



Blable Farm, St. Issey, Wadebridge, Cornwall

Archaeological assessment of proposed wind turbine



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The viewshed mapping was carried out by Megan Val Baker and the geophysical survey by Archaeophysica Ltd.

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.

Freedom of Information Act

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Cover illustration

Looking west across the site proposed for the Blable wind turbine with Bodmin Moor in the far distance.

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Contents

1	Summary	1
2	Introduction	3
2.1	Project background	3
2.2	Aims and objectives	3
2.3	Methods	4
2.3.1	Desk-based assessment	4
2.3.2	Viewshed analysis	4
2.3.3	Fieldwork	5
2.3.4	Post-fieldwork	6
3	Location and setting	6
4	Project extent	7
5	Designations	7
5.1	International	7
5.2	National	7
5.3	Regional/county	7
5.4	Local	8
5.5	Rights of Way	8
6	Results of desk-based assessment	8
7	Results of geophysical survey	10
8	Results of site walkover	10
9	Results of viewshed analysis	11
9.1	1 km radius ZTV	11
9.2	1Km to 5Km radius ZTV	11
9.3	5Km to 10Km radius ZTV	11
9.4	10Km to 15Km radius ZTV	12
9.5	Scheduled Monuments within the 10 Km radius ZTV	12
9.6	Registered Parks and Gardens and Registered Battlefields within the 10Km radius ZTV	13
9.7	Grade 1 and II* Listed Buildings within the 10Km radius ZTV	13
9.8	Conservation Areas within the 5Km radius ZTV	15
9.9	Grade II Listed Buildings within the 5Km radius ZTV	15
9.10	Undesignated sites within the 1Km ZTV	16
9.11	Designated sites within the 10Km to 15Km zone	17
10	Field verification of ZTV	18
11	Cumulative impacts	18
12	Synthesis	19
13	Policies and guidance	20
13.1	National Planning Policy Framework 2012	20
13.2	Former Cornwall Structure Plan	21

13.2.1	Policy 1	21
13.2.2	Policy 2	21
13.3	Former North Cornwall Local Plan	21
13.4	Hedgerow Regulations	22
14	Likely impacts of the proposed development	23
14.1	Types and scale of impact	23
14.1.1	Types of impact, construction phase	23
14.1.2	Types of impact, operational phase	23
14.1.3	Scale and duration of impact	23
14.1.4	Potential and residual impacts	23
14.2	Assessment of impact	23
14.2.1	Impacts on archaeological sites within the development area	24
14.2.2	Impacts on the settings of surrounding key heritage assets	24
14.2.3	Designated heritage assets within the 10Km radius viewshed	25
14.2.4	Designated heritage assets within the 5Km radius viewshed.	26
14.2.5	Undesignated heritage assets within the 1Km radius viewshed	26
14.2.6	Impacts on Historic Landscape Character	27
15	Mitigation Strategy	27
15.1	Archaeological recording	27
16	References	28
16.1	Primary sources	28
16.2	Publications	28
16.3	Websites	28
17	Project archive	29

List of Figures

Fig 1. The location of Blable Farm.

Fig 2. The location proposed for the wind turbine at Blable Farm.

Fig 3. 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 4. The project area and its surroundings, shown on Joel Gascoyne's 1699 Map of Cornwall. The project area is circled in red.

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

Fig 6. The project area and its surroundings as shown on the circa 1809 1st Edition OS mapping. The turbine project area is slightly offset because of the differing projections used by the 19th century OS surveyors and modern mapping.

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

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

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

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

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

Fig 12. Sites recorded in the Cornwall and Scilly Historic Environment Record in the immediate vicinity of the proposed turbine site. MCO21823 relates to a prehistoric cropmark enclosure.

Fig 13. OS contour data for the area immediately surrounding the proposed wind turbine shows its site located on a north sloping ridge.

Fig 14. Mapping showing the ZTV within a 1Km radius of the site proposed for the wind turbines, showing potentially intervisible sites recorded in the HER. Red- prehistoric, green – medieval.

Fig 15. Mapping showing Conservation Areas (in blue) within the 5Km radius ZTV of the sites proposed for the wind turbine showing potential intervisibility.

Fig 16. Mapping showing the ZTV within a 5Km radius of the site proposed for the wind turbines, showing potentially intervisible Listed Buildings (all grades).

Fig 17. Mapping showing potentially intervisible areas of AONB and AGHV within a 5Km radius ZTV of the site proposed for the wind turbine.

Fig 18. Mapping showing Registered Parks and Gardens within 10Km of the site proposed for the wind turbine.

Fig 19. Mapping showing potentially intervisible Scheduled Monuments within the 10Km ZTV of the site proposed for the wind turbine.

Fig 20. Mapping showing potentially intervisible Listed Buildings (all grades) within the 10Km ZTV of the site proposed for the wind turbine.

Fig 21. The 15Km ZTV for the proposed wind turbine at Blable Farm, showing potential intervisibility with Scheduled Monuments and Registered Parks and Gardens.

Fig 22. The 15Km ZTV for the proposed wind turbine at Blable Farm, showing potential intervisibility with Grade I and Grade II* Listed Buildings.

Fig 23. Sites selected for ZTV field checking. Red – Scheduled Monument, Blue – Listed Building.

Fig 24. The sightline (in red) from the south south east of the Nine Maidens stone row towards the proposed wind turbine, showing how it coincides with the alignment of the monument. Photomontages suggest that only the tips of the turbine blades will be visible in this view, however.

Fig 25. Looking north down the lane on the western side of the site proposed for the wind turbine, showing the open nature of the landscape in this direction.

Fig 26. Looking west from the application site towards Bears' Downs, the Trelow Downs barrow cemetery and the Bear's Downs wind farm.

Fig 27. Looking east from the application site showing how the St Breock Downs wind turbines top the skyline in this direction.

Fig 28. Looking south from the application site, showing one of the prominent Scheduled barrows near Scotland Corner on the skyline.

Fig 29. Looking south from the application site showing another of the prominent Scheduled ridgetop barrows at Scotland Corner just under 1Km away.

Fig 30. Looking north west from the application site towards the coast at Trevoise Head.

Fig 31. Looking north from the application site to Padstow and its estuary.

Fig 32. Looking north east from the application site towards the Royal Cornwall Showground (left centre). Wadebridge lies beyond this site, but is not visible from ground level. The Delabole wind farm is on the distant skyline.

Fig 33. Looking north towards the Grade II Listed church at St. Issey. The Grade II Listed Blable Farm building is hidden within the woodland lower right.

Fig 34. The microwave relay tower near the Nine Maidens as seen from the upper part of the application site.

Fig 35. A typically open view to the north north west of the application site.

Fig 36. A very significant setting impact on one of the Scheduled barrows at the western end of the St. Breock Downs wind farm.

Fig 37. Significant setting impacts on a barrow (left) and a standing stone within the area occupied by the St. Breock Downs wind farm.

Fig 38. The view from the eastern end of St. Breock Downs towards the site proposed for the Blable wind turbine just beyond the fields forming the mid distance skyline. Trevoose Head is in the background.

Fig 39. Looking north north east along the alignment of the scheduled Nine Maidens stone row. The tips of the Blable Farm wind turbine blades would appear over the top of the most distant stone making up this monument.

Fig 40. A view of the now-recumbent scheduled standing stone known as The Fiddler associated with the Nine Maidens alignment looking in the direction of the proposed wind turbine, much of which would appear above the skyline just to the left of the barn.

Fig 41. Looking towards the location of the proposed Blable wind turbine across a rather denuded round barrow at SW 94088 68052, part of Monument 1021223. The upper parts of the Blable wind turbine would appear over the barrow.

Fig 42. Looking towards the site proposed for the Blable wind turbine across one of the barrows in the Scotland Corner barrow cemetery. The top of the wind turbine would be visible above this barrow.

Fig 43. Looking towards the site of the proposed wind turbine across another of the Scotland Corner barrow group. Again, the top of the wind turbine would just be visible in this view.

Fig 44. Looking towards the site of the proposed Blable wind turbine (centre left) across the northernmost of the Scotland Corner barrow group. Almost the whole of the turbine would be visible within this view.

Fig 45. Another view of the northern Scheduled barrow at Scotland Corner, showing how the very recently-erected wind turbine at Pawton Dairy Farm (centre right) will also appear in views in this direction.

Fig 46. A severely compromised and badly eroded Scheduled barrow at the summit of Scotland Corner. Looking east north east with the St. Breock Downs wind farm in the background.

Fig 47. A group of Scheduled barrows set along the ridge of Rosenannon Downs. No access was possible to the area within which they stand, but the Blable wind turbine would be clearly visible from them.

Fig 48. Looking across the Scheduled Bogee Round towards the site proposed for the Blable wind turbine (skyline just right of centre). A mature maize crop completely obscured the earthwork at the time of the site visit.

Fig 49. Looking east north east from Higher Bogee Downs across Trelow Downs with its Scheduled barrows. The upper parts of the wind turbine would appear above the summit of the Downs.

Fig 50. St. Issey church from the east. Although there will be intervisibility between the church tower and the proposed wind turbine, in practice, this will not be appreciable from ground level at this site.

Fig 51. The geophysical survey results from the northern part of the survey area. Note curving boundary [5] which may be of early date.

Fig 52. Geophysical survey results from the southern part of the project area. Note the curving feature [28] which may be of early date and the rectangular feature [25] which may be the base of a modern water tank

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 19 September 2012 with a request to provide costs for an archaeological assessment of a proposed wind turbine at Blable Farm, St. Issey, Wadebridge as part of a proposed planning application. A cost schedule for this work was approved on 02 October.

The proposal is for a single 500Kw wind turbine with a maximum blade tip height of 67m to be sited on farmland at Blable Farm in the eastern part of the parish of St. Issey, just to the south of St. Breock Downs at SW 94556 69071. The site chosen for the wind turbine lies on the northern end of a spur of St. Breock Downs in an area of former downland which was enclosed to agriculture during the 20th century.

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

Given the open, elevated nature of the location chosen for the wind turbine, with its wide ranging views across the surrounding landscape and the plethora of Scheduled barrows along the ridge to the south, visual impacts resulting from its construction are inevitable. Potentially the most significant impacts would be on the settings of the Scheduled Nine Maidens stone row and the associated Fiddler recumbent standing stone 1 Km to the south west, but impacts would be experienced at many of the Scheduled barrows along the nearby ridgetops. Significant impacts on the settings of Listed Buildings, Conservation Areas, Registered Parks and Gardens and more distant Scheduled Monuments are unlikely. Impacts on the HLC of the landscape surrounding the proposed wind turbine can also be expected.

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

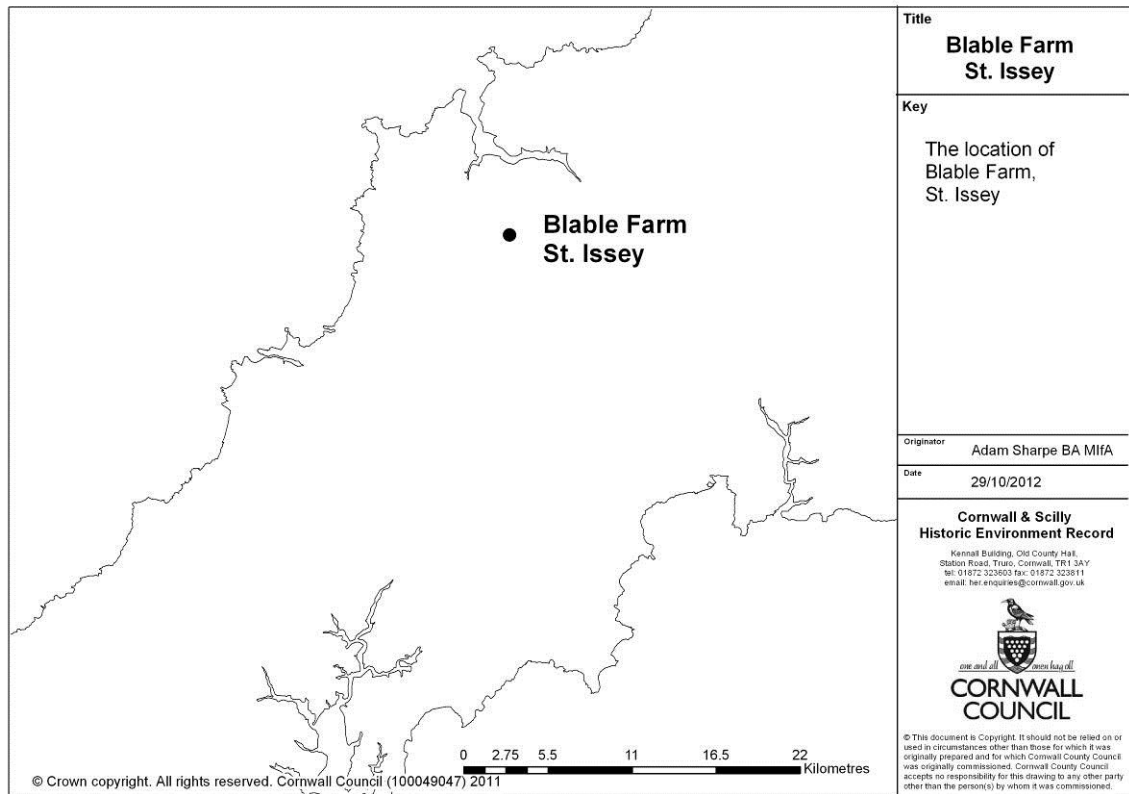


Fig 1. The location of Blable Farm.

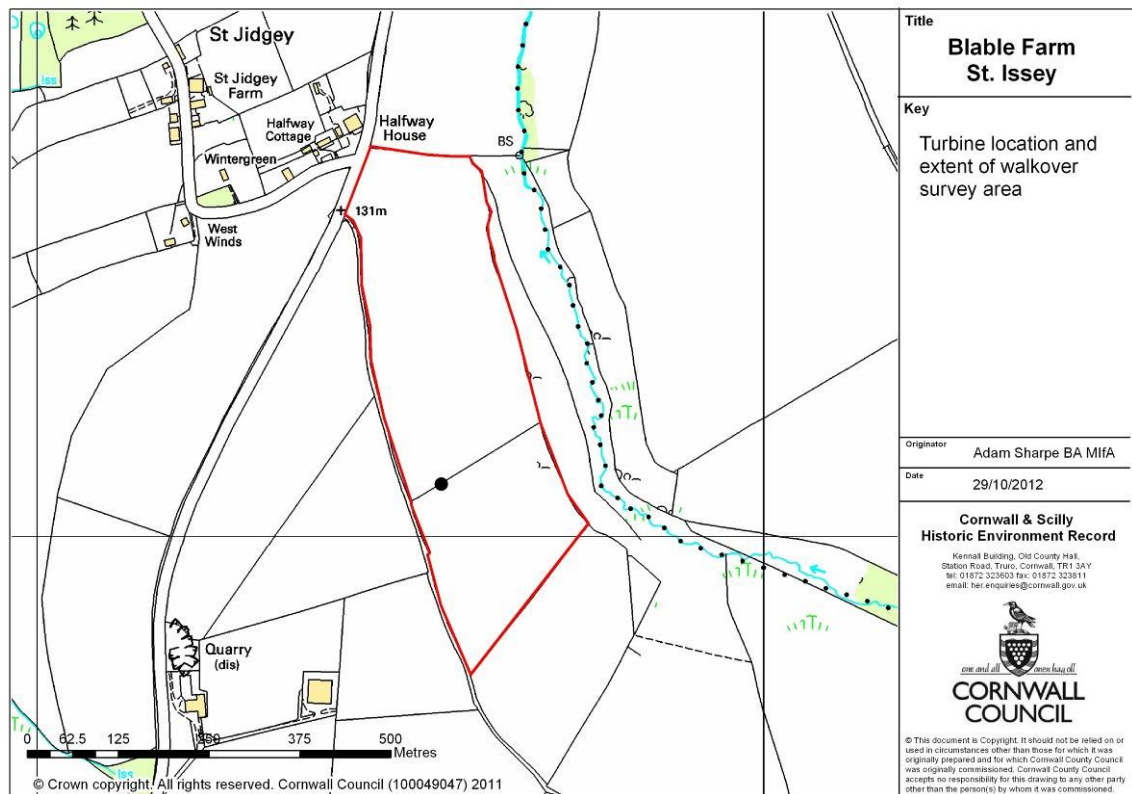


Fig 2. The location proposed for the wind turbine at Blable Farm.

