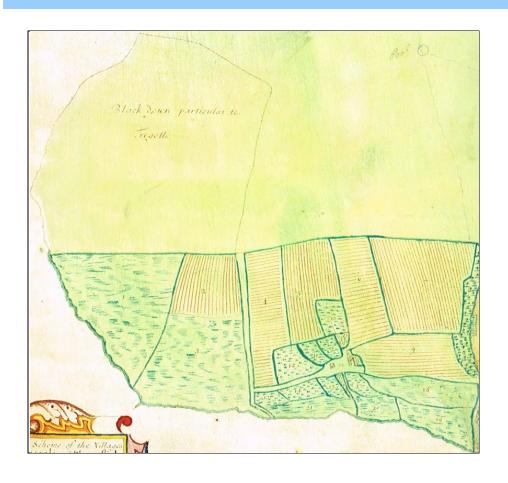
LAND at LOWER TREGOLLS FARM ST. WENN CORNWALL

Results of a Desk-Based Assessment, Walkover Survey, Geophysical Survey & Historic Visual Impact Assessment





The Old Dairy
Hacche Lane Business Park
Pathfields Business Park
South Molton
Devon
EX36 3LH

Tel: 01769 573555 Email: mail@swarch.net

> Report No.: 140912 Date: 12/09/2014 Authors: E. Wapshott

> > V. Hosegood S. Walls

Land at Lower Tregolls Farm, St Wenn, Cornwall

Results of a Desk-Based Assessment, Walkover survey Geophysical Survey & Historic Visual Impact Assessment

For

Jenna Folkard

of

Cleanearth (the Client)

Ву



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Project Director: Bryn Morris **Project Officer:** Bryn Morris

Fieldwork Managers: Samuel Walls

HVIA: Emily Wapshott

Walkover Survey: Joe Bampton

Geophysical Survey Fieldwork: Joe Bampton **Geophysical Survey Data Processing:** Stratascan **Desk Based Assessment:** Victoria Hosegood

Report: Samuel Walls; Emily Wapshott; Victoria Hosegood

Report Editing: Samuel Walls **Graphics:** Victoria Hosegood

September 2014

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Summary

This report presents the results of a desk-based assessment, walkover survey, geophysical survey and historic visual impact assessment carried out by South West Archaeology Ltd. (SWARCH) on land at Lower Tregolls Farm, St. Wenn, Cornwall in advance of the construction of a 41m to tip wind turbine.

The proposed turbine would be installed on land that historically belonged to Tregolls, a small but seemingly independent holding comprised of two or more separate tenements. It came into the possession of the Robartes family of Lanhydrock, and possibly in association with the 'manor' of Tregustick. The turbine would be located on land north-west of the farm which from at least the end of the 17th century was a single large enclosure known as Black Down. The geophysical survey that was undertaken identified two removed historic field boundaries and a probable post-medieval linear anomaly which related to the post-medieval use of this land.

There are two Grade I and two Grade II* Listed buildings or groups of buildings within 7.5km of the site that fall within the ZTV, together with six Grade II Listed buildings or groups. There are 22 relevant Scheduled Monuments within 7.5km, almost all of which are Prehistoric round barrows, primarily found on the Downs to the north of the proposed site. There are further designated assets, primarily Grade II Listed buildings and Conservation Areas, which fall outside of the ZTV.

Most of the designated heritage assets in the wider area are located at such a distance to minimise the impact of the proposed turbine, or else the contribution of setting to overall significance is less important than other factors. The landscape context of many of these buildings and monuments is such that they would be partly or wholly insulated from the effects of the proposed turbine by a combination of local blocking, and the topography, or that other modern intrusions have already impinged upon their settings. However, the presence of a new, modern and visually intrusive vertical element in the landscape would impinge in some way on at least ten of these heritage assets (negative/minor or negligible to negative/minor), and have a more serious impact on the village of Withiel, the two bowl barrows southeast of Higher Tregolls; bowl barrow WSW of St Breock Down Farm; St Breock Down Monolith and Cairn; Standing Stone 815m west of St Breock Farm; and Burial Chamber of St Breock Downs (negative/moderate or negative/minor to negative/moderate). Cumulative impact is a clear issue for this site, given the presence of an operational windfarm, numerous individual turbines, and a large number of proposed turbines.

With this in mind, the overall impact of the proposed turbine can be assessed as **negative/moderate**. The impact of the development on the buried archaeological resource will be **permanent/irreversible**.

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Nick Russell of English Heritage (EH)

1.0 Introduction

Location: Lower Tregolls Farm

Parish: St. Wenn County: Cornwall

NGR: SW 9788466692

1.1 Project Background

This report presents the results of a desk-based assessment and historic visual impact assessment carried out by South West Archaeology Ltd. (SWARCH) at Lower Tregolls Farm, St. Wenn, Cornwall (Figure 1). The work was commissioned by Jenna Folkard of Cleanearth Energy (the Agent) in order to identify any buried archaeology or heritage assets that might be affected by the installation of a 100Kw wind turbine (41m to tip).

1.2 Topographical and Geological Background

The proposed turbine would be located in a field c. 500m North West of Tregolls Farm and less than 500m south of higher Tregolls (see Figure 1). It would stand near the top on the south side of a hill at c.150m AOD. The hill slopes down relatively steeply on the west side towards Little Tregolls, a stream and a wooded area and it slopes more gently on the southern side towards Old Trewithen Mill and Tregolls.

The soils of this area are the well-drained fine loamy soils of the Denbigh 2 Association (SSEW 1983); these overlie the sandstones, siltstones and mudstones of the Staddon Formation (BGS 2014).

1.3 Historical and Archaeological Background

The records concerning the historic use of the land differ slightly. Cornwall's Historic Environment Record notes medieval field systems less than 300m to the west of the site while on the Cornwall Council Historic Landscape Characterisation it is characterised as post medieval enclosed land. The land surrounding the site, particularly to the south, however, is characterised as medieval farmland which falls in to the category of *anciently enclosed land*. The suggestion that the farmland surrounding the site is medieval is further supported by the settlements in the area noted on the HER. Tregolls, which is situated less than half a kilometre from the proposed location of the turbine, is first recorded in 1314 when it is spelt "Tregollas". The name is Cornish and contains the element *tre meaning 'estate, farmstead' (which implies a settlement of early medieval origin) and *coll meaning 'hazel trees' (Padel 1985). Another example is Trewithian which is again situated less than 500m to the south of the proposed site and is first recorded in 1314 when it is spelt "Treweythyan".

There is no record of any extensive archaeological fieldwork being undertaken within the immediate area of the proposed turbine. There have however, been a number of geophysical surveys and archaeological assessments conducted within the wider area, many of which are in association with other wind turbine developments. For example the geophysical surveys at Tregustick Farm, Withiel (GSB 2012a & CAU 2012a) and Higher Tregawne, Withiel (GSB 2012b & CAU 2012b) failed to identify any tangible archaeological features. Archaeological monitoring (or watching briefs) in St. Wenn Churchyard (Exeter Archaeology 2003), for the Hustyns to Burlawn

SWW Pipeline (CAU 2008) and turbine at Blable Farm, St. Issey (SWARCH 2014) have also identified little of archaeological note.

There are however a number of areas which would be of archaeological interest noted on the HER. For example there is a scatter of prehistoric monuments surrounding the site, with a concentration of eleven probable Bronze Age barrows, a possible Bronze Age enclosure and a Prehistoric field system all within one kilometre of the site (see Figure 11). The HER suggest that there may be a possible barrow actually in the same field as the proposed turbine.



Figure 1: Site location (the approximate location of the proposed turbine is indicated).

1.4 Methodology

The desk-based assessment follows the guidelines presented in: *Standard and Guidance for Archaeological Desk-Based Assessment* (IfA 1994, revised 2012).

The geophysical survey was undertaken by SWARCH personnel and the data was processed by Stratascan, in accordance with the guidance laid by English Heritage (2008).

The historic visual impact assessment follows the guidance outlined in: *Conservation Principles:* policies and guidance for the sustainable management of the historic environment (English Heritage 2008), The Setting of Heritage Assets (English Heritage 2011a), Seeing History in the View (English Heritage 2011b), Managing Change in the Historic Environment: Setting (Historic Scotland 2010), Wind Energy and the Historic Environment (English Heritage 2005), and with reference to Visual Assessment of Wind farms: Best Practice (University of Newcastle 2002), Guidelines for Landscape and Visual Impact Assessment 3rd edition (Landscape Institute 2013), The Development of Onshore Wind Turbines (Cornwall Council 2013), Photography and Photomontage in Landscape and Visual Impact Assessment (Landscape Institute 2011), Visualisation Standards for Wind Energy Developments (Highland Council 2010), and the Visual Representation of Wind farms: Good Practice Guidance (Scottish Natural Heritage 2006).

2.0 Desk-Based Assessment and Cartographic Analysis

2.1 Introduction

Lower Tregolls Farm lies in the Parish of St Wenn, in the Hundred and Deanery of Pyder. St. Wenn derives its name from the Cornish saint, Saint Wenna, to whom the parish church is dedicated. There are a number of manors in this parish which date to the medieval period.

The site here assessed lies to the north of the village of St. Wenn. Many of the sites surrounding the proposed turbine location, particularly to the south are of early medieval origin. Tregolls and Trewithen are first recorded in 1314, Treliver in 1340 and Tregustick in 1356. These all contain the common early medieval Cornish place name element *tre meaning estate or farmstead (Padel 1985).

2.2 Cartographic Record

2.2.1 Pre-1800 Landscape Scale Maps

The early cartographic sources lack the accurate scales and details of more modern maps and are often, as is the case with Norden's 1742 Map of Cornwall (Figure 3) more illustrative than detailed. They do however give some indication as to how the landscape around the proposal site was used at this time. In all of the maps the land appears to be unenclosed with the majority of the settlements situated to the south overlooking the valley to the south of the site. Gasgoyne's Map of Cornwall suggests however that there is a topographical if not land-use difference from the area around the proposal site and on St. Breock Downs further to the north (Figure 2). Both of these points suggest that it was not merely open rough common. Martyn's Map of 1784 (Figure 4) includes the most detail, with a number of trackways crossing the land to the north of these settlements making it accessible.

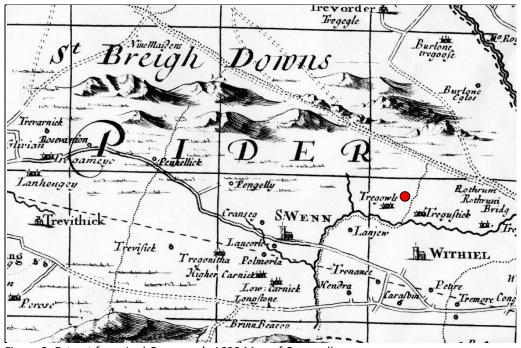


Figure 2: Extract from Joel Gasgoyne's 1699 Map of Cornwall.

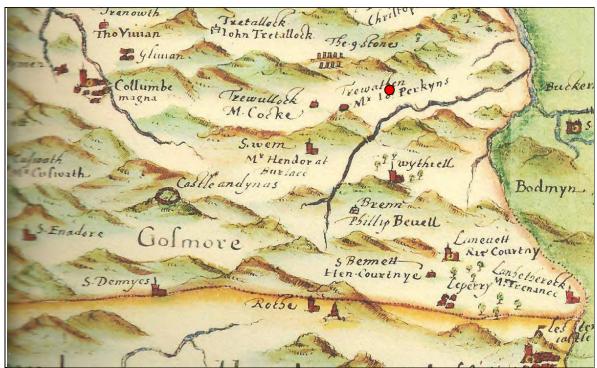


Figure 3: Extract from John Norden's 1742 Map of Cornwall (the approximate location of the site is indicated).



2.2.2 Lanhydrock Atlas

Fortunately, as the proposal site falls within the holdings of the Manor of Tregustick, which belonged to the Robartes of Lanhydrock, there is an early detailed cartographic source of the estate available in the Lahydrock Atlas (Holden, Herring and Padel 2010). The 'Manor' of Tregustick at the time comprised several tenements and larger holdings across the parishes of Withiel, St. Wenn and St. Breock. The proposal site itself falls within the holding of Tregolls, and is located within a large enclosure of downland named *Black Down* (Figure 5). The areas to the north and east are part of the holding also and are listed as *The Common to Tregoles and Tregustick*; this may imply that the enclosure surrounding *Black Down* was an area of relatively recent enclosure, dividing the common between the two primary holdings.

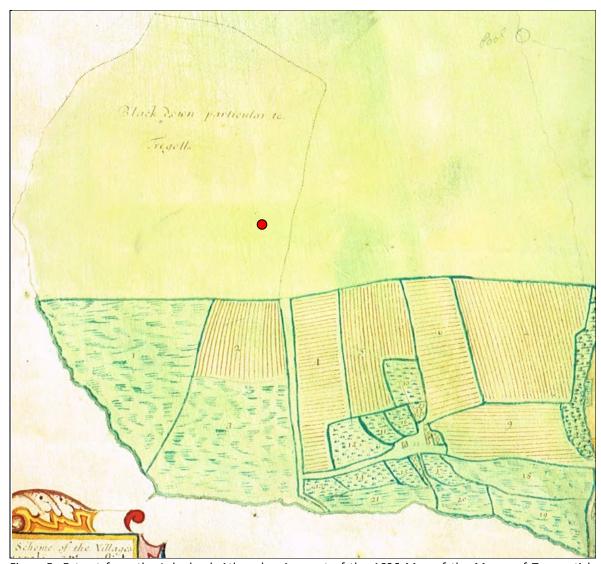


Figure 5: Extract from the Lahydrock Atlas, showing part of the 1696 Map of the Manor of Tregugstick, Withiel (from Holden, Herring and Padel 2010: 256). The approximate location of the site is indicated.

2.2.3 Early 19th Century Maps

The early 19th century maps are more accurate and detailed than the earlier cartographic sources and are thus more useful in this study. For example, Robert Dawson's Map of 1808 displays details of the road network more accurately, and hints at the field patterns at this date. The proposal site is still depicted within a large undivided enclosure, with a road to the east (Figure 6). A similar extent of enclosure is also apparent on the 1856 Ordnance Survey First Series map, although the individual field divisions are not depicted on this map (Figure 7).

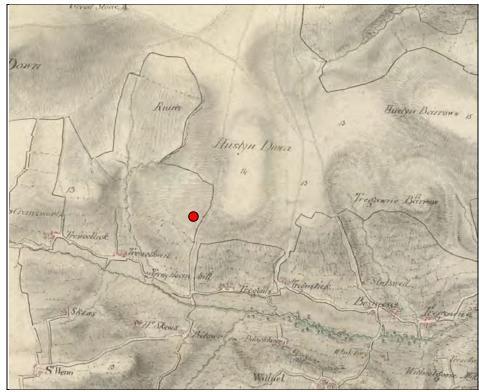


Figure 6: Extract from Robert Dawson's Map c.1808 (the approximate location of the site is indicated).



Figure 7: Extract from the 1856 OS first series map (the approximate location of the site is indicated).

2.2.4 1842 Tithe Map

The 1842 tithe map shows the area around the proposal site as an un-divided area of Downland still named as *Black Down*, and attached to the Tregolls Estate (see Figure 8). Tregolls was still owned at this time by the Lanhydrock Estate, and the farmhouse and majority of the land including the proposal site were leased to a Thomas Penno. The 1841 census confirms a Thomas Penno, a 50 year old farmer, lived at Tregolls with his wife, 5 daughters, elderly father, and 3 servants. Black Down is bounded to the north by a thin strip of waste, with the Lantuell holding beyond (also owned by Lady Agar of Lanhydrock); to the west by a hedged/fenced boundary with Tregolls Common and the road; to the south by the track leading to Little Tregolls (at this date known as *Tregolls Common*); and to the east by the stream and the Trewithian land holding beyond.

Tregolls Common (Little Tregolls) to the south-west has an associated small group of fields, which have clearly been carved out of the larger Black Down enclosure (see Figure 8). Given that Tregolls Common was leased by Thomas Penno Junior, the son of the lessee of the larger Tregolls Estate, it seems likely that this had been a recent division. It indicates that the 'pressure' to sub-divide and more intensively farm this area of Downland had begun.



Figure 8: Extract from the 1842 St Wenn tithe map (CRO) (the approximate location of the site is indicated).

