



Trelaske, Cubert, Cornwall

Archaeological assessment of proposed wind turbine



Historic Environment Projects

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Report author	Adam Sharpe BA MIfA
Approved by	Andrew Young MIfA, HE Projects Officer

Historic Environment, Cornwall Council

Kennall Building, Old County Hall, Station Road, Truro, Cornwall, TR1 3AY

tel (01872) 323603 fax (01872) 323811 E-mail hes@cornwall.gov.uk

www.cornwall.gov.uk

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The viewshed mapping was carried out by Megan Val Baker.

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 across Chapel Downs. The proposed wind turbine would occupy the centre of this view.

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Abbreviations

EH	English Heritage
HER	Cornwall and the Isles of Scilly Historic Environment Record
HE	Historic Environment, Cornwall Council
NGR	National Grid Reference
OS	Ordnance Survey

1 Summary

Historic Environment Projects, Cornwall Council, were approached by Chloe Bines of Mi-Grid Ltd on 11 July 2012 with a request to provide costs for the provision of an archaeological assessment of a proposed wind turbine at a site at Trelaske, Cubert as part of a proposed planning application. A cost schedule for this work was approved on 08 August 2012.

The proposal is for a single wind turbine with a maximum blade tip height of 34.6m to be sited on farmland at Trelaske Farm at SW 80133 56983. The site chosen for the wind turbine lies just to the south of a ridgetop between Cubert and Newlyn East in an area of former downland and medieval farmland near Cubert.

The assessment consisted of a desk-based assessment, viewshed analysis out to 10Km from the site, and a walkover survey.

Despite the elevated site selected for this development and the open nature of the surrounding landscape, it was concluded that very few impacts were likely to result on the settings of designated or undesignated sites within the viewshed of the site except for a small group in its immediate vicinity, these including the scheduled Trelaske Round and the Grade I Listed Building, Cubert Church. The general absence of impacts is due to a number of factors, including the natures and conditions of the monuments concerned, topographical considerations, and distances from the site of the proposed wind turbine. Impacts on the HLC of the landscape surrounding the proposed wind turbine can be expected.

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

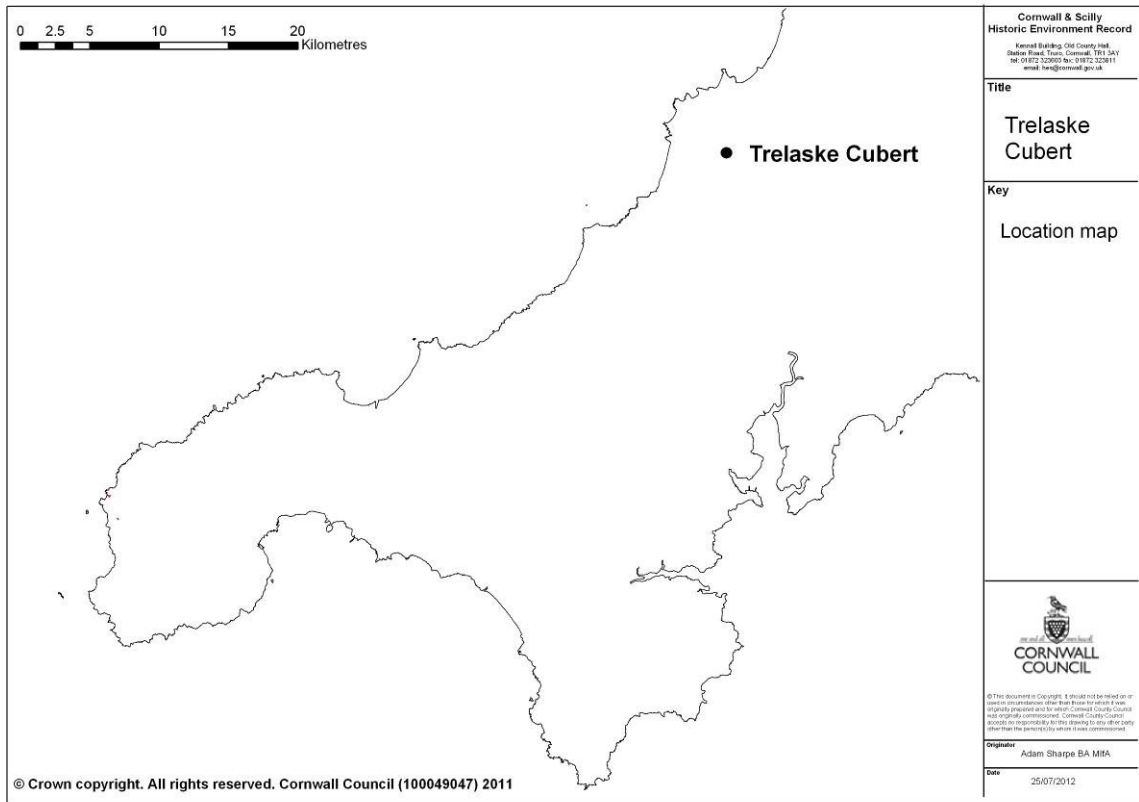


Fig 1. The location of Trelaske, Cubert.

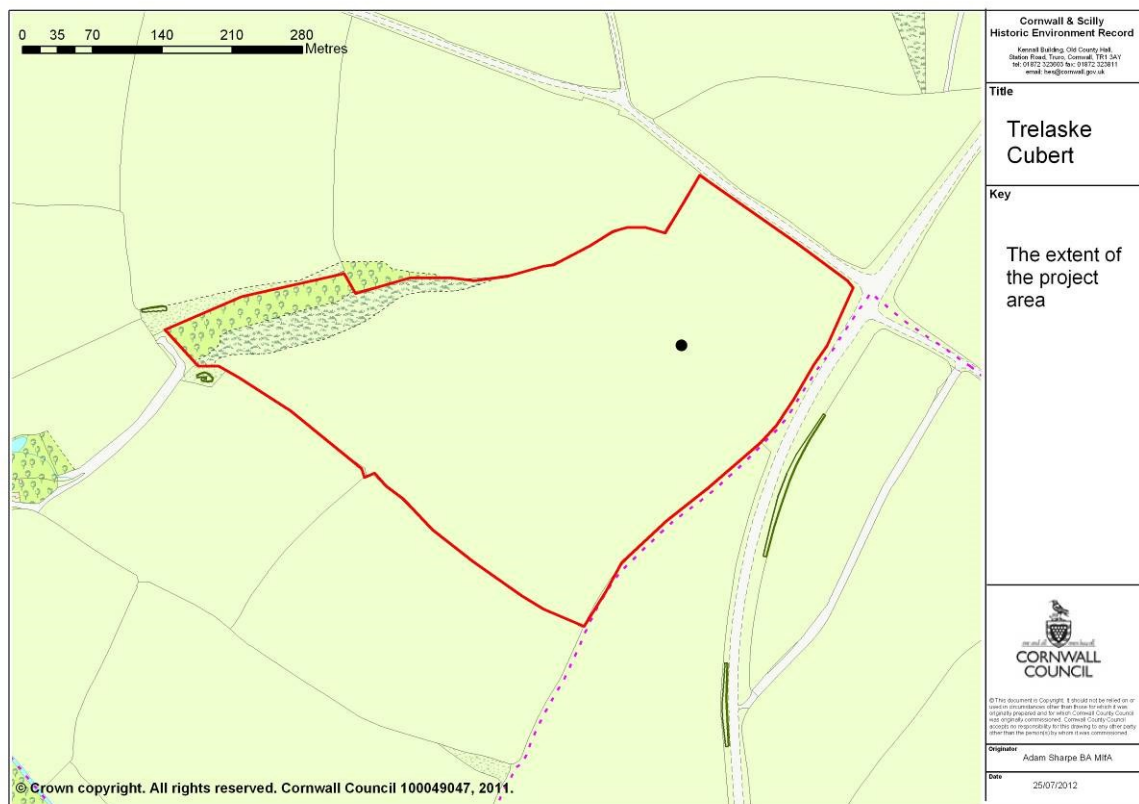


Fig 2. The location proposed for the Trelaske wind turbine.

2 Introduction

2.1 Project background

Historic Environment Projects, Cornwall Council, were approached by Chloe Bines of Mi-Grid Ltd on 11 July 2012 with a request to provide costs for the provision of an archaeological assessment of a proposed wind turbine at a site at Trelaske, Cubert as part of a proposed planning application. A cost schedule for this work was approved on 08 August 2012.

The proposal is for a single wind turbine with a maximum blade tip height of 34.6m to be sited on farmland at Trelaske Farm at SW 80133 56983.

An initial planning assessment (number PA12/01367/Preapp) progressed under a Planning Performance Agreement (PPA) was undertaken on 12th June 2012. The Cornwall Council development Officer (Adam Carlyon) considered that a planning application would be worth pursuing for a wind turbine at this site, though drew the applicant's attention to the comments made by the Historic Environment Planning Advice Officer (Dan Ratcliffe), who noted that a medieval chapel site had been recorded near the location proposed for the turbine field, and the presence of a number of possible prehistoric sites in the surrounding fields. A brief for an archaeological assessment dated 28th May 2012 was appended. This has been used to guide the work undertaken to produce this report, in conjunction with the advice on assessing the impacts of such developments on the settings of designated sites provided by English Heritage in 2012.

The walkover survey and viewshed check were undertaken on the 20th August 2012.

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 Trelaske, Cornwall, particularly given that a medieval chapel site is recorded close to that proposed for the wind turbine.

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.

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
 - Joel Gascoyne's map of Cornwall (1699)
 - Norden's Map of Cornwall (1728)
 - Thomas Martyn's map of Cornwall (1748),
 - OS 1 inch survey (*circa* 1810)
 - Cubert 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 proposal 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 (English Heritage 2012). 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 a single 'observer point' based on the location of the proposed wind turbine.

When performing a viewshed analysis, 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 Trelaske, the viewshed was based on an 'overall observer elevation value' made up of the 'elevation value' or height above sea level of the ground at the observer viewpoint, with added to this an additional offset of 34.6m to represent the maximum height of the turbine blades. This viewshed was 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 viewshed 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). A viewshed radius of either 10Km or 5Km was used to determine potential impacts on designated heritage assets and a radius of 1Km for undesignated heritage assets (see Figs 16 to 22). High level designated heritage sites within the 10Km and 15Km radius zone of the ZTV were identified but not assessed for impact. These are listed in tables contained in this report.

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, 5Km 10m and 15Km radii from the site, as required by model HEPAO (Historic Environment Planning Advice Officer) briefs and English Heritage guidance.

The site types within these data sets were then analysed to determine their likely sensitivity to impacts on settings. Those site types which had no setting (documented sites with no visible remains) 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 were identified for their retention.

The resultant site list consisted of a mixture of designated landscapes with substantial intervisibility with the proposal site, particularly where these included planned views in the direction of the proposal site, Scheduled Monuments whose original settings were intended to include large areas of the landscape (for example prominent hilltop barrows or hillforts), 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), areas of landscape within the Cornish Mining World Heritage Site containing aspects of its OUV (Outstanding Universal Value) which are potentially vulnerable to developments such as wind turbines, and upstanding undesignated sites in close proximity to the development site. This filtered group of sites 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 sites 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.

A walkover survey of the site proposed for the wind turbine and for its cabling was also undertaken to examine the site for upstanding archaeology and to record the nature of the boundary types which might be impacted upon during the development. 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 English Heritage Archive (EHA) 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 (Archaeological Data Service) 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 is at SW 80133 56983 just over a kilometre to the east of the settlement of Cubert at the western end of a hilltop adjacent to the A3075 at a location with views out to the west and south; the site chosen for the wind turbine has a height of is 81m OD (Figs 2 and 14).

The development area is characterised in the Cornwall and Scilly Historic Environment Record (HER) as 'Anciently Enclosed Land – farmland medieval', fringed to the north and west by blocks of woodland and to the east by 'Recently Enclosed Land farmland - 20th century', this representing a block of former open downland (Fig 11). In fact, the site and its neighbouring fields are parts of an area of former downland which had been relatively recently enclosed by 1840 (Tithe Apportionment evidence). The site lies on the upper southern flanks of a ridge running between Cubert and St. Newlyn East, all but the higher parts of which have been cultivated since the Medieval period, and almost certainly since late prehistory.

The parent bedrock underlying the application site consists of interbedded slates and sandstones of the Devonian Meadfoot Group, traversed by east-west trending Felsite dykes of Permian date. The soils are recorded as Denbigh 2 loams over slate. The agricultural classification of this land is Grade 3.

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 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 Policy HE6 in PPS5, 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.
- Grade II Listed Buildings, World Heritage Site Areas and Conservation Areas – 5Km radius.

- Scheduled Monuments, Grade I and II* Listed Buildings, Registered Battlefields and Registered Parks and Gardens – 10Km radius (these also being noted out to 15Km).

5 Designations

5.1 International

The 5Km radius ZTV does not intersect any areas of the Cornish Mining World Heritage Site.

5.2 National

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

The 10Km radius viewshed zone includes 50 Scheduled Monuments, the majority of these being barrows, either singly or in groups.

The 10Km radius viewshed intersects no Registered Parks and Gardens or Registered Battlefields.

The 10Km radius viewshed includes three Grade I Listed Buildings, these being churches at Cubert, Colan and St. Enoder, whilst the church of St. Piran is Listed Grade II*.

The 5Km radius viewshed mapping indicates that there would be no significant intervisibility between the proposed wind turbine and any Conservation Area (see Fig 17).

Within the 5Km radius viewshed, the wind turbine would be theoretically intervisible to some degree with 22 Grade II Listed Buildings (or groups of Grade II Listed Buildings) (see Fig 18).

5.3 Regional/county

No regional or county designations relate to the site proposed for the wind turbine.

5.4 Local

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

5.5 Rights of Way

No rights of way traverse the sites 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 lies near the centre of a very extensive area of relatively elevated dissected plateau inland from the coast between Perranporth and Newquay, this rising gently towards the high ground followed by the A30 between Chiverton Cross and Mitchell.

This landscape has probably long been settled, its higher points being marked by a large number of Bronze Age barrows, many of these in clusters sited in prominent skyline locations. Although evidence for settlement during the Bronze Age is sparse within this area (a reflection of the long history of agriculture within this landscape), it can be assumed that all of the most fertile areas of the landscape would have been settled and farmed, the higher or more exposed areas being left as open downland – an important resource for summer and rough grazing, as areas for the gathering of fuel (in the form of gorse) or animal bedding (heather, moorland grasses and bracken), and for the siting of ceremonial and funerary activities. One barrow is thought to have been sited in the north western corner of the field proposed for the Trelaske wind turbine on

the ridge running between Cubert and Cargoll. Given this location, it would have been visible to some degree from lower ground to the north, and would have been a skyline feature from much of the open landscape to the south.