2 Introduction

2.1 Project background

Historic Environment Projects, Cornwall Council, were approached by Chloe Bines of Mi-Grid Ltd on 19 September 2012 with a request to provide costs for the provision of an archaeological assessment of a proposed wind turbine at Blable Farm, St. Issey, Wadebridge as part of a proposed planning application. A cost schedule for this work was approved on 02 October 2012 and the final location of the wind turbine confirmed on 29 October 2012 following the completion of a geophysical survey.

The proposal is for a single 500Kw wind turbine with a hub height of 40m and a maximum blade tip height of 67m to be sited on farmland at Blable Farm in the eastern part of the parish of St. Issey, just to the south of St. Breock Downs at SW 94556 69071 (Figures 1 and 2). The site chosen for the wind turbine lies on the northern end of a spur of St. Breock Downs in an area of former downland which was enclosed to agriculture during the 20th century.

The assessment consisted of a desk-based assessment, viewshed analysis out to 15Km from the turbine location, analysis of a geophysical survey of the site and a walkover survey.

An initial planning assessment (number PA12/03016) for a single 500Kw turbine and associated infrastructure was made on 20/04/2012, this determining that the application was considered to be an EIA Development (a Schedule 2 development) within the meaning of the EIA Regulations.

The potential for cumulative impacts was noted given that a positive screening option had been made for a single 79m to tip turbine development at Pawton Gate Farm 500m away. There are already eleven 53m to tip wind turbines at St. Breock 2Km to the east, (a planning application being considered for these to be replaced with six turbines 100m in height). A 77m to tip turbine has very recently been constructed at Pawton Gate Dairy 2Km to the north, whilst a smaller wind turbine has been erected at Bogee Farm to the north west. Bears Down wind farm, consisting of 16 turbines 57m to blade tip is 4Km to the south west, whilst an application has been approved for five 100m to tip turbines at Denzell Downs 5Km to the south west.

A model brief prepared by Mr Phil Copleston, Historic Environment Planning Advice Officer, Cornwall Council, was used to guide this archaeological assessment, in conjunction with the advice on assessing the impacts of such developments on the settings of designated sites provided by English Heritage in 2012 and specific advice on ZTV radii in an email from English Heritage dated 20 September 2012.

The geophysical survey was undertaken on 17 October 2012. The walkover survey was undertaken on the 6 November 2012, as was the first part of the viewshed checking (this was curtailed by drizzle and poor visibility); the viewshed checking was therefore completed on the 15 November 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 on land at Blable Farm in the parish of St. Issey.

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
 - Norden's Map of Cornwall (printed in 1728 but mapped *circa* 1600)
 - Joel Gascoyne's map of Cornwall (1699)
 - Thomas Martyn's map of Cornwall (1748),
 - OS 1 inch survey (*circa* 1810)
 - St. Issey 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 turbine.

2.3.2 Viewshed analysis

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

between the proposed wind turbine and key heritage assets within the surrounding landscape. A viewshed was generated for an 'observer point' based on the location of the proposed wind turbine.

When performing 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 Blable Farm, 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 67m 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). Viewshed radii of either 10Km or 5Km were used to determine potential impacts on designated heritage assets (as appropriate) and a radius of 1Km for undesignated heritage assets (see Figures 14 to 22). High level designated heritage sites within the 7.5Km to 15Km radius zone of the ZTV were identified but not assessed for impact and are listed 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 10Km and 15Km radii from the site, as required by model HEPAO 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) were excluded from further analysis, as were those which by their nature have very localised settings (for example, milestones, wayside crosses and fingerposts) except where in very close proximity to the application site. The resultant site lists were further filtered by close examination of the ZTV data and a 2005 vertical aerial photograph GIS layer to remove from the lists those sites where mature vegetation or proximal buildings would almost certainly block intervisibility and where intrusion into key views was unlikely. Designated sites with limited settings (most Grade II Listed Buildings) and those with local settings such as associated urban development which were more than 2Km from the application site tended to be excluded from assessment at this stage unless specific reasons such as wholly unimpeded intervisibility were identified for their retention (as in the case of the Church of St. Ida at St. Issey).

The resultant site list consisted of a mixture of designated landscapes with substantial intervisibility with the proposal site, Scheduled Monuments whose original settings were intended to include large areas of the surrounding landscape (for example, prominent hilltop barrows, hillforts, standing stones and stone rows), or which were designed to function as part of intervisible elements of larger groups with landscape settings (for instance barrow cemeteries), other high grade designated historic structures which were intended when built to be highly prominent within the landscape (predominantly church towers and spires), 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 site proposed for the wind turbine, and to the selected key locations within the surrounding landscape. A visual check and

photographic record were made of intervisibility (or the lack of it) between the proposed development site and heritage assets indicated by the ZTV mapping as being likely to be within the viewshed and whose settings were assessed as vulnerable to impacts from the development where public access was available. Where this was not the case, the nearest possible vantage point from which views including both the heritage asset and the development proposal site was utilised, preferably one in which the proposed development site formed the backdrop to a view of the designated heritage site or was within the same view.

A walkover survey of the site proposed for the wind turbine and for its cabling was also undertaken 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 10 of this report.

A magnetometer survey of a 1Ha area centred on the site proposed for the wind turbine and on a 30m corridor along its cabling route was commissioned by Mi-Grid. The survey results were made available to HE Projects prior to the completion of this report.

2.3.4 Post-fieldwork

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

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

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

3 Location and setting

The site proposed for the wind turbine is at SW 94556 69071 within a large enclosure measuring 12.97 Ha in extent, this being divided into two sections by a wire fence. The site is located on a spur of land extending northwards from the prominent east-west trending ridge formed by Bears' Downs, Trelow Downs, Rosenannon Downs and St. Breock Downs (Figures 1, 2 and 13). This spur falls to the north, east and west, the proposed turbine site being at 170m OD. The site has open views to the Camel Estuary, Padstow and Trevoze Head to the north. To the south, and to a substantial degree to the east and west, views are constrained by the rising ground of the downs, though given the height of the proposed wind turbine, its upper sections will be visible over the crest of the downs from sites located in these directions. This area already sites two prominent wind farms – one on St. Breock Downs to the east, the second on Bear's Downs to the west south west. A third is proposed for Denzell Downs.

The development area is characterised in the Cornwall and Scilly Historic Environment Record (HER) as 'Modern Enclosed Land': that is land whose boundary arrangements were completely reorganised during the modern period, or was formerly open downland but was enclosed during the modern period (Figure 11).

The parent bedrock underlying the application site consists of interbedded Middle Devonian slates, mudstones and sandstones, whilst the soils are recorded as Denbigh 2 loams over shale. No superficial (drift) deposits are recorded by the British Geological

Survey. The agricultural classification of this land is primarily Grade 4, and it rises to and becomes part of Rosenannon Downs not far to the south.

4 Project extent

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

The assessment also takes into account and quantifies impacts on the settings of heritage assets (both designated and undesignated) within the viewshed of the proposed turbine site in line with paragraph 129 of the 2012 National Planning Framework, 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

None apply within the 7.5Km zone.

5.2 National

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

The 10Km radius viewshed zone includes 84 potentially intervisible Scheduled Monuments (Figure 19).

The 10Km radius viewshed intersects two Registered Parks and Gardens (Figure 18).

The 10Km radius viewshed includes 14 Grade I Listed Buildings and 44 Grade II* Listed Buildings (Figure 20).

The 5Km radius viewshed mapping indicates that there could be intervisibility between the proposed wind turbine and two Conservation Areas (Figure 15).

Within the 5Km radius viewshed, the wind turbine would be theoretically intervisible to some degree with a number of Grade II Listed Buildings or groups of Grade II Listed Buildings (see Figure 16).

5.3 Regional/county

No regional or county designations relate to the sites proposed for the wind turbine though an Area of Great Historic Value covers the summits of the downs 1Km to the south, south east and south west. The landscape 1Km to the south east is designated as an Area of Great Landscape Value, whilst the landscape bounding the Camel Estuary to the north is designated as an Area of Outstanding Natural Beauty (see Figure 17).

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 on a spur of land projecting northwards from the prominent east-west ridge between Bears Downs to the west and St. Breock Downs to the east, dividing the landscape of this part of central Cornwall into the extensive coastal plain between Newquay, Padstow and the River Camel to the north and the dissected landscape falling southwards to Goss Moor and Hensbarrow, to the south east towards Bodmin and to the south west towards St. Columb.

St Breock Downs was formerly a large area of open upland stretching from St. Columb in the west to the valley of the River Camel in the east, the churchtowns and enclosed land of Withel and St. Wenn lying to its south. During prehistory the archaeological evidence suggests that this formerly very extensive area of downland was not permanently settled, and would have been used as upland grazing by the farmers whose settlements lay on the fringes of this area, probably predominantly during the summer. In common with other upland areas in Cornwall, the Downs were also the focus for important ceremonial activity, as is demonstrated by the very extensive Early Bronze Age (c. 2500-1500 cal BC) barrow cemeteries which top the high ground, and by the presence of three standing stones, one of Cornwall's small number of Early Bronze Age stone rows (the Nine Maidens) dating to same period, and the Early Neolithic (c. 3800-3600 cal BC) Pawton Quoit (labelled on Martyn's map as '*An Altar of Ye Druids*'). St. Breock Downs were, therefore, of far more than marginal importance to those who lived around them, and the sometimes prominent barrows sited on them (like the earlier Pawton Quoit) were as much territorial markers and shrines associated with local kin groups as places of ceremony and burial. It may well have formed a tribal watershed, serving as an area where neighbouring kin-groups could meet on neutral ground on important social and ceremonial occasions. The ridgetop is particularly notable for the linear barrow cemeteries sited on it and on spurs extending from it – many of these barrow groups are sited so as to be visible from and to give views over extensive areas of the countryside to the north and south of the Downs. Those which were most visible would have acted as territorial markers for the communities within this landscape.

Whilst many of these barrows survive to this day, it is likely that the locations of others have been lost to agriculture. Unless deep or repeated ploughing has taken place, however, significant below ground evidence for such lost barrows may survive.

During later prehistory and into the Romano-British period (c 500 cal BC - AD 410) enclosed settlements were established on the periphery of the downs, the nearest of these being a kilometre to the north. It can be assumed that, during this period, the richer, more fertile and less exposed areas of the landscape to the north and south of the downs would have been settled and farmed, the higher or more exposed areas being left unenclosed – an important resource for summer and rough grazing, and as areas for the gathering of fuel (in the form of gorse) or animal bedding (heather, moorland grasses and bracken).

The downs remained as open land into the historic period, the rough grassland which they supported continuing to provide an important agricultural resource for farming families living in the surrounding landscape, providing summer grazing, and supplying '*furze*' (gorse) for fuel, and '*ferns*' (bracken) or rushes for animal bedding. Settlements

were established off the high ground during the pre-Conquest period, these having names incorporating elements in Cornish such as 'Tre', 'Pol' or 'Pen', though a few farms were created on the fringes of the Downs – these being characterised by names beginning with the prefix 'Ros', meaning heath or downs.

The analysis of historic aerial photographs undertaken as part of the English Heritage National Mapping Programme (Figure 12) shows that, during the medieval period, the downs were also occasionally cultivated during times of high land pressure in the lowlands, most probably during the period preceding the Black Death, and at several locations across the downs there is extensive evidence for medieval outfields. These strip fields would have been used for only short periods, perhaps once a generation, exploiting what little natural fertility had built up in the shallow soils of the downs in the interim. An example of such cultivation activity was found over much of the area of Gidgey Downs examined by the geophysical survey, this extending from near St. Jidgey Farm to the crest of the slope near the site of the proposed wind turbine.

The Domesday Book (1086) does not mention Blable, though this land, held by the Bishop of Exeter, would probably have been part of the Manor of Pawton. The downs were not mentioned as a taxable resource. The place name Blable is first recorded in 1250 as 'Bledbol', which is derived from an unknown Cornish word plus *Pol* = a pool or possibly a spring. Blable itself lies a little way to the north of the downs.

The first mapping of this area, John Norden's map published in 1728, but drawn up *circa* 1600 (Figure 3) depicting the Hundred of 'Pyder, showed the landscape of St. Breock Downs as characterised by rugged hills with 'The 9 stones' at their western end. A few settlements were shown in the landscape surrounding the Downs to the north and south, including Tretallock, 'Canalegie', 'Pomarye', 'Trewathen' and 'Trewullock'.

Joel Gascoyne's late 17th century map of Cornwall labelled this area 'St. Breigh Downs' (Figure 4), showing the area as being characterised by a series of elevated hills, traversed by the routeway from Bodmin to Padstow (the long distance path now known as 'The Saints' Way') which crosses the River Camel at 'Rothrwn Bridge' (Ruthernbridge). No settlements were depicted on St. Breock Downs at this date, indicating that it was a large area of open upland grazing land, much as it had been through prehistory and the medieval period – a significant resource for local farmers.

Martyn's map of 1748 (Figure 5) again showed the downs ('St. Breock Beacon') as lacking any farms, though traversed by a plethora of routeways linking settlements to their north and south.

The 1st Edition of the Ordnance Survey 1" to a mile mapping (Figure 6), and the associated surveyor's drawing (drawn up by Robert Dawson in 1808) show an area of largely open downland, traversed by north-south aligned trackways, but very few settlements. Those sited on the lower ground to the north of the Downs tended to have names combining Cornish elements, such as Trelow, Treanick, Trenance, Trevabon or Trevilder, betraying their pre-Conquest origins, but on the higher ground the place names are in English – No Man's Land, Pleasant Stream and Scotland Corner, for example. Some archaeological features were also depicted, including the *Nine Maidens*, *Druid's Altar* and *Great Stone* together with some un-named prominent barrows. A substantial area of the downs near Blable Farm had been enclosed within a ring fence boundary, but had not been subdivided.

In 1840, the St. Issey Tithe Map shows the area proposed for the wind turbine as being within parcel 1103, which was noted in the associated Apportionment as 'Gidgey Downs – enclosed' an area of commons extending to 186 acres, two poles and nine perches (Figure 7).

No changes were recorded to these fields on the Ordnance Survey 1st Edition 25" to the mile mapping drawn up during the late 19th century (Figure 8) or on the 2nd Edition of this mapping, re-surveyed during the first decade of the 20th century (Figure 9). Both maps characterise this area as rough grassland.

The 2005 Cornwall County Council aerial photograph (Figure 10) shows this area to be a mix of substantial open areas of grassland and arable. It is understood that very large areas of the downs were ploughed up and drained during World War Two as part of a national drive to greatly increase food production in the face of U-Boat attacks on Atlantic convoys. This process is likely to have eradicated many archaeological features – dumps of quartz boulders are a common feature across this landscape, and only small areas now remain unimproved – notably Trelow Downs and Rosenannon Downs.

7 Results of geophysical survey

A magnetometer survey was undertaken in mid October 2012, this covering a 1Ha area around the site proposed for the wind turbine and a 30m corridor centred on the proposed cable connection route (Archaeophysica report BWC121).

The results of the survey were fairly inconclusive. A number of rather ill-defined ditches were revealed, most of these being within the area selected for the cable route. Documentary sources do not show any internal boundaries dividing up the enclosure selected for the erection of the wind turbine, so these features are likely to be of medieval or earlier date and probably relate to the definition of a large area of probably short-lived medieval strip fields. These are overlain by what appears to be a system of field drains laid out in a herringbone plan which are likely to relate to the improvement of the downs to agriculture, quite possibly established during the mid 19th century, when this area of downs was enclosed. Near the site proposed for the wind turbine, a part of a small rectangular structure was revealed. This may represent the base of an agricultural water tank, though there is also the possibility that it may be of military origin.

8 Results of site walkover

A site walkover was undertaken on 6 November 2012. The weather was variable, the morning being characterised by almost cloudless skies, though as the day went on, cloud cover increased rapidly, and by mid afternoon light rain was falling almost continuously and visibility had reduced to the point where the viewshed checking had to be abandoned. The remainder of the viewshed check was carried out a week later.

The site proposed for this wind turbine was in short pasture at the time of survey. This enclosed section of downland is predominantly used for sheep grazing and is subdivided using wire fencing and stock fencing on either timber or concrete posts. The pair of enclosures at the junction of which the wind turbine is proposed rises from the A39 at its foot, cresting near the fenceline dividing the fields. The soils were observed to be thin and stony, and despite their sloping nature and the evidence for field drains in the geophysical survey data, the fields were notably waterlogged, significant poaching having occurred at gateways.