2.3 Ordnance Survey 1st and 2nd Edition Maps

By the time of the 1887 Ordnance Survey 1st Edition Map, the pressure to enclose the former open Downland is clear, and all of the southern edge of the Downland, and most of the western edge, has been subdivided into a number of fields; many of which may have been associated with Little Tregolls (see Figure 9). The proposal site itself had become enclosed by this date, but the present day field is actually shown as a clearly 20th century amalgamation of five separate fields,

which are depicted on the 1st edition map. Within the most western of these five fields an 'old' quarry is depicted, which is not shown on any of the earlier cartographic sources.

There are no major changes between the Ordnance Survey 1st and 2nd Editions, although the field which contains the quarry is depicted as rough ground (see Figure 10). Later 20th century sources show some of the boundary changes, but no other significant changes to the proposal site. The barn to the south has been built in the last fifteen years.

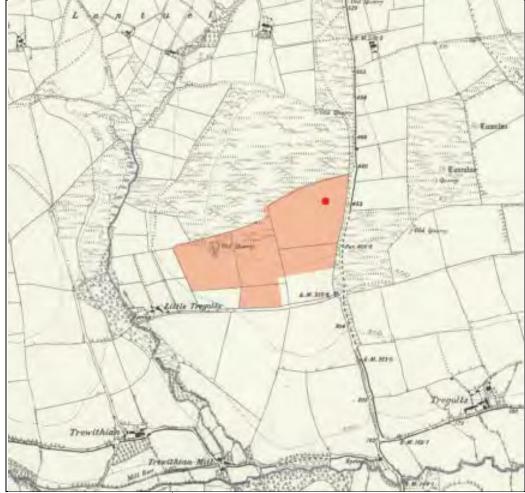


Figure 9: Extract from the OS 1st Edition Map, 1888 (the site of the proposed turbine is indicated).

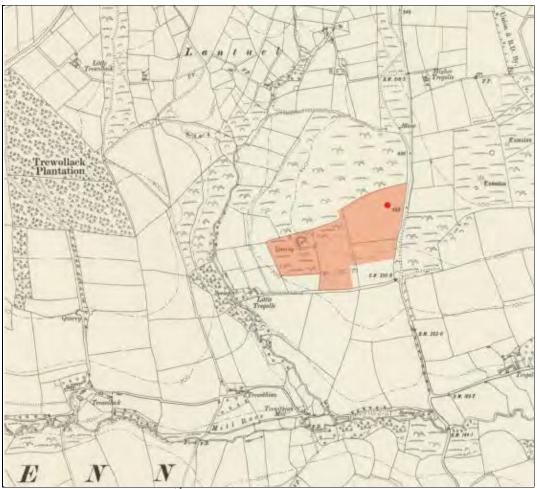


Figure 10: Extract from the OS 2nd Edition Map, 1907 (the site of the proposed turbine is indicated).

3.0 Site Inspection and Archaeological Background

3.1 Site Inspection

The site of the proposed turbine was visited by Joe Bampton on the 5th of September 2014. The field in which the turbine is to be situated lies just west of the road which leads north from St. Wenn towards St. Breock Downs, in a field bordering Little Tregolls Farm on its eastern side. Access to the field is via a gate bordering the road on the eastern side of the field. The field is bounded by Cornish hedgebanks which are approximately 1.5m high. The hedge bounding the road is very wide; over 2m in some places and consists of mainly brambles. The ends of the hedge by the gates and its corners are consolidated with stone lining and there are some occasional large stones along the hedgebank itself. Barbed wire fencing is located around all of the hedgebanks and forms some of the boundaries toward the southern end of the field.

There is a moderate to steep slope running down from the northern end of the site to the south; varying in steepness from rolling at some points to gentle in others. There is a barn situated on terraced and made-up ground, in an area which is more level at the base of the slope, to the south of the field. A derelict barn is situated to the north of the northern hedgebank. A shallow plastic trough is located next to the western boundary near the gate and is presumably linked to a modern service pipe. A number of mature and young deciduous trees are located towards the south-west end of the site. Although there are numerous known monuments in wider area, there are no obvious features or earthworks in this field, and no cropmarks or soil discolouration were observed.

3.2 Archaeological Background

There are a significant number of possible and known Bronze Age barrows within the immediate vicinity of the proposed turbine, two of these are Scheduled Monuments, but most are undesignated (see Figure 11 and Table 1). The group of barrows includes an outlier, identified on the 1946 aerial photographs, within the same field as the proposed turbine site (MCO3043). Also in close proximity to the proposal site, in the field opposite the public road, are two small c. 8m diameter sub-circular enclosures (clearance cairns?) which are aligned with many of the other barrows (MCO21684 and MCO21685). There is also a general background of place-name evidence to suggest a number of the farms to the south have early-medieval origins (MCO17315; MCO17385; MCO18085; MCO18080).

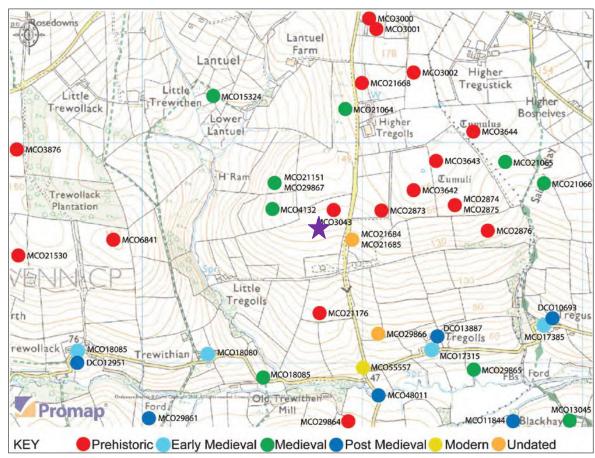


Figure 11: Nearby HER entries (source CCHES). The proposal site is indicated with a purple star.

Reference	Name	Form	Period	
DCO10693	Tregustick farmhouse – Grade II Listed	Extant building	Post-medieval	
DCO13887	Tregolls farmhouse – Grade II Listed	Extant building	Post-medieval	
DCO12951	Trewollack House – Grade II Listed	Extant building	Post-medieval	
MCO2873	Higher Tregolls Bronze Age possible barrow	Extant structure	Prehistoric	
MCO2874	Higher Tregolls Bronze Age round barrow	Extant structure	Prehistoric	
MCO2875	Higher Tregolls Bronze Age round barrow	Extant structure	Prehistoric	
MCO2876	Higher Tregolls Bronze Age round barrow	Extant structure	Prehistoric	
MCO3000	Lantuel Bronze Age round barrow	Extant structure	Prehistoric	
MCO3001	Lantuel Bronze Age round barrow	Extant structure	Prehistoric	
MCO3002	Lantuel Bronze Age round barrow	Extant structure	Prehistoric	
MCO3043	Little Tregolls Bronze Age round barrow	Extant structure	Prehistoric	
MCO3642	Tregolls Bronze Age platform barrow	Extant structure	Prehistoric	
MCO3643	Tregolls Bronze Age bowl barrow – Scheduled	Extant structure	Prehistoric	
MCO3644	Tregolls Bronze Age bowl barrow – Scheduled	Extant structure	Prehistoric	
MCO3876	Trewollack Plantation Bronze Age round barrow	Extant structure	Prehistoric	
MCO4132	Lantuel clearance cairn	Extant structure	Med/post-medieval	
MCO6841	Trewollack prehistoric lithic scatter	Findspot	Prehistoric	
MCO11844	Blackhay and Lanjew post-medieval mine	Extant structure	Post-medieval	
MCO13405	Blackhay settlement	Documentary	Medieval	
MCO15324	Lantuel settlement	Documentary	Medieval	
MCO17315	Tregolls settlement	Documentary	Early medieval	
MCO17385	Tregustick settlement	Documentary	Early medieval	
MCO18080	Trewithian settlement	Documentary	Early medieval	
MCO18085	Trewollack settlement	Documentary	Early medieval	
MCO21064	Higher Tregolls medieval field system	Extant structure	Medieval	

MCO21065	Higher Tregustick medieval field system	Extant structure	Medieval
MCO21066	Higher Tregustick medieval field system	Extant structure	Medieval
MCO21151	Lantuel medieval & post-medieval field system	Extant structure	Med/post-medieval
MCO21176	Little Tregolls prehistoric & medieval field system	Cropmark	Prehistoric & med
MCO21668	Lantuel Bronze Age enclosure	Extant structure	Prehistoric
MCO21684	Little Tregolls enclosure	Extant structure	Undated
MCO21685	Little Tregolls enclosure	Extant structure	Undated
MCO21530	Cransworth Iron Age/Romano-British round	Cropmark	Prehistoric
MCO26548	Trewithian Mill fulling mill, later corn mill	Documentary	Med/post-medieval
MCO29861	Great Skewes ridge and furrow	Extant structure	Post-medieval
MCO29864	Treliver prehistoric enclosure	Extant structure	Prehistoric
MCO29865	Tregolls medieval hollow way	Extant structure	Medieval
MCO29866	Tregolis undated mound	Extant structure	Undated
MCO29867	Lantuel medieval & post-medieval hollow way	Extant structure	Med/post-medieval
MCO48011	Treliver post-medieval bridge	Extant structure	Post-medieval
MCO55557	Tregolis C20 signpost	Extant structure	Modern

Table 1: Local HER records (source: CCHES).

However the results obtainable from a LiDAR survey (see Figures 12-13) may suggest that the barrow and the two possible enclosures (clearance cairns?) shown up on aerial photographs near the proposal site no longer have surviving physical traces, or even archaeological earthworks. In contrast the other barrows to the east-north-east of the proposed turbine and the clearance cairn to the north-west, all show up extremely well. The LiDAR data does show the lines of the majority of the removed field boundaries which appear on the historic maps within the proposal site, although the former quarry site, being a negative feature, does not show up particularly well (clearest on Figure 13).



Figure 12: Arcview image of LiDAR survey data produced by B. Morris of SWARCH showing terrain analysis of the Aspect. Contains freely available LIDAR data supplied by Natural Environment Research Council (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey); ©NERC (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey).



Figure 13: Arcview image of LiDAR survey data produced by B. Morris of SWARCH showing terrain analysis of the Slope. Contains freely available LIDAR data supplied by Natural Environment Research Council (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey); ©NERC (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey).

3.3 Geophysical Survey

A detailed gradiometry survey was conducted by SWARCH personnel over approximately 1.6ha of pasture around the location of the proposed turbine and cable run (see Figure 14). The processing work was undertaken by Substrata on behalf of SWARCH in September 2014. What follows is a summary of the full report (see elsewhere – Substrata *forthcoming*). Areas which were heavily disturbed by existing track ways or wheel-ruts were not surveyed.



Figure 14: Shade plot of the data, with minimal processing (Substrata forthcoming).

The geophysical survey has revealed very few geophysical anomalies that may correspond to archaeological features (Figure 15). Two of these features are explainable as removed field boundaries, whilst the other possible archaeological feature is likely to relate to post-medieval activity as well, especially given that it is aligned with the corner of one of the removed field boundaries. Apart from several large magnetic spikes in the area of the proposed turbine and plough scarring in the vicinity of the turbine base, modern interference is relatively scarce.

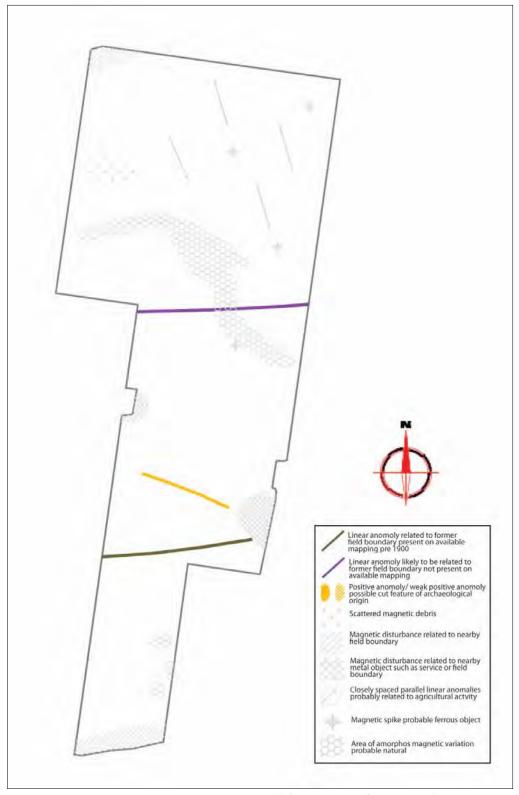


Figure 15: Interpretation plot based on the results (after Substrata forthcoming).

3.4 Assessment of Impact

The location of the proposed turbine, on a south-facing slope, is favourable to settlement. However, the Iron Age/Romano-British enclosures and early medieval settlements (e.g. *Tre*golls) within the immediate area have all been identified further down the slope to the south. There are a number of prehistoric ritual sites located on the higher ground to the north-east, but there is no trace or evidence for the barrow indicated on the results from the geophysical survey or LiDAR analysis. The likelihood of encountering Prehistoric, Romano-British and medieval archaeological remains is therefore deemed low.

Ground disturbance associated with the installation of supports for the wind turbine, the concrete base pad and ancillary works during the construction phase could result in permanent, irreversible loss of below-ground remains of archaeological features within the development area, or of elements of these. The works, where they penetrate the topsoil levels, will affect any buried cut features.

The impact of the construction phase of the turbine would be **permanent** and **irreversible** on the buried archaeology immediately beneath the turbine site, and along the underground cable run and the access tracks. The limited 25 year cycle of the turbines operational phase will limit all negative positive impacts to **temporary/reversible**.

4.0 Visual Impact Assessment

4.1 National Policy

General policy and guidance for the conservation of the historic environment are now contained within the *National Planning Policy Framework* (Department for Communities and Local Government 2012). The relevant guidance is reproduced below:

Paragraph 128

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

Paragraph 129

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

4.2 Setting and Views

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

Setting is the primary consideration of any HVIA. It is a somewhat nebulous and subjective assessment of what does, should, could or did constitute the lived experience of a monument or structure. The following extracts are from the English Heritage publication *The Setting of Heritage Assets* (2011a, 4 & 7):

Setting embraces all of the surroundings (land, sea, structures, features and skyline) from which the heritage asset can be experienced or that can be experienced from or with the asset.

Setting is not a heritage asset, nor a heritage designation. Its importance lies in what it contributes to the significance of the heritage asset. This depends on a wide range of physical elements within, as well as perceptual and associational attributes, pertaining to the heritage asset's surroundings... In some instances the contribution made by setting to the asset's significance is negligible; in others it may be the greatest contribution to significance.

The HVIA below sets out to determine the magnitude of the effect (with reference to the Sinclair-Thomas Matrix and other guidance, see below) and the sensitivity of the heritage asset to that effect. The fundamental issue is that proximity and visual and/or aural relationships may affect the experience of a heritage asset, but if setting is tangential to the significance of that monument or structure, then the impact assessment will reflect this.

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

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

On a landscape scale, views, taken in the broadest sense, are possible from anywhere to anything, and each may be accorded an aesthetic value according to subjective taste. Given that terrain, the biological and built environment, and public access restrict our theoretical ability to see anything from anywhere, in this assessment the term *principal view* is employed to denote both the deliberate views created within designed landscapes, and those fortuitous views that may be considered of aesthetic value and worth preserving. It should be noted, however, that there are distance thresholds beyond which perception and recognition fail, and this is directly related to the scale, height, massing and nature of the heritage asset in question. For instance, beyond 2km the Grade II cottage comprises a single indistinct component within the wider historic landscape, whereas at 5km or even 10km a large stately home or castle may still be recognisable. By extension, where assets cannot be seen or recognised i.e. entirely concealed within woodland, or too distant to be distinguished, then visual harm to setting is moot. To reflect this emphasis on recognition, the term landmark asset is employed to denote those sites where the structure (e.g. church tower), remains (e.g. earthwork ramparts) or – in some instances – the physical character of the immediate landscape (e.g. a distinctive landform like a tall domed hill) make them visible on a landscape scale. In some cases, these landmark assets may exert landscape primacy, where they are the tallest or most obvious man-made structure within line-of-sight. However, this is not always the case, typically where there are numerous similar monuments (multiple engine houses in mining areas, for instance) or where modern developments have overtaken the heritage asset in height and/or massing.

In making an assessment, this document adopts the conservation values laid out in *Conservation Principles* (English Heritage 2008), and as recommended in the Setting of Heritage Assets (page 17 and appendix 5). This is in order to determine the relative importance of *setting* to the significance of a given heritage asset. These values are: *evidential*, *historical*, *aesthetic* and *communal*.

