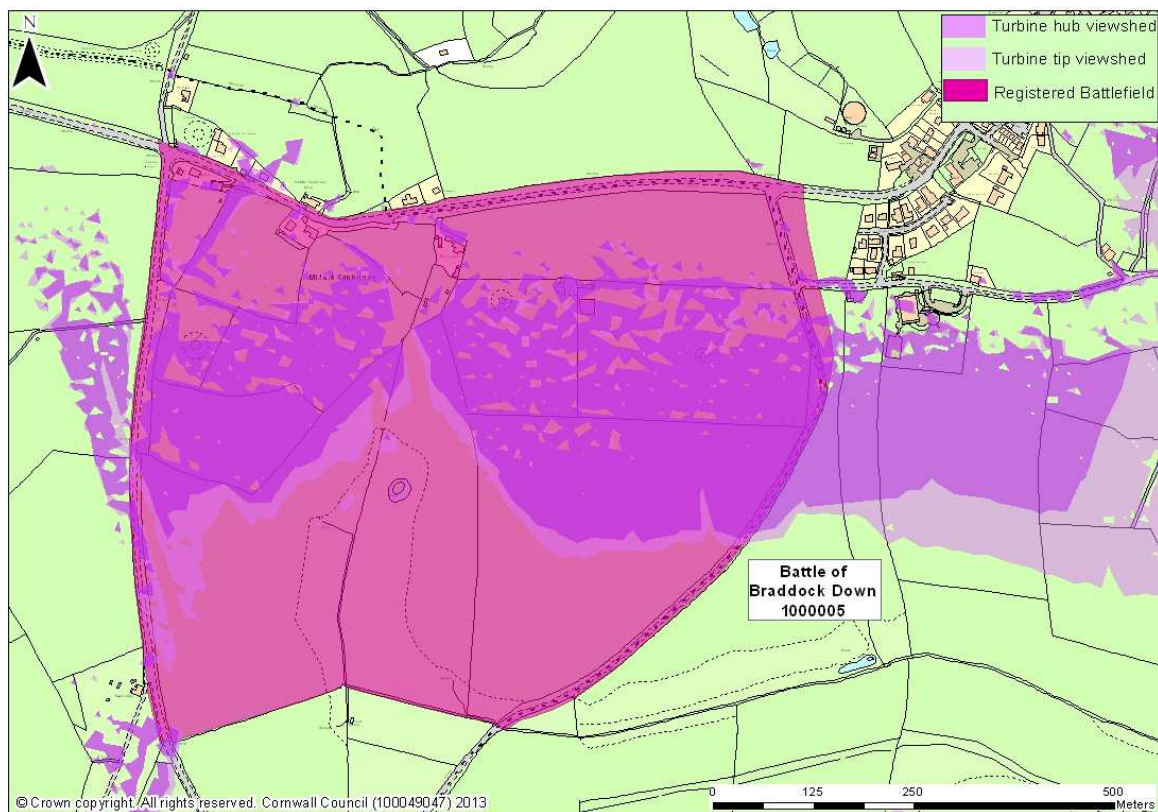


Fig 48 Mapping showing the Registered Battlefield of Braddock Down and the extent of potentially substantial intervisibility with the proposed wind turbine site.



Fig 49 Results of the geophysical survey at Tresawson by Substrata, georeferenced onto the OS Mastermap and showing the proposed wind turbine site.