There were no impediments to survey until the weather closed in, and during the site walkover good visibility was possible in all directions. To the south, from ground level, the skyline was formed by the crest of the Downs, along which a number of barrows could be seen. To the east the upper sections of the St. Breock Downs wind farm turbines appeared over the summit of the Downs. To the south west, the crests of Trelow Downs, Denzell Downs and Bears' Downs formed the limits to visibility; again, some of their summit barrows were visible, though against a backdrop formed by the clearly visible Bears' Downs wind farm. The view in an arc from west to east was open and wide-ranging, coastline features being clearly visible from Park Head near Bedruthan Steps through Trevoise Head, Padstow and the Rumps and, more distantly, on beyond Tintagel to the north east, where the shoulder of Bodmin Moor was visible, as well as Delabole wind farm and a number of individual wind turbines (two at Pawton Dairy Farm and Bogue Farm being erected in the week between the two site visits).

Cornwall Council planning application mapping for renewables indicate a very large number of proposals for wind turbines within this arc of view.

Views of the landscape to the north of the application site were generally open, St. Issey church tower being clearly visible, though incisions in the landscape created by stream and river valleys and their associated woodland hid some settlements, particularly to the north east towards St. Breock, Wadebridge and beyond.

9 Results of viewshed analysis

See Figures 14 to 22.

Given the location of the site and the significant height of the turbine tower, the viewshed analysis suggests that the Zone of Theoretical Visibility (ZTV) will be fairly far-reaching. In line with the requirements of English Heritage guidance, the ZTV has been mapped to a distance of 15Km from the site. The visibility of the turbine will diminish with distance, and will, at many local sites, be blocked by intervening buildings within settlements or farmsteads or by mature groups of trees (albeit on a temporary basis, should such trees subsequently be felled).

9.1 1 km radius ZTV

See Figure 14.

Given the nature of the local topography and the elevation of the proposed wind turbine, the ZTV suggests that the turbine mast or blades will be visible from approximately 95% of this zone, which extends to St. Jidgey to the north north west, The Fiddler standing stone to the south south west, some of the summit barrows at Scotland Corner to the south, Pawton Gate Farm to the east and Pawton Mine to the north east.

9.2 1Km to 5Km radius ZTV

See Figures 15 to 17.

The wind turbine will be visible from around 40% of the 1Km to 5Km radius, the majority of the intervisibility being in the northern half of this zone, which extends to St. Issey and Little Petherick to the north west, St. Ervan to the west north west, Talskiddy on the outskirts of St. Columb to the south west, St. Wenn to the south east, Burlawn to the east north east and St. Brock to the north east.

This zone contains a large number of potentially intervisible hilltop-sited Scheduled Monuments, most of these being barrows along the ridgetops to the south, east and west of the proposed wind turbine site (Figure 19).

The zone contains no Registered Parks and Gardens. Parts of two Conservation Areas (St. Breock and Little Petherick) fall within this zone and are likely to be partly intervisible with it (Figure 18), though actual intervisibility will be constrained by vegetation. The zone also includes a number of Grade II Listed farmsteads (Figure 16).

9.3 5Km to 10Km radius ZTV

See Figures 18 to 20.

The wind turbine will potentially be visible from around 30% of this zone, most particularly to the north of the site proposed for it. The zone extends to Polzeath to the north, Harlyn Bay to the north west, Mawgan Porth to the west, Newquay Airport to the south west, Castle an Dinas hillfort to the south south west, Roche to the south south east, Lanivet and Nanstallon to the south east, St. Mabyn to the east north east, St. Kew to the north east and St. Endellion to the north north east.

Within this zone, although there will be some degree of intervisibility with the wind turbine, a pronounced fall-off in the visual prominence will occur.

The zone contains a substantial number of Scheduled monuments, (Figure 19), as well as a very large number of Listed Buildings, a substantial number of these being within Padstow, or comprising churches (Figure 20). This zone includes two Registered Parks and Gardens at Pencarrow (Grade II*) to the east and Prideaux Place (Grade II) to the north west (Figure 18).

9.4 10Km to 15Km radius ZTV

See Figures 21 and 22.

In accordance with English Heritage requirements, the ZTV was mapped out to 15Km from the site. High level designated sites within the 7.5Km to 15Km zone of the ZTV have been listed in this report, though do not need to be assessed.

The ZTV mapping suggests that around 20% of the land surface within this zone will experience intervisibility with the wind turbine, the zone extending to The Rumps cliff castle to the north, Trevoise Head to the north west, Trevelgue Head near Newquay to the south west, St. Stephen by Brannel to the south, Bodmin to the east south east and just short of Michaelstow and St. Teath to the north east.

The mapping suggests that intervisibility with the wind turbine will be significantly attenuated beyond 15Km, though it will be visible from some hill and ridge tops, particularly to the north east. For many of the sites within this outer zone, intervisibility will be confined to the upper parts of the turbine blades.

This zone includes a number of potentially intervisible Scheduled Monuments and Grade I and II* Listed Buildings.

The ZTV was mapped out to 15Km from the sites at Blable Farm. It seems unlikely that there will more than very limited potential for intervisibility beyond this zone, and where it occurs, very considerable visual attenuation will occur at such distances, and the likelihood of blocking by trees, hedge vegetation and buildings will be very high. Impacts on the settings of designated areas, monuments and buildings at these distances are very unlikely to occur.

9.5 Scheduled Monuments within the 10 Km radius ZTV

See Figure 19.

There are 118 Scheduled Monuments within 10Km of the proposed wind turbine site at Blable, of which 84 are within the ZTV, as follows:

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

- 2 of 4 individual barrows.
- 49 of 56 barrow groups.
- 4 stone rows.
- 1 of 3 standing stones.
- 2 burial chambers.
- 4 hillforts.
- 5 prehistoric enclosures.
- 1 churchyard enclosure bank.
- 1 inscribed stone.
- 11 medieval crosses or cross bases
- 1 holy well.

- 3 bridges.
- 1 dovecot.

Some of these potentially intervisible Scheduled Monuments consist of wayside crosses, churchyard crosses, inscribed stones, bridges, the holy well and the dovecot, whose settings are inherently very local. None are close to the sites proposed for the wind turbine, and, in line with English Heritage guidance, no assessment on impacts on their settings therefore needs to be made. Hillforts, barrows, standing stones and stone rows, in contrast, were intended, when constructed, to have far-ranging settings, and the majority of the Scheduled Monuments within the 10Km viewshed consist of monuments of these types, and assessments of impacts on the settings of many of these were judged to be required.

Although there is likely to be some degree of intervisibility between these sites and the proposed wind turbine, in some cases views of them will tend to be distant, in some partial and in others locally blocked by nearby vegetation or structures. Nevertheless, given the elevated location proposed for the wind turbine and nearby locations of many of the barrow groups, negative impacts on the settings of some Scheduled Monuments are likely.

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

See Figure 18.

Prideaux Place (1001249, Grade II) in Padstow is 7.15Km to the west north west of Blable. Its principal vista is to the east south east and it is unlikely, given the urban setting of this designated area, its distance from the application site and the proximity of the existing wind farms on St. Breock and Bears' Downs that the construction of the wind turbine will result in any additional impacts on its setting. Pencarrow (1000652, Grade II*) is 9.5Km to the east of Blable. Its principal vista is to the east, and, again, given this factor and its distance from the site at Blable, there are unlikely to be any impacts on its setting.

There are no Registered battlefields within 10Km of the sites proposed for the wind turbine at Blable Farm.

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

See Figure 20.

There are 753 Listed Buildings of all grades within 10Km of the proposed wind turbine at Blable Farm. Fourteen are listed at Grade I and 44 at Grade II*. Of these the following are Listed at Grade I:

- 1211902 – Church of St. Enodoc.
- 1144134 – Lanhearne convent.
- 1144068 – Church of St. Columba.
- 1144128 – Church of St. Mawgan.
- 1144121 – Nine Maidens (also a Scheduled Monument).
- 1332584 – Church of St. Menefreda.
- 1143078 – Church of St. Clement.
- 1289472 – Church of St. Uvelus.
- 1289743 – Gates and walls at Prideaux Place.
- 1289931 – Church of St. Petroc.
- 1212008 – Prideaux Place.

- 1142961 – Egloshayle Church.
- 1327422 – Church of St. Wenna.
- 1212675 – Church of St. Petroc Minor.

Listed structures within Padstow and in the surrounding settlements are judged to be sufficiently far from the proposed turbine sites for no significant impacts to occur on their settings. A small number of high grade structures which may be sensitive to impacts on their settings lie within 5Km of the proposed turbine site, as follows:

- 114121 – Nine Maidens stone row (assessed as a Scheduled Monument).
- 1212675 – Church of St. Petroc Minor, Little Petherick.

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

- 1327382 – Walls at Lanhearne Convent.
- 1311084 – Pencarrow House.
- 1124714 – Church of St. Michael.
- 1144097 – Walls and gate piers at the Old Rectory.
- 1124714 – Trewornan.
- 1327395 – Carnanton House.
- 1137996 – Gate piers at Penmellyn.
- 1143003 – Tregarden.
- 1212202 – South Terrace and grotto at Prideaux Place.
- 1159175 – Croan.
- 1212134 – Dairy and Grotto.
- 1143047 – Kestle.
- 1212478 – Methodist Chapel.
- 1212526 – Church of St. Hermes.
- 1115117 – Lantern Cross at St. Mawgan.
- 1137593 – Walls at Lanhearne Convent.
- 1212749 – Dovecot at Harlyn House.
- 1144124 – Trewan Hall (2 entries).
- 1212011 – The Stables.
- 1144073 – Bank House.
- 1327925 – Ruthern Bridge.
- 1142975 – Wadebridge Bridge.
- 1212013 – Lead bust at Prideaux Place.
- 1212199 – Garden temple at Prideaux Place.
- 1211508 – Trearne.
- 1144107 – Town Hall.
- 1312299 – The Old Rectory.
- 1143038 – St. Breock Place.
- 1289740 – Abbey House.

- 1212204 – South entrance to Prideaux Place.
- 1144067 – The Glebe House.
- 1212128 – Footbridge at Prideaux Place.
- 1289637 – Cannon at Prideaux Place.
- 1212203 – Garden feature at Prideaux Place.
- 1211636 – Trevelver.
- 1144096 – The Old Rectory.
- 1144129 – Cross at St. Mawgan.
- 1327399 – Penmellyn.
- 1138191 – Garden walls and gate piers at Bank House.
- 1144097 – Walls and gateway at the Old Rectory.
- 1212748 – Harlyn House.
- 1212746 – Trevoyan farmhouse.
- 1212764 – Church of St. Merryn.

Again, Listed Buildings in Padstow (many associated with Prideaux Place) and the surrounding settlements, together with designated features such as dovecots, crosses, walls, and town houses have relatively local settings and most are at a sufficient distance from the wind turbine for no impacts on their settings to occur. One Grade II* Listed Building lies within 5Km of the proposed wind turbine site, and was judged to be potentially vulnerable to impacts on its setting:

1143038 – St. Breock Place.

9.8 Conservation Areas within the 5Km radius ZTV

See Figure 15.

Two Conservation Areas are sited within 5Km of the site at Blable Farm proposed for the wind turbine, these being Little Petherick (DCO127) 4.12Km to the north west and St. Breock (DCO131) 4.12Km to the north east. The principal views within Little Petherick are aligned east-west through the settlement. Views within St. Breock south-westwards towards the church could include parts of the proposed wind turbine, though may well be blocked by mature trees.

9.9 Grade II Listed Buildings within the 5Km radius ZTV

See Figure 16.

Within the 5Km zone there are 107 Listed Buildings of all grades. Of these, the following are Listed Grade II, as follows:

- 17 farmhouses or farm buildings.
- 4 houses or cottages.
- 3 manor houses or associated features.
- 1 village hall.
- 1 toll house.
- 1 church.
- 1 vicarage.
- 2 features associated with a church.

- 3 headstones or memorials.
- 1 bridge.
- 1 mill.
- 7 guideposts or milestones.

Note – some Listed Buildings have multiple entries in the GIS to distinguish separate elements, though have single List numbers.

Impacts on the settings of many of these feature types are very unlikely unless they are in very close proximity to the proposed wind turbine. These include guideposts, milestones, stiles, churchyard walls, lych gates, etc., headstones or chest tombs, crosses, bridges and village halls. Others such as houses, farmhouses and manors have rather more extensive settings, but none of the Grade II Listed features noted above have extensive settings.

As a result, impacts on potentially sensitive Grade II Listed Buildings have been evaluated within an area extending out to approximately 2Km from the proposal site (though this has been varied according to local topography, taking in the openness and general orientation of views). Two Grade II Listed Buildings fall within this zone, these being:

- 1159526 – Pawton Farmhouse.
- 1212639 - Blable Farmhouse.

There is one Listed Building within 1Km of the proposed wind turbine site – Milestone 250m SW of Halfway House (1212672, Grade II).

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

9.10 Undesignated sites within the 1Km ZTV

See Figure 14.

The ZTV mapping suggests that all of the landscape within a 1km radius of the Blable 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 five sites, and of these, the ZTV mapping indicates that all undesignated sites will be intervisible with the wind turbine to some degree or other, as follows:

Prehistoric

- None

Undated

- MCO21823 – Prehistoric or medieval enclosure measuring 30m x 15m near St. Jidgey, 385m west north west (cropmark site).

Medieval

- MCO10200 – St. Jidgey medieval chapel 650m north west (documented site).
- MCO7083 – St. Jidgey holy well 650m north west (documented site).
- MCO16855 – St. Jidgey medieval settlement 650m north west (documented site).

Post-medieval/modern

- MCO49008 – Post-medieval milestone near St. Jidgey 340m north west.

Given the natures of these sites, the proposal for wind turbine at Blable Farm would have no significant impact on their settings.

9.11 Designated sites within the 10Km to 15Km zone

See Figures 21 and 22.

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 at this stage.

Registered Parks and Gardens

- Pencarrow II* (1000652) 10Km away.
- Prideaux Place II (1001249) 7.5Km away.
- Lanhydrock II* (1000449) 15Km away.
- Lamellen II (1000650) 13Km away.

Registered Battlefields

- None.

Scheduled Monuments

121 Scheduled monuments are found within the 15Km viewshed around Blable Farm, as follows:

- Neolithic settlement – 1.
- Burial chamber (multiple entries) – 2.
- Stone row (multiple entries) – 4.
- Standing stone – 2.
- Barrow – 5.
- Barrow group – 60.
- Hillfort or camp – 10.
- Cliff castle 1.
- Earthwork (undated) – 2.
- Round – 1.
- Early Christian memorial stone – 2.
- Inscribed stone – 1.
- Holy well and chapel – 2.
- Chapel – 1.
- Churchyard cross – 6.
- Wayside cross – 18.
- Dovecot – 1.
- Preaching pit – 1.

Grade I Listed Buildings

- 1116830 – Church of St. James.
- 1162144 – Church of St. Uda.
- 1161735 – Church of St. Mabena.
- 1355166 – Church of St. Petroc.
- 1327342 - St. Michael's Chapel at Roche.

- 1311865 - Church of St. Ender.

Grade II* Listed Buildings

- 1129856 – Barn near Bokelly.
- 1327931 – Church of St. Helena.
- 1146396 – Lancarffe.
- 1143120 – Stables at Lancarffe.
- 1195252 – Stone cross.
- 1143088 – Treffry Farm.
- 1158829 – Church of St. Gomonda.
- 1327433 – Church of St. Dennis.

10 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 St. Breock Downs, Bears' Downs, The Nine Maidens and the Fiddler standing stone, St. Issey, Rosenannon, St. Breock, Boguee, Pawton and the outskirts of Wadebridge (see Figure 23).

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 close to the Blable Farm site assisted in gauging the likely impacts of the proposed turbine on the settings of key heritage sites.

Where possible, photographs were taken from key locations within the surrounding landscape and from the locations at Blable Farm back to these sites. Whilst views from the surrounding ground allowed the location of the proposed wind turbine to be readily determined within the landscape, even from considerable distances away, in the lower lying ground field hedges, woods and other tree plantings blocked views back towards the site; within settlements, groups of buildings and mature trees and shrubs also blocked many views back to the site. The visibility cut-off imposed by the local topography suggested by the viewshed mapping was confirmed.