4.2.1 Evidential Value

Evidential value is derived from the potential of a structure or site to provide physical evidence about past human activity, and may not be readily recognised or even visible. This is the primary form of data for periods without adequate written documentation. Individual wind turbines tend to have a very limited impact on evidential value as the footprint of the development tends to be relatively small. It is, however, the least equivocal value: evidential value is absolute, all other ascribed values are subjective.

4.2.2 Historical Value

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

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

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

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

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

Individual wind turbines tend to have a limited impact on historical value, save where the illustrative connection is with literature or art (e.g. Constable Country).

4.2.3 Aesthetic Value

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

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

Some aesthetic value developed *fortuitously* over time as the result of a succession of responses within a particular cultural framework e.g. the seemingly organic form of an urban or rural landscape or the relationship of vernacular buildings and their materials to the landscape.

Aesthetic values are where a proposed wind turbine would have its principle or most pronounced impact. The indirect effects of turbines are predominantly visual, and their height and moving parts ensure they draw attention within most vistas. In most instances the impact is incongruous;

however, that is itself an aesthetic response, conditioned by prevailing cultural attitudes to what the historic landscape should look like.

4.2.4 Communal Value

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

Commemorative and symbolic value reflects the meanings of a place to those who draw part of their identity from it, or who have emotional links to it e.g. war memorials. Some buildings or places (e.g. the Palace of Westminster) can symbolise wider values. Other places (e.g. Porton Down Chemical Testing Facility) have negative or uncomfortable associations that nonetheless have meaning and significance to some and should not be forgotten.

Social value need not have any relationship to surviving fabric, as it is the continuity of function that is important.

Spiritual value is attached to places and can arise from the beliefs of a particular religion or past or contemporary perceptions of the spirit of place. Spiritual value can be ascribed to places sanctified by hundreds of years of veneration or worship, or wild places with few signs of modern life. Value is dependent on the perceived survival of historic fabric or character, and can be very sensitive to change.

Individual wind turbines tend to have a limited impact on present-day communal value. However, where the symbolic or spiritual value is perceived to be connected to the wild, elemental or unspoilt character of a place, the construction and operation of a wind turbine would have a pronounced impact. In the modern world, communal value most clearly relates to high-value ecclesiastical buildings and sites (e.g. holy wells) that have been adopted by pagan groups. In the past, structures, natural sites or whole landscapes (e.g. stone circles, barrows, rocky outcrops, the environs of Stonehenge) would have had a spiritual significance that we cannot recover and can only assume relate in part to locational and relational factors.

4.2.5 Summary

As indicated, individual wind turbine developments have a minimal or tangential effect on most of the heritage values outlined above, largely because the footprint of the development is relatively small and almost all effects are indirect. The principle values in contention are aesthetic/designed and, to a lesser degree aesthetic/fortuitous, as wind turbines are, despite the visual drawbacks, part of the evolution of the historic landscape. There are also clear implications for other value elements (particularly historical/associational and communal/spiritual).

4.3 Likely Impacts of the Proposed Development

4.3.1 Types and Scale of Impact

Three types of archaeological impact associated with wind turbine developments have been identified, as follows:

- Construction phase The construction of the wind turbine will have direct, physical impacts on the buried archaeology of the site through the excavation of the turbine foundations, the undergrounding of cables, and the provision of any permanent or temporary vehicle access ways into and within the site. Such impacts would be permanent and irreversible.
- Operational phase A wind turbine might be expected to have a visual impact on the settings of some key heritage assets within its viewshed during the operational phase, given the height of the masts (41m to tip). Such factors also make it likely that the development would have an impact on Historic Landscape Character, although given the frequency of single wind turbines within the surrounding landscape it is arguable that wind turbines themselves form a key element of the area's landscape character. The operational phase impacts are temporary and reversible.
- Cumulative Impact a single wind turbine will have a visual impact, but a second and a third
 turbine in the same area will have a synergistic and cumulative impact above and beyond that of a
 single turbine. The cumulative impact of a proposed development is particularly difficult to
 estimate, given the assessment must take into consideration operational, consented and
 proposals in planning.

4.3.2 Scale and Duration of Impact

Impact Assessment

The impacts of a wind turbine on the historic environment may include positive as well as adverse effects. However, turbines of any scale are large, usually white, and inescapably modern intrusive visual actors in the historic landscape. Therefore the impact of a wind turbine will almost always be **neutral** (i.e. no impact) or **negative** i.e. it will have a **detrimental impact** on the setting of ancient monuments and the vast majority of protected historic buildings.

For the purposes of this assessment, these impacts are evaluated on a six-point scale based on the one presented in *Seeing History in the View* (English Heritage 2011b), and in line with best practice as outline in the GLVIA (2013, 38):

Neutral	No impact on the heritage asset.
Magligible	واطنوني وطيروس ومنطسية وطلا وسوطالا

Negligible Where the turbine may be visible but will not impact upon the setting

of the heritage asset, due to the nature of the asset, distance,

topography, or local blocking.

Negative/unknown Where an adverse impact is anticipated, but where access cannot be

gained or the degree of impact is otherwise impossible to assess.

Negative/minor Where the turbine would impact upon the setting of a heritage asset,

but the impact is restricted due to the nature of the asset, distance, or

local blocking.

Negative/moderate Where the turbine would have a pronounced impact on the setting of a

heritage asset, due to the sensitivity of the asset and proximity of the

turbine; it may be ameliorated by local blocking or mitigation.

Negative/substantial Where the turbine would have a severe impact on the setting of a

heritage asset, due to the particular sensitivity of the asset and/or close physical proximity; it is unlikely local blocking or mitigation could

ameliorate the impact of the turbine in these instances.

Group Value Where a series of similar or complementary monuments or structures

occur in close proximity their overall significance is greater than the sum of the individual parts. This can influence the overall assessment.

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Permanent/irreversible Where the impact of the turbine is direct and irreversible e.g. on

potential buried archaeology beneath the turbine base.

Temporary/reversible Where the impact is indirect, and for the working life of the turbine i.e.

c.25 years.

In addition, the significance of a monument or structure is often predicated on the condition of its upstanding remains, so a rapid subjective appraisal was also undertaken.

Condition Assessment

Excellent The monument or structure survives intact with minimal modern damage or

interference.

Good The monument or structure survives substantially intact, or with restricted

damage/interference; a ruinous but stable structure.

Fair The monument or structure survives in a reasonable state, or a structure that

has seen unsympathetic restoration/improvement

Poor The monument survives in a poor condition, ploughed down or otherwise

slighted, or a structure that has lost most of its historic features

Trace The monument survives only where it has influenced other surviving elements

within the landscape e.g. curving hedgebanks around a cropmark enclosure.

Not applicable There is no visible surface trace of the monument.

Note: this assessment covers the survival of upstanding remains; it is not a risk assessment and does not factor in potential threats posed by vegetation – e.g. bracken or scrub – or current farming practices.

Wherever possible, the monuments and structures that fall within the ZTV, or which have been identified as being particularly important, have been visited by SWARCH personnel and the impact assessment reflects the experience of the site as it currently survives. However, it is not usually possible to visit sites on privately-owned land, or identify those that may lie within a large group of buildings. On the basis that to do anything else would be misleading, an assessment of negative/unknown is usually applied. A *probable* impact assessment can be made, based on topographical mapping, aerial photography and views from the closest point of public access, but this can be no substitute for a site visit.

4.3.3 Statements of Significance of Heritage Assets

The majority of the heritage assets – the 'landscape receptors' – considered in the historic visual impact assessment (below) have statutory protection:

Scheduled Monuments

In the United Kingdom, a Scheduled Monument is considered an historic building, structure (ruin) or archaeological site of 'national importance'. Various pieces of legislation, under planning, conservation, etc., are used for legally protecting heritage assets given this title from damage and destruction; such legislation is grouped together under the term 'designation', that is, having statutory protection under the *Ancient Monuments and Archaeological Areas Act 1979*. A heritage asset is a part of the historic environment that is valued because of its historic, archaeological, architectural or artistic interest; those of national importance have extra legal protection through designation.

Important sites have been recognised as requiring protection since the late 19th century, when the first 'schedule' or list of monuments was compiled in 1882. The conservation and preservation of

these monuments was given statutory priority over other land uses under this first schedule. County Lists of the monuments are kept and updated by the Department for Culture, Media and Sport. In the later 20th century sites are identified by English Heritage (one of the Government's advisory bodies) of being of national importance and included in the schedule. Under the current statutory protection any works required on or to a designated monument can only be undertaken with a successful application for Scheduled Monument Consent. There are 19,000-20,000 Scheduled Monuments in England.

Listed Buildings

A Listed building is an occupied dwelling or standing structure which is of special architectural or historical interest. These structures are found on the Statutory List of Buildings of Special Architectural or Historic Interest. The status of Listed buildings is applied to 300,000-400,000 buildings across the United Kingdom. Recognition of the need to protect historic buildings began after the Second World War, where significant numbers of buildings had been damaged in the county towns and capitals of the United Kingdom. Buildings that were considered to be of 'architectural merit' were included. The Inspectorate of Ancient Monuments supervised the collation of the list, drawn up by members of two societies: The Royal Institute of British Architects and the Society for the Protection of Ancient Buildings. Initially the lists were only used to assess which buildings should receive government grants to be repaired and conserved if damaged by bombing. The Town and Country Planning Act 1947 formalised the process within England and Wales, Scotland and Ireland following different procedures. Under the 1979 Ancient Monuments and Archaeological Areas Act a structure cannot be considered a Scheduled Monument if it is occupied as a dwelling, making a clear distinction in the treatment of the two forms of heritage asset. Any alterations or works intended to a Listed Building must first acquire Listed Building Consent, as well as planning permission. Further phases of 'listing' were rolled out in the 1960s, 1980s and 2000s; English Heritage advise on the listing process and administer the procedure, in England, as with the Scheduled Monuments.

Some exemption is given to buildings used for worship where institutions or religious organisations have their own permissions and regulatory procedures (such as the Church of England). Some structures, such as bridges, monuments, military structures and some ancient structures may have Scheduled Monument status as well as Listed Building status. War memorials, milestones and other structures are included in the list and buildings from the first and middle half of the 20th century are also now included as the 21st century progresses and the need to protect these buildings or structures becomes clear. Buildings are split into various levels of significance; Grade I, being most important; Grade II* the next; with Grade II status being the most widespread. English Heritage Classifies the Grades as:

Grade I buildings of exceptional interest, sometimes considered to be **internationally important** (forming only 2.5% of Listed buildings).

Grade II* buildings of particular importance, **nationally important**, possibly with some particular architectural element or features of increased historical importance; more than mere special interest (forming only 5.5% of Listed buildings).

Grade II buildings that are also **nationally important**, of special interest (92% of all Listed buildings).

Other buildings can be Listed as part of a group, if the group is said to have 'group value' or if they provide a historic context to a Listed building, such as a farmyard of barns, complexes of historic industrial buildings, service buildings to stately homes etc. Larger areas and groups of buildings which may contain individually Listed buildings and other historic homes which are not Listed may be protected under the designation of 'conservation area', which imposes further regulations and restrictions to development and alterations, focusing on the general character and appearance of the group.

Parks and Gardens

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

Many heritage assets have settings that have been designed to enhance their presence and visual interest or to create experiences of drama and surprise. Views and vistas, or their deliberate screening, are key features of these designed settings, providing design axes and establishing their scale, structure, layout and character (The Setting of Heritage Assets 2011, 10).

4.4 Methodology

The methodology adopted in this document is based on that outlined in *The Setting of Heritage Assets* (English Heritage 2011), with reference to other guidance, particularly the *Visual Assessment of Windfarms: Best Practice* (University of Newcastle 2002) and *Conservation Principles* (English Heritage 2008) The assessment of visual impact at this stage of the development is an essentially subjective one, and is based on the experience and professional judgement of the authors (see GLVIA 2013, 21-2).

Visibility alone is not a clear guide to visual impact: "the magnitude or size of windfarm elements, and the distance between them and the viewer, are the physical measures that affect visibility, but the key issue is human perception of visual effects, and that is not simply a function of size and distance" (University of Newcastle 2002, 2). People perceive size, shape and distance using many cues, so context is critically important. For instance, research on electricity pylons (Hull & Bishop 1988) has indicated scenic impact is influenced by landscape complexity: the visual impact of pylons is less pronounced within complex scenes, especially at longer distances, presumably because they are less of a focal point and the attention of the observer is diverted. There are many qualifiers that serve to increase or decrease the visual impact of a proposed development (see Table 2), some of which are seasonal or weather-related.

The principal consideration of this assessment is not visual impact *per se*. It is an assessment of the likely magnitude of effect, the importance of setting to the significance of heritage assets, and the sensitivity of that setting to the visual intrusion of the proposed development. The schema used to guide assessments is shown in Table 3 (below). A key consideration in these assessments is the concept of *landscape context* (see below).

4.4.1 Assessment and Landscape Context

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

Landscape context is based on topography, and can vary in scale from the very small – e.g. a narrow valley where views and vistas are restricted – to the very large – e.g. wide valleys or extensive upland moors with 360° views. Where very large landforms are concerned, a distinction can be drawn between the *immediate context* of an asset (this can be limited to a few hundred metres or less, where cultural and biological factors impede visibility and/or experience), and the *extended context* (i.e. the wider landscape within which the asset sits). A similar distinction between *immediate* and *extended* or *wider* context appears in the ICOMOS *Xi'an Declaration* (2005) and the ASIDHOL2 (CADW 2007, 20).

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

4.4.2 The Sinclair-Thomas Matrix

The Sinclair-Thomas Matrix was developed in order to predict the likely visual impact of windfarms in the wider landscape. This work took place in the late 1990s and remains virtually the only guidance on the subject. It was used, for instance, to help guide the development of the Cornwall planning advice (2013) on wind turbines (Nick Russell, pers. comm.).

In the following table (Table 2), the figures quoted were developed with regard to windfarms rather than individual wind turbines, and should in this instance be treated as a worse-case scenario. Subsequent work has suggested it over-estimates the impact at middle distances, as it takes no account of differing landscape character or visual context (University of Newcastle 2002, 61).

The distances quoted are predicated on clear visibility, and local weather conditions would have a marked impact on the visibility of any given turbine. Work by Bishop (2002), undertaken with computer simulations and using a turbine 63m to tip, noted the following:

- The most significant drop in recognition rates occurred at 8-12km (clear air) and 7-9km (light haze);
- Visual impact drops rapidly at 4km and is at <10% at 6km in clear air;
- Visual impact drops rapidly at 4km and is at <10% at 5km in light haze;
- Low contrast in light haze reduces the distance threshold by 20%;
- High contrast can dramatically increase the potential impact of white towers;
- Ratings were highly sensitive to changing atmospheric conditions.

Land at Lower Tregolls Farm, St Wenn, Cornwall

Descriptors	Zone		Height to tip (m)		
		41-45	52-55	70	95
		Approx	cimate Dist	tance Rang	ge (km)
Dominant : due to large scale, movement, proximity and number	А	0-2	0-2.5	0-3	0-4
Prominent: major impact due to proximity, capable of dominating the landscape	В	2-4	2.5-5	3-6	4-7.5
Moderately intrusive ; clearly visible with moderate impact, potentially intrusive	С	4-6	5-8	6-10	7.5-12
Clearly visible with moderate impact, becoming less distinct	D	6-9	8-11	10-14	12-17
Less distinct : size much reduced but movement still discernible	E	9-13	11-15	14-18	17-22
Low impact: movement noticeable in good light, becoming components in overall landscape	F	13-16	15-19	19-23	22-27
Becoming indistinct with negligible impact on the wider landscape	G	16-21	19-25	23-30	27-35
Noticeable in good light but negligible impact	Н	21-25	25-30	30-35	35-40
Negligible or no impact	I	25	30	35	40

Table 2: The modified Sinclair-Thomas Matrix (after 1999). The relevant distance range is highlighted.

In the following assessment, heritage assets have been divided up according to Sinclair-Thomas Matrix zone.

Table 3: The conceptual model for visual impact assessment proposed by the University of Newcastle (2002, 63), modified to include elements of *Assessment Step 2* from the Setting of Heritage Assets (English Heritage 2011a, 19).