By late prehistory, there is ample evidence for the farming of this landscape from the enclosed settlements known as 'rounds', both in the form of surviving earthworks such as those at Cargoll or St. Piran's Round, or the large number identified from cropmarks recorded by the National Mapping Programme. It is likely that late Iron Age and Romano-British period farmsteads of this sort would have had a distribution similar to Medieval farms, and that large parts of this landscape would have been laid out to enclosed fields. At least seven such settlements are recorded within 2Km of the site proposed for the wind turbine at Trelaske, and cropmark features recorded within fields close to the site at Trelaske may represent elements of field systems of this date.

These late prehistoric settlements were, in turn, succeeded by early Medieval farmsteads, many within this area being prefixed with the Cornish 'Tre' or farmstead. With the exception of some of the highest points in the landscape, which remained as downland until the early 20th century, almost all of the surrounding landscape was laid out as enclosed farmland during the Medieval period, whilst churches such as those at Cubert, St. Enoder and Colan had succeeded St. Piran's Oratory sited at the eastern edge of Penhale Sands. The Domesday Book (1086) does not mention Trelaske, but nearby Cargoll was described as '*held by a thane who could not be separated from St. Petroc's*' There was '*land for 15 ploughs; in lordship 3 ploughs; 16 slaves; 12 villagers and 22 smallholders with 6 ploughs. A mill which pays 30d; woodland, 4 acres, pasture 2 leagues long and 1 league wide.*' '*12 mares, 7 cattle, 7 pigs, 60 sheep, 12 goats*'. The impression given is of a productive and relatively fertile estate laid out to mixed agriculture. At some point during this period, a small chapel dedicated to St. Nighton was established in the north-eastern corner of the area proposed for the wind turbine, adjacent to the route across the downs from Cubert to St. Newlyn East. This may have been associated with a small cemetery and may well predate the construction of the churches in the surrounding area.

The first mapping depicting this area dates to the 17th century, when Joel Gascoyne produced his map of Cornwall (Fig 3). Gascoyne depicted the surrounding landscape as containing a relative high density of settlements or farmsteads. Tracks and roadways traversed these uplands, the major examples linking adjacent churchtowns (such as Cubert and St. Newlyn East) and market centres.

John Norden's map dating to 1728 (Fig 4) depicting the Hundred of 'Pyder', showed the landscape just in from the coast dominated by the church of 'S. Kibberd' (Cubert), the land around Trelaske being associated with the Arundell Family. Thomas Martyn's map drawn up a few decades later showed some more detail of this landscape (Fig 5), and was the first to depict 'Trelask'.

The 1st Edition of the Ordnance Survey 1" to a mile mapping (Fig 6), dating to the first decade of the 19th century, showed a dense network of roads and lanes linking Trelaske, Rejerrah, Trewolla, Trenizzick, Trebellan and Cubert within what is clearly a mature and long-settled farming landscape with a mill at Rejerrah in the nearby valley.

The *circa* 1840 Cubert Tithe Map (Fig 7) provides a little more detail of the landscape immediately surrounding the application site, showing networks of small fields which had clearly been derived from bundled Medieval strip fields to the north east, whilst the application site was depicted as a large triangular enclosure which probably derived from a remnant area of open downland. At this date the field proposed for the wind turbine (parcel 616) was known as 'Chapel Downs', extended to 5 acres, 3 poles and 35 perches and was recorded as being in arable cultivation. Part of Trelaske and owned by the Earl of Mount Edgcumbe, it was tenanted by Edward Collins Esq. and tenanted by Francis Glasson. Another field just to the west adjoining Trelaske Round was named 'Round Downs'.

By the late 19th century (Fig 8) it can be seen from the 1st Edition of the Ordnance Survey 25" to a mile mapping that this large triangular enclosure remained undivided. A small part of the plot in its western corner remained in rough grazing, and sited a pair of small quarries – presumably opened to provide building stone for Trelaske. The field was traversed by what was probably a long-established footpath route at its eastern end, a reminder of the period not long before when it had been open downland.

In 1907/8 (Fig 9) the 2nd Edition of the Ordnance Survey 25" mapping showed that an effort had been made during the past three decades to improve this former downland by sub-dividing it into three. These boundaries survived until at least 1940 but were subsequently removed by the present tenant's father (pers. comm. Bob Coade). The footpath route continued to be depicted, but the quarries had become disused. During the 20th century, the 2005 Cornwall County Council aerial photograph (Fig 10) shows that this phase of sub-division was short-lived, the boundaries having been removed. The land appears at this date to have been used as sheep pasture, whilst the western corner of the field sited a small area of mixed woodland.

7 Results of site walkover

A site walkover was undertaken on 20th August 2012. The weather was warm, and sunny, with almost cloudless skies for much of the day. Clear visibility was possible out to in excess of 15Km of the site, particularly to the south west.

The site on which the wind turbine will be constructed forms part of an extensive field down to mixed grasses and clover which had recently been cut for silage, and adjoins public roads to the east and north. Although generally level, its edges slope gently to the south and west. The field is bounded to the north and east by Cornish hedges up to 1.6m high and 1.4m wide, these being topped by blackthorn and the occasional small tree. To the south these boundaries are slightly lower, and to the west much of the boundary consists of thorn bushes on a low bank or hedge, though the south western section adjoins a small mixed woodland containing conifers, willows and sweet chestnuts. Hedges within the surrounding landscape tend to be topped with scrub vegetation, and, despite the relatively elevated situation, semi-mature trees are found within the surrounding landscape, particularly on hedgerows or around dwellings and settlements.

The landscape centred on Trelaske is relatively open and elevated in character, though dissected by a number of quite deep stream valleys, the closest of which is not far to the south. This rises at Lemain on the edge of Newlyn Downs, flows west north westwards past Rejerrah, Trelaske Farm and the eastern edge of Penhale Sands to debouch to the sea at Holywell Bay. A north-flowing tributary rising near Goonhavern joins this stream just to the west of Trelaske Farm, whilst a further tributary rises near Treluddrow Farm. To the east of the site, a rather more substantial stream has carved out a valley from its source near St. Enoder north-eastwards through Kestle Mill to form the main fresh water feed into the Gannel to the south of Newquay. A further stream rises to the north of the Trelaske site, and, after flowing northwards for a short distance, turns to the north west to reach the sea at Porth Joke.

As a result, whilst the views from the site are open, particularly to the south and these views can be far-ranging, some quite local areas of the landscape are hidden from view, especially given the convex slope profiles characteristic of these valleys, and local views tend to be orientated west north west to east south east along the ridgeline past Trelaske Round to the settlement of Cubert, and out to the south west across the nearby valley at Rejerrah. Views to the north are blocked by the rising ground. To the east the ridge limits intervisibility with nearby sites, though long-distance views extend out to the highest parts of Newlyn Downs and the wind farm at Carland Cross. The most open views are towards the coast at Perran Sands to the west, though extend south to the ridgeline followed by the A30 and south west to St. Agnes Beacon in the far distance.

No features of archaeological significance were found within the area proposed for the turbine, or that which would be trenched for its connecting cables. The farm tenant indicated that cropmarks had been seen by him within growing cereal crops in the field immediately to the north, however.

8 Results of viewshed analysis

See Figs 16 to 22.

Given the elevated location of the site and the height of the turbine mast, the viewshed analysis suggests that the Zone of Theoretical Visibility (ZTV) will be very far-reaching. In line with the requirements of English Heritage guidance, the ZTV has been mapped to a distance of 15Km from the site, but the ZTV suggests that its visibility is unlikely to extend to this in any direction. The visibility of the turbine will diminish with distance, and will, at some sites, be locally blocked by intervening buildings within settlements or by mature groups of trees (albeit on a temporary basis, should such trees subsequently be felled).

8.1 1 km radius ZTV

See Fig 16.

Given the nature of the local topography and the elevated site selected at Trelaske, the wind turbine would be visible from around 80% of this area, the principal exception being the south west facing slopes to the north of the stream valley flowing east north east through Rejerrah (see Fig 16). The scheduled Iron Age round at Trelaske (DCO1070) falls within this zone at 685m from the proposed turbine site.

8.2 1Km to 5Km radius ZTV

See Figs 17-18, 22.

This zone extends to Newquay and the northern banks of the Gannel to the north, to the fringes of Quintrell Downs to the north east, to Newlyn Downs to the south east, to the ridge followed by the A30 to the south, to Goonhavern to the south west, along the highest parts of Penhale Sands to the west and to the north west to Kelsey Head and Pentire Point. Although the ridge followed by the A30 from Mitchell and Carland Cross through Four Burrows to Chiverton Cross trends more or less east west and terminates the viewshed in this direction, the topography trends south east to north west in the remainder of this zone, limiting likely intervisibility between the turbine and the landscape to about 50% of this zone, the only exception to this general observation being the north-south aligned crest of Penhale Sands to the west. Intervisibility will tend to be confined to south east to north west trending hilltops and south-facing slopes to the north and east of the turbine site and to similarly-aligned hilltops and north-facing slopes to its south (see Figs 17-18 and 22).

This zone contains a number of potentially intervisible hilltop-sited scheduled sites, these including Cargoll hillfort (DCO7731) 1.5Km to the south east, St. Piran's Round (DCO117) 3.4Km to the south west, Engelly Plen an Gwary 4.35K to the south, as well as Bronze Age barrows at East Pentire (DCO2572, DCO2573) 4.7Km to the north north west, and on Cubert Common (DCO2524) 3.23Km to the north west.

The zone contains no Registered Parks and Gardens. Although the Conservation Area at St. Newlyn East will have some partial intervisibility with the wind turbine, there are unlikely to be any impacts on its setting.

8.3 5Km to 10Km radius ZTV

See Figs 19 - 21.

This zone extends to Perranporth and St. Agnes to the south west; to the south, the zone reaches Shortlanesend and Summercourt to the east south east, though the viewshed terminates on the ridge followed by the A30 between these two, at Whitecross to the east and at Watergate Bay to the north east. Approximately 30% of the area of land within this zone is likely to be intervisible with the proposed wind turbine, the fall-off of intervisibility between this area and Trelaske will be considerable.

The zone contains a substantial number of scheduled monuments, only a small number being likely to be intervisible with the wind turbine. These include the Higher Ennis barrow cemetery (DCO1032) 5.45Km to the south east, Tresawsen hillfort (DCO925) 7.75Km to the south south west, and other barrows in its vicinity area, including one near Callestick Vean (DCO909) 8.7Km away, Four Burrows (DCO893) 9.7Km away, Pendown Barrow (DCO912) 9.5Km away and Barrows near Callestick (DCO910) are 8Km away; Treslow Barrow (DCO1052) is 6Km to the south west and the scheduled Second World War elements of Perranporth airfield (DCO1084) are centred 7.5Km to the south west.

This zone includes one Registered Park and Garden at Chiverton (Grade II, DCO26) 5.9Km to the south of Trelaske, but almost none of this designated area will be intervisible with the proposed wind turbine.

8.4 10Km to 15Km radius ZTV

In accordance with English Heritage requirements, the ZTV was mapped out to 15Km from the site. High level designated sites within the 10Km to 15Km zone of the ZTV have been listed in this report, though do not need to be assessed.

This zone extends to Porthtowan and Scorrier to the south west, Malpas, the higher reaches of the Fal Estuary and Truro to the south, Grampond and St. Stephens by Brannel to the south east, St. Columb Major to the east and Watergate Bay, Park Head, Bears Downs and Denzill Downs to the north east. Within this zone, the only areas within which there would be likely to be intervisibility with the proposed wind turbine would be on Bears Downs/Denzill Downs to the north east and the north east-facing flanks of St. Agnes Beacon to the south west, together with a very restricted area near Threemilestone to the south.

Trewithen Grade II* Registered Park and Garden (DCO18) is just under 15Km to the south east of Trelaske, but would not be intervisible with it. A small number of Scheduled Monuments within this zone would experience some degree of intervisibility, amongst these being a very small part of the Bolster Bank (DCO923) and the barrow (DCO921) on St. Agnes Beacon 11.45Km to the south west, barrows at Hurlingbarrow (DCO898 and DCO899) 11.3Km to the south west, Three Burrows (DCO895) 11.5Km to the south west, a round at Mount Pleasant (DCO96) 12.5Km to the south, seven barrows on Bears Downs and Denzill Downs (DCO1103) 14.4Km to the north east and two barrows near High Cove Farm (DCO14900) 12.38Km to the north north east.

The ZTV was mapped out to 15Km from the site at Trelaske. There may be some limited potential for intervisibility beyond this zone to the south west and to the north east, but very considerable visual attenuation will occur at such distances, and the likelihood of blocking by trees, hedge vegetation and buildings will be high. Impacts on the settings of designated areas, monuments and buildings at these distances are very unlikely to occur.

8.5 Scheduled Monuments within the 10Km radius ZTV

See Figs 21 - 22.

There are 96 Scheduled Monuments within 10Km of the site proposed for the wind turbine at Trelaske, of which 50 individual monuments (or elements of these) would potentially be intervisible with it (some of these being in groups), as follows. Those within 5Km of the site are:

- DCO 1070 – Round near Trelaske, 730m to the north west.
- DCO1076 – Hillfort near Engelly, 4.29Km to the south (very limited potential intervisibility).
- DCO193 – St. Piran’s Church and Cross, 3Km to the west south west (limited potential intervisibility)
- DCO920 – Barrow on Cubert Common, 3.18Km to the north west.
- DCO1055 – Cargoll hillfort, 1.56Km to the east south east.
- DCO918 – Twelve Barrows linear barrow cemetery at Higher Hendra, 1.68Km to the south south west.
- DCO917 – three barrows near Rosehill Farm, 3.3Km to the south west.
- DCO930 – Caer Kief round, 4.8Km to the south south west (very limited intervisibility).
- DCO919 – St. Piran’s Round, 655m to the north west.
- DCO1071 – Cliff Castles at Kelsey Head and Porth Joke and two barrows near Porth Joke, 5.3Km to the north west (very limited potential intervisibility).
- DCO931 – Barrows at Ligger Point, 4.4Km to the west north west (very limited potential intervisibility).
- DCO932 – Penhale Point cliff castle, 4.9Km to the north west (very limited potential intervisibility).

Of this group, the desktop study suggested that St. Piran’s Round, Trelaske Round, Cargoll hillfort and the Twelve Barrows linear barrow cemetery may experience some impacts on their settings given their proximity to the site proposed for the proposed Trelaske wind turbine.

The remainder of the monuments lie within the 5Km to 10Km zone of the ZTV consist of one World War 2 airfield, 10 barrow groups, four individual barrows, three hillforts or rounds and three medieval crosses.

Although there is likely to be some degree of intervisibility between these sites and the proposed wind turbine, views of it will tend to be distant, in some cases partial and in others locally blocked by nearby vegetation or structures. There are few locations within the landscape from which views of these designated sites will include the wind turbine as significant, far less dominant, elements of the views. Negative impacts on their settings are therefore unlikely.

The monuments within the 5Km to 10Km zone are:

- DCO1084 – World War 2 elements of Perranporth Airfield.
- DCO1032 – Barrow cemetery at Higher Ennis (partial intervisibility only).
- DCO904 – Two barrows near Ropewalk Farm.
- DCO1404 – Three barrows on Pentire Point.
- DCO1031 – Two barrows near Higher Ennis Farm.
- DCO893 – Four Burrows.