Field verification tended to confirm the viewshed mapping, from ground level the viewshed terminating along the crest of Rosenannon Downs and the high ground just to the north of the Nine Maidens to the south, St. Breock Downs to the south east, and along the combined crests of Trelow Downs, Denzell Downs and Bears' Downs to the west. The views were open and more or less uninterrupted to the north and north east, extending to the north east as far as the western edge of Bodmin Moor. Most heritage assets within these views would therefore theoretically be intervisible with the wind turbine proposed on the former downs just to the south of St. Jidgey.

11 Cumulative impacts

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

The EIA screening option for this site has indicated the potential for cumulative impacts. A positive screening option has been made for a single 79m to tip turbine

development at Pawton Gate Farm 500m away. There are already eleven 53m to tip wind turbines at St. Breock 2Km to the east (Figures 27, 36-37), a planning application being considered for these to be replaced with six turbines 100m in height). A 77m to tip turbine has just been erected at Pawton Gate Dairy 2Km to the north, as has a smaller turbine at Bogee Farm to the north west. Bears Down wind farm, consisting of 16 turbines 57m to blade tip is 4Km to the south west (Figure 26), whilst an application has been approved for five 100m to tip turbines at Denzell Downs 5Km to the south west.

The Bears' Downs and St. Breock Downs wind turbines are sited to the east and west of the application site and are visible from it (Figures 26 and 27), as is the Delabole wind farm to the north east (Figure 32). Individual wind turbines are visible at Burlerrow near St. Mabyn 10Km to the east and near St. Ervan around 7Km to the north west (Figures 30 and 35).

A substantial microwave signal relay tower is sited immediately to the west of the Nine Maidens (Figure 34), whilst St. Eval sites a number of military aerial masts. Several local farms have recently-constructed large agricultural sheds or barns, some of these being highly-visible landscape features, as is the Royal Cornwall Showground near Wadebridge (Figure 32).

There are few areas within this general locality where wind turbines are not already parts of local views, principally because of the hilltop sites occupied by the St. Breock Downs and Bears' Downs wind farms. In addition, the large number of sites for which farm scale individual wind turbines are currently being applied for will significantly increase the ubiquity of these features within this part of the Cornish landscape. Significantly, however, the one location at which wind turbines are not currently significant elements of any view is the Scheduled Nine Maidens stone row, in particular within key views north and south along its length. The proposed wind turbine at Blable Farm lies on the sightline along the length of the stone row from the south (Figure 24).

12 Synthesis

Neither the desk-based assessment nor the walkover survey indicated the presence of any significant upstanding archaeology which might be directly impacted upon by the proposed wind turbine and cabling at Blable Farm.

The geophysical survey revealed evidence for an extensive area of ridge and furrow cultivation of medieval date, together with a network of field drains and other features whose appearance suggests a relatively modern date of origin. Two curving features (survey numbers [5] near the foot of the hill and [28] near its crest) may be of substantially earlier date.

Impacts on both designated and undesignated heritage assets within the local landscape resulting from the construction of a wind turbine on land at Blable Farm will vary with their distance from the turbine sites, 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 the case of some designated assets relatively distant from the application site, even where intervisibility will be present, distance from the site and the resultant large areas of landscape and the features it contains within the arc of view will significantly reduce its impact, in particular where such views include parts or all of the existing wind farms on St. Breock Downs and Bears' Downs.

There is the potential for moderate negative impact on the settings of sensitive receptors within the immediately local landscape out to two kilometres from the site (especially ridgetop barrows to the south of the site) and some negative impact on such settings out to five kilometres from the site. Some negative impact will occur on the setting of the Scheduled Nine Maidens stone row, given that the wind turbine lies

almost exactly on the sightline along the monument from its southern end, and the outer parts of the turbine blades will therefore be clearly visible in this view. At The Fiddler standing stone to the north, the upper part of the wind turbine mast and the whole of its blades will be clearly visible.

There will be some impacts on the Historic Landscape Character of this downland landscape, though these will be additional to existing impacts rather than new, given the siting of existing wind farms along the downland ridges nearby.

13 Policies and guidance

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

13.1 National Planning Policy Framework 2012

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

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

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

132. *When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*

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

- *the nature of the heritage asset prevents all reasonable uses of the site; and*
- *no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and*

- conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and
- the harm or loss is outweighed by the benefit of bringing the site back into use.

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

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

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

13.2 Former Cornwall Structure Plan

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

13.2.1 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.'

13.2.2 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.'*

13.3 Former North Cornwall Local Plan

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

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

POLICY ENV12:

4. *Development proposals for the erection of a new building or other structure, or the use of land, will not be permitted where this would adversely affect the character or appearance of a listed building or its setting.*

POLICY ENV14:

1. *Development proposals affecting nationally important remains, whether scheduled or not, and their settings, will not be permitted unless:*

(a) *there will be no significant damage to, or adverse effect on, a site or its setting; and*

(b) *the development can be controlled through the use of conditions or planning obligations to ensure the remains are preserved in-situ.*

2. *Development proposals which adversely affect locally important archaeological sites or remains identified as a result of a prior archaeological investigation will only be permitted where:*

(a) *physical preservation in-situ is not feasible in conjunction with the proposed development and the importance of the development clearly outweighs the case for preservation of the remains; and*

(b) *satisfactory arrangements are made for the investigation and recording of the remains before or during development.*

3. *In areas of great historic value, historic settlements and all other locations 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, applicants will be requested to carry out an archaeological evaluation of the proposal before the planning application is determined. The areas of great historic value and historic settlements are defined on the proposals map.*

POLICY ENV15:

Development proposals will not be permitted where they would adversely affect the character, appearance or setting of areas of great historic value, historic parks and gardens and historic battlefields.

North Cornwall District Council Policy ENV15 3. states: In areas of Great Historic Value, Historic Settlements and all other locations 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, applicants will be requested to carry out an archaeological evaluation of the proposal before the planning application is determined. The Areas of Great Historic Value and Historic Settlements are defined on the Proposals Map.

13.4 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.

14 Likely impacts of the proposed development

14.1 Types and scale of impact

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

14.1.1 Types of impact, construction phase

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**.

14.1.2 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 their viewshed during the operational phase, given its height (76 metres), the topography 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.

14.1.3 Scale and duration of impact

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

positive/substantial

positive/moderate

positive/minor

neutral

negative/minor

negative/moderate

negative/ substantial

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

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

14.1.4 Potential and residual impacts

Potential adverse impacts may be capable of mitigation through archaeological recording or other interventions. In the assessments forming Section 14.2, 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.

14.2 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** to **negative/moderate**, principally dependant on proximity to the proposed turbine sites and intervisibility with them. In the case of the Nine Maidens stone row, the impact of the current proposal is assessed as **negative/minor** (see Figures 24 and 39) and in the case of The Fiddler

standing stone and the barrows on the ridgeline to the south the impacts are judged likely to be **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. There may be some potential for impacts on sub-surface archaeology within the development sites, given the evidence from the geophysical survey, though this is likely to be minor in scope given the character of the feature types which showed up in the data.

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

14.2.1 Impacts on archaeological sites within the development area

Ground disturbance associated with the installation of foundations for the wind turbine, 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. The presence of a late prehistoric defended enclosure not far to the north of the site and the likely pre-Norman origins of Blable Farm might suggest some potential for impacts on potentially significant sub-surface archaeology to take place, but the geophysical survey undertaken by Archaeophysica indicates that within this part of the former downs, this is **not** likely to be the case.

14.2.2 Impacts on the settings of surrounding key heritage assets

The proposed wind turbine are considered likely to have an impact on the setting of key surrounding heritage assets, this being summarised as **negative/moderate**, in particular in relation to the Scheduled barrows and other features on the ridgetops to the south. This impact is, however, to a substantial degree reduced given the proximity of a large number of already-existing wind turbines in nearby locations. Impacts on the setting of the Scheduled Nine Maidens stone row are judged likely to be **negative/minor** in view of the inclusion of the upper parts of the wind turbine within a key view of the monument from the south south east. In the case of The Fiddler, where most of the turbine will be visible, impacts are likely to be **negative/moderate**. Such impacts will be **temporary/reversible** overall should the wind turbine be dismantled in the future and not be replaced:

- There are a large number of Scheduled sites located within 5Km of the site proposed for the wind turbine which would have been intended, when constructed, to be highly visible focal points within the local landscape. These include the many barrows and the two standing stones site on the ridgetops to the south of the application site and the Nine Maidens stone row and its associated standing stone (The Fiddler). There will be substantial intervisibility between some of these sites and the proposed wind turbine.
- There are extensive wind farms already sited along these ridgetops and other wind turbines have either been approved or proposed for nearby locations. These modern features, some of which have been in place for several years, have, as a result, already modified the character of this particular area of the Cornish landscape. The construction of a wind turbine at Blable Farm will not, therefore, introduce the first highly-visible modern feature into this landscape and it has to be accepted that because of these developments, the landscape character of this

area has now to be viewed as former downland siting wind farms and wind turbines. This has already impinged on the settings of some of the Scheduled barrow groups and other early prehistoric features (in some cases to a very substantial degree). This is not the case in relation to the Nine Maidens stone row, however, at which wind turbines are currently not experienced as landscape features.

- The defended enclosures at St. Eval and Bogee Farm have been extensively ploughed down. In the case of the former, this is immediately abutted by extensive built elements of the former RAF station, whilst the latter is now within enclosed farmland and is regularly cultivated. In both cases, these factors have impacted upon their settings by substantially reducing their visibilities and drastically diminishing their former landscape dominances. The hillslope site of the enclosed late prehistoric site at Trenance to the north west will substantially limit any intervisibility with the proposed wind turbine.
- Other Scheduled Monuments within the 10Km viewshed are either types which have only limited settings or are at distances from the proposed wind turbine where their settings are unlikely to be impacted upon.
- Further similarly-scaled wind turbines are already in existence not far away from the site at Blable Farm with which the additional proposed wind turbine may well effectively form a visual cluster from some directions.
- 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 Grade II Listed farmhouses at Blable and Pawton have limited, local settings; intervisibility at these sites will be constrained by trees.
- There are no Registered Battlefields within the 10Km radius viewshed of the proposed wind turbine.
- There are unlikely to be any impacts on the settings of intervisible Conservation Areas within the 5Km radius viewshed of the proposed wind turbine.
- Any impacts on heritage assets within the landscape surrounding the proposed wind turbine would be temporary and reversible should the wind turbine be dismantled in the future.

14.2.3 Designated heritage assets within the 10Km radius viewshed

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

Scheduled Monuments (SM) – see Figure 19.

Identifier	Site	Impact
1004325	Camp west of Trenance	Neutral
1021221	Fort and round barrow SE of Bogee Farm	Neutral
1021162	Four round barrows	Neutral
1021008	Four round barrows on Bears and Denzell Downs	Neutral
1021007	Seven round barrows on Bears and Denzell Downs	Neutral
1021222	Nine round barrows NE of Penatillie	Negative/minor
1021163	Two round barrows SE and SW of Prince Parc	Neutral
1021160	Three round barrows on St. Issey Beacon	Negative/minor
1021161	Eleven round barrows and a stone alignment NW of the Nine Maidens	Negative/moderate
1021223	The Nine Maidens, The Fiddler and two barrows	Negative/minor to negative/moderate
1021224	Eight round barrows north of Scotland Corner	Negative/moderate

Identifier	Site	Impact
1004406	Three round barrows on Rosenannon Downs	Negative/moderate
1004405	Round barrow SW of Pawton Springs	Negative/moderate
1004619	Three round barrows NW of Pawton Springs	Negative/moderate
1004475	Burial chamber on St. Breock Downs	Neutral
1012119	St. Breock Downs standing stone	Neutral
1006705	Pawton Downs burial chamber	Negative/minor

Despite the intervisibility between these sites and the proposed wind turbine, the effects of distance and the presence, in many cases, of existing wind farms will limit setting impacts on many of these sites, as indicated above.

Grade 1 Listed Buildings - see Figure 20.

Identifier	Site	Impact
1212675	Church of St. Petrock Minor (Little Petherick)	Neutral

Whilst there will be some intervisibility between parts of the proposed turbine and the church tower at St. Petrock Minor, no appreciation of this will occur at ground level where there will be blocking of views between the two through intervening buildings and vegetation. Impacts on the setting of this Listed Building is therefore assessed as neutral.

Grade II* Listed Buildings

Identifier	Site	Impact
1143038	St. Breock Place	Neutral

14.2.4 Designated heritage assets within the 5Km radius viewshed.

Grade II Listed Buildings – see Figure 16.

Identifier	Site	Impact
1159526	Pawton Farm	Neutral
1212639	Blable Farm	Neutral
1212700	Church of St. Ida (St. Issey)	Neutral

Given the topography of the area within which these designated structures are sited, intervisibility with the wind turbine may occur. At Blable and Pawton, topography and vegetation will considerably limit this. Full intervisibility will occur with the Church of St. Ida at St. Issey 3.2Km away, but this will not be appreciable at ground level.

Conservation Areas

See Figure 15.

Of the two Conservation Areas which fall within the 5Km ZTV, neither are considered as lying close enough to the site proposed for the wind turbine at Blable Farm for there to be any likelihood of negative impacts on their settings.

14.2.5 Undesignated heritage assets within the 1Km radius viewshed

See Figure 14.

Identifier	Site	Impact
MCO10200	Site of chapel at St. Jidgey	Neutral
MCO7083	Site of St. Jidgey holy well	Neutral
MCO16855	Settlement of St. Jidgey	Neutral
MCO21823	Cropmark enclosure near St. Jidgey	Neutral

St. Jidgey was the site of a holy well and associated chapel, possibly one sited on a early routeway across the downs, and is sited not far to the north of the site proposed for the wind turbine. The site of the chapel has disappeared without trace, leaving only a field name, the holy well site has been overbuilt and the settlement (first recorded in 1195 as *'in Sancto Ydi'* and possibly a former manorial centre) is now the site of a modern farm. The degree of survival of below ground archaeology associated with the cropmark enclosure to the south west of St. Jidgey is unknown. As a result of the now very limited settings of these sites, no impacts on them are likely to occur.

14.2.6 Impacts on Historic Landscape Character

A wind turbine installation erected at Blable Farm can be predicted to have some degree of 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 downland origin through the introduction of a highly visible modern feature into this landscape.
- The land-take for the proposed development is small in comparison with the area of the HLC Units of former downland 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.

15 Mitigation Strategy

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

15.1 Site redesign

Mitigating the impacts on the setting of the Nine Maidens stone row and The Fiddler standing stone might be possible through a degree of relocation of the wind turbine to remove it from the key views at these monuments. English Heritage may require the production of photomontages demonstrating that any submitted proposal could achieve this aim.

15.2 Archaeological recording

In a case where the finalised site design would seem likely to result in unavoidable physical 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 (East), setting out its scope. A Written Scheme of Investigation (WSI) to meet the brief would need to be prepared and agreed to establish and direct a programme of mitigating archaeological work.

Archaeological recording 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 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 reduces any impacts on the archaeology of the sites to

negative/minor. Any resultant impacts would be reduced to **permanent** and **irreversible**.

In the instance of the site at Blable Farm, there is a limited possibility of at-present unrecorded below ground remains being directly impacted upon by the proposal to construct a wind turbine at these locations. The Historic Environment Planning Advice Officer may require an evaluation of the site proposed for the turbine through evaluation trenching to determine the likely impacts and significance of any below ground remains before a recommendation for the granting of planning permission could be made.