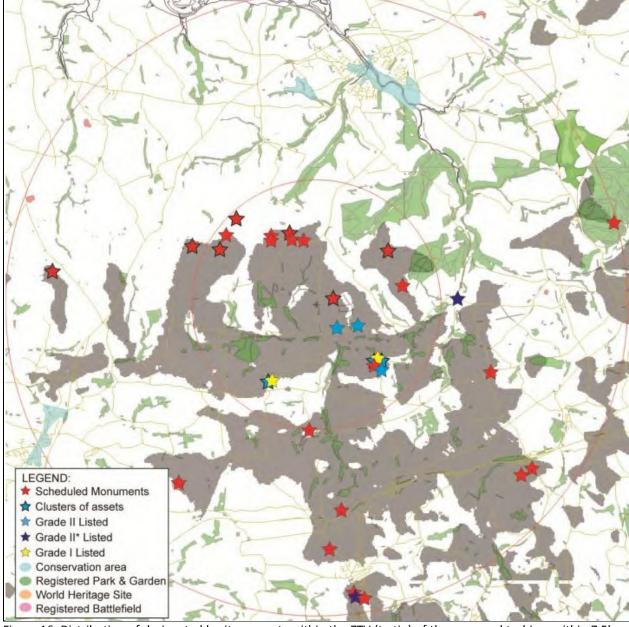


Figure 16: Distribution of designated heritage assets within the ZTV (to tip) of the proposed turbine: within 7.5km, based on an observer height of 2m (based on a ZTV supplied by Cleanearth Energy) (© English Heritage 2014. Contains Ordnance Survey data © Crown copyright and database right 2014. The English Heritage GIS Data contained in this material was obtained on 16.12.13).

4.5 Results of the Viewshed Analysis

The viewshed analysis indicates that the Zone of Theoretical Visibility (ZTV) in this landscape will be fairly comprehensive within 3km; subject to local blocking, only the deeper valleys will avoid theoretical intervisibility. The high ground to the south around Castle Dinas and Belowda Beacon limits views beyond to the south-west, south and south-east. The ZTV was mapped to a total distance of 10km from the turbine site by Cleanearth Energy the figures presented here are based on that ZTV. The visibility of the proposed turbine will diminish with distance, and may be locally blocked by intervening buildings within settlements by individual trees, hedgebanks, woodlands and natural topography, particularly to the north-east. Theoretical visibility has been assessed as the visibility to the blade tip (41m). Up to 3km Listed Buildings (of all grades) were considered; at

5-7.5km only Grade II* and Grade I Listed Buildings, Scheduled Monuments and Registered Parks and Gardens and Registered Battlefields were considered.

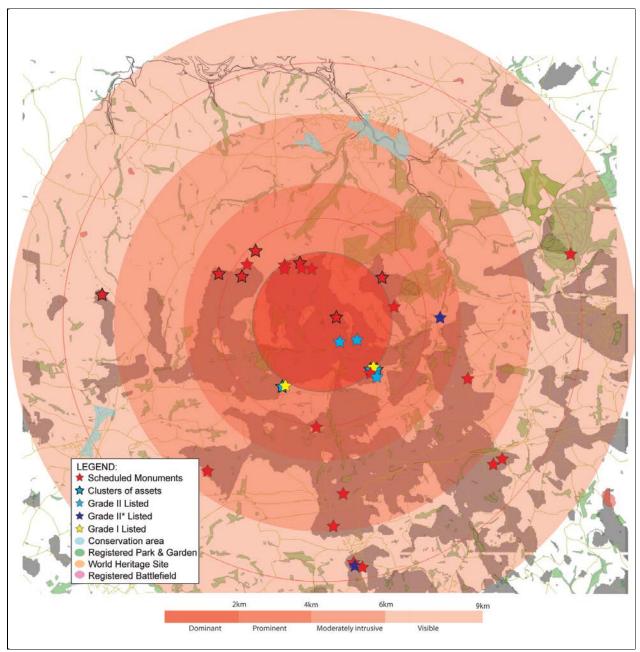


Figure 17: Distribution of designated heritage assets within the ZTV (to tip) of the proposed turbine, out to 7.5km, based on an observer height of 2m (based on a ZTV supplied by Cleanearth Energy), related to the Sinclair-Thomas Matrix (© English Heritage 2014. Contains Ordnance Survey data © Crown copyright and database right 2014. The English Heritage GIS Data contained in this material was obtained on 16.12.13).

4.6 Field Verification of ZTV

On the whole, the ZTV mapping was found to be a fairly accurate representation of the likely intervisibility between the proposed wind turbine and the surrounding landscape out to 5km and beyond, with all the heritage assets that landscape encompasses. Two Grade II Listed buildings or groups of buildings and six Scheduled Monuments or groups of monuments lie on the ZTV within

2km. Overall, the ZTV demonstrates the proposed turbine may be intervisible with 22 Scheduled Monuments or groups of monuments, two Grade I Listed buildings, two Grade II* Listed buildings, and six Grade II Listed buildings or groups of buildings. The Conservation Areas at Wadebridge, St Breock and St Columb Major fall just outside the ZTV, but are included in Figures 16-17. The largest collection of the Scheduled Monuments lie on the high downs to the north and northwest, which comprise an extensive Prehistoric funerary landscape of regional importance, but already compromised by several windfarms.

4.7 The Structure of Assessment

Given the large numbers of heritage assets that must be considered by the HVIA, and with an emphasis on practicality and proportionality (see *Setting of Heritage Assets* page 15 and 18), this HVIA groups and initially discusses heritage assets by category (e.g. churches, historic settlements, funerary remains etc.) to avoid repetitious narrative; each site is then discussed individually, and the particulars of each site teased out. The initial discussion establishes the baseline sensitivity of a given category of monument or building to the projected visual intrusion, the individual entry elaborates on local circumstance and site-specific factors.

It is essential the individual assessments are read in conjunction with the overall discussion, as the impact assessment is a reflection of both.

4.8 Impact by Class of Monument or Structure

4.8.1 Farmhouse and Farm Buildings

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

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

The setting of the farmhouse is in relation to its buildings or its internal or structural features; farmhouses were rarely built for their views, but were practical places of work, developed when the farm was profitable and neglected when times were hard. In some instances, model farms were designed to be viewed and experienced, and the assessment would reflect this.

Historic farm buildings are usually surrounded by modern industrial farm buildings, and if not, have been converted to residential use, affecting the original setting. Wind turbines will usually have a restricted impact on the meaning or historical relevance of these sites.

What is important and why

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

Sinclair-Thomas Matrix Zone A: Dominant

- Tregolls Farmhouse; medium significance; Grade II Listed; condition: good. Distance to turbine: c.0.7km. The farm is set back into the south-facing banks of the river valley, the main frontage looking south across the valley and away from the turbine. The house is tall and may have clear views over the trees to the north, west and east. The barns and buildings are set down and are lower than the house and the views between and across the farmstead are protected by mature trees which will block views. The valley context and wider landscape setting of the farm will be completely altered for the life of the turbine, there are however numerous turbines within the wider landscape. The farm itself will have no direct views, but when approaching the farm from the east, along the parish road, the turbine will appear on the skyline, above the farm and carry the eye away from the asset, affecting our experience of their 'setting', even if the immediate setting itself is little affected; impact: negative/minor.
- Tregustick Farmhouse; medium significance; Grade II Listed; condition: good. Distance to turbine: c.1.2km. The farm is set back into the south-facing banks of the river valley, looking south. To the west of the farmhouse the extensive farm buildings have been converted to provide additional dwellings. Extensive modern barns enclose the asset to the south. The ground rises up to the west and the trees and hedgebanks of the landscape will successfully block views to the turbine. The turbine will affect the general landscape context of the farm, the valley and the wider landscape setting, although numerous turbines already stand in this landscape. The setting within the small farming hamlet and the farmland will not be affected. When approaching from the east, along the road the turbine will be clearly visible as a skyline feature and will carry the eye upwards away from the farm and buildings, but not from within their immediate surroundings. When looking across the valley from the south and south-east the turbine again will carry the eye to the skyline, away from the farmstead, however the farm was not built to be visually prominent, but for serving its landholding, so a change in its landscape presence has less effect than for other asset types; impact: negative/minor.

4.8.2 Listed cottages and structures within Historic Settlements Clusters of Listed Buildings within villages or hamlets; occasionally Conservation Areas

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

Most village settlements have expanded significantly during the 20th century, with rows of cottages and modern houses and bungalows being built around and between the older 'core' Listed structures. The character of the settlement and setting of the heritage assets within it are continually changing and developing, as houses have been built or farm buildings have been converted to residential properties. The setting of these heritage assets within the village are rarely influenced the erection of wind turbines, unless they are located in close proximity to the

settlement. The relationships between the houses, church and other Listed structures will not be altered, and it is these relationships that define their context and setting in which they are primarily to be experienced.

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

What is important and why

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

Sinclair-Thomas Matrix Zone A: Dominant

Withiel: Withiel House and outbuildings attached to rear; Gateway with gate at the south entrance to Withiel House; The Old Rectory; Pair of gate piers, gate and garden walls attached to E of the Old rectory; Wall with gateway and attached privy; Buscomb monument in the churchyard; Lavender cottage; Withiel Post Office; Menaghyty; South View; all medium significance; Grade II Listed; conditions: fair to good. Distance to turbine: c.1.9-2.2km. These assets are all set within the village of Withiel, and most have some level of local blocking, either as a result of their wooded grounds (e.g. the Old Rectory and Withiel House) or from other buildings within the village (e.g. South View). The prominent topographical position of the village, on north and east facing slopes, will however afford direct views towards the turbine to the north-west, most notably from the lane north of the churchyard, and when approaching the village from the high ground to the south. The turbine will rise behind, affecting our understanding of the village as a whole. The cottages to the north side of the village street will have direct views from their back windows, the main streetscape however and views to the church will be largely unaffected. The settings and experience of the assets from within the village would not be affected, and most assets will have no views of the turbine. The turbine stands outside of the landscape context of the village but directly within

its wider landscape setting. There will be views from where the village opens up and the allotments and fields north of the church allow views to open countryside. Consequently the turbine will be visible from the main street of the village, by the bus stop, but only for a limited area; impact: **negative/minor** to **negative/moderate** on the village; **negligible** to **negative/minor** for the individual Grade II Listed assets.

Sinclair-Thomas Matrix Zone B: Prominent

• St. Wenn: Hutching Monument; Merifield Monument; Steps, Walls and Coffin Rest; Farmhouse 100m NW of church of St Wenna; medium significance; Grade II Listed; conditions: fair. Distance to turbine: c.2.3km. The assets within the churchyard will all be blocked from views by the school, and their settings cannot be intruded upon by the proposed turbine. The farmhouse's setting within the village and its views to the school and church will not be affected. It is set into the bank and there will be some limited views to the north from its rear windows, however it is still part of a working farm and the large modern farm buildings to the north-west shield the building from wide or direct views. The turbine will directly affect the wider landscape setting of the village but numerous wind turbines already stand within this landscape and do not affect our experience or understanding of the structures or the village. They do however, affect views and there will be an element of cumulative impact within those views by adding another turbine; impact: negligible.

4.8.3 Churches and pre-Reformation Chapels

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

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

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

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

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

As the parishes in Devon and Cornwall can be relatively small (certainly in comparison with the multi-township parishes of northern Britain) the tower would be visible to the residents of multiple parishes. This would have been a clear expression of the religious devotion – or rather, the competitive piety – of a particular social group. This competitive piety that led to the building

of these towers had a very local focus, and very much reflected the aspirations of the local gentry. If the proposed turbine is located within the landscape in such a way to interrupt line-of-sight between towers, or compete with the tower from certain vantages, then it would very definitely impact on the setting of these monuments.

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

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

What is important and why

Churches are often the only substantial medieval buildings in a parish, and reflect local aspirations, prosperity, local and regional architectural trends; they usually stand within graveyards, and these may have pre-Christian origins (evidential value). They are highly visible structures, identified with particular geographical areas and settlements, and can be viewed as a quintessential part of the English landscape (historical/illustrative). They can be associated with notable local families, usually survive as places of worship, and are sometimes the subject of paintings. Comprehensive restoration in the later 19th century means many local medieval churches are associated with notable ecclesiastical architects (historical/associational). They are often attractive buildings that straddle the distinction between holistic design and piecemeal/incremental development, all overlain and blurred with the 'patina of age' (aesthetic/design and aesthetic/fortuitous). They have great communal value, perhaps more in the past than in the present day, with strong commemorative, symbolic, spiritual and social value. In general terms, the evidential, historical and communal value of a church would not be particularly affected by individual wind turbine developments; however, the aesthetic of the tower and its role as a visible symbol of Christian worship in the landscape/soundscape could be.

Sinclair-Thomas Matrix Zone A: Dominant

• Church of St Clement, Withiel; high significance; Grade I Listed; condition: excellent. Distance to turbine: c.2km. Parish church with 13th century foundations, with a nave and chancel of the 14th century, alterations and additions of the late 15th century and extensive 19th century restoration. The tower is of three-stages with set-back buttresses, embattled parapet, with octagonal piers and crocketed pinnacles. Set in the village of Withiel, north of the Manor, Rectory and a large farmstead, which all have wooded grounds. To the west are a small collection of houses and terraced cottages. The setting of the church within the village will be unaffected, but there will be views to the turbine from the church tower. The landscape context is the high ground, the valleys to the north, east and west and the rising high ground to the south. The turbine stands outside of this landscape context but stands within the wider landscape setting. From the high ground to the south, at the cross-roads, the views across Withiel will include the turbine, which will frame all views to the north-west; impact: negative/minor.

Sinclair-Thomas Matrix Zone B: Prominent

• Church of St Wenna, St Wenn; high significance; Grade I Listed; condition: good. Distance to turbine: c.2.2km. A 15th century parish church with later 15th additions. Partly restored in the 1820s and fully restored in the 1860s. Granite ashlar west tower, of two stages, with set-back

buttresses, embattled parapet and crocketed finials. Set in the village of St Wenn, in a wooded sub-ovoid enclosure, north of a large house, and south of the 19th century village school. The village is very small comprised of these three key buildings and a few cottages, with scattered outlying farms. The ground falls away steeply from the village, to the south-east, west and north and a ridge of high ground runs to the east, rising higher with a peak about 1-2km, to the east. The school and trees block the churchyard and body of the church from any views but there will be clear views to the turbine from the church tower. The setting of the church, amongst the churchyard and the village is unaffected. The views will most definitely be affected, the views back from the high ground around St Breock Downs and Scotland Corner, to St Wenn, will be interrupted by the turbine. Views from the south-west, near Castle-an-Dinas and Roche, to the south will also include the turbine, which will frame views to the village of St Wenn; impact: negative/minor.

Sinclair- Thomas Matrix Zone D: Visible

• Church of St Gomonda, Roche; high significance; Grade II* Listed; condition: good. Distance to turbine: *c*.7.1km. A 14th century parish church with potential Norman origins, partly rebuilt in the 15th century. Significantly altered in the 1920s and heavily restored in the 1890s. Three stage tower, butressed, with embattled parapet, with polygonal corners, and carved figure corbels or masks. Set in a heavily wooded churchyard, which opens on the eastern side. A house lies within the wooded enclosure to the north, framed by agricultural fields and extensive modern housing. These block the body of the church from views to the landscape to the north, but not the tower, which naturally rises up above the other houses and buildings. There will be distant views from the church tower but the setting of the church will not be affected and the turbine will be too far away to frame any key views, such as to Roche Chapel; impact: negligible.

4.8.4 Ruined Churches and Pre-Reformation Chapels Chapels, current, former and ruined

The significance of these Christian sites is very variable. Some chapels were later medieval in date and associated with the homes of the landed gentry; in these instances the chapel will usually lie within the curtilage of other Listed structures and assessed as part of that group. In these instances, the chapel may be elaborate, but it was not the religious and social focus for a parish. Thus the setting is restricted to its immediate surroundings unless it forms part of a wider designed landscape associated with the House. In these instances, the impact on the chapel of a wind turbine would be subsumed within the assessment of the House and its landscape.

Some late medieval chapels were built to address the needs of distant parishioners in large parishes, but remained non-parochial. In these instances, the chapel was subordinate to the parish church, and its architectural pretensions rather more muted. These buildings tend to be simpler and smaller than parish churches, unless they were established in locations that subsequently became populous, whereupon they became parochial and are dealt with elsewhere (above). In most cases, the impact of a wind turbine would be muted.

Some chapels have very early origins, and the location and setting of these chapels is of significance to our understanding of the building, its function, and the development of early Christianity. They could be built in remote coastal or upland locations, and their significance may partly be derived from their relationship with existing Prehistoric or Roman remains. In these instances, the impact of a wind turbine would be severe, as it would be any other intrusive modern element.