- DCO1464 – Three barrows at Barrowfields.
- DCO901 and DCO911 – Two barrows at Higher Callestick.
- DCO14890 – Two barrows south of Zachary’s Island.
- DCO1036 – Long barrow and four barrows near Mitchell Farm.
- DCO912 – Barrow near Pendown.
- DCO1052 – Barrow near Treslow Farm.
- DCO1030 – Barrow near Higher Ennis Farm.
- DCO1051 – Barrow near Anchor.
- DCO1332 – Melangoose Camp.
- DCO925 – Hillfort near Tresawsen.
- DCO914 – Caer Dane (limited potential intervisibility).
- DCO798 – Doublestiles Cross.
- DCO967 - Wayside cross at Penpol House.
- DCO854 – Wayside cross in St. Enoder churchyard.

Wayside and other crosses are felt to have only very limited, local settings. Given the distances between the remaining monuments and the proposed wind turbine, no impacts are felt likely to result on their settings.

8.6 Registered Parks and Gardens and Registered Battlefields within the 10Km radius ZTV

See Fig 20.

One Registered Parks and Garden (Chiverton Park, Grade II) lies within 10Km of Trelaske, but will not be intervisible with it.

There are no Registered battlefields within 10Km of the site proposed for the wind turbine at Trelaske.

8.7 Grade 1 and II* Listed Buildings within the 10Km radius ZTV

See Fig 19.

There are 404 Listed Buildings of all grades within 10Km of the proposed wind turbine at Trelaske. Of these 69 intersect with the ZTV and of these the following are Listed at Grade I:

- DCO13894 – Church of St. Enoder, 9.06Km to the east.
- DCO4230 – Church of St. Cubert, 1.75Km to the west north west.
- DCO13074 – Church of St. Colanus, 7.96Km to the north west.

The Church of St. Piran (DCO5500), 5.8Km to the south west is Listed at Grade II*.

With the possible exception of the church at Cubert where intervisibility is likely, the considerable distances between these high grade Listed Buildings and the proposed wind turbine at Trelaske, together with their settings within settlements and often within wooded churchyards suggest that impacts on their settings will not occur.

8.8 Areas of the Cornish Mining World Heritage Site within the 5Km radius ZTV

No Areas of the Cornish Mining World Heritage Site lie within 5Km of the site at Trelaske proposed for the wind turbine.

8.9 Conservation Areas within the 5Km radius ZTV

See Fig 17.

Two Conservation Areas lie within 5Km of the site at Trelaske proposed for the wind turbine. Crantock (DCO106) is 3.6Km to the north north west, but no parts of the settlement would be intervisible with the wind turbine. St. Newlyn East (DCO49) is 2.79Km to the east south east of Trelaske; small, fragmented areas of the settlement might have views of the upper parts of the wind turbine, though it is most likely that intervisibility would largely be blocked by buildings within the settlement. The Carland Cross wind farm is 2Km to the south of this Conservation Area in an elevated, hilltop location.

8.10 Grade II Listed Buildings within the 5Km radius ZTV

See Fig 18.

22 Grade II Listed Buildings (or groups of buildings) intersect the 5Km radius ZTV.

Those within 1Km of the Trelaske site are:

- DCO4374 – Trewolla Farmhouse, 865m north east.
- DCO4226 – Guidestone, 225m north east.
- DCO5587 – Guidestone, 225m north east.
- DCO4089 – Trevryn, 910m south south east.

Impacts on the settings of the guideposts within this group are considered very unlikely unless they are in very close proximity to and clearly intervisible with a wind turbine. Some impacts on the settings of the two farmhouses are considered possible, though hedge and other trees within their vicinities are likely to block most intervisibility with the proposed wind turbine.

Within the 1Km to 2Km zone around the Trelaske site are:

- DCO4228 – The Smugglers’ Inn, 1.25Km to the west.
- DCO5592 – Cubert Methodist church, 1.85Km to the north west.
- DCO5623 – Carevick Farmhouse, 1.8Km to the north.
- DCO4229 – Barns at Trerew, 1.73Km to the north east.
- DCO5673 – Higher Treluddrow, 1,98Km to the south east.

Impacts on the settings of these Listed Buildings are considered unlikely.

Within the 2Km to 5Km zone around the Trelaske site are:

- DCO13073 – Gate piers of Trevithick Manor, 3.37Km north east.
- DCO13067 – Manuels Farm, 4.92Km north east.
- DCO4447 – Garden walls and gate piers at Trerice, 4.3Km east north east.
- DCO5505 – Trevarthian Farmhouse, 4.76Km east north east.
- DCO4111 – Newlyn East preaching pit, 239Km east south east.
- DCO4088 – Newlyn East cross church base, 2.6Km east south east.
- DCO4112 – Finger post, 2.68Km east south east.
- DCO4438 – The Old vicarage, Newlyn East, 2.84Km east south east.
- DCO4215 – Remains of the old church of St. Piran, 2.99Km east.

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 these sites are likely.

8.11 Undesignated sites within the 1Km ZTV

See Fig 16.

Around 80% of the landscape within a 1km radius of the Trelaske site will be intervisible with all or part of the proposed wind turbine. Within this zone, the Cornwall and Scilly Historic Environment Record (HER) records 25 sites, and of these, the ZTV mapping indicates that 13 sites will be intervisible with the wind turbine to some degree or other, as follows:

Prehistoric

- MCO3525 - Neolithic barrow adjacent to St. Nighton's Chapel (documented site).

Medieval

- MCO32852 – Trenissick early medieval field system (cropmark site).
- MCO13958 – Chiverton medieval settlement (documented site).
- DCO10228 – St. Nighton's Chapel (documented site).
- MCO29116 – Treworthan Mill (documented site).
- MCO16574 - Rejerrah early medieval settlement (documented site).

Post-medieval/modern

- MCO291114 – Cornwall Minerals Railway.
- MCO55863 – Rejerrah railway bridge.
- MCO13078 – Wheal Peru.

Undated

- MCO55908 – Trelaske undated cropmark.
- MCO33609 – Rejerrah ditch cropmark.
- MCO32862 – Trelaske enclosure cropmark.
- MCO32861 – Trelaske undated pit (cropmark site).

Given the natures of these sites, the proposal for a wind turbine at Trelaske would have no significant impact on their settings with exception of those of St. Nighton's Chapel (MCO10228) and its adjoining barrow (MCO3525)

8.12 Designated sites within the 10Km to 15Km zone

Current English Heritage guidance states that high grade designated structures, sites and areas within this zone should be listed, but do not need to be assessed for impact.

Registered Parks and Gardens

- None

Registered Battlefields

- None.

Scheduled Monuments

Scheduled monuments are found with two areas of the extended viewshed to the north east and south west of Trelaske, as follows:

North east

- DCO1102 – Redcliff cliff castle.
- DCO14900 – Two barrows near High Cove Farm.
- DCO1103 - Seven round barrows and a ring barrow on Bears Downs and Denzill Downs (marginal intervisibility with some elements of this group possible).

South west

- DCO921 – Barrow on St. Agnes Beacon.
- DCO923 – Bolster Bank (extreme eastern end only).
- DCO898 – Barrow south of Hurlingbarrow.
- DCO899 – barrow south of Hurlingbarrow.
- DCO900 – Barrow in Mongoose Plantation.
- DCO901 - Two barrows at Two Burrows.
- DCO896 – Barrow near St. Peter’s Church, Mithian.
- DCO895 – Three Burrows.
- DCO897 – Barrow near Cornubia Farm.

Grade I Listed Buildings

- None

Grade II* Listed Buildings

- DCO5610 – Church of St. Agnes.

9 Field verification of ZTV

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 Trelaske Round, Cubert, St. Newlyn East, St. Piran’s Old Church, Cross and Oratory sites, St. Piran’s Round, Care Dane and Caer Kief, Cargoll hillfort, Treluddrow and Carevas.

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. Existing wind turbines visible from the Trelaske site allowed the likely impacts of the proposed turbine on the settings of key heritage sites to be assessed.

Where possible, photographs were taken from key locations within the surrounding landscape and from the location at Trelaske back to these sites. In the absence of the turbine mast, the site proposed for it was not always evident within the landscape from a distance, despite its location on high ground. In practice, field hedges, woods and other tree plantings blocked views back towards the site in many rural areas; within settlements, groups of buildings and mature garden trees and shrubs also blocked many views back to the site. The visibility cut-off imposed by the local topography suggested by the viewshed mapping was confirmed.

The viewshed from the site was found to extend beyond the 15Km zone, terminating on the ridge followed by the A30 from Carland Cross to Chiverton Cross, extending to St Agnes Beacon to the south west and to Perran Sands to the west. Views in other directions were more difficult to assess given the local topography and a general

paucity of accessible viewpoints, though the viewshed would probably terminate on the built up area of Newquay on the high ground just to the north of the Gannel to the north; to the east it could well extend considerable distances, taking in hilltops and upper west-facing hillslopes.

Whilst the near hilltop site proposed for the wind turbine formed the skyline from some of the sites and areas assessed, particularly from the west and south west, intervening ridges and hills greatly reduced its visual prominence, particularly from the south, the incised plateau forming the landscape to the east would also greatly reduce its landscape impact, whilst from the north, most views would also include the Carland Cross wind farm 5Km to its south east, and the skylining Four Burrows wind and other wind turbines to its south.

10 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.

There are already some existing wind turbines in the surrounding landscape, the long-established wind farm at Carland Cross above Mitchell (15 x 47m to blade tip turbines) lies 4.65Km to the south east, whilst there is a single 34.4m to blade tip turbine at Fair View just over 5Km to the south west. A large number of individual wind turbines have been proposed within 3Km of the site at Trelaske, though none have yet been consented within the landscape around Cubert.

Much further away to the south west adjacent to the A30 is the extensive Four Burrows wind farm, whilst a number of individual medium-sized wind turbines have recently been erected in the area around Chiverton Cross, Mithian and Shortlanesend 10Km away. To the north east over 15Km away are the Bears Downs and St. Breock Downs wind farms.

There are no highly visible high voltage power lines within the surrounding landscape. Substantial modern agricultural barns immediately abut Trelaske Round to its north and south, but few other structures of this type are visible from the site. The southern outskirts of the settlement of Cubert are characterised by highly visible modern housing, whilst the eastern flanks of Penhale Sands, 3.5Km to the west south west site a number of extensive, modern holiday camps and there are also a number of camp sites between the Trelaske site and the coast between Perranporth and Newquay.

However, in general, the landscape surrounding the proposed wind turbine site contains very few visually-prominent 21st century features, and remains essentially open and agricultural in character. There are, at present, no medium-sized wind turbines within the area around Cubert.

11 Synthesis

Neither the desk based assessment nor the walkover survey indicated the presence of any significant upstanding archaeology which might be impacted upon by the proposed wind turbines and cabling at Trelaske.

Impacts on both designated and undesignated heritage assets within the local landscape resulting from the construction of a wind turbine on land at Trelaske, Cubert 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), the presence of other buildings or the proximity of already-existing wind turbines or other visually dominant modern structures or features. In some cases, even where intervisibility will be present, topography will limit views of the Trelaske wind turbine from archaeological sites in the local landscape to the upper sections of the turbine mast or to the upper parts of its blades.

There will be moderate negative impact within the immediately local landscape out to one to two kilometres from the site. The most sensitive sites include Trelaske Round, though the present condition of this site (bisected by a main road, abutted by 20th century barns and planted with trees) currently significantly reduces the sensitivity of this site, and to a lesser extent, Cargoll hillfort (in this instance its condition and location significantly reduces the sensitivity of its setting to the construction of a wind turbine at Chapel Downs. The most significant effects will be on the setting of Cubert Church. The church spire is, at present, the only tall feature within this general area, and forms a skyline landmark from much of the landscape to the south west and west.

In the wider landscape, although the wind turbine is to be sited on a prominent ridge top with relatively far-ranging views across the landscape of mid Cornwall, it is unlikely to have an impact on the settings of designated heritage assets, other than to a moderate degree on those sited an average of 1Km from the site. There will also be impacts on the Historic Landscape Character of this landscape, which has, to date, by and large not been modified by highly visible modern features.

12 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.

12.1 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.*

12.2 PPS5 English Heritage guidance

The English Heritage and DCMS (Department for Culture, Media and Sport) document 'PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide' provides current guidance on PPS5 (and its successor the NPPF) and its application.

This refers to the need, for decision-making in response to an application for change that affects the historic environment, of providing and assessing, at a level appropriate to the relative importance of the asset affected, information on the asset and its extent, on its setting, and on the significance of both of these aspects. Section 5, 54 states that '*Heritage assets may be affected by direct physical change or by change in their setting. Being able to properly assess the nature, extent and importance of the significance of a heritage asset and the contribution of its setting is very important....*'

Section 5 on Policies HE6 to HE 12, 58, notes among appropriate actions (in point 5) '*Seek[ing] advice on the best means of assessing the nature and extent of any archaeological interest e.g. geophysical survey, physical appraisal of visible structures and/or trial trenching for buried remains.*'

The section on Policy HE10 defines setting as follows:

'113. Setting is the surroundings in which an asset is experienced. All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral.'

'114. The extent and importance of setting is often expressed by reference to visual considerations. Although views of or from an asset will play an important part, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust and vibration; by spatial associations; and, by our understanding of the historic relationship between places. For example, buildings that are in close proximity but not visible from each other may have a historic or aesthetic

connection that amplifies the experience of the significance of each. They would be considered to be within one another's setting.'

12.3 Former Cornwall Structure Plan

The following policies in the Cornwall Structure Plan relate to the historic environment are currently used to guide responses to applications.

12.3.1 Policy 1

'Development should be compatible with:

The conservation and enhancement of Cornwall's character and distinctiveness;

The prudent use of resources and the conservation of natural and historic assets;

A reduction in the need to travel, whilst optimising the choice of modes, particularly opportunities for walking, cycling and the use of public transport;

Through developing the principles of Policy 1 it is intended to integrate environmental values with land use and transport policies, achieving patterns of development that reflect strong environmental protection and stewardship of resources.'

12.3.2 Policy 2

'Throughout Cornwall, development must respect local character and:

- *Retain important elements of the local landscape, including natural and semi-natural habitats, hedges, trees, and other natural and historic features that add to its distinctiveness;*
- *Contribute to the regeneration, restoration, enhancement or conservation of the area;*
- *Positively relate to townscape and landscape character through siting, design, use of local materials and landscaping.*
- *The conservation and enhancement of sites, areas, or interests, of recognised international or national importance for their landscape, nature conservation, archaeological or historic importance, including the proposed World Heritage Site, should be given priority in the consideration of development proposals.'*

12.4 Former Restormel Local Plan

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

Policy 25

Development proposals which would damage scheduled ancient monuments or other archaeological remains of national importance or their settings will not be permitted.

Policy 26

Development proposals which adversely affect locally important archaeological sites held on the county sites and monuments record or identified as a result of a prior archaeological investigation will only be permitted where:

(1) physical preservation in-situ is not feasible and the importance of the development outweighs the case for preservation of the remains; and

(2) satisfactory arrangements are made for the excavation and recording of the remains before or during development.