16 References

16.1 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 St. Issey* (digital copy available from CRO)

16.2 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

Padel, O.J. 1988, *Cornish place-names*, Penzance

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

16.3 Websites

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

17 Project archive

The HE project number is **PR146199**

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.A-D\Blable wind turbine assessment
3. English Heritage/ADS OASIS online reference: cornwall2-137717
4. This report text is held in digital form as: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites B\Blable wind turbine assessment 2012\Report\Blable Farm wind turbine assessment.doc

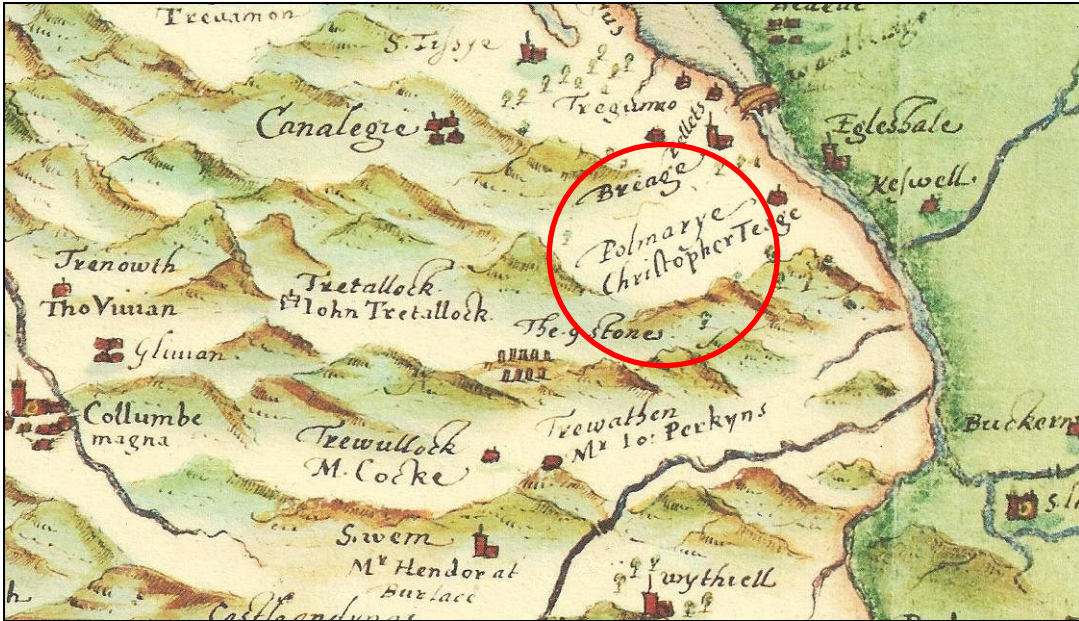


Fig 3. The proposed turbine site and its surroundings, as shown on John Norden's 1724 Map of Cornwall. The project area is circled in red.



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

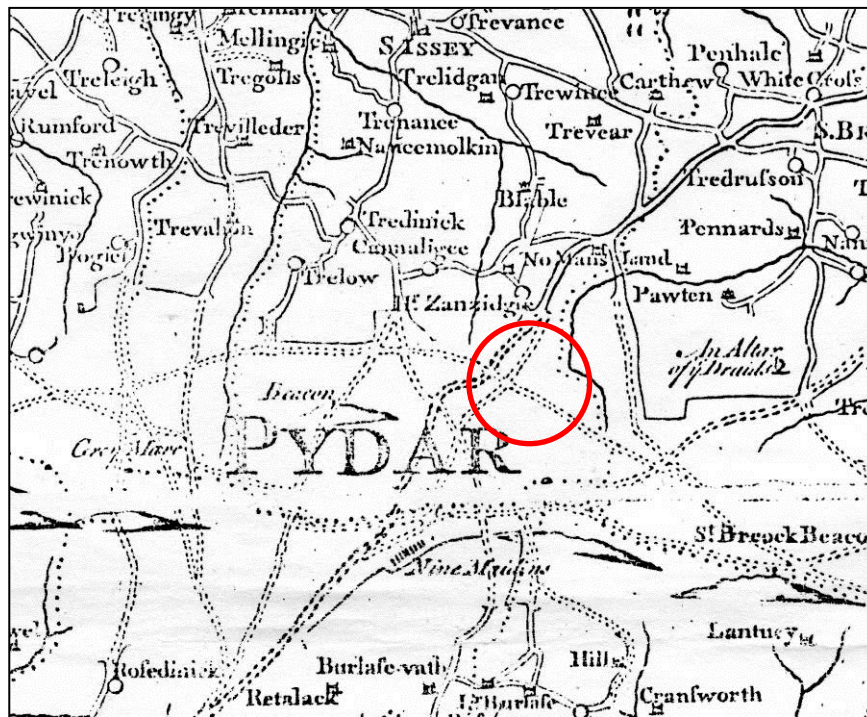


Fig 5. The proposed turbine site and its surroundings, as shown on Martyn's 1748 Map of Cornwall. The project area is circled in red.

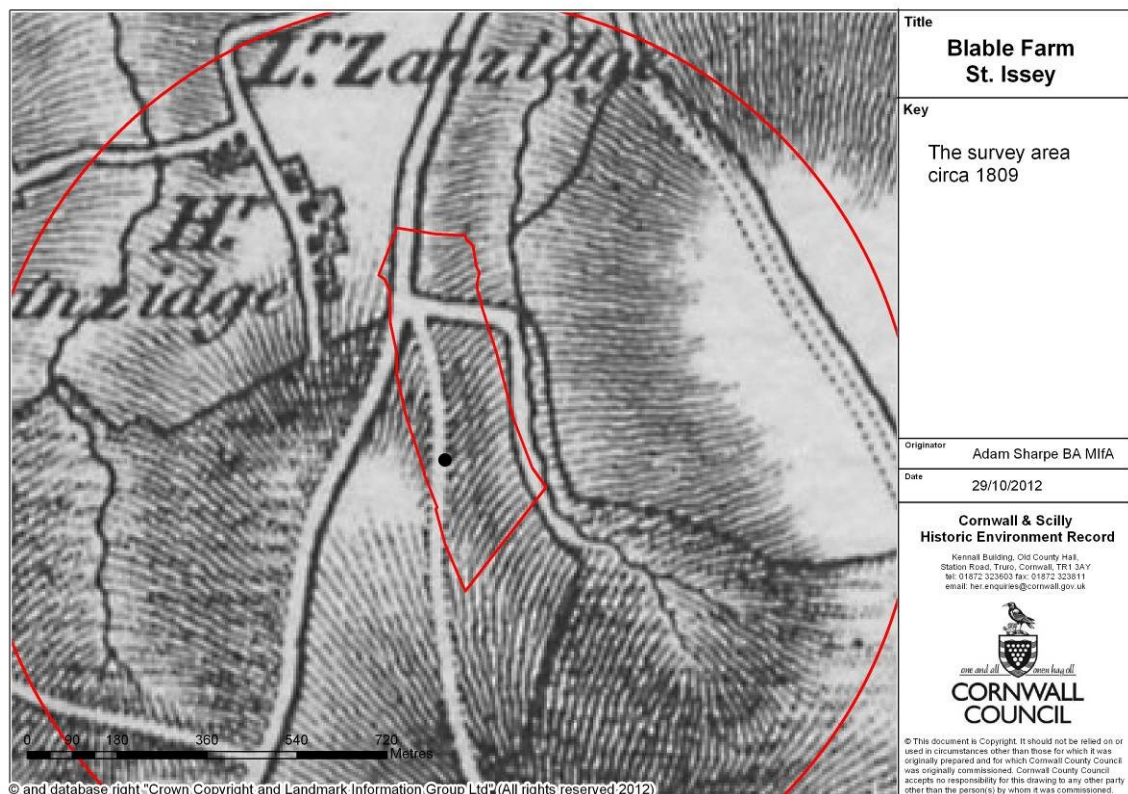


Fig 6. The project area and its surroundings as shown on the circa 1809 1st Edition OS mapping. The turbine project area is slightly offset because of the differing projections used by the 19th century OS surveyors and modern mapping.

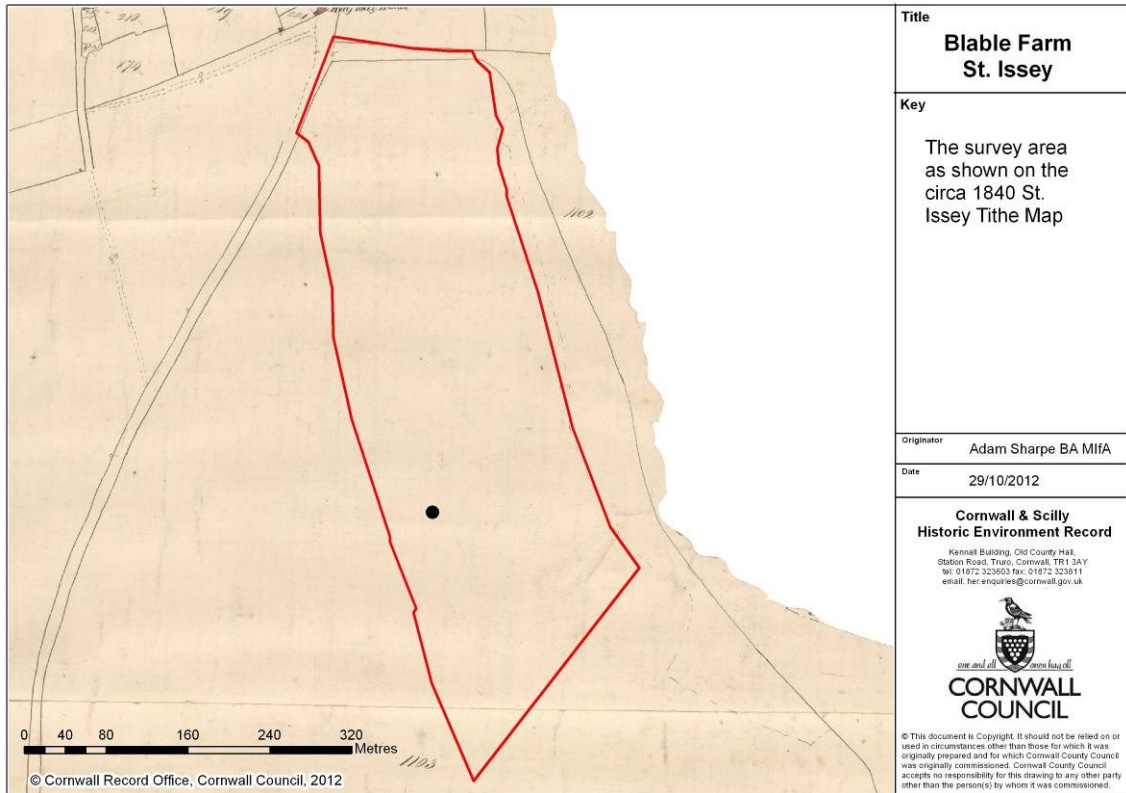


Fig 7. The project areas as shown on the circa 1840 St. Issey Tithe Map. The proposed turbine is indicated by a black dot.

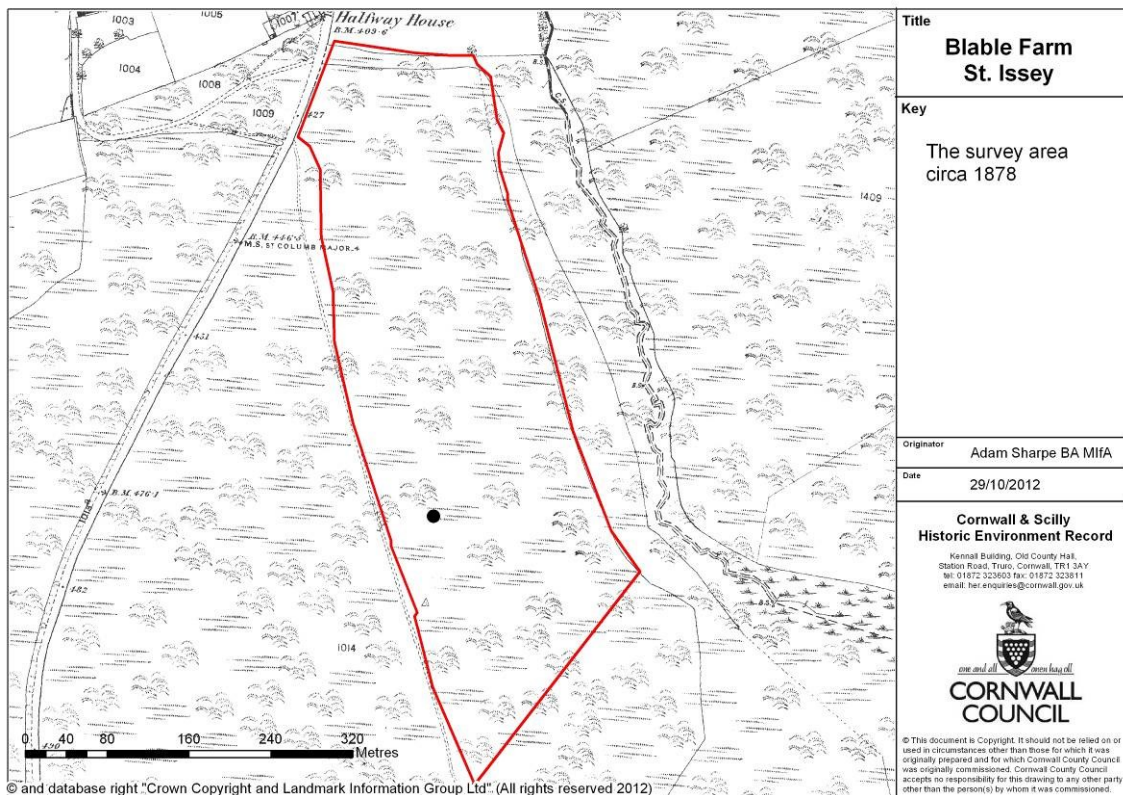


Fig 8. The project area as shown on the circa 1877 1st Edition OS 25'' to the mile mapping.

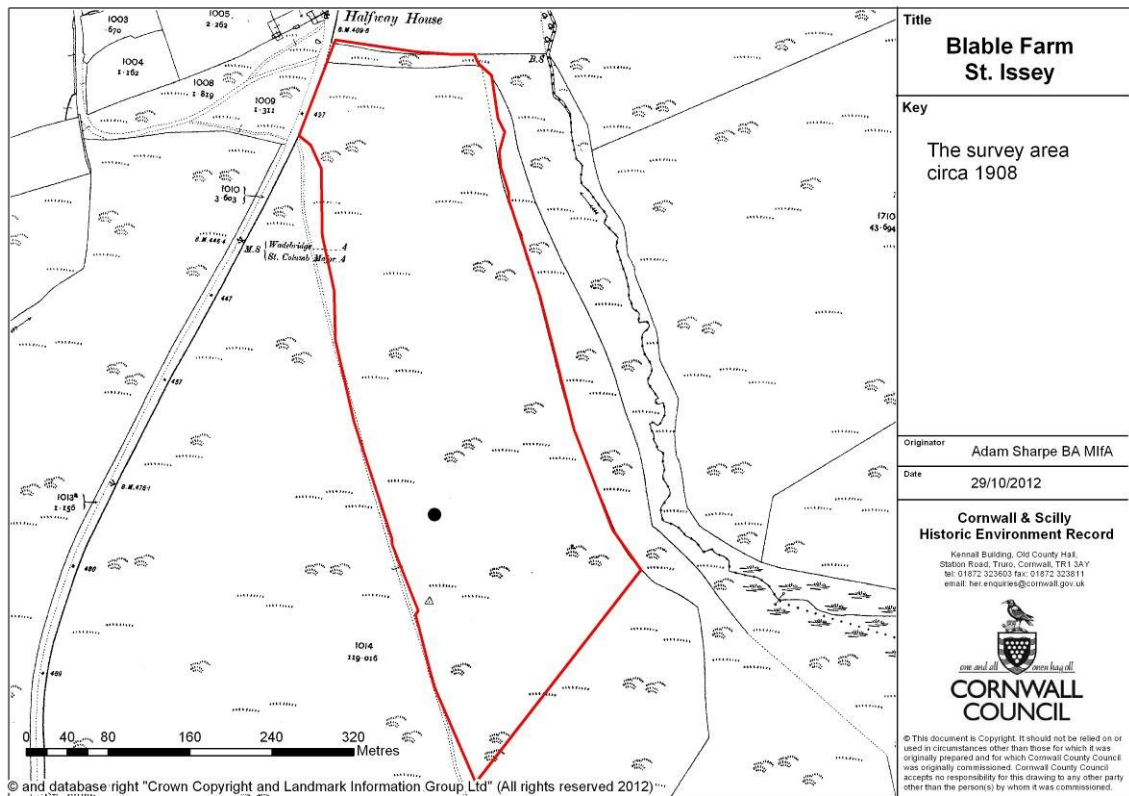


Fig 9. The project area as shown on the circa 1908 OS 25" to the mile mapping.