Some of these buildings are no longer places of worship: some lie in ruins, others have been turned to other uses. For those that have been converted into dwellings, the original use of the structure has been lost, with a commensurate impact on the significance of the site. For those places that lie in ruins, the impact of a wind turbine can be enhanced, as they may possess the qualities of remoteness and tranquillity. In these instances, the impact of a turbine could be severe.

What is important and why

Anglican or private chapels can preserved medieval fabric and may reflect regional architectural trends, but are more often represent examples of the local vernacular (evidential value). They are not usually visually impressive structures, though notably exceptions do exist and some may be termed iconic (e.g. St Michael's Chapel on Roche Rock) (historical/illustrative). They exist because of local need and often at the behest of the local gentry, and may form part of a complex of buildings associated with, or integral to, the local manor house; they are also places of worship (historical/associational). They can be attractive buildings, more often a product of piecemeal/incremental development overlain by the 'patina of age' (aesthetic/fortuitous). They may retain communal value, with strong commemorative, symbolic, spiritual and social value where they survive as places of worship. Ruined examples may foster a different aspect of spirituality, that of decrepitude and 'wildness'. Converted examples retain the shell but lose the meaning.

Sinclair-Thomas Matrix Zone D: Visible

• St Michael's Medieval Chapel, Roche Rock; high significance; Scheduled Monument and Grade I Listed; condition: fair. Distance to turbine: c.7.2km. Built into a rocky outcrop, which forms a shallow Tor/outcrop, south-east of the village of Roche. The fabric of the chapel is built into the rock and is clearly intended to be a key visual feature in the local landscape, adjacent to a main route through the village of Roche. The chapel is clearly visible to the north, north-east, north-west, west and south-west. The chapel will be widely visible to much of its wider landscape setting; the turbine stands far outside of the landscape context of the asset. The chapel itself has small window openings, one in its eastern gable and one to the west, being built into the rock to north and south, therefore its outlook is largely irrelevant, the windows would have been to light the church, not for views. The value of the building is in its unusual form, location, its survival, and its architectural merit, none of these factors would be affected by the proposed turbine. The setting on the rocky outcrop and in relation to the village is unaffected and the turbine would stand too far away to visually compete or affect the views towards the asset. It also would not frame views; although there is a cumulative effect; impact: negligible.

4.8.5 Playing Places and Preaching Pits Medieval religious theatres and Nonconformist venues

A distinctive feature of the Cornish religious landscape was the playing place (plen an gwary) and the preaching pit: both were sunken theatres, usually circular, with raised banks provided with seating. The playing places were constructed to function as open-air theatres for the performance of Cornish miracle plays, religious dramas which lasted over a period of two or three days, describing biblical events or possibly the life of a saint (Lyon 2003, 2). They could be bespoke or re-use an existing structure or monument. Preaching pits could re-use existing playing places or be constructed de novo (e.g. Gwennap Pit). In terms of setting, the emphasis of these sites is on the drama or sermon taking place in the centre of the pit, not on the wider landscape location. Visibility within the landscape does not seem to have been a particular issue, save where an earlier monument was adopted, and thus retains prior landscape presence.

What is important and why

Both forms of retain important structural information, although modern excavations have been limited in extent and results (evidential). Some have very clear historical associations with saints (e.g. St Piran's Round) and Nonconformist preachers (e.g. Gwennap Pit and John Wesley) (historical/associational). There is a design aesthetic, but as they tend to re-use existing structures, it is more often a case of fortuitous development than conscious design (aesthetic/fortuitous). They once possessed clear communal value, in some cases retained into the modern day today (e.g. St. Piran's Round) but this is now more symbolic and social than spiritual.

Sinclair-Thomas Matrix Zone D: Visible

• A Prehistoric henge, reused as a playing place, in medieval times, near Castle Hill Farm; high significance; Scheduled Monument; condition: fair to good. Distance to turbine: c.6.5km. The asset survives above ground with some earthworks visible amongst gorse and scrub. The asset now lies immediately south of the large modern junction of the A30, leading to St Austell, with the A391, to the east, a small parish road to the west and the A30 to the north. A farmhouse frames it to the south. This is the landscape context of the asset and the turbine does not stand within this context or obscure or interrupt views within it. The enclosure in which the henge is to be found is fringed by tall hedge-banks and is now very inward looking. The immediate surroundings have changed so much in the 20th century; they now completely dominate what once would have been a visible feature. It cannot otherwise be seen and the wider public would never know it was there, it is also not accessible. It has no surviving wider landscape presence; impact: neutral.

4.8.11 Holy Wells

Holy wells are often very found in very secluded locations, or in association with churches or chapels. These are also usually very intimate monuments or structures, with little frame of reference with regard to the wider landscape. As such, unless located in immediate proximity to a proposed turbine, the impact of these developments is likely to be minimal.

What is important and why

Designated holy wells usually possess a wellhouse or related structural elements (evidential), and this may possess aesthetic/design value. They are usually associated with a particularly saint and/or some curative property (historical/associational). Most have lost all communal value, though some spiritual value may be regained where they are adopted by modern pagans.

Sinclair-Thomas Matrix Zone C: Moderately Intrusive

• Holy Well near Roche Station; high significance; Scheduled Monument; condition: unknown. Distance to turbine: c.5km. This feature appears to only be a below ground feature, it therefore has no known outward views, or landscape presence so cannot be affected by the turbine. The setting of the holy well within the landscape around the village of Roche, will not be affected. There will be no views; impact: neutral.

4.8.12 Memorials, Crosses and Inscribed Stones

Memorials are typically located in order to be seen, often at road junctions, high points or central locations within the communities that they were designed to evoke remembrance within. Many examples are located within churchyards or cemeteries, but those which are typically afforded statutory protection are those located outside of these bounds. Context and setting is often confined to the settlement with which they are associated and therefore wind turbines, when visible at a distance, do not affect their relationships with their surroundings or public

understanding of their meaning and significance. Some large (primarily 19_{th} century) memorials are afforded a much wider setting by their prominent positioning on hilltops above settlements, and in these instances they are more sensitive to wind turbine developments.

Most medieval 'wayside' crosses are *ex-situ*. Many examples have been moved and curated in local churchyards, often in the 18th or 19th century, and the original symbolism of their setting has been lost. Therefore, context and setting is now the confines of the church and churchyard, where they are understood as architectural fragments associated with earlier forms of religious devotion. Therefore wind turbines, when visible at a distance, do not affect their relationships with their new surroundings or public understanding of their meaning and significance. This is not the case for those few wayside crosses that survive at or near their original location. This class of monument was meant to be seen and experienced in key spiritual locations or alongside main routeways, so the significance of the remaining few *in situ* examples is enhanced.

Inscribed stones are memorials erected during the early medieval period; these can survive *in situ*, but more often now found in churchyards. They essentially constitute the only written records for this period.

What is important and why

Inscribed stones are often the only written sources from the early medieval period (evidential). All have strong communal value, in terms of commemorative power and symbolic associations (communal).

Sinclair-Thomas Matrix Zone A: Dominant

• Wayside Cross in the grounds of the former Rectory at Withiel; high significance; Scheduled Monument; condition: unknown. Distance to turbine: c.2km. The cross is situated in private grounds/gardens, but may have stood alongside the small track or former road which runs from the parish road to the east, to a house and turns running south-east back to another road to the south. It may have been moved in the 19th century to form a feature, in the grounds. In which case it is not in its intended setting. The general area certainly has distant views back towards the high ground. The grounds and gardens are wooded with a dense wooded fringe which significantly blocks much of the outer views. The landscape context of the cross is now the gardens of the house, the turbine does not intrude in any views within or across the gardens or grounds. The 'setting' of the cross will not be affected; impact: neutral.

Sinclair-Thomas Matrix Zone C: Moderately Intrusive

• Cross at Higher Woodley; high significance; Scheduled Monument; condition: good. Distance to turbine: c.4.5km. Set along the old coach road, on the south side of the road. The cross is only a small stone feature, on the grassy roadside banks. It will be comprehensively blocked by the barns and stone buildings of Fernside Farm, which lies directly to the north, on the opposite side of the road. Views to the asset are therefore limited to the roadscape, to the east and west. There may be general views from the location and along the road but these will have little, to no effect on the asset; impact: negligible.

4.8.13 Hillforts and Earthworks

Hillforts, tor enclosures, promontory forts, cross dykes, dykes

Hillforts are large embanked enclosures, most often interpreted as fortifications, and usually occupy defensible and/or visually prominent positions in the landscape. They are typically visible from all or most of the surrounding lower and higher ground, with the corollary that they enjoyed extensive views of the surrounding countryside. As such, they are as much a visible statement of

power as they are designed to dissuade or repel assault. The location of these sites in the landscape must reflect earlier patterns of social organisation, but these are essentially visual monuments. They are designed to see and be seen, and thus the impact of wind turbines is often disproportionately high compared to their height or proximity.

Tor enclosures are less common, and usually only enclose the summit of a single hill; the enclosure walls is usually comprised of stone in those instances. Cross dykes and promontory forts are rather similar in nature, being hill spurs or coastal promontories defended by short lengths of earthwork thrown across the narrowest point. Both classes of monument represent similar expressions of power in the landscape, but the coastal location of promontory forts makes them more sensitive to visual intrusion along the coastal littoral, due to the contrast with the monotony of the sea. Linear earthworks are the cross dyke writ large, enclosing whole areas rather than individual promontories. The investment in time and resources these monuments represent is usually far greater than those of individual settlements and hillforts, requiring a strong centralised authority or excellent communal organisation.

It is not always clear when a large earthwork enclosure (e.g. a round) can be classified as a small hillfort. However, hillforts invariably occupy strong natural positions in the landscape, whereas other forms of enclosed settlement need not.

What is important and why

Large Prehistoric earthwork monuments contain a vast amount of structural and artefactual data, and represent a considerable time and resource investment with implications of social organisation; they were also subject to repeated reoccupation in subsequent periods (evidential). The more monumental examples may be named and can be iconic (e.g. Maiden Castle, South Cadbury), and may be associated with particular tribal groups, early medieval heroes and the work of antiquarians (historical). The range in scale and location make generalisations on aesthetics difficult; all originally had a design value, modified through use-life but then subject to hundreds if not thousands of years of decrepitude, re-use and modification. The best examples retain a sense of awe and sometimes wildness that approaches the spiritual. At the other end of the scale, the cropmarks of lost fortifications leave no appreciable trace.

Sinclair-Thomas Matrix Zone B: Prominent

• Small Multivallate hillfort 127m E of Demelza Farm; high significance; Scheduled Monument; condition; fair. Distance to turbine: c.3km. This monument has been subsumed into farmland but sits on a promontory, with wide views. The monument's setting has been completely changed by the agricultural landscape. The hedgebanks and field boundaries are very mature here and the banks of the monument appear to have been re-used to form field boundaries so local blocking is quite effective at seasonally reducing views. From the east and north-east, along the road between Withiel and St. Wenn, the hillfort can be seen to the south and retains some landscape presence. Due to its situation in a complex landscape of steep valleys and rolling downs, it does not however stand out nor have any prominence. Alongside this there are now multiple wind turbines in this area, including three within close proximity of the monument; impact: negative/minor.

Sinclair-Thomas Matrix Zone C: Moderately Intrusive

• Castle-an-Dinas; high significance; Scheduled Monument, condition: good. Distance to turbine: c.5.4km. The turbine stands far outside of the landscape context of the asset. Wide 360 degree views are possible from this asset which occupies an open, exposed situation. The large wind farm near Carland Cross is very visible from this site. The outlook from such a monument is vital to our understanding of it, however, the landscape here has changed to such an extent that the landscape primacy of the monument is directly challenged already by the extant turbines so a further distant turbine will have a cumulative effect. Views towards the

monument will not be affected, and the skyline profile of the assets will be retained. The turbine will also stand outside of the landscape setting of the monument; impact: **negligible**.

Sinclair-Thomas Matrix Zone D: Visible

• Slight univallate hillfort in Dunmere Wood; high significance; Scheduled Monument; condition: unknown. Distance to turbine: c.7.4km. This asset is set on a high ridge, within a large, steep valley. It is set within woodlands and will have no outward landscape presence, its relevant landscape context in which it is experienced is limited to the woodland only and the proposed turbine is so distant that it will have no effects on the assets setting or its (now limited) views and we can no longer experience or understand the asset as intended; impact: neutral.

4.8.14 Prehistoric Ritual/Funerary Monuments Stone circles, stone rows, barrows and barrow cemeteries

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

What is important and why

Prehistoric ritual sites preserve information on the spiritual beliefs of early peoples, and archaeological data relating to construction and use (evidential). The better examples may bear names and have folkloric aspects (historical/illustrative) and others have been discussed and illustrated in historical and antiquarian works since the medieval period (historical/associational). It is clear they would have possessed design value, although our ability to discern that value is limited; they often survive within landscape palimpsests and subject to the 'patina of age', so that fortuitous development is more appropriate. They almost certainly once possessed considerable communal value, but in the modern age their symbolic and spiritual significance is imagined or attributed rather than authentic. Nonetheless, the location of these sites in the historic landscape has a strong bearing on the overall contribution of setting to significance: those sites located in 'wild' or 'untouched' places – even if those qualities are relatively recent – have a stronger spiritual resonance and illustrative value than those located within enclosed farmland or forestry plantations.

Sinclair-Thomas Matrix Zone A: Dominant

• Platform barrow, disc barrow and saucer barrow near St Breock Beacon; high, to very high significance, Scheduled Monument group; conditions: fair. Distance to turbine: c.1.8km. Set amongst the turbines of the large St Breock Down wind farm, these important monuments form part of a wider relict landscape, but will have the impact of the proposed turbine negated by the extensive effects of the extant wind farm. This wind farm subsumes the features, reduces all landscape presence and blocks their former visual functional relationship with the landscape. Another turbine will not impact any further on these monuments which are already dominated by the extant turbines, in terms of both their setting on the former open down, and in their views. The existing turbines are already framing all views inwards and outwards; impact: negligible.

- The St Breock Downs monolith and surrounding cairn; Standing stone 815m W of St Breock Farm; high significance; Scheduled Monuments; conditions: good. Distance to turbine: c.1.7km. These are upstanding features which hold local landscape primacy in their immediate surroundings. They cannot however, be seen wider afield as any landscape presence is subsumed by the extant wind farm which frames all views, appearing behind on the higher ground immediately behind. The turbine will be visible within the very different landscape to the south-south-east, outside of the landscape context of these monuments. The views from the assets to the south and east, in which the turbine would appear, are the only open views remaining. Their settings are already compromised so remaining open views hold higher significance; impact: negative/moderate to negative/minor.
- Two bowl barrows, south-east of Tregolls; high significance; Scheduled Monuments, conditions: fair. Distance to turbine: c.0.5km. There are other undesignated barrows in poor condition in the surrounding fields. The turbine stands directly within the landscape setting of these barrows. They are now however, to be found within agricultural fields, enclosed by tall hedgebanks, which means the landscape context for each barrow is limited to their individual field enclosures. There are general views from the area up to the relict prehistoric landscape on St Breock Down. There are also extant general views from the area to the wind farm at St Breock. The turbine stands across the road on high ground and despite key views being down the valley to the south and south-east, the upper parts of the turbine are expected to be visible from the assets. At such close proximity this can only be considered negative, as the turbine will affect the character of the setting; impact: negative/moderate to negative/minor.
- Bowl barrow on St Breock Down Farm; high significance; Scheduled Monument; condition: good. Distance to turbine: c.1.6km. This is a large and well preserved mound on the open rough grazing of the partially enclosed down. It stands above the wire fences and hedges and is visible from the landscape in which the proposed turbine stands, and there will be direct intervisibility. The skyline profile of this barrow is distinct and the topography shields views towards the monument from the existing wind farm turbines, allowing some landscape primacy which would be intruded upon in some views by the proposed turbine; impact: negative/moderate.