Policy 27

Where 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, an archaeological assessment will be carried out prior to the granting of planning permission.

12.5 Hedgerow Regulations

Under the current, 1997 Hedgerow Regulations, owners wishing to remove all or part of a hedgerow considered to be historically important must notify the Local Planning Authority (LPA). Criteria determining importance include whether the hedge marks a pre-1850 boundary, and whether it incorporates an archaeological feature. The LPA may issue a hedgerow retention notice prohibiting removal.

13 Likely impacts of the proposed development

13.1 Types and scale of impact

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

13.1.1 Types of impact, construction phase

Construction of the wind turbine could have direct, physical impacts on the buried archaeology of the site through the construction of the turbine foundations, through the undergrounding of cables, and through the provision of any works compound, together with any permanent or temporary vehicle access ways into and within the site. Such impacts would be **permanent** and **irreversible**.

13.1.2 Types of impact, operational phase

This wind turbine might be expected to have a visual impact on the settings of some key heritage assets within its viewshed during the operational phase, given the height of its mast (40 metres), the elevation of the site and the open 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.

13.1.3 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.

13.1.4 Potential and residual impacts

Potential adverse impacts may be capable of mitigation through archaeological recording or other interventions. In the assessments forming Section 13.2, where appropriate, both 'potential' and 'residual' impacts are given; that is, expected impacts 'before' and 'after' such work, principally in relation to the development phase. A proposed mitigation strategy is outlined below in Section 14.

13.2 Assessment of impact

Overall, the impacts of the proposed wind turbine on the archaeological resource are assessed as having a potential scored as **negative/minor**, principally dependant on proximity to the proposed turbine site and intervisibility with it, though in two cases (Trelaske Round and Cubert Church) the impacts have been assessed as **negative/moderate**.

Impacts on the settings of designated heritage sites within 10Km of the proposed turbine site have been assessed as **neutral** to **negative/minor** overall. Impacts on potential sub-surface archaeology within the development site are thought likely to occur, given the documentary, aerial photographic and archaeological evidence relating to this site and its immediate surrounding landscape.

The assessments supporting this general statement are outlined in the following sub-sections. To comply with current policies and guidance (Section 12) 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.

13.2.1 Impacts on archaeological sites within the development area

Ground disturbance associated with the installation of foundations for the wind turbine, cabling 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 the whole site which would be affected. On the basis of the documented history of the site, there is the potential for such impacts to take place, in particular on any cemetery associated with the medieval chapel of St. Nighton sited within this field, but also potentially with features of prehistoric origin.

13.2.2 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/moderate to negative/minor** and **temporary/reversible** overall should the wind turbine be dismantled in the future:

- There are a number of Scheduled and high grade Listed sites located within 2Km of the site proposed for the wind turbine. All of these would have been intended, when constructed, to be highly visible focal points within the local landscape. There will be substantial intervisibility between these sites and the proposed wind turbine, in particular in relation to Trelaske Round and the spire of Cubert Church.
- However, as a result of the process of enclosure within the surrounding countryside during the medieval period, the character and appearance of the

landscape within which most local prehistoric monuments now sit has changed considerably from those within which they were originally designed to be seen and understood.

- Other Scheduled Monuments within the 10Km viewshed are either of types which have only limited settings or are at distances from the proposed wind turbine where their settings are unlikely to be impacted upon.
- Whilst additional wind turbines can be seen at some distance at several points in the wider landscape surrounding this site, the Trelaske wind turbine would be the first in this immediate area.
- During the operational phase the wind turbine is unlikely to impact to any significant degree on the settings of the majority of the Listed Buildings within its viewshed, given the relatively large distances between the wind turbine and these designated structures and constraints on intervisibility. The only likely exception to this would be the Grade I Listed Church of St. Cubert.
- There are no Registered Battlefields within the 10Km radius viewshed of the proposed wind turbine.
- There are no intervisible Conservation Areas within the 5Km radius viewshed of the proposed wind turbine.
- The most significant impacts on settings will be on closely-set designated late prehistoric settlements at Cargoll and Trelaske and the church at Cubert, whose proximity to the turbine will inevitably result in impacts on their settings, despite in one case (Cargoll) limited intervisibility.
- Any impacts on heritage assets within the landscape surrounding the proposed wind turbine would be **temporary** and **reversible** should the wind turbines be dismantled in the future.

13.2.3 Designated heritage assets within the 10Km radius viewshed

Preliminary filtering of potential impacts on these sites is discussed above (Section 8). Only those on which it was considered that some level of impact might occur are listed below and assessments of impact made.

Scheduled Monuments (SM) – see Figs 21 -22.

Identifier	Site	NGR	Impact
DCO1055	Cargoll hillfort	SW 81654 56708	Negative/minor
DCO918	Twelve Barrows linear barrow cemetery	SW 79401 55451 (centre)	Neutral
DCO919	St. Piran's Round	SW 79596 57405	Neutral
DCO1070	Round near Trelaske	SW 79640 57378	Negative/moderate in its present condition.

Despite its proximity to the proposed wind turbine, impacts on the setting of the round near Trelaske will be somewhat limited, given that both its visibility as a monument is compromised by its bisection by a public highway and its planting with trees and because its setting is severely compromised by two large agricultural barns to its immediate north and south. Nevertheless, the proximity of the proposed wind turbine to this site will inevitably have some impacts on its setting, which are assessed as negative/moderate in its current condition.

Given the topographical situation of Cargoll hillfort, intervisibility with the proposed wind turbine will be far more fragmentary, and probably limited to the outer parts of its blades. Again, the impacts on setting are assessed as negative/minor, given the proximity of the proposed wind turbine to this site.

In relation to Twelve Barrows, again, the degree of intervisibility will be very small given the topographical locations of the features making up this designated site, their ploughed-down natures and the blocking effects of an immediately-adjacent hedgeline to the north. No negative effects are likely to result on the setting of this monument.

Similarly, the ZTV analysis and field checking suggests that intervisibility between the proposed wind turbine and St. Piran’s Round will be limited and fragmentary. No parts of the interior of the round are likely to be intervisible with the wind turbine and likely impacts on its setting are assessed as neutral.

Grade 1 Listed Buildings - see Fig 19.

Identifier	Site	NGR	Impact
DCO4230	Church of St. Cubert	SW 78593 57759	Negative/moderate.

Whilst there may be some intervisibility between the upper parts of the proposed turbine and the church spire at Cubert, no appreciation of this will occur at ground level where there will be blocking of views between the two through intervening buildings and other features. However, the wind turbine is likely to intrude to a significant degree into views of this structure given the relatively short distance between the two and the nature of the surrounding landscape. The church spire is currently the only tall feature within this landscape, and impacts on its setting are therefore assessed as negative moderate.

13.2.4 Designated heritage assets within the 5Km radius viewed.

Grade II Listed Buildings – see Fig 18.

Identifier	Site	NGR	Impact
DCO4374	Trewolla	SW 87818 57510	Neutral to negative/minor.
DCO4089	Trevryn	SW 80312 56064	Neutral to negative/minor.

The Listed Building at Trewolla is suggested as being likely from the ZTV mapping to be fully intervisible with the proposed wind turbine at Trelaske. However, mature trees immediately surrounding it and buildings just to its south will reduce this intervisibility considerably. Given the relative proximity of this structure to the proposed wind turbine, however, impacts on its setting are thought likely to be neutral to negative/minor.

The northern elevation of Trevryn will be intervisible with the proposed turbine at Trelaske, though this appears from aerial photographs not to have been its principal elevation (which is to the south). Impacts on its setting are therefore assessed as neutral to negative/minor.

13.2.5 Undesignated heritage assets within the 1Km radius viewed

See Fig 16.

Identifier	Site	NGR	Impact
MCO10228	St. Nighton’s Chapel	SW 80283 57025	Negative/unknown.
MCO3525	Barrow adjacent to St. Nighton’s Chapel	SW 80283 57025	Negative/minor.

Both St. Nighton’s Chapel and the barrow recorded adjacent to it are documented sites, though in the case of the former, some elements of the building were revealed during road widening activities immediately to the east. It can be argued that documented/below ground sites can only have a very limited setting, unless sited in very open landscapes and of potentially national significance. In the case of the latter of these two sites, its location and visual prominence within the surrounding landscape

was integral to its function. However, the second of these has been lost, and impacts on its setting are therefore likely to be minor at most. Impacts on the setting of the Medieval chapel are more difficult to evaluate in the absence of information concerning the degree of preservation of the site as below-ground archaeology (part of the site was destroyed by road widening), though are likely to be minor, despite the proximity of this site to the proposed wind turbine.

13.2.6 Impacts on Historic Landscape Character

A wind turbine installation erected on the elevated land at Trelaske can be predicted to have a negative impact on the historic character of the 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 this area as former farmland and downland of Medieval origin, in particular through the introduction of a highly visible modern feature into this open landscape. There are almost no wind turbines or visually obtrusive modern features such as pylons and aerials within the landscape around this site.
- The land-take for the proposed development is small in comparison with the area of the HLC Units of former industrial land within the surrounding landscape.
- 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.
- Any impacts on the legibility of HLC would be **temporary** and **reversible** should the wind turbine be dismantled in the future.

14 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, who may choose to recommend one or more of the following.

14.1 Archaeological recording

In a case where the finalised site design would seem likely to result in unavoidable impacts on below-ground or above ground features, a brief for work to mitigate these impacts would be prepared by Cornwall Council's Historic Environment Advice Officer (Central), 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 in the form of the recording of upstanding elements of the site which might be negatively impacted upon by the works, or a watching brief (observation by an archaeologist during mechanical ground reduction activities) can be required either where any significant features or areas of ground are to be disturbed (for instance for the foundations for the turbine mast or during cable trenching), in areas where significant features had been identified through the site walkover, 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 reduce any impacts on the archaeology of the site to **negative/minor**. Any resultant impacts would be reduced to **permanent** and **irreversible**.

In the instance of the site at Trelaske, it seems likely that there is a possibility of below ground remains (including a possible medieval cemetery) associated with St. Nighton's Chapel being directly impacted upon by the proposal to construct a wind turbine at this location. The Historic Environment Planning Advice Officer is likely to require an evaluation of this site through geophysical survey and possibly through subsequent

trenching to determine the likely impacts and significance of the below ground remains before a recommendation for the granting of planning permission could be made.

15 References

15.1 Primary sources

Cornwall County Council 2005 aerial mapping of Cornwall.

Joel Gascoyne's 1699 Map of Cornwall

Martyn's 1748 Map of Cornwall

Ordnance Survey, 1809, *1 inch mapping* First Edition (licensed digital copy at HE)

Ordnance Survey, c1880. *25 Inch Map* First Edition (licensed digital copy at HE)

Ordnance Survey, c1907. *25 Inch Map* Second Edition (licensed digital copy at HE)

Ordnance Survey, 2007. *Mastermap Digital Mapping*

Tithe Map and Apportionment, c1840. *Parish of Cubert* (digital copy available from CRO)

15.2 Publications

English Heritage 2005, *Wind energy and the Historic Environment*

English Heritage 2011, *The setting of Heritage assets: English Heritage guidance*

Herring, P. 1998, *Cornwall's historic landscape: presenting a method of historic landscape character assessment*, Cornwall Archaeological Unit

Norden, J. 1724, *Map of Cornwall*, reprinted University of Exeter 1972

Thorn, C. and Thorn, F. (eds.) 1979, *Domesday Book, 10: Cornwall*, Chichester

15.3 Websites

<http://www.heritagegateway.org.uk/gateway/> English Heritage's online database of Sites and Monuments Records, and Listed Buildings

16 Project archive

The HE project number is **PR146178**

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Kennall Building, Old County Hall, Station 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\Trelaske wind turbine assessment 2012
3. English Heritage/ADS OASIS online reference: cornwall2-132953
4. This report text is held in digital form as: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites T\Trelaske wind turbine assessment 2012\Report\Trelaske wind turbine assessment.doc

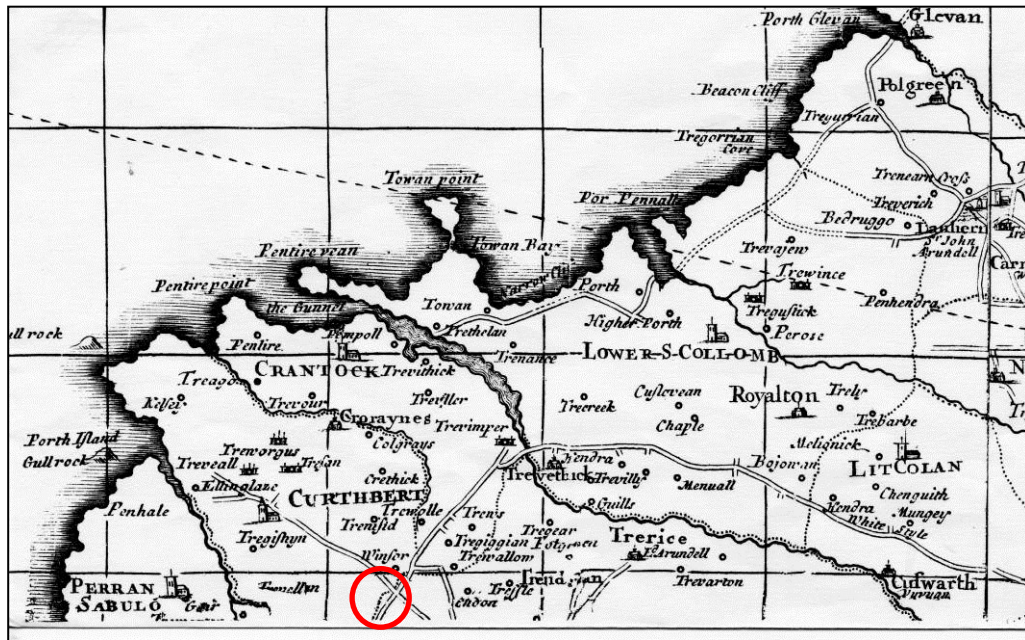


Fig 3. The project area and its surroundings, shown on Joel Gascoyne's 1699 Map of Cornwall. The project area is circled in red.



Fig 4. The proposed turbine site and its surroundings, as shown on John Norden's 1724 Map of Cornwall. The project area is circled in red.



Fig 7. The project area as shown on the circa 1840 Cubert Tithe Map. The proposed turbine is located within the red circle. North is at 10 o'clock.