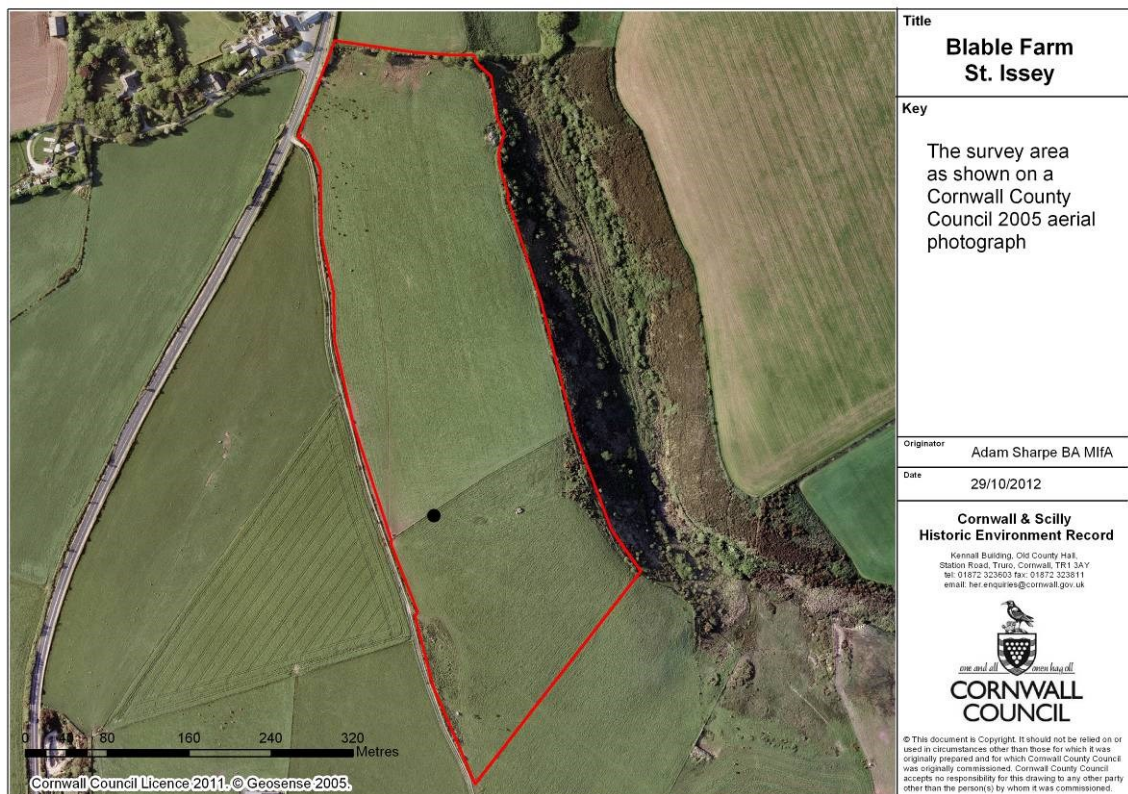


Fig 10. The project area as shown on a 2005 CCC aerial photograph.

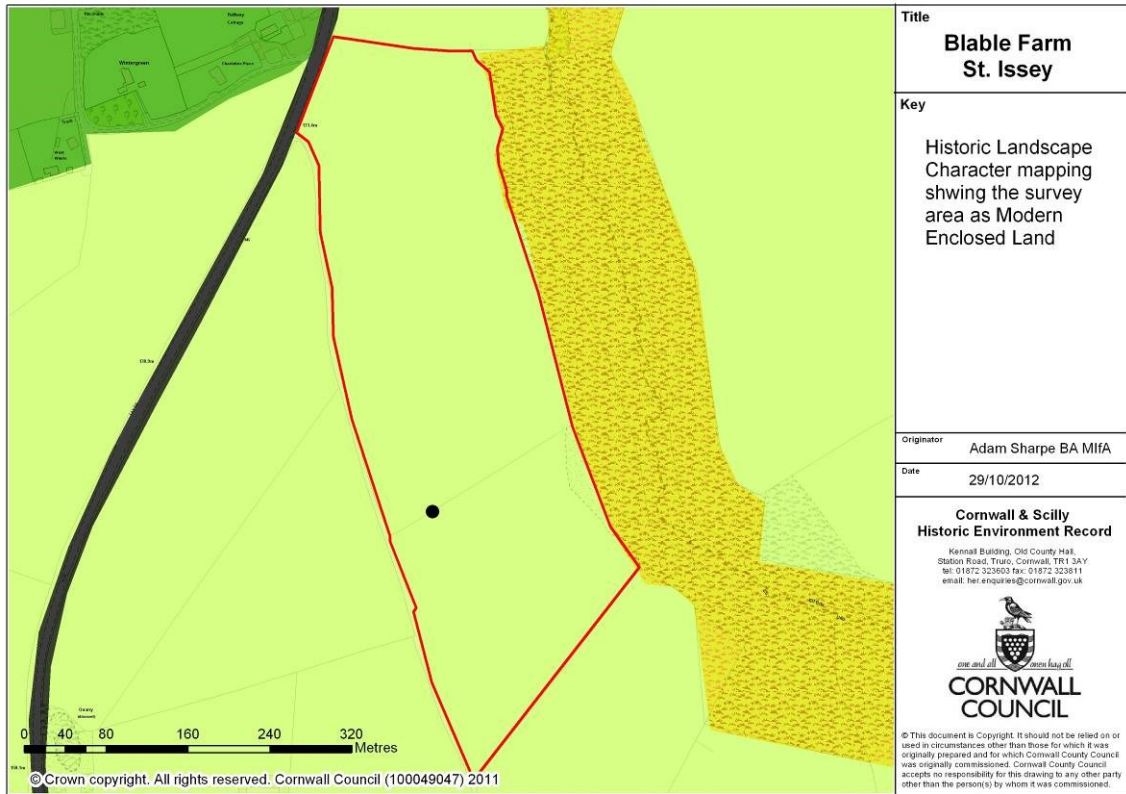


Fig 11. Historic Landscape Character mapping showing how this area of countryside is derived from land enclosed during the modern period.

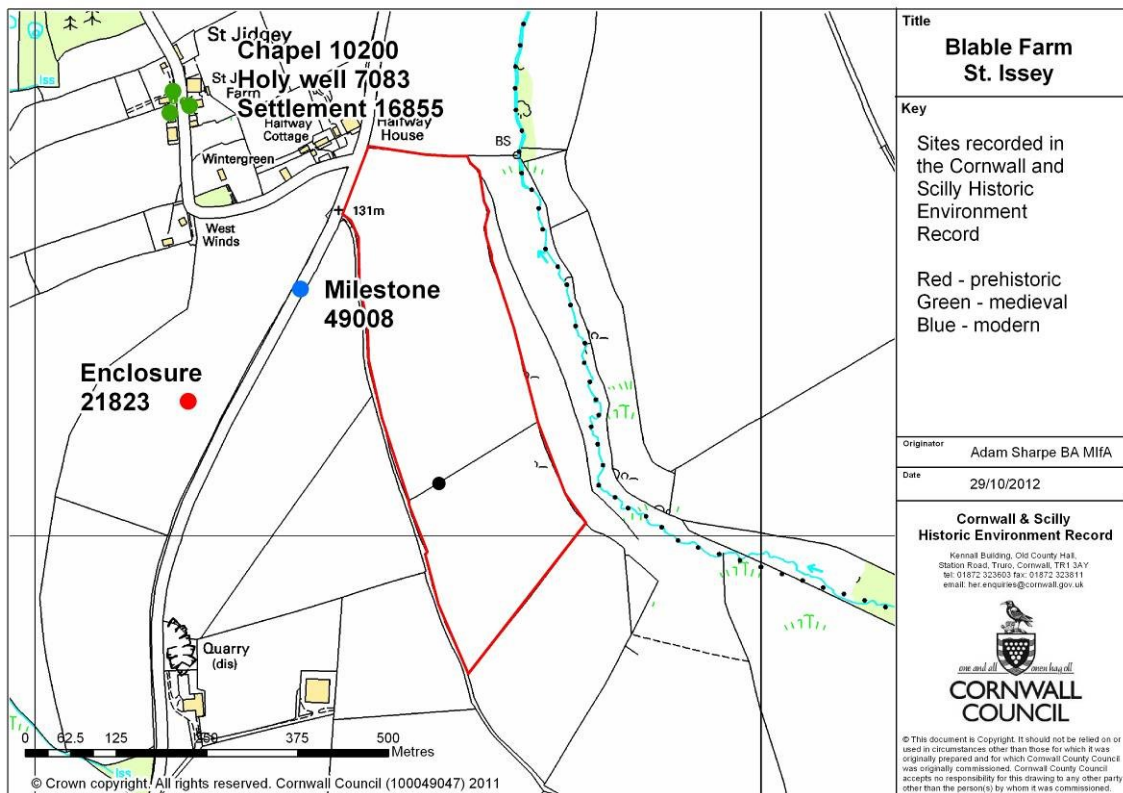


Fig 12. Sites recorded in the Cornwall and Scilly Historic Environment Record in the immediate vicinity of the proposed turbine site. MCO21823 relates to a prehistoric cropmark enclosure.

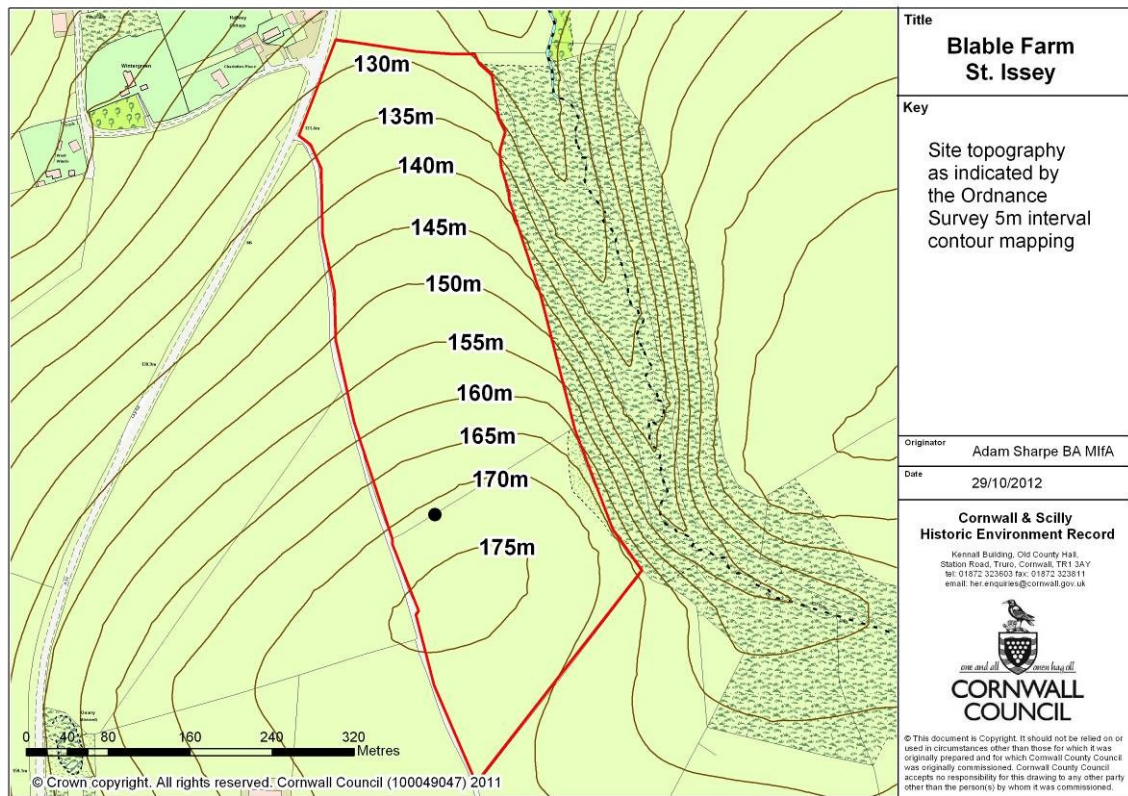


Fig 13. OS contour data for the area immediately surrounding the proposed wind turbine shows its site located on a north sloping ridge.

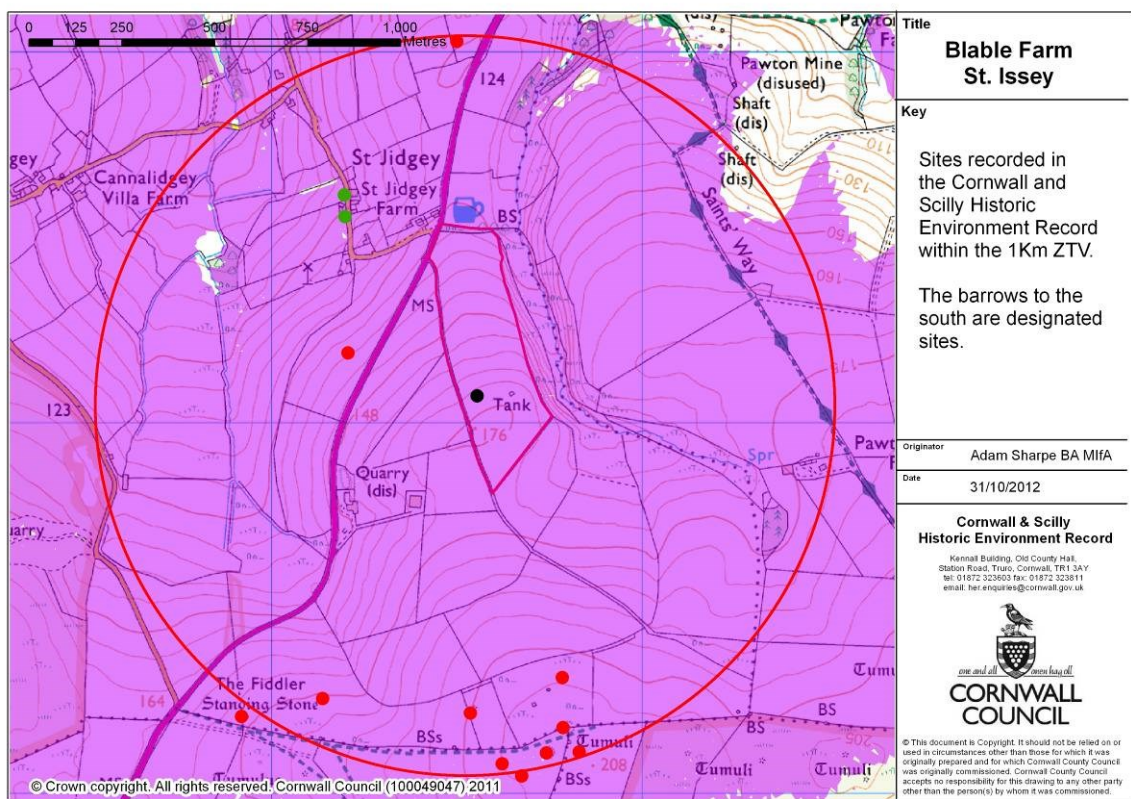


Fig 14. Mapping showing the ZTV within a 1Km radius of the site proposed for the wind turbines, showing potentially intervisible sites recorded in the HER. Red- prehistoric, green - medieval.

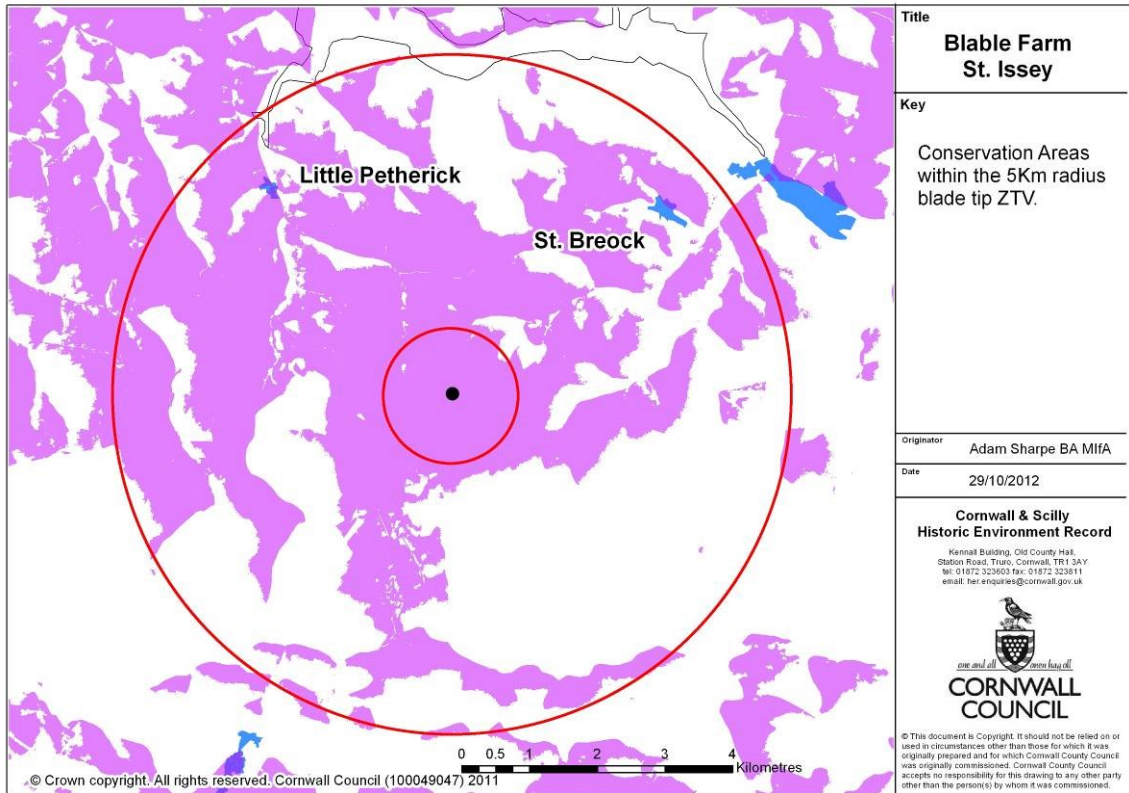


Fig 15. Mapping showing Conservation Areas (in blue) within the 5Km radius ZTV of the sites proposed for the wind turbine showing potential intervisibility.