Sinclair-Thomas Matrix Zone B: Prominent

- Three bowl barrows at Pawton Springs; high significance, Scheduled Monument group; condition: fair to poor. Distance to turbine: c.2.8km. Set in agricultural fields and enclosures of rough grazing, west of the large St Breock Down wind farm, on the upper northern slopes of a valley which drops to a wooded base. These have significance as a group of features, within a wider relict landscape, with other funerary and ritual features. The landscape setting of these assets is the high downs area, in which they lie on the very edge. They now lie in a different cultural landscape as they have been enclosed in an agricultural intake. The turbine stands outside of the landscape context of the downs, but does stand in the wider landscape setting of the improved farmland. The wind farm on St Breock Down, dominates the wider landscape setting. The turbine will be visible to some extent from the surroundings of the barrows, if not directly from the shallow mounds themselves, so the experience will be affected by its appearance within views, especially in terms of cumulative impact. The setting will be unaffected, and the proposed turbine will not frame any key views; impact: negative/minor.
- Round Barrow Cemetery on Hustyn Downs; very high significance, a large group of barrows, Scheduled Monuments, condition: fair to poor. Distance to turbine: c.2.2km. There is a very dense plantation of conifer trees planted across the downs, on eastern and southern slopes and any barrows within the plantation are completely enclosed by the trees and will have no outward views. The turbine stands outside the landscape context of these barrows, but within the wider setting; impact: neutral for barrows in the trees; impact: negligible to negative/minor for those in the fields and on the downs.
- Eight round barrows north of Scotland Corner; high, to very high significance, Scheduled Monument group; conditions: excellent to poor. Distance to turbine: *c*.3.3km. These assets lie

on private farmland but can be viewed from surrounding roads and a nearby footpath. The barrows lie on the high downs, within enclosures of wire fences, consequently views between the groups of barrows are uninterrupted thus strengthening the group context and providing a setting to each other. The barrows still lie in an open position and retain landscape presence. The ground falls away shallowly to the east towards the ridge of ground running north to St Breock Down. There is a large line of pylons which crosses just north of this group and the St Breock Down wind farm lies within the same wider landscape setting; the turbine does not stand within this landscape context. Key views are north to the other features on St Breock Downs and to the west, to the coast. The busy A39 road runs just to the west, altering the once open landscape setting of these assets. Our experience of these assets is altered by their enclosure within fields and by the modern impacts which are already extant. These factors mitigate but do not remove the impact of the addition of a further turbine; impact: negative/minor.

- Bowl barrow called Tregawne Barrow; high significance; Scheduled Monument; condition: unknown. Distance to turbine: c.2.2km. This barrow is set within the field system on the high down, on the same high ridge as Hustyn Downs. This area has been enclosed into the agricultural landscape and the barrow no longer holds wider landscape presence and cannot be seen from the parish road or nearby footpaths, so may only survive as a shallow mound blocked by field banks; impact: negative/unknown is applied but negligible is expected.
- A bell barrow, a bowl barrow and a platform barrow 620m west of Higher Cransworth; high significance; Scheduled Monuments; conditions: fair. Distance to turbine: c.2.6km. These stand on the high down, in late enclosed rough grazing, divided by fences and some hedges. The turbine will stand within the more established agricultural landscape to the south-east, outside of the landscape context of these barrows, but within their wider landscape setting. There are numerous turbines already visible in this landscape as well as the large St. Breock wind farm, cumulative impact is therefore a consideration; impact: negative/minor.
- A disc barrow near Pawton Springs; high significance; Scheduled Monument; condition: fair. Distance to turbine: c.2.7km. Set in an agricultural field west of the large St Breock Down wind farm, this barrow would have much of its views to the proposed turbine disrupted by the hedgebanks and overgrowth growing along the wire fence as it is shallow. The proposed turbine stands outside of the assets landscape context. The extant wind farm has already had a significant impact on this area of intensive prehistoric activity and would negate any real impact from another turbine; impact: negligible.

Sinclair-Thomas Matrix Zone C: Moderately Intrusive

• Three bowl barrows, between 120m and 820m south of Brynn Barton Cottage; very high significance; Scheduled Monument group; conditions: fair to poor. Distance to turbine: c.5.8km. One barrow is clearly visible from the B3274. The field is flat, with clear views to the high ground, to the north, across the A30 road. The barrow survives only as a very shallow mound, less than 0.5m in height, and the hedge-banks which surround the field will limit and restrict any views out of its field enclosure. The fields are therefore the landscape context of these assets, the turbine stands far outside of this context and the wider setting on the level ground north of Roche. The other visible barrow, can be seen as a slightly more substantial mound set to the north of a tall mature hedge-bank. Any views between the barrows are restricted by the hedgebanks, and they have lost their functional relationship to each other, and the wider landscape. Local blocking will apply to these barrows. There will be no outward views towards the turbine from these assets and only some very limited distant views possible to the turbine from the general location; impact: negligible.

Sinclair-Thomas Matrix Zone D: Visible

 Bowl barrow, 270m south-west of Castle Hill Farm; very high significance; Scheduled Monument; condition: good. Distance to turbine: c.6.4km. Set in the middle of a block of

agricultural fields, just visible over the hedges from the A391. The land here is quite flat, looking towards the high ground. The hedge-banks and trees do provide some local blocking but are not high enough to reduce all views from the substantial overgrown mound. The mound has lost its intended open ground context and appears to be a solitary feature, however, it retains a local landscape presence which will not be interrupted by the turbine. The turbine stands far outside of this landscape context and the landscape setting on the level plain north of Roche. The current setting within the fields will not be affected, but there may be distant views towards the turbine; impact: negligible.

• Nine round barrows 850m north of Pennatille; high to very high significance, Scheduled Monument group; condition: generally fair. Distance to turbine: c.6.4km. Visible from the B3274 road to the east. Set on a high ridge of ground. Those barrows which are still upstanding, have significant landscape presence in their immediate surroundings with views over hedgebanks, but a restricted presence wider afield as they are situated in a complex landscape which includes several wind farms. The turbine stands far outside the wider landscape setting of the assets, the foothills of St Breock Downs. However a large wind farm lies immediately west, just off the peak of the slight knoll on which these barrows stand and this wind farm dominates their immediate surroundings. Cumulative impact should be considered here as the turbine is adding to the extensive numbers now within this landscape; impact: negligible to negative/minor.

4.8.22 Historic Landscape General Landscape Character

The landscape of the British Isles is highly variable, both in terms of topography and historical biology. Natural England has divided Devon and Cornwall into roughly 15 'character areas' based on topography, biodiversity, geodiversity and cultural and economic activity. Both councils, AONBs and National Parks have undertaken similar exercises, as well as Historic Landscape Characterisation.

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

As wind turbines proliferate, it may not be long before the cumulative impact on the historic landscape character of certain areas becomes **substantial/irreversible**.

• The proposed turbine would be erected within the *St Breock Downs* Landscape Character Area (LCA), close to the edge of the *Camel and Allen Valleys* LCA (Cornwall Council). The *St Breock Downs* is characterised as an open landscape with limited areas of open ground enclosed largely in the 19th and 20th centuries. Windfarm and mast development are already listed as key landscape characteristics for this LCA. From a historic landscape perspective, the proposed turbine would clearly be an intrusive new element in this landscape, but it is not unprecedented. The *Camel and Allen Valleys* LCA is described as undulating plateau dissected by steep valleys, with dispersed clustered settlements and some nucleated settlements focused on Medieval churchtowns. This character area is noted for being a landscape of contrasts with wooded valleys with enclosed vistas and long-ranging views from the plateau tops. The overall sensitivity of these LCAs to wind turbine developments varies; for the St

Breock Downs, sensitivity is assessed as *low-moderate*, for the Camel and Allen Valleys, *moderate*, (Cornwall Council 2013b).

- The biggest issue, in a landscape sense, is clearly that of cumulative impact. The St Breock Downs already feature two large windfarms and numerous individual turbines, with a reasonably large number under consideration. Despite the number and character of Scheduled funerary monuments on the Downs, under the guidance issued by Cornwall Council (2013b) it is apparent it has been identified as an area suitable for such development. The proposed turbine would be located at the edge of the Downs, and in an area of greater visual complexity and thus arguably better able to withstand the effects of wind turbine development. However, the presence of turbines in this area would serve to erode the relative distinctiveness of these LCAs, especially when wind energy generation is a key characteristic of one of them already. On that basis, the overall impact on the historic environment is assessed as negative/moderate.
- The turbine will affect the immediate archaeology within the field permanently/irreversibly
 and during its operating time of 25 years it will have a temporary/reversible effect on the
 wider landscape and the heritage assets it contains as once it has fulfilled its role, it can
 technically be removed.

4.8.23 Aggregate Impact

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

The proportion of heritage assets in this area likely to suffer any appreciable negative effect includes a fair number of designated heritage assets. The assessment for ten assets or groups of assets is rated as negative/minor. The impact on a further five assets or group of assets; is rated as negative/moderate or negative/minor to negative/moderate. However, given that the proposed turbine will not affect the immediate setting of any of these assets, and that the higher impact levels are largely as a result of cumulative impact, the aggregate impact is taken to be negative/minor to negative/moderate.

4.8.24 Cumulative Impact

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

The Setting of Heritage Assets 2011a, 25

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

GLVIA 2013, 123

The visual impact of individual wind turbines can be significant, but the cumulative impact of wind energy generation will undoubtedly soon eclipse this. An assessment of cumulative impact is, however, very difficult to gauge, as it must take into account operational turbines, turbines with

planning consent, and turbines in the planning process. The threshold of acceptability has not, however, been established, and landscape capacity would inevitability vary according to landscape character.

In terms of cumulative impact in this landscape, the proposed turbine would be located in close proximity to two smaller operational/approved turbines — Higher Tregolls (1×34.2m) and Bosneives Hill (1×34.6m) — and at a slightly greater distance from numerous large turbines, particularly to the north-east on St Breock Downs (see Figure 16). A large number of turbines are also in screening within the wider study area, particularly to the south and north-east of the proposed turbine.

In terms of receptors, there are a number of high-value heritage assets within 5km that will enjoy intervisibility with the proposed turbine; the high-value sites tend to cluster on the tops of the Downs, where vistas are less restricted and thus cumulative impact is an issue. The proposed turbine would appear separate from most of the other turbines within this landscape, and sometimes within views from high value assets (primarily barrows) which are presently unintruded by turbines. The complexity of the landscape would however serve to diminish the overall visual impact of the development to some extent; impact: negative/moderate to negative/substantial.

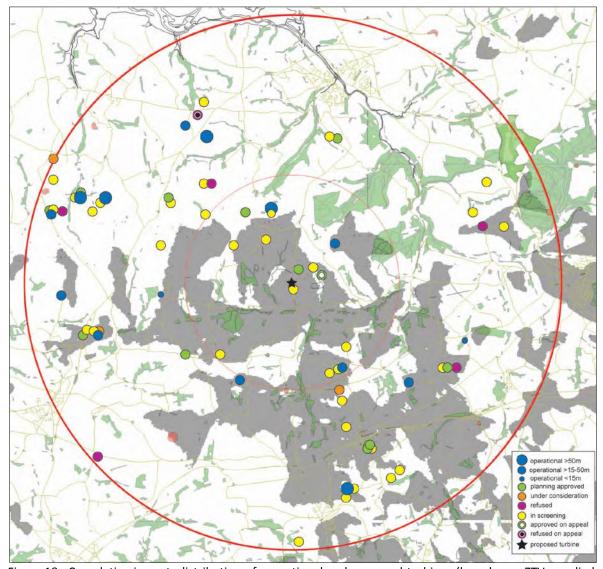


Figure 18: Cumulative impact: distribution of operational and proposed turbines (based on a ZTV supplied by Cleanearth Energy and data from Cornwall Council, as of 01.09.14).

4.9 Summary of the Evidence

ID	UID	Name	NGR	Assessment		
SCHEDULED ANCIENT MONUMENTS						
SAM	CO841	Two Bowl barrows 385m SE of Higher Tregolls	SW9833366899	Negative/minor to negative/moderate		
SAM	CO357	Bowl barrow 540m WSW id St Breock Down Farm	SW9759868214	Negative/moderate		
SAM	CO474	A platform barrow, a saucer barrow and a disc barrow 470m ENE of St Breock Beacon	SW9737668449	Negligible		
SAM	15002	St Breock Downs Monolith and surrounding cairn	SW9678868312	Negative /miner to negative /mederate		
	CO358	Standing stone 815m W of St Breock Farm	SW9731668266	Negative/minor to negative/moderate		
SAM	CO336	Burial chamber on St Breock Downs	SW9678468233	Negative/minor to negative/moderate		
SAM	CO241	Wayside Cross in the grounds of the former	SW9930065258	Neutral		
		rectory at Withiel 70m SW of the house		Neutrai		
SAM	CO475	Disc Barrow 485m SW of Pawtonsprings	SW9572068376	Negligible		
SAM	CO476	A bell barrow, a bowl barrow and a platform	SW9554868101	Negative/minor		
		barrow 620m west of Higher Cransworth		Negative/IIIIIoi		
SAM	CO505	Three bowl barrows 200m NW of Pawtonsprings	SW9596268761	Negative/minor		
SAM	CO843	Round barrow cemetery on Hustyn Downs	SX0008268013	Neutral to negative/minor		
SAM	CO842	Bowl barrow called Tregawne Barrow	SW9996367138	Negative/unknown		
SAM	CO908	Small Multivallate hillfort 127m E Of Demelza Farm	SW9772963652	Negative/minor		

SAM	32987	Eight round barrows N of Scotland Corner, 980m	SW9454568230				
SAIVI	32907	SW of Pawton Gate Farm	3009454506250	Negative/minor			
SAM	CO636	Holy Well NW of Roche Station	SW9850661723	Neutral			
SAM	CO839	Three Bowl barrows between 120m and 820m S of	SW9819461378	Nedual			
SAIVI	CO833	Brynn Barton Cottage	3003013401378	Negligible			
SAM	CO93	Large Multivallate hillfort with two bowl barrows	SW9454462367				
37 (17)	CO 33	known as Castle-an-Dinas, 335m N of Tresaddern	3003434402307	Negligible			
		Bungalow		1.08.000			
SAM	CO204	Wayside cross 330m NNW of Higher Woodley	SX0207865059	Negligible			
SAM	32985	Nine round barrows 850m NE of Pennatillie	SW9143367592	Negligible to negative/minor			
SAM	CO429	Slight univallate hillfort in Dunmere Wood 235m	SX0507068650				
		WNW of Crabb's Pool [Borderline]		Neutral			
SAM	CO110	Henge reused as a medieval playing place	SX0311162755	Neutral			
SAM	CO907	Bowl barrow 270m SW of Castle Hill Farm	SX0283562578	Negligible			
SAM	28448	Churchyard cross in Roche churchyard	SW9879459776				
SAM,	CO191	Medieval chapel of St. Michaels on Roche Rock	SW9911159617				
GI		[borderline]		Negligible			
GRADE I LISTED STRUCTURES							
GI	67625	Church of St. Clement, Withiel	SW9942665384	Negative/minor			
GI	71325	Church of St Wenna, St. Wenn	SW9679064835	Negative/minor			
		GRADE II* LISTED STR	UCUTRES				
GII*	70980	Church of St. Gomonda, Roche	SW9879659796	Negligible			
GII*	67605	Ruthern Bridge	SX0130066830				
	GRADE II LISTED STRUCUTRES						
GII	71331	Tregolls Farmhouse	SW9834266118	Negative/minor			
GII	676148	Tregustick Farmhouse	SW9886466189	Negative/minor			
GII		Withiel:					
	67621	Withiel House and outbuildings attached to rear	SW9936465296				
	67623	The Old Rectory	SW9939165367				
	67624	Pair of gate piers, gate and garden walls attached	SW9942065367				
	67626	to the Old rectory	SW9942165372				
	67627	Wall with gateway and attached privy	SW9944265381	Negative/minor to negative/moderate			
	67628	Buscomb monument in the churchyard	SW9947765411	30.1 1, 11 10 10 10			
	67629	Lavender cottage; Withiel post office	SW9952565409				
	67630	Menaghyty	SW9954765396				
	67622	South View	SW9943165125				
		Gateway with gate at the south entrance to Withiel house					
GII		St Wenn:					
dii	71326	Steps, walls and coffin rest, St Wenna churchyard	SW9677064829				
	71320	Hutchings Monument	SW9679664857	Negligible			
	71327	Merifield Monument	SW9677464853	TTCBIIBIOIC			
	71329	Farmhouse 100m NW of church of St Wenna	SW9675564879				
		CONSERVATION A					
CA	-	Wadebridge	SW9895471969				
CA	_	St. Breock	SW9779171783				
CA	-	St. Columb Major	SW9124062349				
		,					
-	-	Historic Landscape Character	-	Negative/moderate			
-	-	Aggregate Impact	-	Negative/minor to negative/moderate			
-	-	Cumulative Impact	-	Negative/moderate to			
		·		Negative/substantial			
		ry of impacts Sinclair Thomas Matrix colour co					

Table 4: Summary of impacts. Sinclair-Thomas Matrix colour code: RED = Dominant Zone; ORANGE = Prominent Zone; YELLOW = Moderately Intrusive Zone; GREEN = Visible Zone. Assets in grey are listed but were not assessed as they fall outside of the ZTV.