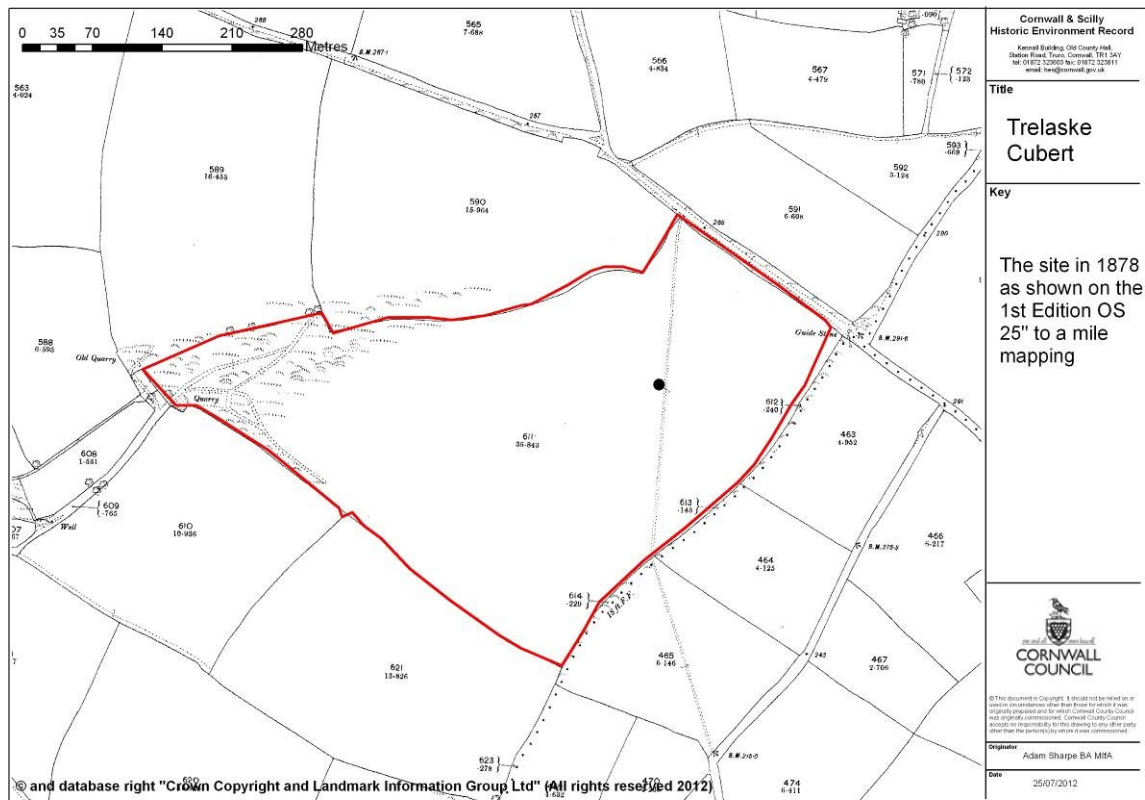


Fig 8. The project area as shown on the circa 1877 1st Edition OS 25" to the mile mapping.

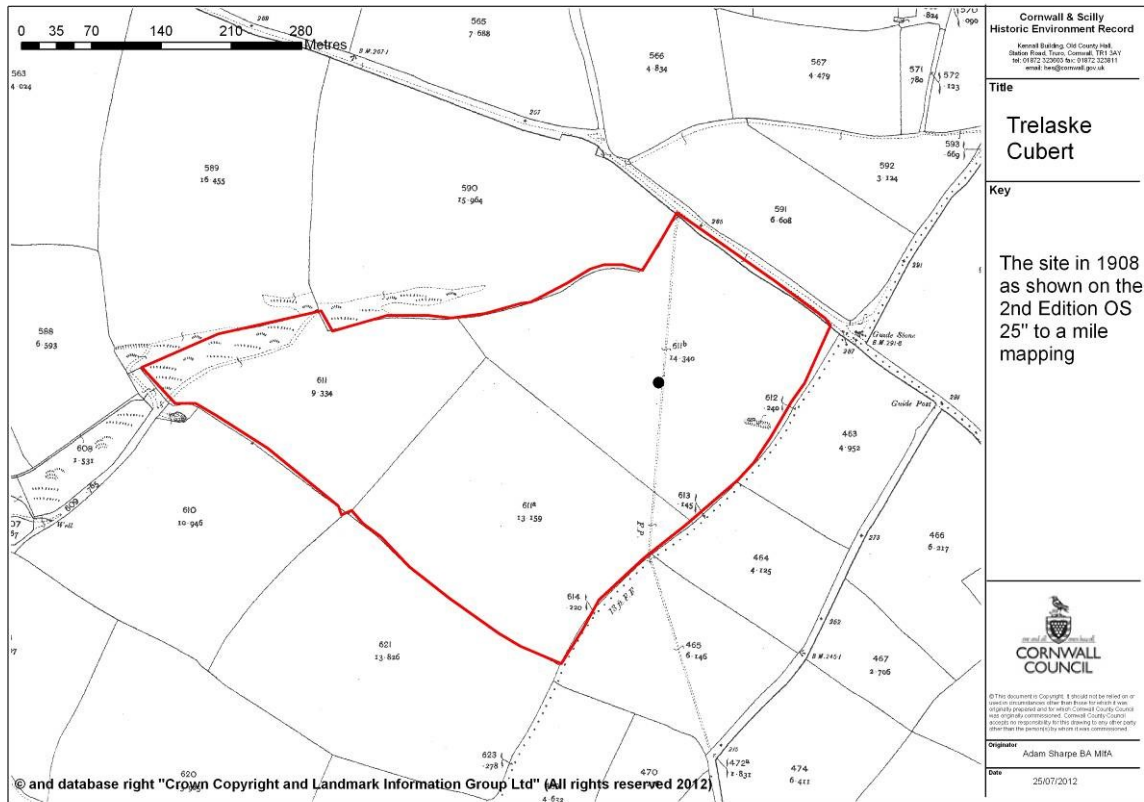


Fig 9. The project area as shown on the circa 1908 OS 25" to the mile mapping.



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

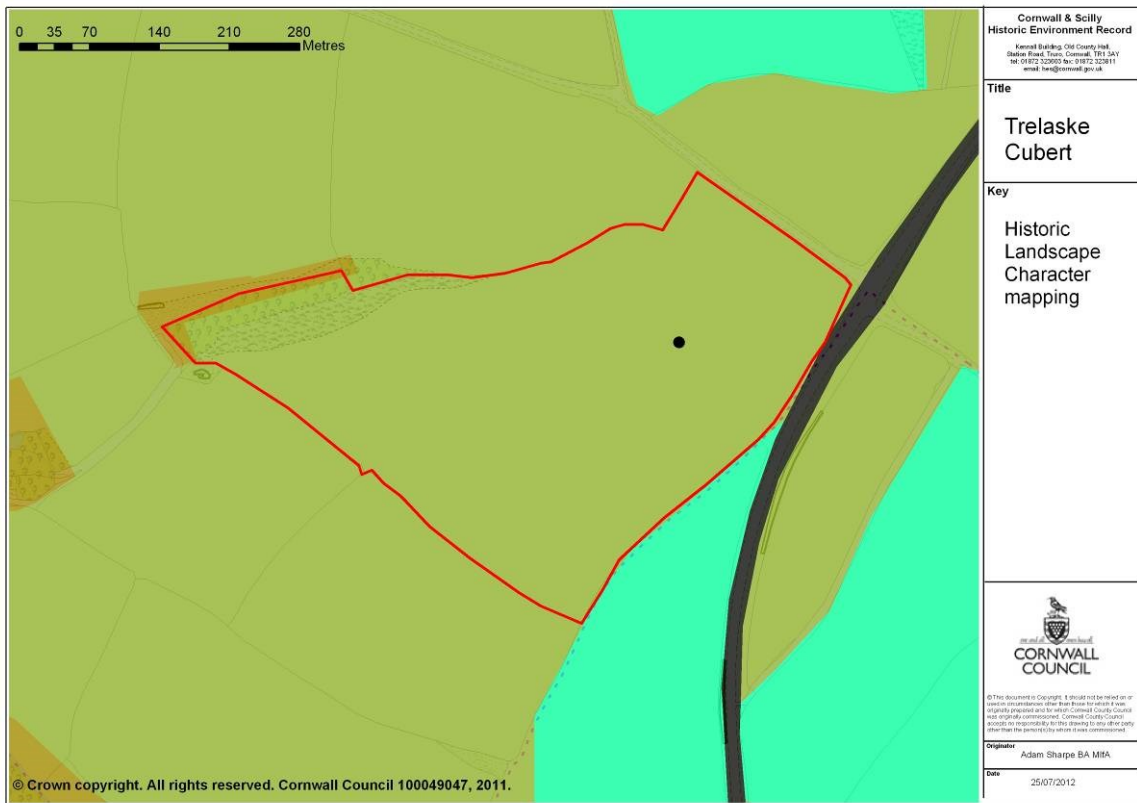


Fig 11. Historic Landscape Character mapping showing how this area of countryside is derived from medieval farmland (khaki) and post-medieval farmland (turquoise).

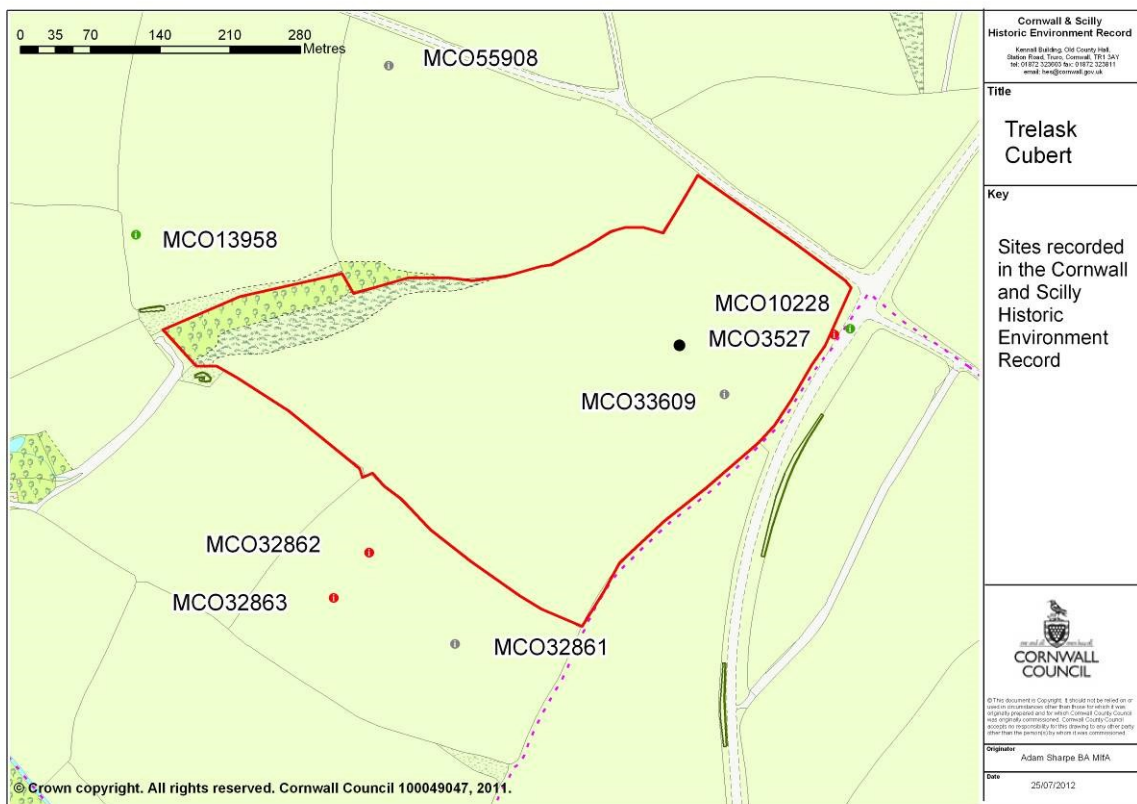


Fig 12. Sites recorded in the Cornwall and Scilly Historic Environment Record in the immediate vicinity of the proposed turbine site. MCO10228 relates to the chapel and MCO3527 to the possible Bronze Age barrow. Both locations are approximate.

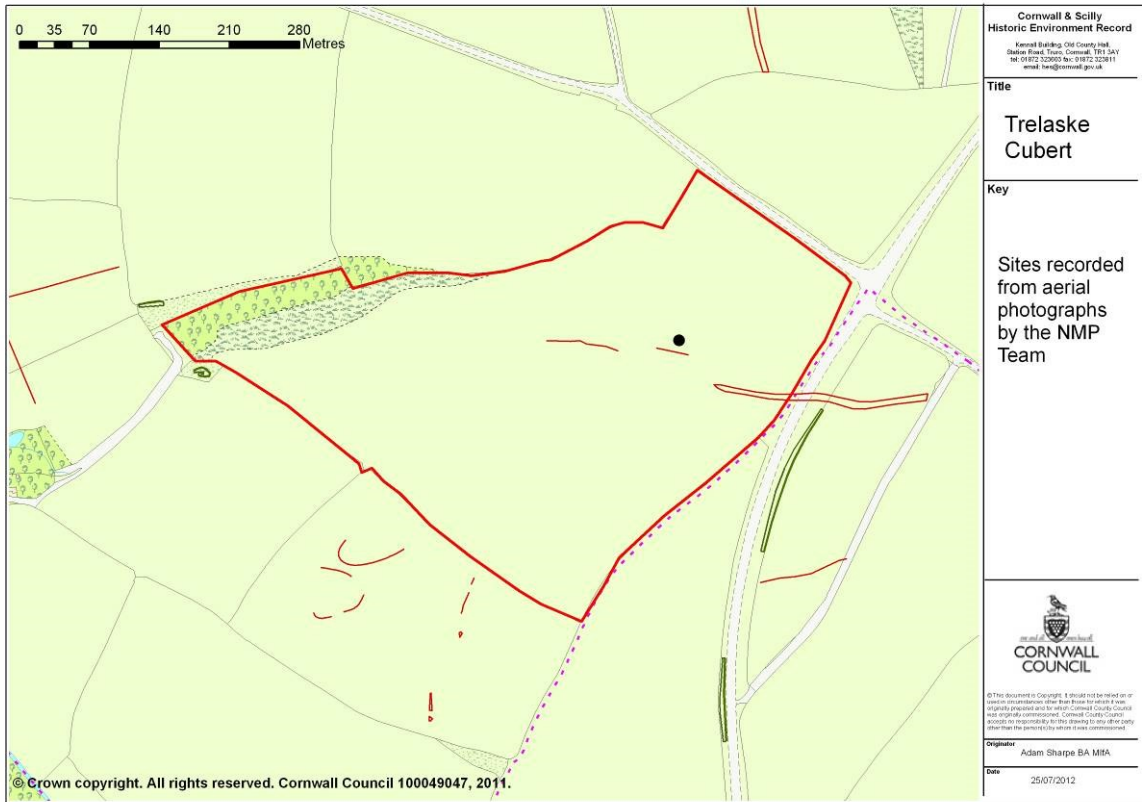


Fig 13. Archaeological sites recorded from aerial photographs by the NMP team include possible prehistoric enclosures and field boundaries. The tenant farmer has also noted cropmarks in the field immediately to the north.