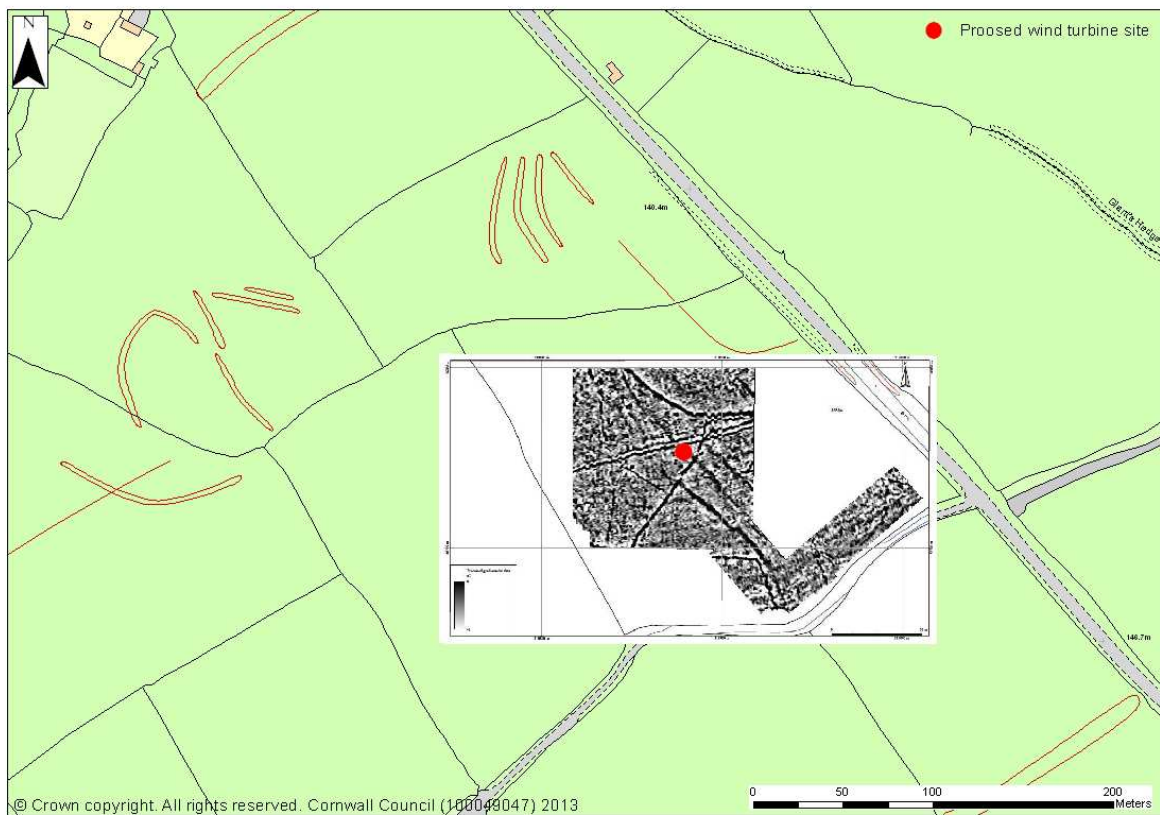


Fig 50 The results of the geophysical survey at Tresawson by Substrata, shown in relation to the National Mapping Programme data.



Fig 51 The interpreted results of the geophysical survey at Tresawson by Substrata, georeferenced onto the OS Mastermap and showing the proposed wind turbine site.