5.0 Conclusions

5.1 Discussion and Conclusion

The proposed turbine would be installed on land that historically belonged to Tregolls, a small but seemingly independent holding comprised of two or more separate tenements. It came into the possession of the Robartes family of Lanhydrock, and possibly in association with the 'manor' of Tregustick. The turbine would be located on land north-west of the farm which from at least the end of the 17th century was a single large enclosure known as Black Down. The geophysical survey that was undertaken indicates two removed historic field boundaries and a single most likely post-medieval linear anomaly. There is no trace of the probable barrow indicated on the HER in the geophysical or LiDAR survey results.

The site is located on the south facing slope on the edge of the St Breock Downs (to the north) and above a tributary of the River Camel. The site lies within *modern enclosed land*, with medieval settlements and fields to the south. In this complex landscape, new, tall vertical elements will be visible, but their prominence will diminish quickly with distance.

There are two Grade I and two Grade II* Listed buildings or groups of buildings within 7.5km of the site that fall within the ZTV, together with six Grade II Listed buildings or groups. There are 22 relevant Scheduled Monuments within 7.5km, almost all of which are Prehistoric round barrows, primarily found on the Downs to the north of the proposed site. There are further designated assets, primarily Grade II Listed buildings and Conservation Areas, which fall outside of the ZTV.

Most of the designated heritage assets in the wider area are located at such a distance to minimise the impact of the proposed turbine, or else the contribution of setting to overall significance is less important than other factors. The landscape context of many of these buildings and monuments is such that they would be partly or wholly insulated from the effects of the proposed turbine by a combination of local blocking, and the topography, or that other modern intrusions have already impinged upon their settings. However, the presence of a new, modern and visually intrusive vertical element in the landscape would impinge in some way on at least ten of these heritage assets (negative/minor or negligible to negative/minor), and have a more serious impact on the village of Withiel, the two bowl barrows south-east of Higher Tregolls; bowl barrow WSW of St Brerock Down Farm; St Breock Down Monolith and Cairn; Standing Stone 815m west of St Breock Farm; and Burial Chamber of St Breock Downs (negative/moderate or negative/minor to negative/moderate). Cumulative impact is a clear issue for this site, given the presence of an operational windfarm, numerous individual turbines, and a large number of proposed turbines.

With this in mind, the overall impact of the proposed turbine can be assessed as **negative/moderate**. The impact of the development on the buried archaeological resource will be **permanent/irreversible**.

6.0 Bibliography & References

Published Sources:

Beacham, P. & Pevsner, N. 2014: *The Buildings of England: Cornwall.* London.

Cadw 2007: Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process, 2nd edition.

Cornwall Council 2012: *Technical Paper E4 (b) Annex 1: Landscape Sensitivity and Strategy Matrices for each Landscape Character Area.*

Cornwall Council 2013a: *The Development of Onshore Wind Turbines*. Renewable Energy Planning Guidance Note 3.

Cornwall Council 2013b: An Assessment of the Landscape Sensitivity to On-shore Wind Energy and Large-scale Photovoltaic Development in Cornwall.

Bishop, I.D. 2002: 'Determination of the thresholds of visual impact: the case of wind turbines', *Environment and Planning B: Planning and Design* 29, 707-18.

English Heritage 2005: Wind Energy and the Historic Environment.

English Heritage 2008: Conservation Principles: policies and guidance for the sustainable management of the historic environment.

English Heritage 2011a: *The Setting of Heritage Assets*.

English Heritage 2011b: Seeing History in the View.

Gelling, M. & Cole, A. 2000: The Landscape of Place-Names. Shaun Tyas.

Highland Council 2010: Visualisation Standards for Wind Energy Developments.

Historic Scotland 2010: *Managing Change in the Historic Environment: Setting.*

Hull, R.B. & Bishop, I.D. 1988: 'Scenic impacts of electricity transmission towers: the influence of landscape type and observer distance', *Journal of Environmental Management* 27, 99-108.

ICOMOS 2005: Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas.

Landscape Institute 2013: *Guidelines for Landscape and Visual Impact Assessment*, 3rd edition. London.

Landscape Institute 2011: *Photography and Photomontage in Landscape and Visual Impact Assessment*. Advice Note 01/11

Scottish Natural Heritage 2005: *Cumulative Effect of Windfarms*, Version 2 revised 13.04.05.

Scottish Natural Heritage 2006: Visual Representation of Windfarms: Good Practice Guidance.

Soil Survey of England and Wales 1983: Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations).

University of Newcastle 2002: *Visual Assessment of Windfarms: Best Practice*. Scottish Natural Heritage commission report F01AA303A.

Websites:

British Geological Survey 2012: *Geology of Britain Viewer*.

http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html [accessed 19.05.2014]

Unpublished Sources:

CAU 2012a: Tregustick Farm, Withiel, Geophysical Survey: Statement of Archaeological Implications. CAU Report 2012R011.

CAU 2012b: Higher Tregawne, Withiel, Cornwall: Archaeological Assessment of Proposed Wind Turbine. CAU Report 2012R008.

CAU 2008: Hustyns to Burlawn SWW Pipeline, Cornwall. February 2008: Archaeological Watching Brief. CAU Report 2008R065.

Exeter Archaeology 2003: Archaeological watching brief, St Wenn Church. CRO AD1880/9

GSB 2012a: Tregustick Farm wind turbine, Withiel, Cornwall. GSB Survey Ref: 2012/08.

GSB 2012b: Higher Tregawne Farm, Withiel, Cornwall. GSB Survey Ref: 2012/09.

SWARCH 2014: Archaeological Monitoring for Wind Turbine and Access Road, Blable Farm, St. Issey.

Appendix 1

PROJECT DESIGN FOR DESK-BASED APPRAISAL AND VISUAL IMPACT ASSESSMENT ON LAND AT LOWER TREGOLLS FARM, ST. WENN, CORNWALL.

Location: Land Lower Tregolls Farm

Parish: St. Wenn
County: Cornwall
NGR: SW 9788466692

Planning Application ref: Pre-application

Proposal: Construction of one (41m to tip) wind turbine.

Date: 29/087/14

1.0 INTRODUCTION

1.1 This document forms a Project Design (PD) which has been produced by South West Archaeology Limited (SWARCH) at the request Jenna Folkard of Clean Earth (the Client). It sets out the methodology for desk-based research, site walkover and a visual impact assessment for related off site analysis and reporting at land at Lower Tregolls Farm, St Wenn Cornwall. The PD and the schedule of work it proposes have been drawn up in line with guidance issued by Phil Copleston of Cornwall Council Historic Environment Service (CCHES) and Nick Russell of English Heritage (EH).

2.0 ARCHAEOLOGICAL BACKGROUND

The proposed site sits approximately 2km north east from the village of St Wenn. The turbine would be located within an area characterised on the Cornwall and Scilly Historic Landscape Characterisation as post medieval enclosed land (land which would have been enclosed in the 17th, 18th and 19th centuries). Much of the land surrounding the site particularly to the south, however, is characterised as medieval farmland which falls into the category of *Anciently Enclosed Land* (AEL). THE Cornwall Historic Environment Record notes evidence for Prehistoric activity in the immediate vicinity. There is a spread of funerary monuments, including 11 barrows, within 1km of the site as well as a possible Bronze Age enclosure and Prehistoric field system. Much of this activity is concentrated approximately 300m to the east of the site, but there is one example situated in the same field as the proposed turbine (MCO3043).

3.0 AIMS

- 3.1 The principal objectives of the work will be to:
 - 3.1.1 Undertake a desk-based appraisal of the site;
 - 3.1.2 Undertake a walkover survey of the site;.
 - 3.1.3 Identify and assess the significance of the likely landscape and visual impacts of the proposed development through the use of view-shed-analysis;
 - 3.1.4 Identify and assess the significance of the likely landscape and visual impacts of the proposed development through the use of view-shed-analysis:
 - 3.1.5 Assess the direct visual effects of the proposed development upon specific landscape elements and historic assets through the use of photo-montages, including views from key features looking toward the development site, and showing scale images of the proposed turbine superimposed thereon;
 - 3.1.6 Produce a report containing the results of the desk-based research and the visual impact assessment;
 - 3.1.7 Provide a statement of the impact of the proposed development on the potential archaeological resource, with recommendations for those areas where further evaluation and/or mitigation strategies may be required.

4.0 METHOD

4.1 Desk-based Appraisal:

The programme of work shall include desk-based research to place the development site into its historic and archaeological context. This will include examination of material currently held in the Cornwall County Council Historic Environment Record and examination of readily available cartographic sources.

4.2 Walkover survey:

The site of the turbine and the length of the access track/other infrastructure will be examined for evidence of archaeological remains i.e. unrecorded earthworks or artefactual material identified in the topsoil.

- 4.3 Visual Impact Assessment (VIA):
 - 4.3.1 A viewshed analysis resulting in a Zone of Theoretical Visibility (ZTV) will be supplied by the Client and this will be used during the archaeological VIA.
 - 4.3.2 Historic assets that fall within the VIA will be assessed on the basis of their intrinsic importance and the potential impact of the development following English Heritage 2012 guidelines on the Setting of Heritage Assets (http://www.english-heritage.org.uk/publications/setting-heritage-assets/). This will include: all Grade II Listed structures and exceptional un-designated assets within a 3km radius, all Grade I and Grade II* Listed buildings, Scheduled Monuments within 7.5km and all Registered Parks and Gardens, Battlefields and World Heritage Sites within a 10km. An abbreviated list of these heritage assets will be included as an appendix within the report.

- 4.3.3 Significant historic assets and monument groups will be identified and visited to assess the impact on their setting and photomontages produced in accordance with the Landscape Institute and Institute of Environmental Assessment "Guidelines for Landscape and Visual Impact Assessment" 3rd Edition 2013. This will be used to produce a statement of significance for those heritage assets potentially impacted upon by the development.
- 4.3.4 The likely impact will be assessed using the methods outlined in the English Heritage 2012 *Guidelines on the Setting of Heritage Assets.*

5.0 REPORT

- 5.1 A report will be produced and will include the following elements:
 - 5.1.1 A report number and the OASIS ID number;
 - 5.1.2 A location map, copies of the view shed analysis mapping, a map or maps showing assets referred to in the text and copies of historic maps and plans consulted shall be included, with the boundary of the development site clearly marked on each. All plans will be tied to the national grid;
 - 5.1.3 A concise non-technical summary of the project results;
 - 5.1.4 The aims and methods adopted in the course of the investigation;
 - 5.1.5 Illustrations of the site in relation to known archaeological deposits/sites around it, in order to place the site in its archaeological context;
 - 5.1.6 A statement of the impact of the proposed development on the potential archaeological resource;
 - 5.1.7 A copy of this PD will be included as an appendix.
- The full report will be submitted within three months of completion of fieldwork. The report will be supplied to the HES on the understanding that one of these copies will be deposited for public reference in the HER. A copy will be provided to the HES in digital 'Adobe Acrobat' PDF format.
- 5.3 A copy of the report detailing the results of these investigations will be submitted to the OASIS (*Online AccesS to the Index of archaeological investigations*) database.

6.0 FURTHER WORK

Should the results of this Assessment indicate a need for further archaeological works to be undertaken this would need to be completed before validation of the Planning Application in order to enable the Local Planning Authority to make an informed and reasonable decision on the application, in accordance with the guidelines contained within paragraph 141 of paragraph 128 of the National Planning Policy Framework (2012).

7.0 PERSONNEL

7.1 The project will be managed by Bryn Morris; the desk-based research and the visual impact assessment will be carried out by SWARCH personnel with suitable expertise and experience. Relevant staff of (CCHES) will be consulted as appropriate. Where necessary, appropriate specialist advice will be sought (see list of consultant specialists in Appendix 1 below).

Victoria Hosegood South West Archaeology Ltd the Old Dairy, Hacche Lane Business Park, Pathfields Business Park, South Molton, Devon EX36 3LH Telephone: 01769 573555 email: mail@swarch.net

List of specialists

Building recording

Richard Parker 11 Toronto Road, St James, Exeter. EX4 6LE, Tel: 07763 248241

Conservation

Alison Hopper Bishop The Royal Albert Memorial Museum Conservation service, a.hopperbishop@exeter.gov.uk
Richard and Helena Jaeschke 2 Bydown Cottages, Swimbridge, Barnstaple, EX32 OQD, mrshjaeschke@email.msn,com

Curatorial

Thomas Cadbury Royal Albert Memorial Museum, Gandy Street, Exeter, EX4 3LS Tel: 01392 665356

Alison Mills The Museum of Barnstaple and North Devon, The Square, Barnstaple, EX32 8LN, Tel: 01271 346747

Bone

Human Professor Chris Knusel, University of Exeter, Tel: 01392 722491, c.j.knusel@ex.ac.uk

Animal Wendy Howard, Department of Archaeology, Laver Building, University of Exeter, North Park Road, Exeter EX4 4QE

Tel: 01392 269330, w.j.howard@exeter.ac.uk

Lithics

Dr Martin Tingle Higher Brownston, Brownston, Modbury, Devon, PL21 OSQ martin@mtingle.freeserve.co.uk

Palaeoenvironmental/Organic

Wood identification Dana Challinor Tel: 01869 810150 dana.challinor@tiscali.co.uk

Plant macro-fossils Julie Jones juliedjones@blueyonder.co.uk

Pollen analysis Ralph Fyfe Room 211, 8 Kirkby Place, Drake Circus, Plymouth, Devon, PL4 8AA

Pottery

Prehistoric Henrietta Quinnell, 39D Polsloe Road, Exeter EX1 2DN, Tel: 01392 433214

Roman Alex Croom, Tyne & Wear Archives & Museums, alex.croom@twmuseums.org.uk

Medieval John Allen, Exeter, Tel: 01392 665918

Post Medieval Graham Langman, Exeter, EX1 2UF, Tel: 01392 215900, su1429@eclipse.co.uk

Appendix 2 **Key Heritage Assets**

Two bowl barrows 285m SE od Higher Tregollis

Bowl barrows, the most numerous form of round barrow, are funerary monuments dating from the Late Neolithic period to the Late Bronze Age, with most examples belonging to the period 2400-1500 BC. They were constructed as earthen or rubble mounds, sometimes ditched, which covered single or multiple burials. They occur either in isolation or grouped as cemeteries and often acted as a focus for burials in later periods. Often superficially similar, although differing widely in size, they exhibit regional variations in form and a diversity of burial practices. There are over 10,000 surviving bowl barrows recorded nationally (many more have already been destroyed), occurring across most of lowland Britain. Often occupying prominent locations, they are a major historic element in the modern landscape and their considerable variation of form and longevity as a monument type provide important information on the diversity of beliefs and social organisations amongst early prehistoric communities. They are particularly representative of their period. Despite reduction in the heights of the mounds through past cultivation, the two bowl barrows 385m south east of Higher Tregolls survive comparatively well and appear to have differing underlying constructional characteristics. They will contain archaeological and environmental evidence relating to their construction, relative chronologies, territorial significance, social organisation, ritual and funerary practices and overall landscape context. SW9833366899

Bowl barrow 540m WSW OF St. Breock Down Farm

CO357

The monument includes a bowl barrow, situated on the upper eastern slopes of the prominent ridge known as St Breock Downs. The bowl barrow survives as a circular mound, measuring up to 22m in diameter and 1.8m high. The surrounding quarry ditch, from which material to construct the mound was derived, is preserved as a buried feature. A central hollow, indicating early excavation or robbing, is now backfilled with rubble.