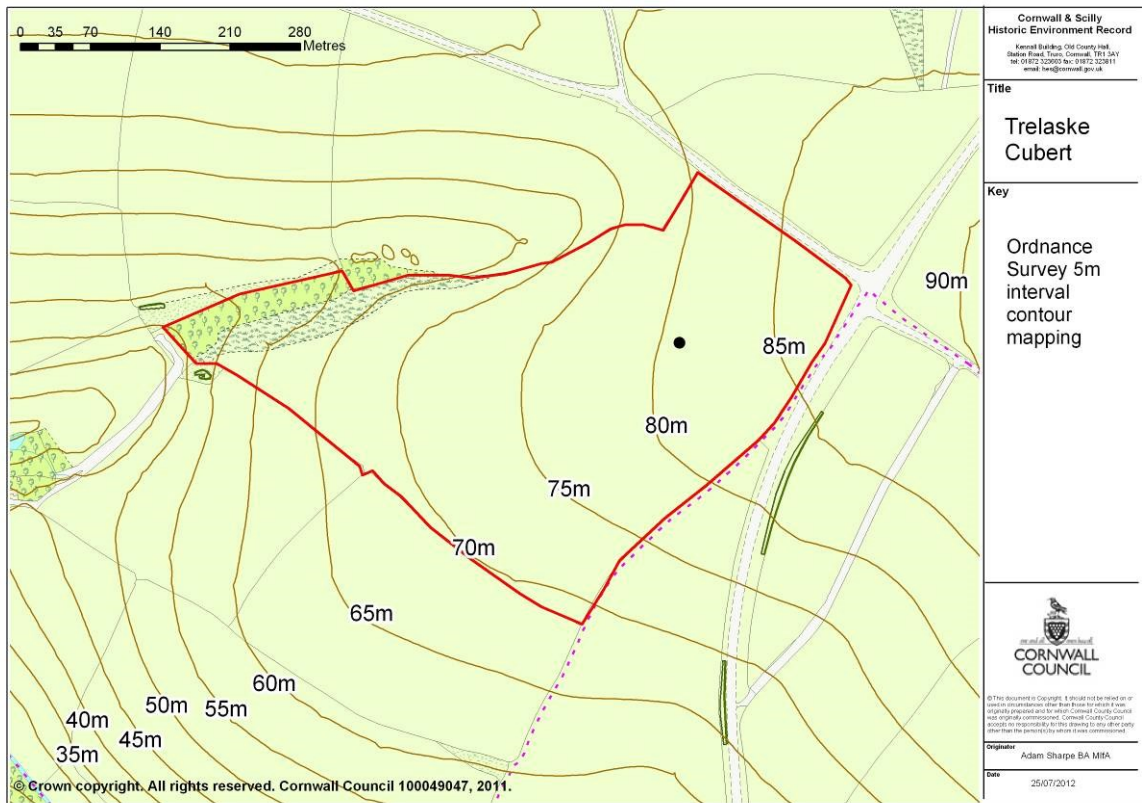


Fig 14. OS contour data for the area immediately surrounding the proposed wind turbine shows the site located near a hilltop on land falling to the west and south.

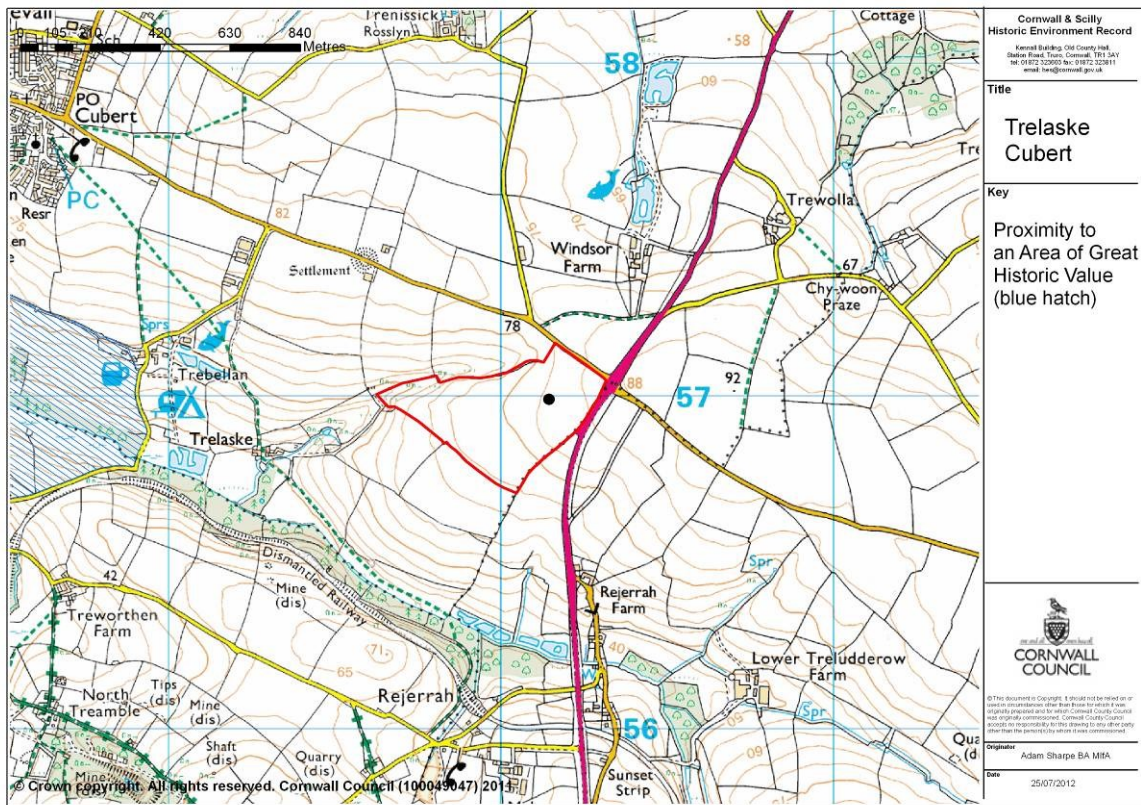


Fig 15. Blue hatching indicates the boundary of the nearby Area of Great Historic Value (AGHV).

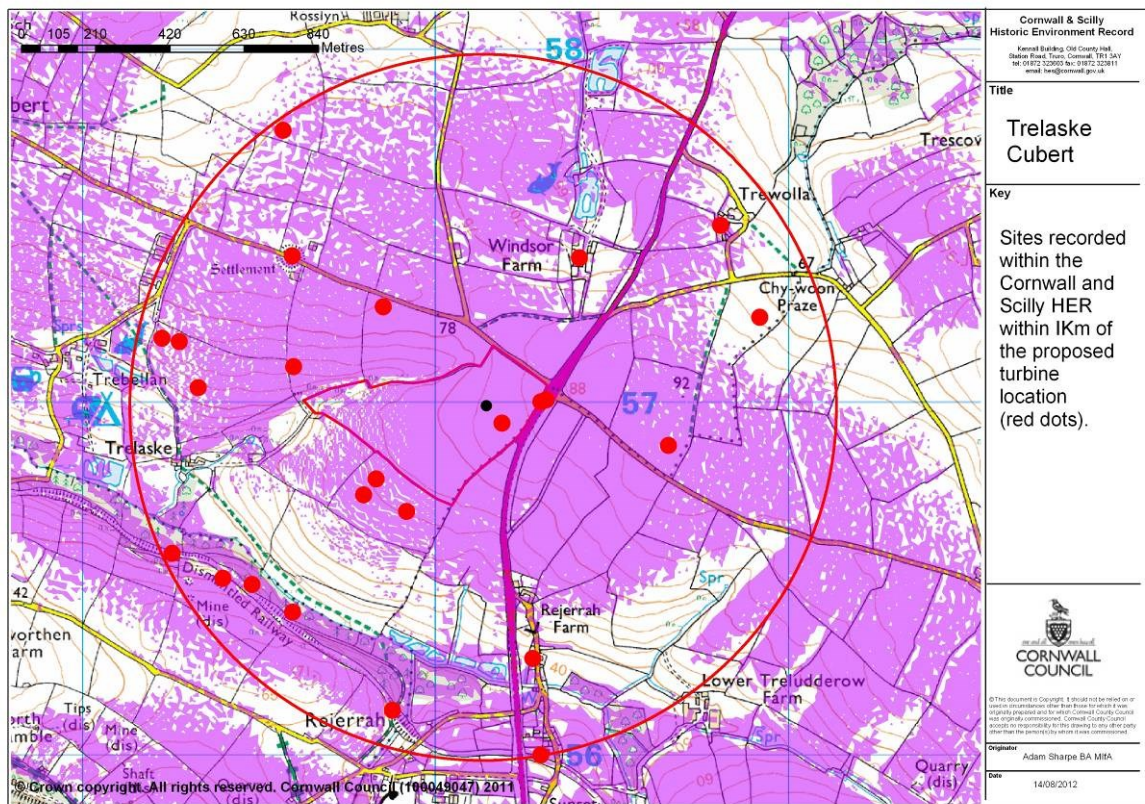


Fig 16. Mapping showing the ZTV within a 1Km radius of the site proposed for the wind turbines, showing potentially intervisible sites recorded in the HER.

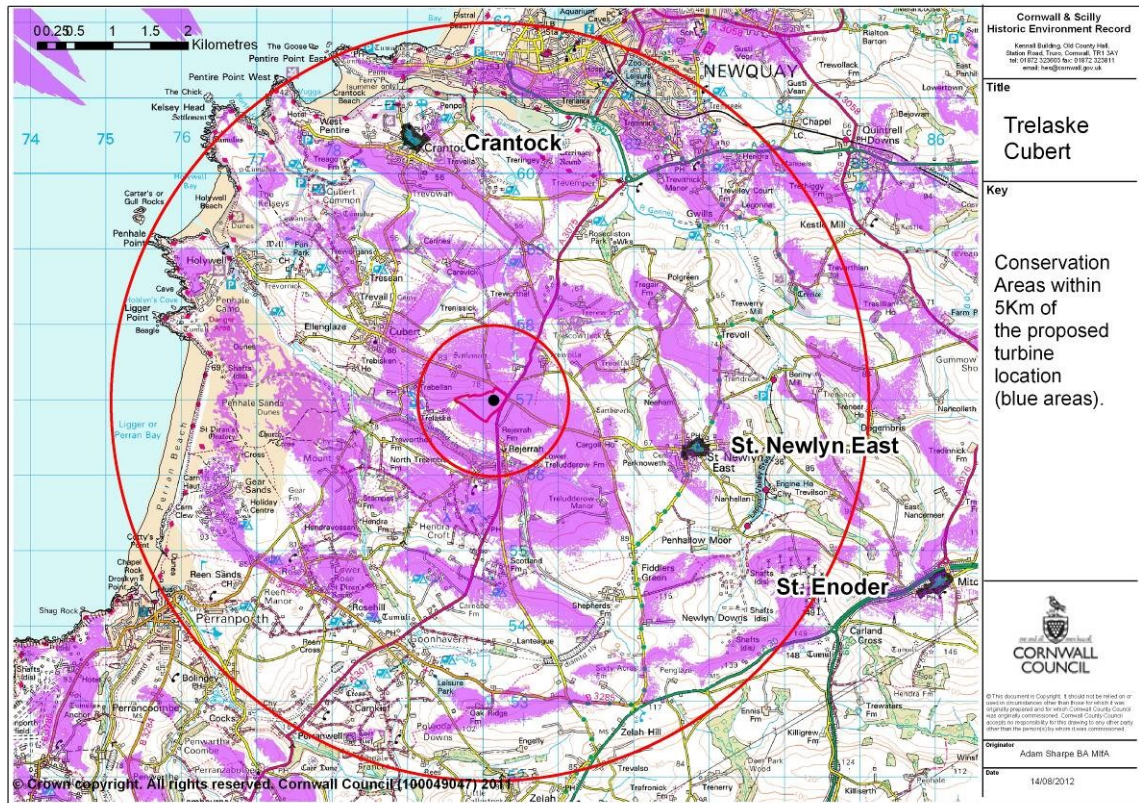


Fig 17. Mapping showing Conservation Areas (in blue) within the 5Km radius ZTV of the site proposed for the wind turbine showing potential intervisibility.

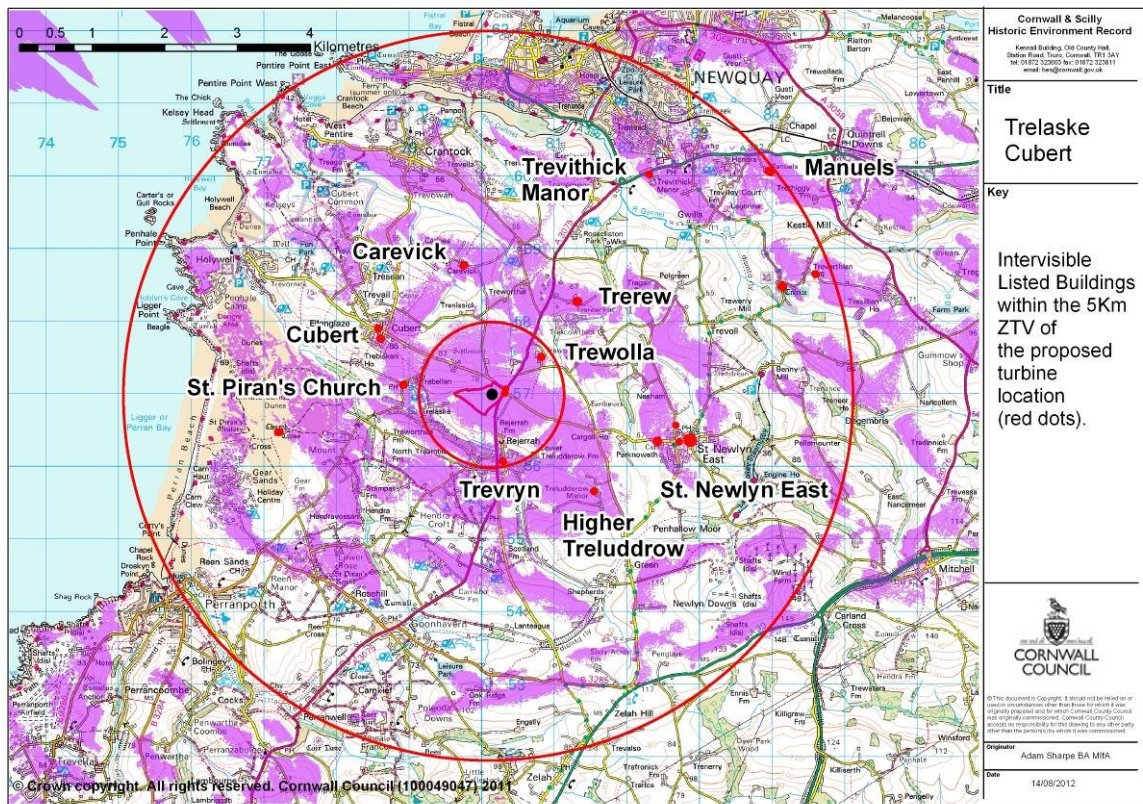


Fig 18. Mapping showing potentially intervisible Listed Buildings (in red) within the 5Km radius ZTV of the site proposed for the wind turbine.