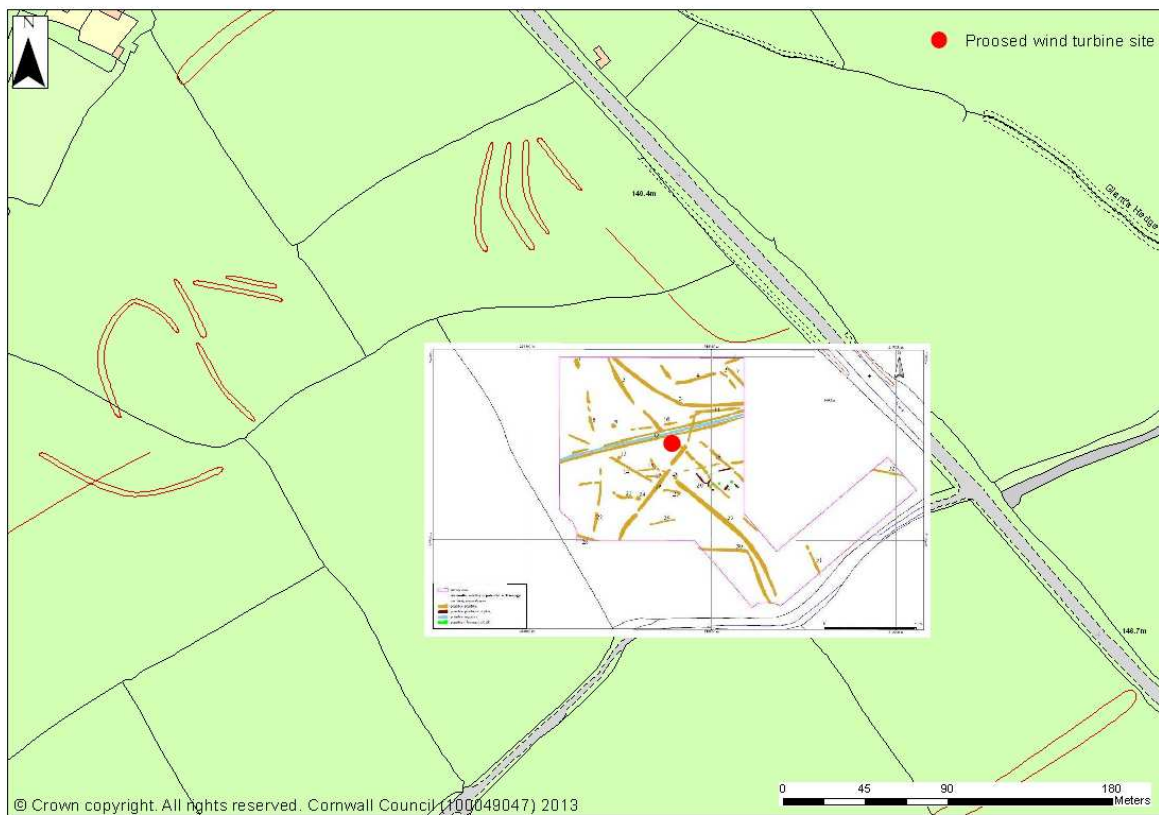


Fig 52 The interpreted results of the geophysical survey at Tresawson by Substrata, shown in relation to the National Mapping Programme data.

Anomaly group	Associated groups	Anomaly characterisation certainty and class	Anomaly form	Additional archaeological characterisation	comments
1		Possible, positive	linear		
2		Possible, positive	disrupted curvilinear		
3		Possible, positive	curvilinear		
4		Possible, positive	disrupted curvilinear		
5		Possible, positive	disrupted linear		
6		Possible, positive	linear		
7		Possible, positive	linear		
8		Possible, positive	disrupted linear		
9		Possible, positive	oval	large pit or filled depression	
10		Possible, positive	disrupted linear		
11		Possible, positive	linear		
12		Possible, positive	linear	Cornish bank	
13		Possible, positive	oval	large pit or filled depression	
14		Possible, positive	disrupted linear		
15		Possible, positive	linear		
16		Possible, positive	disrupted curvilinear		
17		Possible, positive	disrupted linear		
18		Possible, positive	disrupted linear		
19		Possible, positive	disrupted linear		
20	21	Possible, positive	complex	partial sub-circular deposit with adjacent linears	a group of anomalies, disrupted by large anomalies from ferrous deposits, that may represent a partial sub-circular feature and partial enclosures
21	20	Possible, dipolar		ferrous-rich deposits	anomalies may represent recent material and are highlighted to show the disruption they cause to group 20
22		Possible, positive	disrupted linear		
23		Possible, positive	disrupted curvilinear		
24		Possible, positive	oval	large pit or filled depression	
25		Possible, positive	curvilinear		
26		Possible, positive	oval	large pit or filled depression	
27		Possible, positive	curvilinear		
28	30	Possible, positive	linear		
29		Possible, positive	linear		
30	28	Possible, positive	multi-linear		
31		Possible, positive	disrupted linear		
32		Possible, positive	linear		

Fig 53 Table of data analysis reproduced from the geophysical survey report for Tresawson (Dean 2013), relating to Figures 49 to 52.



Fig 54 Looking north from the proposed turbine site at Tresawson, with Bury Down on the skyline, left of shot



Fig 55 Looking east from the proposed turbine site at Tresawson



Fig 56 Looking south south east from the proposed turbine site at Tresawson



Fig 57 Looking south east from the proposed turbine site at Tresawson towards Pelynt (the church tower is partially visible above the hedgeline, centre shot)



Fig 58 Looking south from the proposed turbine site at Tresawson in the direction of Trenake (over crest of hill)



Fig 59 Looking south west from the proposed wind turbine site at Tresawson towards the Fowey estuary



Fig 60 Looking west north west from the proposed wind turbine site at Tresawson in the direction of Lanreath (over the crest of the hill)



Fig 61 Looking north west from the proposed wind turbine site at Tresawson



Fig 62 Looking south east across the tower of St Manarck and St Dunstan Church, Lanreath, in the direction of the proposed turbine site at Tresawson, which is likely to be substantially visible above the skyline to the left of the church tower