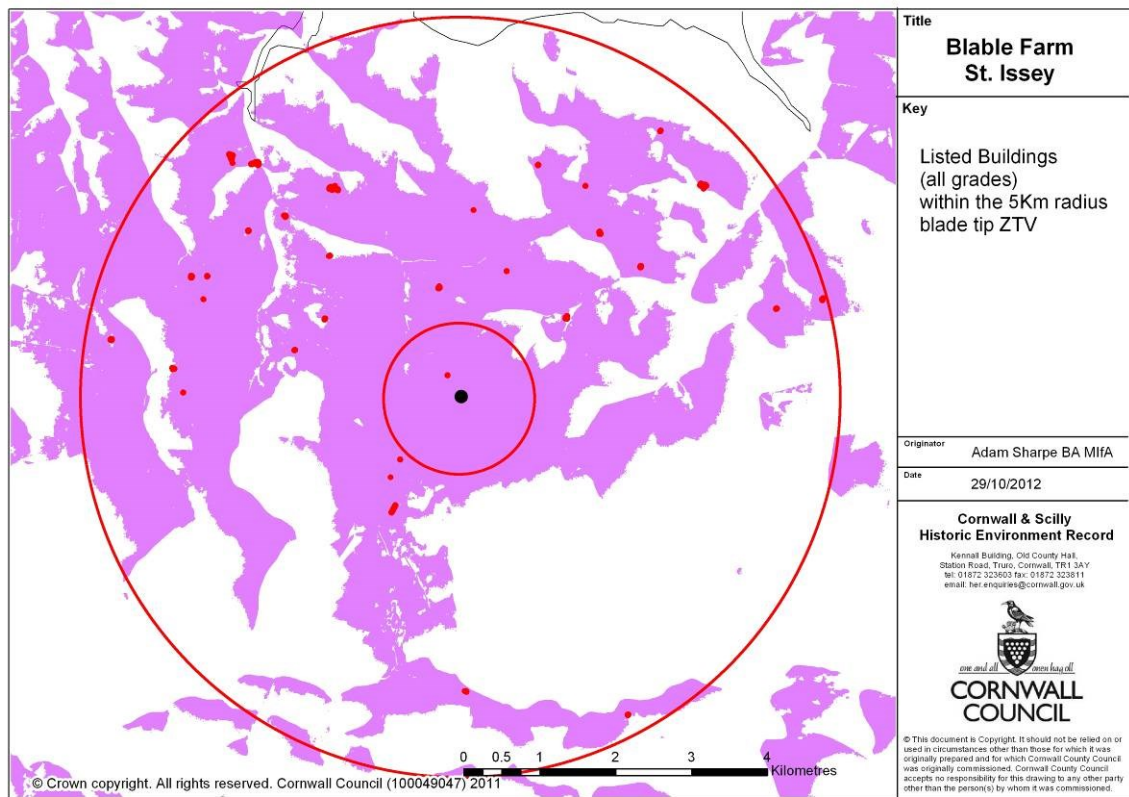


Fig 16. Mapping showing the ZTV within a 5Km radius of the site proposed for the wind turbines, showing potentially intervisible Listed Buildings (all grades).

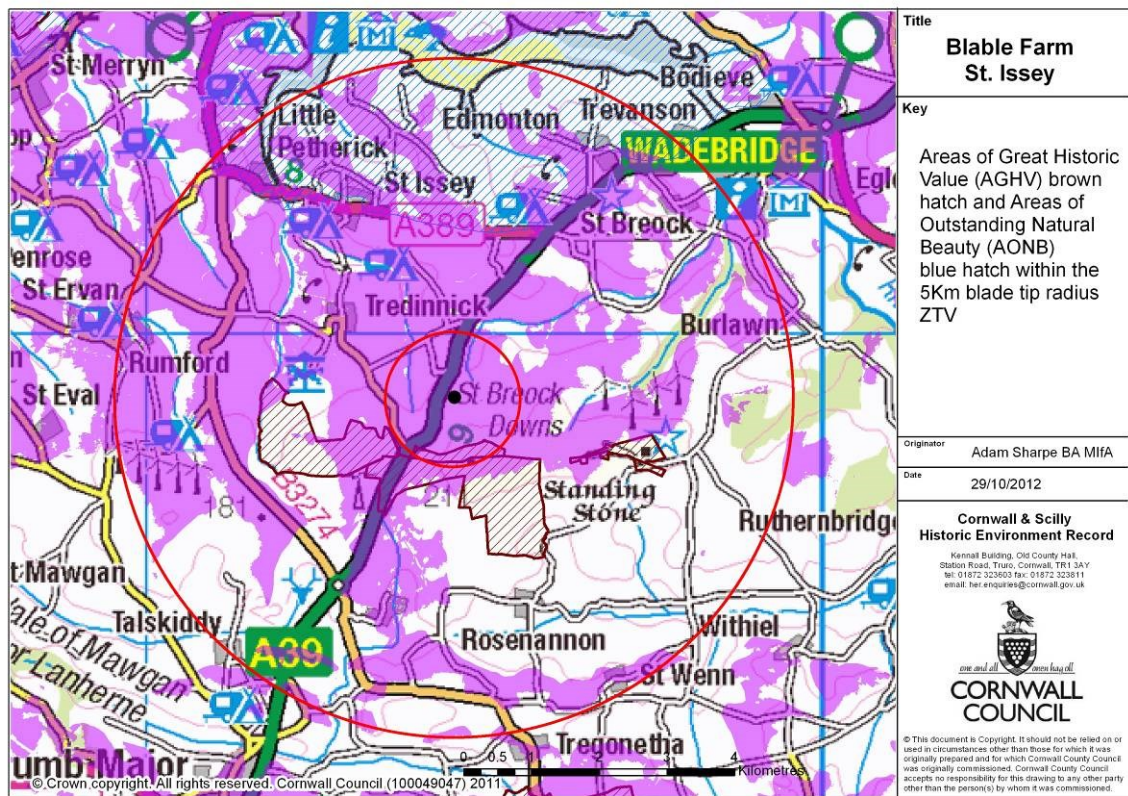


Fig 17. Mapping showing potentially intervisible areas of AONB and AGHV within a 5Km radius ZTV of the site proposed for the wind turbine.

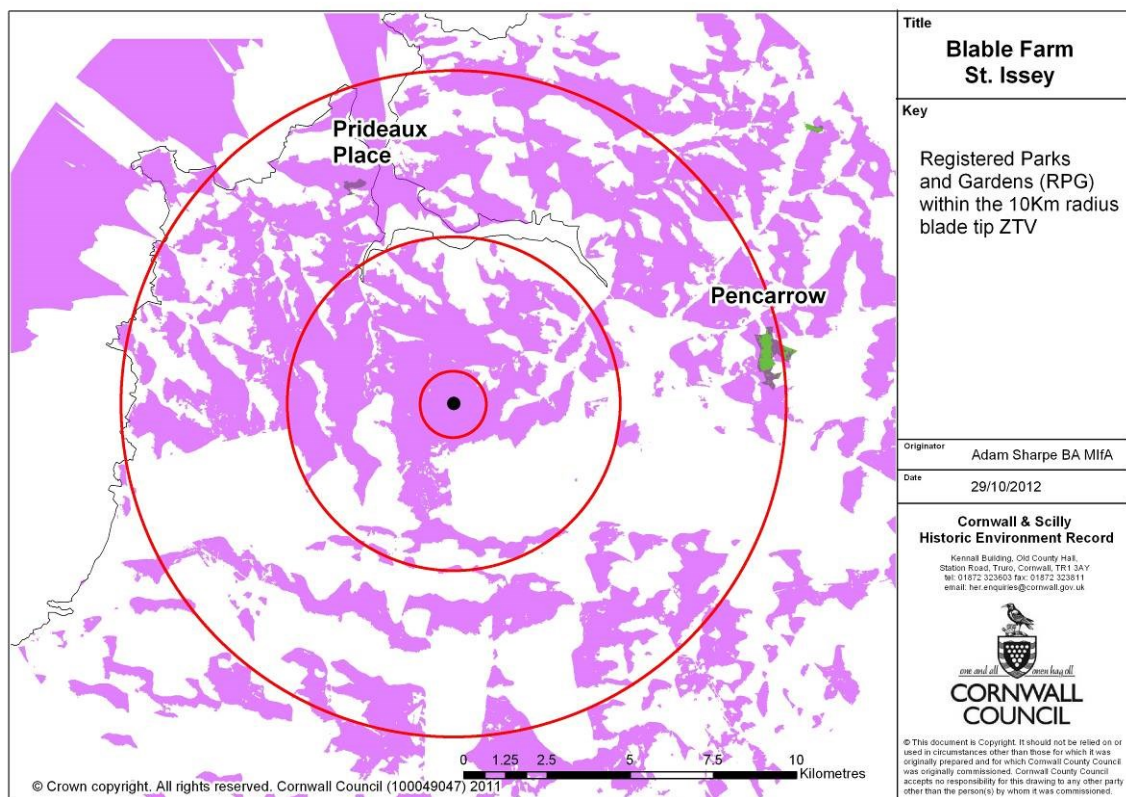


Fig 18. Mapping showing Registered Parks and Gardens within 10Km of the site proposed for the wind turbine.

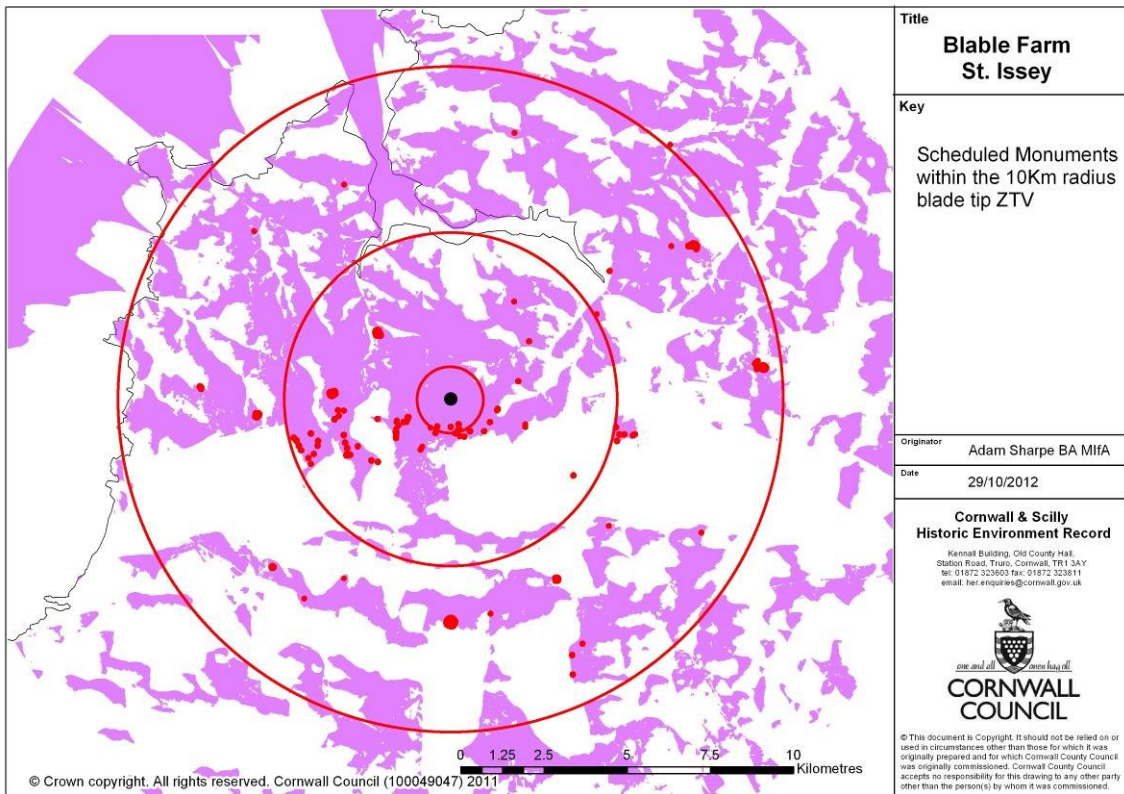


Fig 19. Mapping showing potentially intervisible Scheduled Monuments within the 10Km ZTV of the site proposed for the wind turbine.

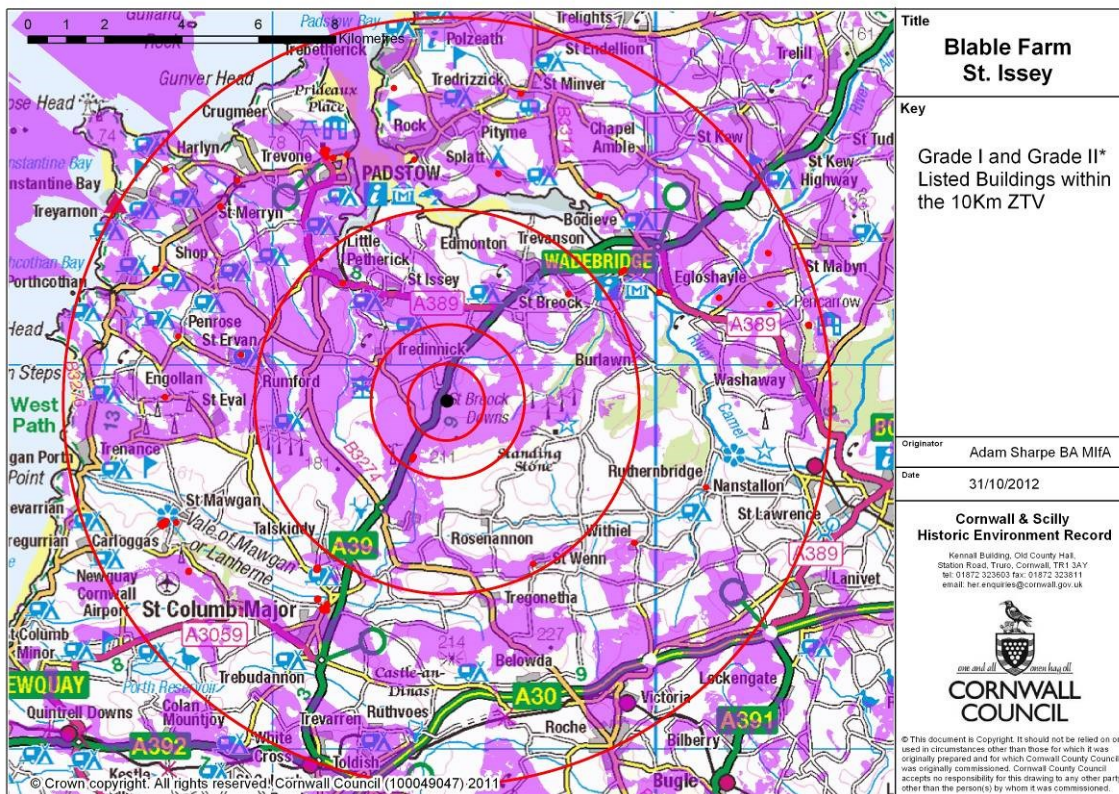


Fig 20. Mapping showing potentially intervisible Listed Buildings (all grades) within the 10Km ZTV of the site proposed for the wind turbine.