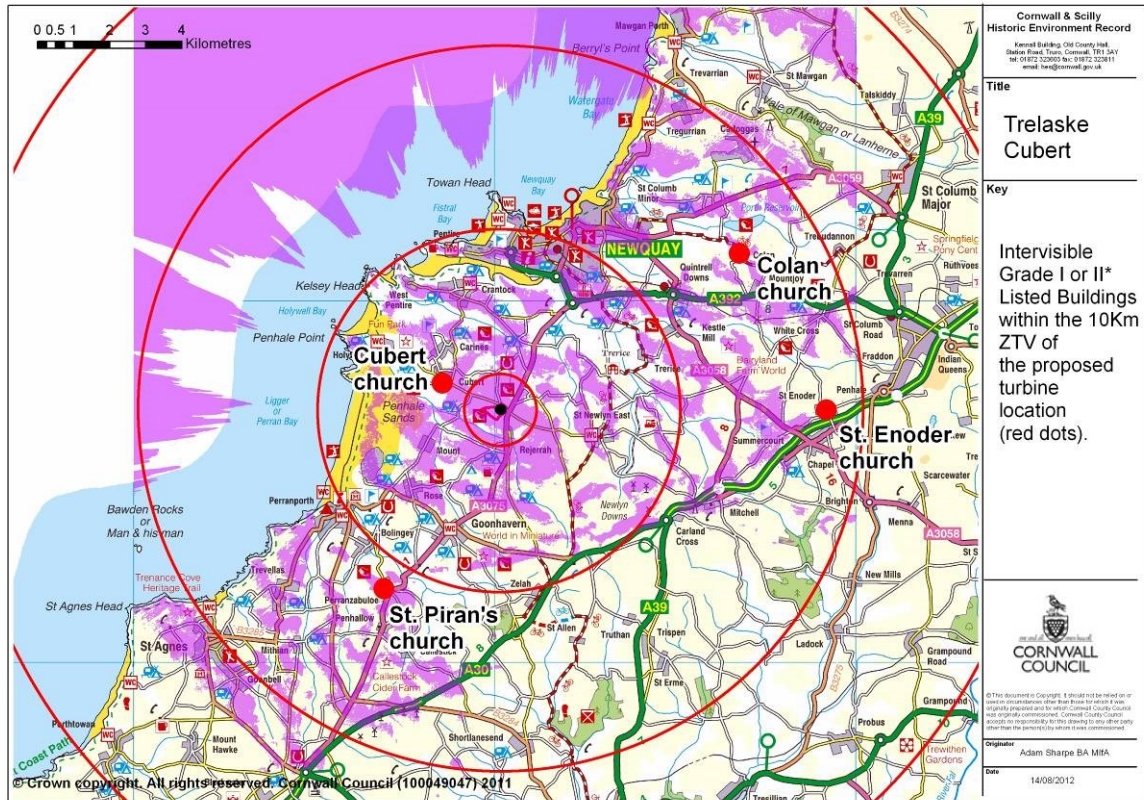


Fig 19. Mapping showing potentially intervisible Grade I and II* Listed Buildings (in red) within the 10Km radius ZTV of the site proposed for the wind turbine.

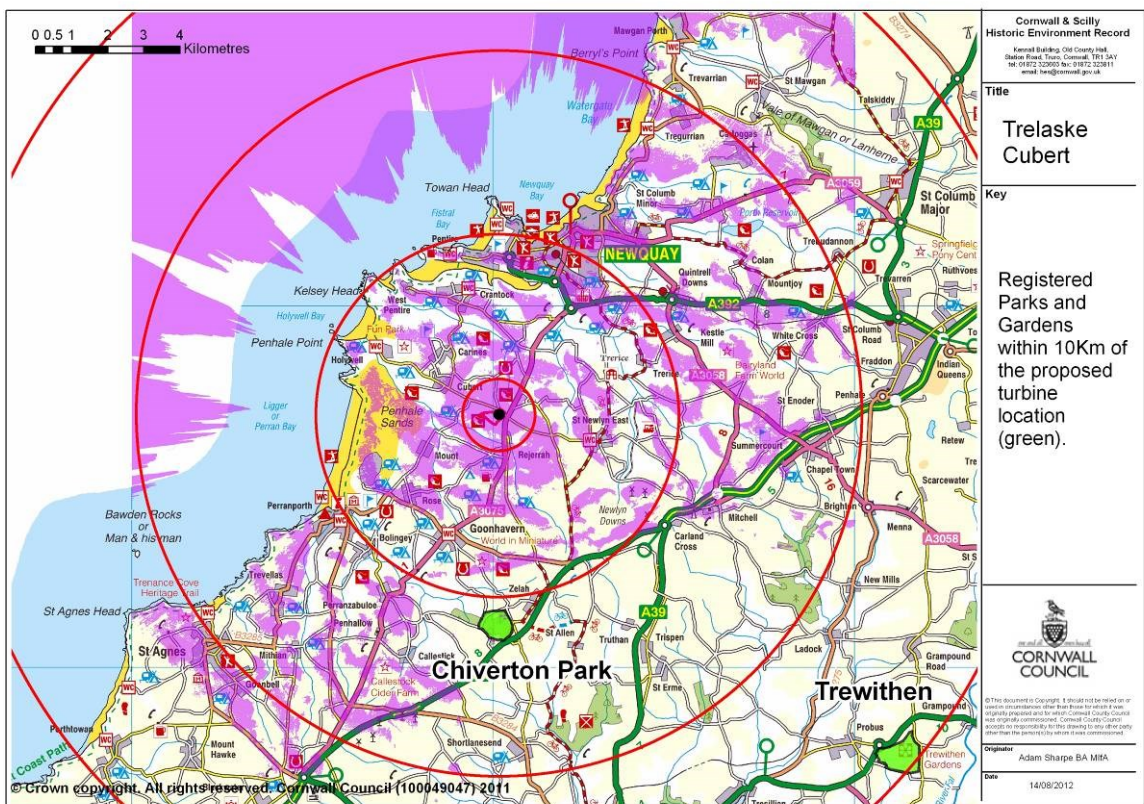


Fig 20. Mapping showing Registered Parks and Gardens (green) within 10Km of the site proposed for the wind turbine.

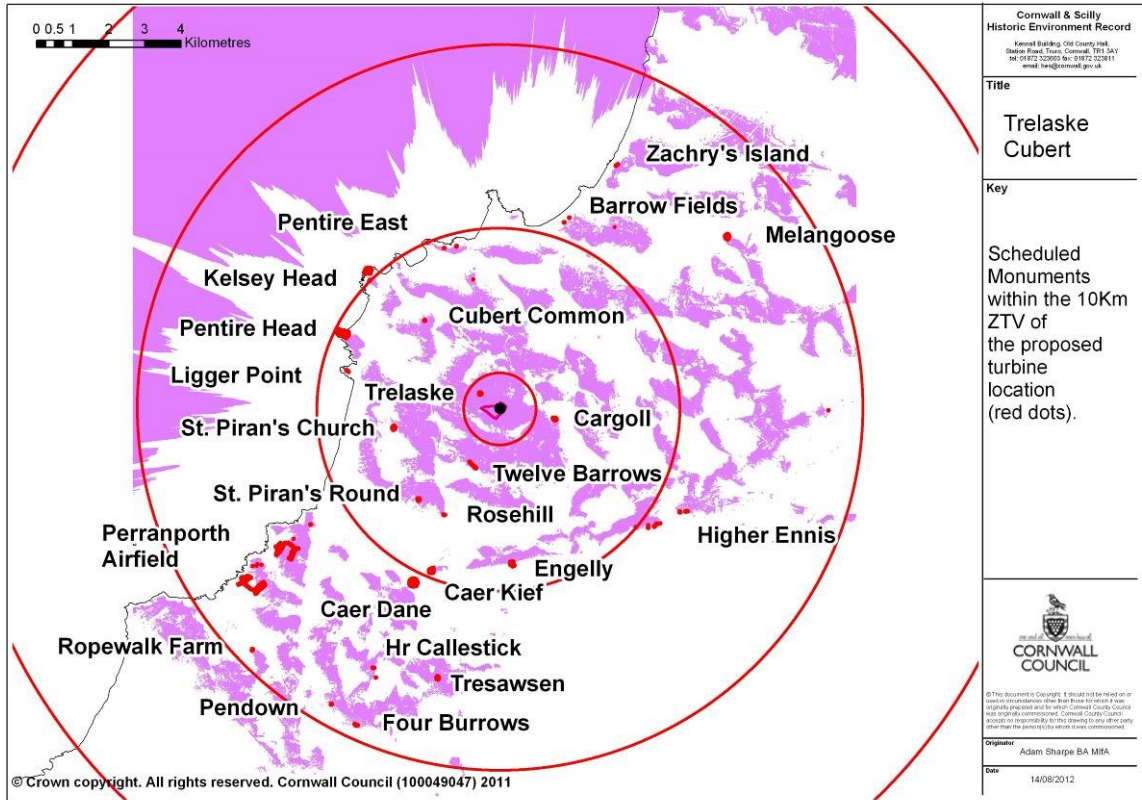


Fig 21. Mapping showing potentially intervisible Scheduled Monuments (red) within the 10Km ZTV of the site proposed for the wind turbine.

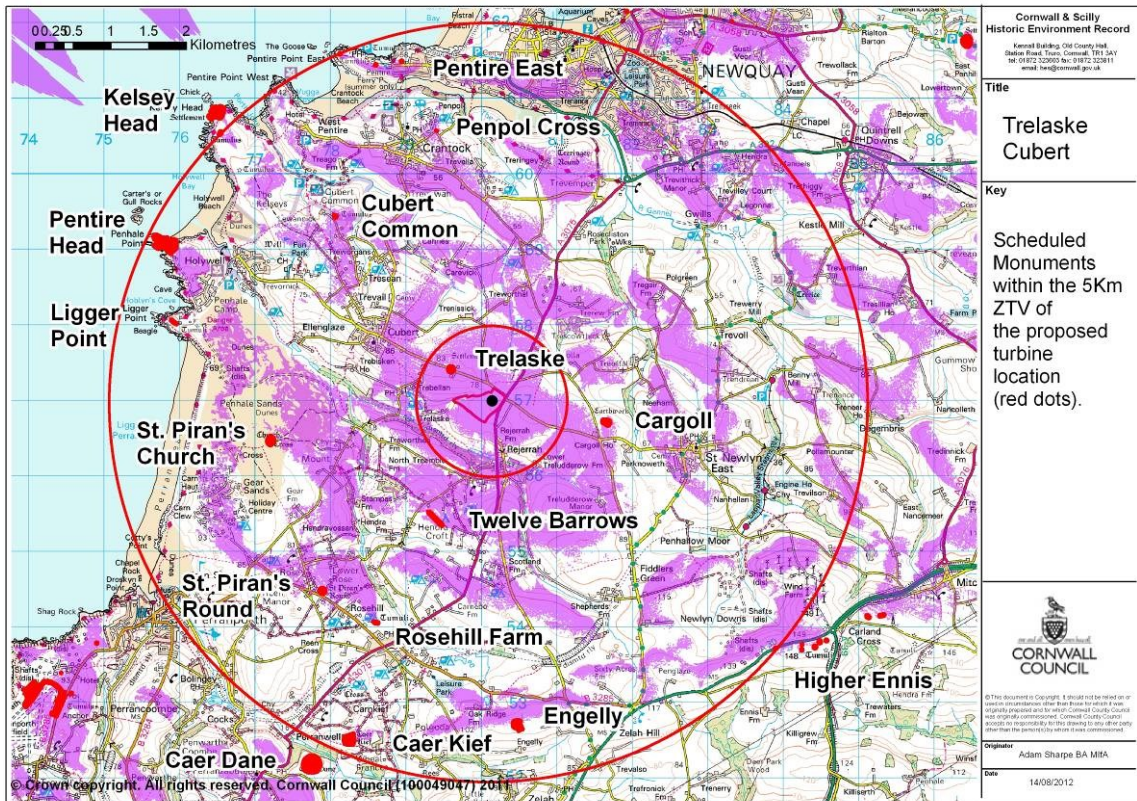


Fig 22. Mapping showing potentially intervisible Scheduled Monuments (red) within the 5Km ZTV of the site proposed for the wind turbine.



Fig 23. Looking just north of west from the site proposed for the wind turbine on Chapel Downs, Cubert church spire is a prominent landmark.



Fig 24. Looking east from Penhale Sands, this view again emphasises the skyline location of the spire at Cubert church.



Fig 25. Just to the west of Cubert, and less than 700m from the site proposed for the wind turbine, is Trelaske Round, in this view set between a farmhouse and an agricultural barn.



Fig 26. Looking south east from Chapel Downs, the Carland Cross wind farm is 4.5Km away, and a prominent skyline feature.



Fig 27. St Piran's Lost Church on Perran Sands, looking east towards the site proposed for the wind turbine, which would, from this site, appear as a skyline feature.



Fig 28. St. Piran's Cross adjacent to the Lost Church on Perran Sand, again looking east.



Fig 29. Looking east from Perran Sands towards Chapel Downs. The proposed turbine would be on the skyline just to the right of centre in this image taken from 3.2Km away.



Fig 30. Looking east from Chapel Downs towards Perran Sands, and the sites of St. Piran's Oratory, Church and Cross.



Fig 31. Looking south from the road between Crantock and Quintrell Downs. Trelaske Round skylines to the right and the wind turbine would appear on the skyline near the centre of this view.



Fig 32. Looking north from just above Caer Dane, the wooded nature of the landscape around Goonhavern (centre) is emphasised. The proposed wind turbine would be on the skyline near the centre of this view.



Fig 33. This view south west through a gateway near Cargoll Round emphasises the plateau-like nature of the topography, though also demonstrates how sites within valleys can be almost wholly invisible except from very local viewpoints.



Fig 34. The fingerpost at Cargoll crossroads. The wind turbine would just be visible above the scrub trees to its right.



Fig 35. Looking south west towards St. Agnes Beacon just over 10Km away.



Fig 36. Looking south across a scatter of small farm buildings towards the Four Burrows wind farm on the skyline in the far distance.

Brief for Archaeological Assessment (provided by Cornwall Council's Historic Environment Service)

BRIEF FOR ARCHAEOLOGICAL ASSESSMENT- Trelaske Farm

Date: 28/05/2012

Site: Erection of a single wind turbine, with a maximum blade tip height of 34.6m

Address: Trelaske Farm, Cubert, Newquay

Application Number: PA12/01367/PREAPP

Historic Environment Planning Advice Officer: Dan Ratcliffe

Planning Case Officer: Adam Carlyon

This brief is only valid for six months. After this period the Historic Environment Planning Advice Officer (HEPAO) should be contacted. The contractor is strongly advised to visit the site as there may be implications for accurately costing the project.

Contractors Written Scheme of Investigation (WSI)

No ground works are to be undertaken until the HEPAO and the Local Planning Authority (LPA) have approved the archaeological contractor's WSI.