Fig 63 Looking south east across Lanreath churchyard towards the proposed turbine site at Tresawson, which is likely to be substantially visible above the skyline looking across the churchyard from the car park by the shop



Fig 64 Looking south east across Court Barton, Lanreath, towards the proposed turbine site at Tresawson, which may be substantially visible above the skyline, though partially blocked by present tree cover



Fig 65 Looking south across the Giants Hedge (centre shot) towards the proposed turbine site at Tresawson, which may be substantially visible above the skyline, centre shot



Fig 66 Looking north west from Pelynt churchyard towards the proposed turbine site at Tresawson, which may give glimpsed or partial views of the upper hub and/or blades through gaps in the buildings or vegetation cover



Fig 67 Looking west north west along the valley in front of Hillhead towards the proposed turbine site at Tresawson, which may be partially visible above the ridge, with some possible blocking by intervening hillslopes and vegetation



Fig 68 looking west south west along the valley from the rear of St Cuby churchyard, Duloe, towards the proposed turbine site at Tresawson, which is likely to be blocked from view by the present tree cover in this direction



Fig 69 Looking south west from Duloe stone circle towards the proposed turbine site at Tresawson, which is likely to be only partially visible above the skyline and across intervening hills and valleys (poor visibility during the site visit means this could not be confidently ascertained)



Fig 70 looking south east across Boconnoc towards the proposed turbine site at Tresawson, which is likely to be partially visible above the skyline, centre left of shot; the setting of the Park from this direction is already impacted upon by a modern pylon



Fig 71 looking south east from beside the barrow group N of Grey Mare Farm towards the proposed turbine site at Tresawson, which may be partially visible above the skyline, centre shot; a modern pylon is already visible centre right of shot



Fig 72 looking south east from in front of St Nectans Chapel towards the proposed turbine site at Tresawson, which may be partially visible above the skyline, centre shot, although the present tree cover would probably have some blocking effect



Fig 73 Looking north east from the north west corner of St Veep churchyard towards the proposed turbine site at Tresawson, which may appear substantially above the skyline in this direction, though possibly blocked from view by present tree cover



Fig 74 Looking north east from the road to the north of St Veep churchyard across the open vista towards the proposed turbine site at Tresawson, which may be substantially visible above the skyline, centre left of shot



Fig 75 Looking south east across Restormel Roman fort towards the proposed turbine site at Tresawson, which may be partially visible towards the far skyline, although this is likely to be along intervening hillslope (poor visibility during the site visit means this could not be confidently ascertained)



Fig 76 Looking north east from St Sampson's churchyard, Golant, towards the proposed turbine site at Tresawson, which may be partially visible above the skyline to left of trees



Fig 77 Looking north east from the rear of St Sampson's churchyard, Golant, towards the proposed turbine site at Tresawson, which may be partially visible above the skyline, behind the trees



Fig 78 Looking north east across the field beside Castle Dore towards the proposed turbine site at Tresawson, which may partially visible at a distance above the skyline, centre left of shot



Fig 79 Looking north north east across Castle Dore, demonstrating the openness of the vista in this direction; the proposed turbine at Tresawson may be partially visible above the distant skyline, far right of shot



Fig 80 A reduced scale copy of a photomontage provided by Capture-Energy looking from the shop car park at Lanreath across the corner of the churchyard towards the proposed turbine site at Tresawson, about 600m distant, centre shot. This is included for information only, but indicates that the upper parts of the turbine mast and its blades will be substantially visible from some areas within Lanreath, including views of, and across, the Grade I Listed church



Fig 81 A reduced scale copy of a photomontage provided by Capture-Energy looking from the B3359 N of Pelynt towards the proposed turbine site at Tresawson, about 1.8km distant, centre left of shot. This is included for information only, but indicates that the turbine will be substantially visible from this distance within some areas of the local landscape



Fig 82 A reduced scale copy of a photomontage provided by Capture-Energy looking west from No Mans Land towards the proposed turbine site at Tresawson, about 8.6km distant, centre shot. This is included for information only, but indicates that the turbine will be visible in some distant views of the local landscape from this direction



Fig 83 A reduced scale copy of a photomontage provided by Capture-Energy looking north east from a viewpoint just south of St Ciricus and St Julitta Church, St Veep, towards the proposed turbine site at Tresawson, about 5.2km distant, centre right of shot. This is included for information only, but indicates that the upper parts of the turbine will be visible on the distant skyline across a relatively open landscape from this direction