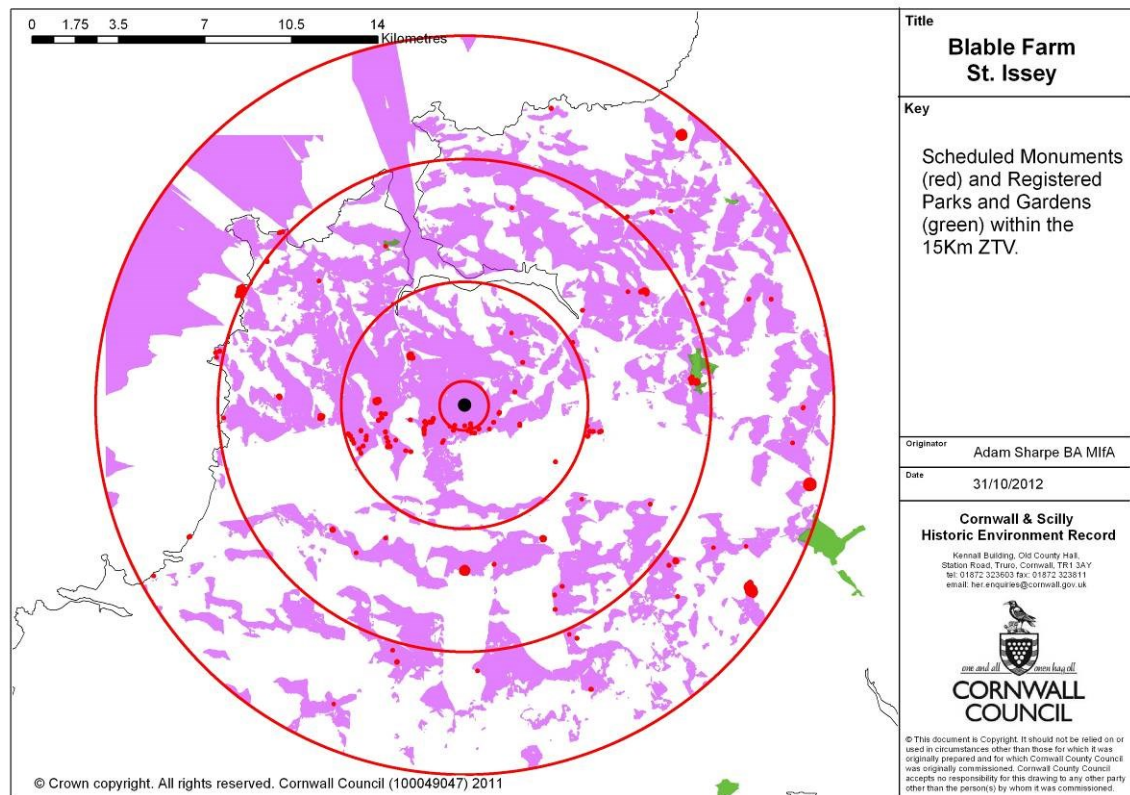


Fig 21. The 15Km ZTV for the proposed wind turbine at Blable Farm, showing potential intervisibility with Scheduled Monuments and Registered Parks and Gardens.

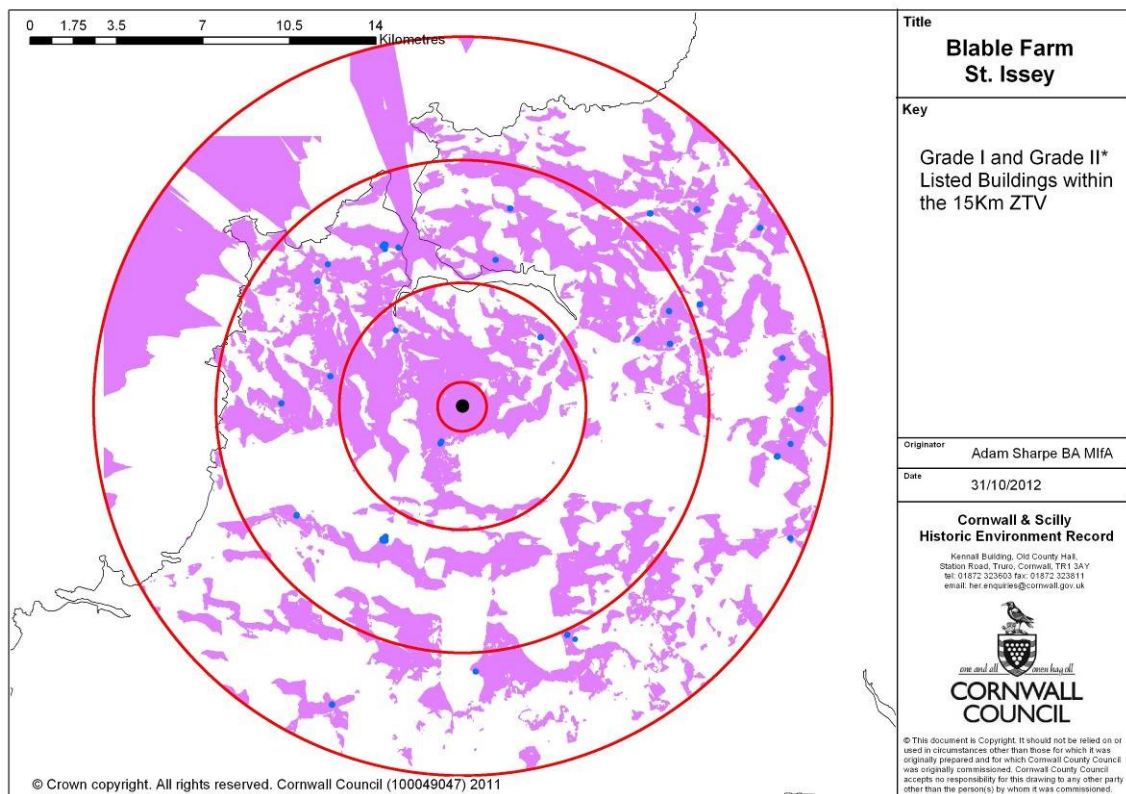


Fig 22. The 15Km ZTV for the proposed wind turbine at Blable Farm, showing potential intervisibility with Grade I and Grade II* Listed Buildings.

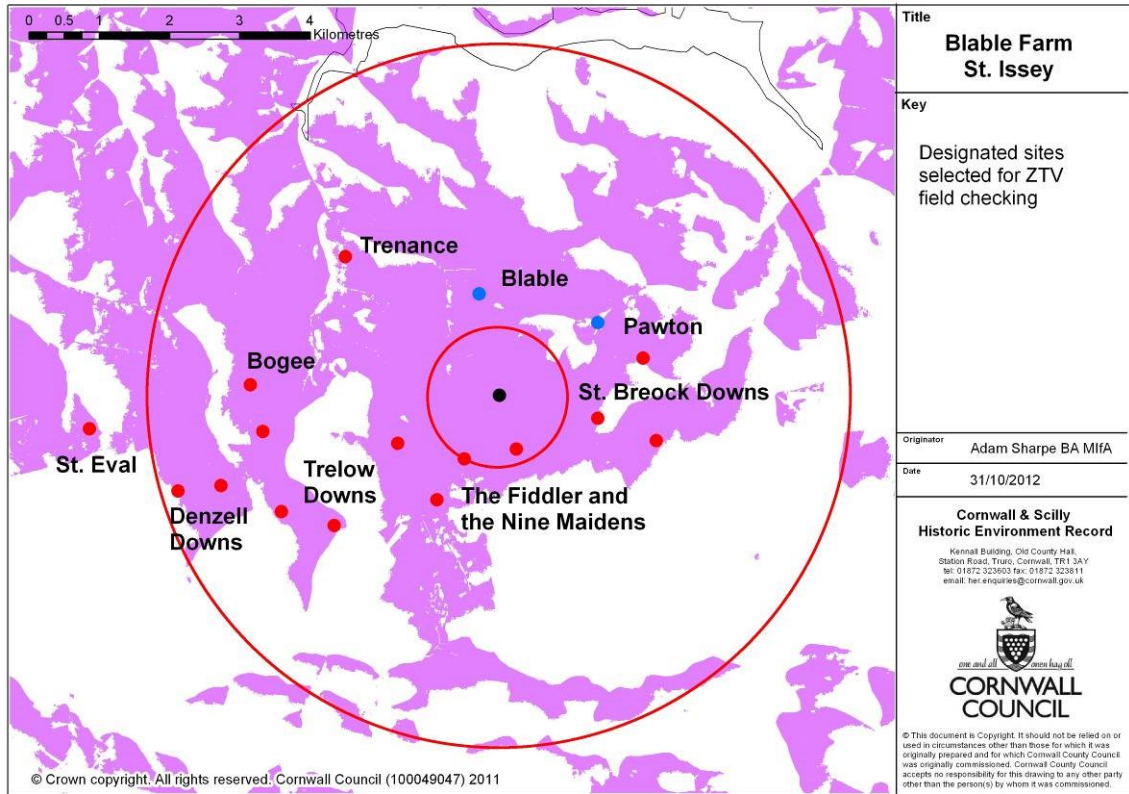


Fig 23. Sites selected for ZTV field checking. Red – Scheduled Monument, Blue – Listed Building.

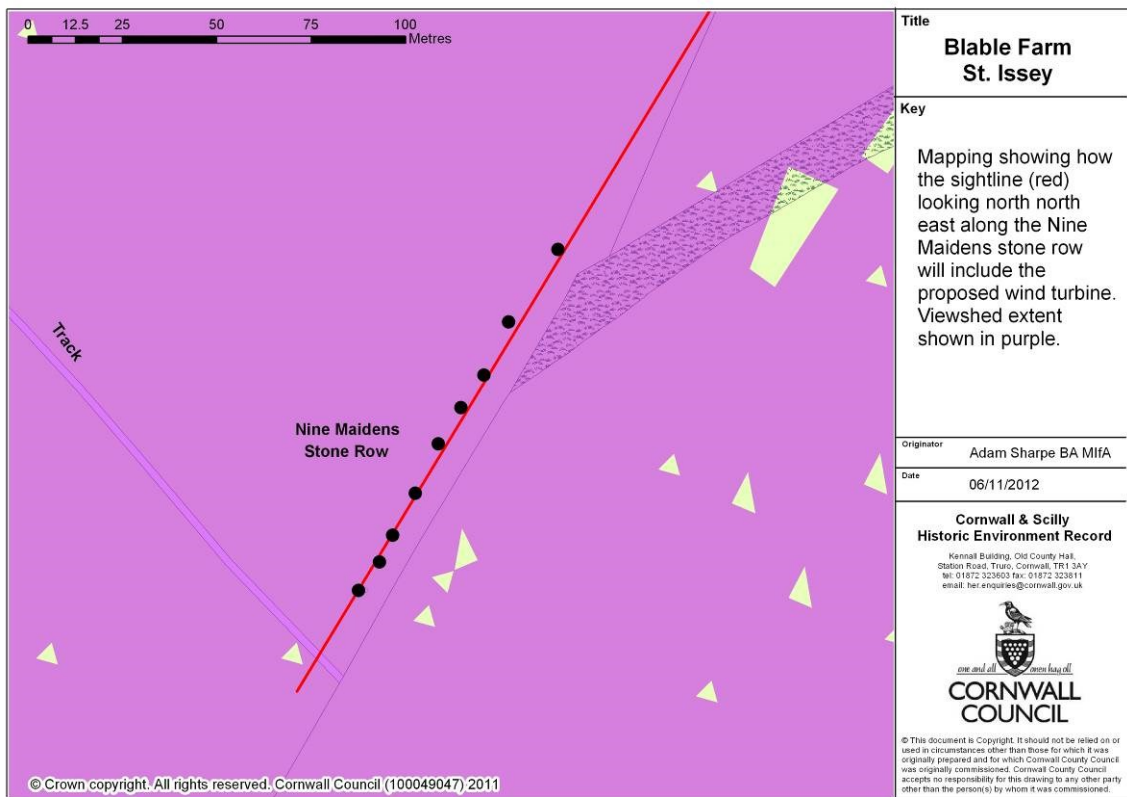


Fig 24. The sightline (in red) from the south south east of the Nine Maidens stone row towards the proposed wind turbine, showing how it coincides with the alignment of the monument. Photomontages suggest that only the tips of the turbine blades will be visible in this view, however.



Fig 25. Looking north down the lane on the western side of the site proposed for the wind turbine, showing the open nature of the landscape in this direction.



Fig 26. Looking west from the application site towards Bears' Downs, the Trelow Downs barrow cemetery and the Bear's Downs wind farm.



Fig 27. Looking east from the application site showing how the St Breock Downs wind turbines top the skyline in this direction.



Fig 28. Looking south from the application site, showing one of the prominent scheduled barrows near Scotland Corner on the skyline.



Fig 29. Looking south from the application site showing another of the prominent scheduled ridgetop barrows at Scotland Corner just under 1Km away.



Fig 30. Looking north west from the application site towards the coast at Trevoze Head.



Fig 31. Looking north from the application site to Padstow and its estuary.



Fig 32. Looking north east from the application site towards the Royal Cornwall Showground (left centre). Wadebridge lies beyond this site, but is not visible from ground level. The Delabole wind farm is on the distant skyline.



Fig 33. Looking north towards the Grade II Listed church at St. Issey. The Grade II Listed Blable Farm building is hidden within the woodland lower right.



Fig 34. The microwave relay tower near the Nine Maidens as seen from the upper part of the application site.



Fig 35. A typically open view to the north north west of the application site.



Fig 36. A very significant setting impact on one of the scheduled barrows at the western end of the St. Breock Downs wind farm.



Fig 37. Significant setting impacts on a barrow (left) and a standing stone within the area occupied by the St. Breock Downs wind farm.



Fig 38. The view from the eastern end of St. Breock Downs towards the site proposed for the Blable wind turbine just beyond the fields forming the mid distance skyline. Trevoise Head is in the background.



Fig 39. Looking north north east along the alignment of the scheduled Nine Maidens stone row. The tips of the Blable Farm wind turbine blades would appear over the top of the most distant stone making up this monument.



Fig 40. A view of the now-recumbent scheduled standing stone known as The Fiddler associated with the Nine Maidens alignment looking in the direction of the proposed wind turbine, much of which would appear above the skyline just to the left of the barn.



Fig 41. Looking towards the location of the proposed Blable wind turbine across a rather denuded round barrow at SW 94088 68052, part of Monument 1021223. The upper parts of the Blable wind turbine would appear over the barrow.



Fig 42. Looking towards the site proposed for the Blable wind turbine across one of the barrows in the Scotland Corner barrow cemetery. The top of the wind turbine would be visible above this barrow.



Fig 43. Looking towards the site of the proposed wind turbine across another of the Scotland Corner barrow group. Again, the top of the wind turbine would just be visible in this view.



Fig 44. Looking towards the site of the proposed Blable wind turbine (centre left) across the northernmost of the Scotland Corner barrow group. Almost the whole of the turbine would be visible within this view.



Fig 45. Another view of the northern scheduled barrow at Scotland Corner, showing how the very recently-erected wind turbine at Pawton Dairy Farm (centre right) will also appear in views in this direction.



Fig 46. A severely compromised and badly eroded Scheduled barrow at the summit of Scotland Corner. Looking east north east with the St. Breock Downs wind farm in the background.



Fig 47. A group of Scheduled barrows set along the ridge of Rosenannon Downs. No access was possible to the area within which they stand, but the Blable wind turbine would be clearly visible from them.



Fig 48. Looking across the scheduled Bogee Round towards the site proposed for the Blable wind turbine (skyline just right of centre). A mature maize crop completely obscured the earthwork at the time of the site visit.



Fig 49. Looking east north east from Higher Bogee Downs across Trelow Downs with its Scheduled barrows. The upper parts of the wind turbine would appear above the summit of the Downs.



Fig 50. St. Issey church from the east. Although there will be intervisibility between the church tower and the proposed wind turbine, in practice, this will not be appreciable from ground level at this site.



Fig 51. The geophysical survey results from the northern part of the survey area. Note curving boundary [5] which may be of early date.



Fig 52. Geophysical survey results from the southern part of the project area. Note the curving feature [28] which may be of early date and the rectangular feature [25] which may be the base of a modern water tank.