1 Introduction

This brief has been written by the HEPAO and sets out the minimum requirements for an archaeological desk based assessment and geophysical survey of the above site prior to the submission of an application to erect a single wind turbine.

Archaeological assessment and survey of the above site will be required to provide information on the significance and potential of archaeological remains on the site and to identify the likely impact of the proposals on that significance.

2 Site Location and Description

The turbine will be located at approximately SW 800 569. An access route / track to the site has not been specified. The site lies within agricultural farmland the ground cover of which is not known by the HEPAO. **This information should be supplied with this brief as it may affect costings.**

3 Planning Background

PA12/01367/PREAPP relates to a pre-application advice request made by MiGrid. HES has advised that due to the archaeological potential of this site and its proximity to a Scheduled Monument, that it should be supported by expert assessment and geophysical survey.

4 Archaeological Background

Historic Environment Record (HER) ref: 25042.00 records ST NIGHTONS CHAPEL within this field. The site of the chapel and its burial ground were recorded in the 17th century but lost by the mid 20th century until part of the chapel building was excavated c1968 in advance of construction of the A3075. A prehistoric barrow may have been incorporated (ref 25042.20) into the corner of the burial yard. Aerial photography studied by the EH 'National Mapping Project' has recorded a number of possible prehistoric sites in this and adjacent fields.

Scheduled Monument 1020025 Name ROUND 650M NORTH EAST OF TRELASKE lies around 600m north west of the proposed site.

5 Requirement for Work

Ground works may disturb extant and buried archaeological remains and have an effect of the setting of designated historic assets. In order to understand these impacts an assessment is required. This would involve a desk based assessment including a map regression plus a walk over survey of the extant remains of the site. This would provide evidence for any recommendations for archaeological recording. Geophysical survey of the turbine site and access route, with an additional buffer of 20m either side of any proposed impacts (including temporary compounds, temporary haul routes, set down areas and crane bases) will provide direct information about the presence or absence of archaeological remains and any possible mitigation that may be possible by micro-siting.

The site specific aims are to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map evidence for the site.
- Whether historic/architectural features are present and should be retained.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Produce 'statements of significance' for all designated historic assets, that are identified within 1.5km of the proposal site and within its Zone of Theoretical Visibility (ZTV). Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local' and follow the EH Guidance *The Setting of Heritage Assets* to describe setting impacts.
- Identify the construction, use and 'end of life' impacts of the current proposals on the 'national importance' of Scheduled Monuments, the 'Outstanding Universal Value of the World Heritage Site' and on undesignated historic assets as described in PPS5.

6 General Guidance

- 6.1 The archaeological contractor is expected to follow the code of the Institute for Archaeologists (IfA).
- 6.2 All of the latest Health and Safety guidelines shall be followed on site.
- 6.3 Terminology will be consistent with the English Heritage Thesaurus.

7 Results

- 7.1 The full report including all specialist assessments of artefact assemblages shall be submitted within a length of time (but not exceeding six months) to be agreed between the applicant and the archaeological contractor, Cornwall Council Historic Environment Service and the Cornwall Record Office or Royal Cornwall Museum. A further digital copy shall be supplied on CD-ROM preferably in 'Adobe Acrobat' PDF format.
- 7.2 The archaeological contractor will undertake the English Heritage/ads online access to the index of archaeological investigations (OASIS).
- 7.3 This report will be held by the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation.
- 7.4 The report must contain:
 - A concise non-technical summary of the project results.
 - The aims and methods adopted in the course of the investigation.
 - A discussion of the archaeological findings in terms of both the site specific aims and the desk based research.

- A location map, a drawing showing those areas examined as part of the archaeological recording, and copies of historic maps and plans consulted and any archaeological plans and sections. All plans shall be tied to the national grid.
- All specialist reports and assessments.
- A summary of the archive contents and date of deposition.
- A copy of the brief and the approved WSI will be included as an appendix.

8 Archive Deposition

- 8.1 An ordered and integrated site archive will be prepared in accordance with: *Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006* upon completion of the project. The requirements for archive storage shall be agreed with the Royal Cornwall Museum. Please check the accessioning and deposition information on the Royal Cornwall Museum website and fill in the 'Notification of Fieldwork' form. Once this has been accepted an accession number will be provided by the museum.
- <http://www.royalcornwallmuseum.org.uk/policies/>
- 8.2 Where there is only a documentary archive this will be deposited with the Cornwall Record Office as well as the Courtenay Library of the Royal Institution of Cornwall.
- 8.3 A copy of the report will be supplied to the National Monuments Record (NMR) Swindon.
- 8.4 A summary of the contents of the archive shall be supplied to the HEPAO.
- 8.6 Only on completion of 8.1 to 8.5 (inclusive) will there be a recommendation for the discharge of any archaeological recording condition.

9 Monitoring

- 9.1 The HEPAO will monitor the work and should be kept regularly informed of progress.
- 9.2 Notification of the start of work shall be given preferably in writing to the HEPAO at least one week in advance of its commencement.
- 9.3 Any variations to the WSI shall be agreed with the HEPAO, preferably in writing, prior to them being carried out.

Trelaske Farm, Cubert, proposed wind turbine: Written Scheme of Investigation for archaeological assessment of impacts on heritage assets

Client: Chloe Bines, for Mi-Grid

Client tel : 01872 560445

Client email: chloe@mi-grid.co.uk

Project background and site history

Pre-application PA12/01367 for the erection of a single wind turbine with a maximum blade tip height of 24.6m at SW 80143 56993, Trelaske Farm, Cubert was the subject of an initial planning assessment which is being progressed under a Planning Performance Agreement (PPA) and dated 12 June 2012.

The site proposed for the turbine consists of a single agricultural enclosure of Grade 3 land extending to 15 Ha. The site is at 80m OD near the top of a south west facing slope in land whose Historic Landscape Character is Anciently Enclosed Land – Farmland Medieval, a landscape type which has a high potential for the survival of buried archaeological remains.

A brief issued by Dan Ratcliffe (Historic Environment Planning Advice Officer – Central Cornwall) and dated 28th May 2012 indicated the known existence of the buried remains of St. Nighton’s Chapel within the north-eastern part of the field proposed for the development. This was mentioned in 1470 and 1503, being described *circa* 1600 but appears to have been substantially demolished by the 20th century, although construction of the nearby A3075 in 1968 revealed parts of its foundations. The chapel may well be associated with a graveyard extending into the field. The chapel yard may incorporate a Bronze Age barrow. Cropmark evidence for two undated, but probably late prehistoric settlement enclosures has been recorded through aerial photography 370m and 425m to the south-west of the proposed turbine site. The scheduled extant remains of either a medieval Plen an Gwarry (playing place) or late prehistoric enclosed settlement (or possibly both) survives 690m to the north-east of the proposed development. The brief also indicates the existence of other cropmark features of likely prehistoric date within the environs of the development site. As a result, the HEPAO considers that the development should be subject to an archaeological assessment whose scope is set out below.

A request for a Written Scheme of Investigation for the assessment of the likely impacts of the proposal on the historic environment was received from Chloe Bines of Mi-Grid on 11th July 2012. This Written Scheme of Investigation (WSI) sets out the methodology to be used to achieve the objectives set out in these documents, the approach being taken being in line with PPS5 Planning for the Historic Environment (DCLG 2010) Policy HE6, which states that *‘Local planning authorities should require an applicant to provide a description of the significance of the heritage assets affected and the contribution of their setting to that significance.’* Policy HE10 goes on to state that LPAs should *‘treat favourably applications that preserve ... or better reveal the significance of the asset [and] identify opportunities for changes in the setting to enhance or better reveal the significance of a heritage asset.’*

Requirement for work and project extent

Ground works may disturb buried archaeological remains. In order to understand the site and its potential for recording archaeological remains an archaeological assessment has been recommended by the HEPAO. A geophysical survey recommended by the HEPAO may also be undertaken at the client’s discretion. If this is carried out it will extend for 1ha around the site of the turbine base, and for a 30m wide corridor along the whole length of the grid connection, including any areas used for construction

compounds and material or equipment storage. This would provide evidence for any recommendations for further archaeological recording or mitigation measures.

A walkover survey will cover the whole of the agricultural enclosure within which the turbine is proposed to be sited, together with its boundaries. Other areas to be visited will be those identified by the ZTV as within the viewshed of the site out to the recommended radius from the site.

Aims and objectives

As set out in the brief, the site specific aims are to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map information about the site.
- Determine whether historic/architectural features are present and should be retained.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether paleo-environmental sampling would be required.
- Produce statements of significance for all designated historic assets that are identified within 10Km of the proposal site and within its Zone of Theoretical Visibility (ZTV) and where impacts on their settings may result from the development. Where currently undesignated assets are identified, their likely significance should be indicated i.e. national, regional or local, and follow the EH Guidance *The Setting of Heritage Assets* to describe setting impacts.
- Produce a table listing designated heritage assets (as specified in English Heritage) which are within the ZTV but which are excluded from the assessment.
- Identify the construction, use and end of life impacts of the current proposals on both designated and undesignated heritage assets within the site and its ZTV.
- Produce a report containing the data in interpreted form

Working methods

All recording work will be undertaken according to the Institute for Archaeologists *Standards and Guidance for Archaeological Investigation and Recording*. Staff will follow the IfA *Code of Conduct* and *Code of Approved Practice for the Regulation of Contractual Arrangements in Archaeology*. The Institute for Archaeologists is the professional body for archaeologists working in the UK.

Desk-based assessment

A desk-based assessment will be carried out to inform the fieldwork stage. This will comprise:

- Published sources
- Historic maps, including
 - OS 1 inch survey (c1810)
 - Cubert Tithe Map (c1840)
 - 1st and 2nd Editions of the OS 25 inch maps (c1880 and c1907)
- NMP aerial photo transcripts
- Modern maps
- Relevant GIS layers curated by Historic Environment and Cornwall Council generally

Fieldwork: walkover survey

A walk-over survey will be undertaken of the site proposed for the wind turbines to determine the direct physical impacts of the construction of the wind turbines, trenching for cabling and any requirements for contractors' access. Areas of archaeological sensitivity will be identified during the walk over survey. Digital photographs will be taken for illustrative purposes.

Creation of site archive

This will include:

- Digital colour photographs stored according to HER guidelines
- Project materials stored according to HER guidelines
- Completion of an English Heritage/ADS OASIS online archive entry.

Archive report

The written report will include:

- A concise non-technical summary of the project results;
- The aims and methods adopted in the course of the investigation;
- A discussion of the archaeological findings setting out a brief background history to the project area, designations applying to it and heritage assets within it;
- Interpreted results of the geophysical survey, if commissioned;
- Recommendations as to whether an archaeological evaluation or further archaeological recording of any potential buried remains is recommended;
- a brief inventory of heritage assets within the study area, their significances and the impacts which might result from the development;
- A location map, a plan showing those areas examined as part of the archaeological recording and copies of any historic maps and plans consulted. All plans will be tied to the national grid;
- A summary of the archive contents;
- References;
- A copy of the brief and the approved WSI will be included as appendices;
- Supporting illustrations: location map, historic maps, interpreted results of geophysical surveys, photographs.

A paper copy and a digital (PDF) copy of the report, illustrations and any other files will be deposited with in the Cornwall HER. Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

Archive deposition

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with HE standards.

An ordered and integrated site archive will be prepared in accordance with Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006 upon completion of the project. As the project is likely to produce solely a documentary archive this will be deposited with the Cornwall Record Office as well as the Courtenay Library of the Royal Institution of Cornwall.

A summary of the contents of the archive shall be supplied to the HEPAO.

The archiving will comprise the following:

1. All correspondence relating to the project, the WSI, a single paper copy of the report together with an electronic copy on CD, stored in an archive standard (acid-free) documentation box.
2. The project archive will be deposited initially at ReStore PLC, Liskeard and in due course (when space permits) at Cornwall Record Office.

Timetable

The study is anticipated to be commenced during late Summer 2012. HE Projects will require adequate notice before commencement of work, in order to allocate field staff time and arrange other logistics.

The archive report will be completed within 3 months of the end of the fieldwork. The deposition of the archive will be completed within 3 months of the completion of the archive report.

Monitoring and Signing Off Condition

Monitoring of the project will be carried out by Dan Ratcliffe, HEPAO.

Monitoring points during the study will include:

- Approval of the WSI
- Completion of archive report
- Deposition of the archive

Historic Environment Projects

Historic Environment Projects is the contracting arm of Historic Environment, Cornwall Council (HE). HE employs some 20 project staff with a broad range of expertise, undertaking around 100 projects each year.

HE is committed to conserving and enhancing the distinctiveness of the historic environment and heritage of Cornwall and the Isles of Scilly by providing clients with a number of services including:

- Conservation works to sites and monuments
- Conservation surveys and management plans
- Historic landscape characterisation
- Town surveys for conservation and regeneration
- Historic building surveys and analysis
- Maritime and coastal zone assessments
- Air photo mapping
- Excavations and watching briefs
- Assessments and evaluations
- Post-excavation analysis and publication
- Outreach: exhibitions, publication, presentations

Standards



HE is a Registered Organisation with the Institute for Archaeologists and follows their Standards and Code of Conduct.

As part of Cornwall Council, HE has certification in BS9001 (Quality Management), BS14001 (Environmental Management), OHSAS18001 (Health, Safety and Welfare), Investors in People and Charter Mark.

Terms and conditions

Contract

The HE projects team is part of Historic Environment, Cornwall Council. If accepted, the contract for this work will be between the client and Cornwall Council.

The views and recommendations expressed will be those of the HE projects team and will be presented in good faith on the basis of professional judgement and on information currently available.

Project staff

The project will be managed by a nominated Senior Archaeologist (Adam Sharpe BA MIfA) who will:

- Discuss and agree the detailed objectives and programme of each stage of the project with the client, including arrangements for health and safety.
- Liaise with the client regarding the budget and related issues.

Report distribution

Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

A digital copy of the report, illustrations and any other files will be held in the Cornwall HER and also supplied to the client on CD or other suitable media.

Copyright

Copyright of all material gathered as a result of the project will be reserved to the Historic Environment, Cornwall Council. Existing copyrights of external sources will be acknowledged where required.

Use of the material will be granted to the client.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

HE will ensure that all information arising from the project shall be held in strict confidence to the extent permitted under the Act. However, the Act permits information to be released under a public right of access (a "Request"). If such a Request is received HE may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

Health and safety statement

Historic Environment is within the Environment, Planning and Economy Directorate of Cornwall Council. The HE projects team follows Cornwall Council's *Statement of Safety Policy*.

Prior to carrying out on-site work HE will carry out a Risk Assessment.

Insurance

As part of Cornwall Council, HE is covered by Public and Employers Liability Insurance and Professional Negligence Insurance.

Adam Sharpe BA MIFA

Senior Archaeologist

18 July 2012

Historic Environment Projects

Cornwall Council

Kennall Building, Old County Hall,

Station Road,

Truro, Cornwall. TR1 3AY

Tel: 01872 323603; Fax: 01872 32381; Mob: 07968 892146

Email: asharpe@cornwall.gov.uk