Standing stone 815m W of St Breock Down Farm

The monument includes a standing stone, situated close to the summit of the prominent ridge known as St Breock Downs. The standing stone survives as a tall rectangular section upright monolith set into a low circular mound. The standing stone measures approximately 2.4m high, 1.4m wide and 0.6m thick and is set into a mound measuring up to 6m in diameter and 0.1m high. The standing stone is one of two on St Breock Downs. This other standing stone, and further archaeological remains in the immediate vicinity, are the subject of separate schedulings. SW9731668266

A platform barrow, a saucer barrow and a disc barrow 470n ENE of St Breock Beacon

The monument, which falls into three areas of protection, includes one platform barrow, one saucer barrow and a disc barrow, situated on the prominent ridge called St Breock Downs, overlooking the valleys of tributaries to the River Camel. The three barrows are located in an east to west linear arrangement. The western platform barrow survives as a low flat-topped circular mound measuring up to 17m in diameter and 0.3m high, surrounded by a 2m wide and 0.2m deep ditch. The central saucer barrow has an overall diameter of 32m and survives as a circular low flat-topped mound surrounded by a 2m wide and 0.2m deep ditch with a 6m wide and 0.7m high external bank. The eastern disc barrow survives as a circular low platform of approximately 20m in diameter with a central inner mound of 7m diameter and 0.2m high. Surrounding the platform is a buried ditch and beyond this an outer bank of 3m wide and 0.2m high. Further archaeological remains survive within the vicinity of this monument and are the subject of separate schedulings SW9737668449

St Breock Downs Monolith and surrounding cairn

The monument comprises a massive standing stone located slightly SW of the centre of a low stone cairn. The standing stone is formed from the local Devonian shale with extensive feldspar veining. It stands 3.05m high but leans markedly to the N and measures 4.92m long and 1.51m by 1.07m at the base. Limited excavation of the cairn in 1956 revealed that the stone stood in a setting of quartz pebbles measuring 4.89m by 3.67m. Two small, shallow, empty hollows occurred in the subsoil beneath the pebble layer. The cairn extends to a visible diameter of c.10m and the monolith base is centred c.1.5m SW of the cairn's centre. The monument is located near the summit of the St Breock Downs in an open landscape of heath and recently improved pasture which contains many other Bronze Age ritual monuments with which this monument was probably associated, including at least, one other standing stone and a series of barrow cemeteries that extend up to 7km to the west. The monument figures in local folklore as a meeting place and it was formerly adopted as a parish boundary marker. It has been recorded by antiquarian accounts since 1613 and features in most archaeological reviews of Cornwall's monuments. The modern information sign and its concrete plinth are excluded from the scheduling, but the land beneath them is included. SW9678868312

Burial chamber of Breock Downs

CO336

No information available SW9678468233

Disc barrow 485m SW of Pawtonsprings

CO475

This monument includes a disc barrow, situated on the prominent upland ridge called St Breock Downs, overlooking several tributaries to the River Camel. The disc barrow survives as a circular outer stony bank measuring 5m wide and 0.4m high with an overall diameter of 21m which surrounds a low inner platform with a central mound of 6m in diameter and 0.2m high. The internal ditch is preserved as a buried feature, and the central mound had been disturbed by partial early excavation or robbing.

A bell barrow, bowl barrow and platform barrow 620m west of higher Cransworth

The monument, which falls into three areas of protection, includes a bell barrow, a bowl barrow and a platform barrow, situated on the prominent upland ridge known as Roseannon Downs. The bell barrow lies to the north and survives as a steep-sided circular mound with traces of an outer berm measuring up to 19.5m in diameter and 3.1m high. It has a buried outer ditch. There are several early partial excavation trenches and hollows on the mound. The central bowl barrow survives as a circular mound measuring approximately 19m in diameter and 1.8m high with a buried surrounding quarry ditch. There is a deep central excavation hollow and a partial stone kerb. The southern platform barrow survives as a low, 13m diameter, circular flat-topped mound with a buried outer ditch. The low mound has been disturbed by partial early excavation and varies in height from 0.3m to 1.1m. Further archaeological remains survive in the vicinity of the monument and are the subject of separate schedulings. SW9554868101

Three bowl barrows 200m west of pawtonsprings

The monument, which falls into three areas of protection, includes three bowl barrows, situated on the northern upper slopes of St Breock Downs. Two of the barrows are contiguous with a third to the south west. They survive as circular mounds with buried outer quarry ditches, from which material to construct the mounds was obtained. The northern barrow mound measures 8.5m in diameter and 0.8m high and three spar stones protrude from the centre near the top. The central barrow, contiguous to the first has a low mound measuring up to 9.5m in diameter and 0.6m high. The south western mound is 14m in diameter and 0.3m high. It is surrounded by a perimeter bank, with some protruding stone indicating a retaining kerb of up to 5m wide and 0.5m high. These barrows form part of an extensive and dispersed cemetery, and other barrows within it are the subject of separate schedulings. SW9596268761

A round barrow cemetery on Hustyn Downs

The monument, which falls into six areas of protection, includes a round barrow cemetery, situated on the summit of the prominent hill known as Hustyn Downs. The barrows survive as circular mounds surrounded by buried quarry ditches, from which the construction material was derived. They vary in size from 15m to 27m in diameter and from 0.6m to 3.6m high. Two have peripheral stones indicative of retaining kerbs. One has been partially cut by a field boundary, and one has a central excavation hollow and an Ordnance Survey triangulation pillar set onto it. The pillar and hedge are excluded from the scheduling but the ground beneath these features is included. The largest barrow is known locally as 'Hustyn Barrow' or the 'Great Barrow of Hustyn' and although reputedly partially excavated no finds were reported.

A bowl barrow called Tregawne Barrow

The monument includes a bowl barrow, situated on the summit of a prominent ridge forming the watershed between two tributaries to the River Camel. The barrow survives as a circular mound measuring 24m in diameter and 1.3m high. The surrounding quarry ditch, from which the construction material was derived, is preserved as a buried feature. SW9996367138

Wayside cross in the ground of the former rectory at Withiel 70m SW of House

CO241

The monument includes a wayside cross in the grounds of the former Rectory in Withiel. The cross survives as a tall decorated wheel-head and shaft set into a modern two-stepped square base and measuring up to 2.3m high. The head and shaft are decorated on both sides with a moulded relief border which runs around the edges and surrounds the equal-armed cross in relief which adorns the head. The cross formerly stood outside the entrance gate to the Rectory and was moved to its present location in about 1860. SW9930065258

Small multivallate hillfort 127M e OF Demelza Farm

The monument includes a small multivallate hillfort, situated on the upper slopes of a very prominent ridge, overlooking the valley of a tributary to the River Camel. The hillfort survives as an oval enclosure measuring approximately 120m by 110m. It is defined by two concentric ramparts with ditches which survive differentially. The inner rampart is a very steep bank of up to 3.6m high. The outer rampart is up to 4.3m high. Both ditches are preserved as largely-buried features. To the south a natural steep slope has been utilised to form part of the outer defences.

Eight round barrows N of Scotland Corner, 980m SW of Pawton Gate Farm

The monument includes eight prehistoric round barrows, situated on level or slightly sloping ground, on and around the western summit of a hill north east of St Columb Major. The barrows are associated with others beyond this scheduling, forming a distinct group within a wider barrow cemetery. The scheduling is divided into eight separate areas of protection. The barrows are spaced fairly widely and evenly, though the distances between them vary from about 50m to 350m. Three of the barrows form an alignment running NNW-SSF over the highest part of the hill. All eight command wide views, though not all are intervisible, and the group is closely associated with the boundaries of three parishes. Moving from west to east across the scheduling, the first barrow is oval in plan, measuring 19m north-south by 16.9m east-west. It has a mound of earth and stone approximately 0.5m high overall, with no evidence for a surrounding quarry ditch. In profile, the mound has a slightly concave top about 12.7m across, with a curving skirt beneath this, merging with it on the east. The second barrow, on the south west in the scheduling, is of platform type, having a relatively low, flat topped earth mound. The mound is approximately 18m in diameter, and generally around 0.5m in height although on the south east, where it projects above a slight natural gradient, it is up to 0.7m high. It has curving sides, and an uneven upper surface with a hollow towards its south east, indicating limited disturbance. There is no sign of an external ditch. The third barrow from the west is sub-circular in plan. Its mound measures 28m north east-south west by 30m north west-south east, and is 0.9m high overall. There is no trace of a ditch around it. The mound contains earth, and local slate and quartz rubble. It has a broad top, platform-like but concave, the centre being some 0.4m below the rim, and sloping sides. Around the western edge is a bank approximately 3m wide and 0.2m high, possibly the result of relatively recent disturbance. East of this is the barrow on the north of the scheduling, also the northernmost of the three aligned barrows. It has an oval mound of earth and stone and is thought to have been constructed in layers, clay type material being visible above a darker layer. It has no external ditch. The mound is oval, measuring approximately 24m across north-south by 21.5m east-west, and 1.2m high. It has a flattish top, surrounded by a shelf in the region of 1.4m wide and 0.2m-0.3m high, except on the east side where its side curves down to ground level. On the top of the barrow, west of the centre, are several modern piles of stones. A ditch along the north of the mound is also thought to be the result of relatively recent disturbance. Further east is the barrow standing on the highest point of the hill, in the middle of the scheduling, and in the centre of the alignment of three. This barrow again has an oval mound with no external ditch apparent, made of earth and stones including quartz and slate rubble. It measures 20.5m east-west by 15.8m north-south and its overall height is around 1.7m. The mound is stepped in profile, having a slightly hollow top some 10m across and up to 0.9m high, encircled by a brim around 2m wide and 0.8m high. It has been modified by erosion and by a pit around 4m across and 0.5m deep towards the east. The next barrow is the third in the alignment, and the most southerly in the scheduling. It has a sub-circular mound measuring 16.2m across north-south by 15.5m east-west, and around 0.7m high, with no surrounding ditch. The fabric of the barrow appears to include clay as well as quartz and slate stones. The mound is of platform type, with fairly steep sides and a slightly concave top. It has a modern deposit of stones towards its east side, and a hollow north of its centre. In the south east of the scheduling is a barrow thought to have been reduced in modern times, visible as a mound of dark earth with quartz rubble approximately 18m in diameter, irregular in profile but up to 0.4m high. Lastly, the easternmost barrow in this group has an oval mound, measuring 28m east-west by 25.5m north-south, and 1.7m high; again, no external ditch is known. The fabric of the mound includes clay, earth, and slate and quartz stones. The mound has a rounded, bowl type profile. It has a depression in its top, probably the result of an antiquarian excavation, and a relatively recent hollow in its south side. All modern fencing is excluded from the scheduling, although the ground beneath it is included SW9454568230

Nine round barrows 850m Ne of Pennatillie (4 here included)

32985

The scheduling includes nine prehistoric round barrows, situated on the level summit and moderate northern and western slopes of a rounded hill north of St Columb Major. They are associated with other barrows beyond this scheduling, together forming a wider hill and ridge-top barrow cemetery. The barrows are fairly widely and evenly spaced, apart from two which form a neighbouring pair. Five are dispersed west-east over the summit of the hill, though they are not very closely aligned with one another. These five command dramatic distant views north over the Camel estuary. The scheduling is divided into eight separate areas of protection. Taking first the barrow on the south west in the scheduling, at the west end of the dispersed group, this has a mound of earth and stone roughly crescent-shaped in plan, being truncated by cultivation to the east. The mound measures up to 15m across and is reduced by ploughing to a height of around 0.5m. It is modified on the east to form part of a boundary bank. There is no evidence for a ditch surrounding the mound. Moving east towards the highest point of the hill, the second barrow in this group has an earth and stone mound approximately 20m in diameter and 0.6m high. The profile of the mound is regular, smoothed by ploughing. No surrounding ditch is recorded. Further east is the pair of closely set barrows, standing on top of the hill. Each of these has an earth mound with a rounded profile; neither is considered to have an external ditch. The southern barrow of the pair has a diameter of approximately 22m, and is up to 0.9m high. The northern one is approximately 26m across, and up to 1m high. The barrow on the east of the summit, the most easterly of the dispersed group, is approximately 25m across and up to 1.2m high. Its mound rises with curving sides to a slightly flattened top, and is thought to have no surrounding ditch. Of the barrows on the north slope of the hill, the two nearest to the summit are similar in appearance, each having a mound with no known ditch, approximately 24m in diameter and 1m high. Both of these mounds are smoothed by ploughing. The northernmost barrow in the scheduling is sub-circular in plan and measures approximately 26m across and 2m high. Its mound contains earth with small rubble quartz and shillet (local stone), and has a curving profile with a flat centre to its top, smoothed and trimmed by ploughing. No external ditch is known. Lastly, the barrow on the north east shoulder of the hill has a diameter of approximately 19m. It has an earth and stone mound rising to 1.1m high with a regular rounded profile, except on the west side where the edge is reduced. Again, there are no traces of a ditch around the mound. The modern agricultural implement and fencing are excluded from the scheduling, although the ground beneath them is included. SW9143367592

Slight univallate hillfort in Dunmere Wood 235m WNW of Crabbs Pool [Borderline]

CO429

The monument includes a slight univallate hillfort, situated on the upper south eastern slopes of a prominent hill, and at the top of the steep western valley side of the River Camel. The hillfort survives as an oval enclosure measuring approximately 180m long by 135m wide defined by a single rampart bank of steep profile and up to 3m high and a rock cut outer ditch of up to 2m deep with near vertical sides in several places. There is a slightly inturned causewayed entrance to the north west. Within the interior, two slight hollows to the SSE may be terraces for houses or charcoal burning platforms. Known locally as 'Dunmere Camp', it was marked on the Ordnance Survey map of 1813 and first recorded by Maclauchlan in 1849. It belonged to the Priory of Bodmin in the medieval period and was already covered in woodland at that time. The placename 'Dun' means fort. SX0507068650

Henge reused as a medieval playing place

The monument includes a henge, re-used as a playing place, situated on the summit of a relatively low rise called Castle Hill within Innis Downs, close to the source of the Luxulyan River. The henge survives as an oval enclosure with a level interior measuring 48.8m long by 29.6m wide internally. It is defined by an approximately 1.4m high bank, inner berm and a 1.7m deep inner ditch. The bank has been partially cut by a hedge, and the ditch is largely preserved as a buried feature. There are two entrances; the one to the north is a simple causeway across the ditch and is original. The enclosure is called 'castle' on the 1840 Ordnance Survey map and is referred to as 'castilly' by 19th century writers. In 1852 R Thomas suggested it was a cattle fold but both Borlase and Henderson believed it was a medieval playing place. It was first interpreted as a henge in 1954 and in 1962 it was partially excavated by C Thomas. Although producing little in the way of finds apart from some flint flakes and medieval pottery, the work concluded that the ditch was that of a Class I henge which had been built in sections. This had been cleared and the bank remodelled during the 13th century to construct a playing place. Subsequently, the enclosed area had been re-used as a gun emplacement during the Civil War the evidence came from annon wheel ruts and cannon balls SX0311162755

Bowl barrow 3270m SW of Castle Hill Farm

ment includes a bowl barrow, situated on a prominent ridge called Innis Downs. The barrow survives as a circular mound measuring up to 15m in diameter and 1.4m high with the surrounding quarry ditch, from which the material for the construction of the mound was derived, being preserved as a buried feature. There is a central hollow indicating early partial excavation, although no details are known. The barrow was first recorded on the Tithe Map. SX0283562578

Holy well NW of Roch Station

CO636

This record has been generated from an "old county number" (OCN) scheduling record. These are monuments that were not reviewed under the Monuments Protection Programme and are some of our oldest designation records. As such they do not yet have the full descriptions of their modernised counterparts available. Please contact us if you would like further information.

Three bowl barrows between 120m and 820m S of Brynn Barton Cottage

CO839

The monument, which falls into three areas of protection, includes three bowl barrows, situated on a plateau known as Tregoss Moor. The barrows survive as circular or slightly oval mounds surrounded by buried quarry ditches, from which their construction material was derived. The southernmost mound is circular and measures 25m in diameter and 0.9m high with a small depression on the north side. The central circular mound measures up to 22m in diameter and 3.2m high and has a slightly irregular profile. It is known locally as 'Holywell Barrow'. The northern barrow is oval and stands up to 20m long by 16m wide and 0.9m high.

Churchyard cross in Roche churchyard, 10m S of the church

28448

The churchyard cross is visible as an upright granite shaft with an almost square shaped head, measuring 1.88m in overall height. The cross leans markedly towards the west. The head measures 0.67m high by 0.6m wide, the principal faces orientated east-west. Both principal faces display a low relief round boss with a bead around its base and four circular sinkings or shallow holes with slightly raised centres, one in each corner. The boss on the east face is positioned between the two lower holes, that on the west face is more centrally placed. Below the head at the neck of the cross are two projections or bosses which project 0.06m to either side of the shaft. The shaft measures 1.21m high by 0.41m wide at the base widening to 0.55m at the top, and is 0.32m thick at the base tapering slightly to 0.29m at the top. Each face of the shaft is decorated with incised lines and motifs and rows of little holes or dots. Both the east and west pattern down the length of the shaft. The south side is decorated by incised lines. The north side has a 0.06m wide bead on both edges and is decorated with transverse incised lines giving a ribbed pattern down the length of the shaft. The south side is decorated with a few dots at the top with three small incised circles and below that an incised sword complete with hilt and blade. It has been suggested that this unusual motif may represent pagan influence. There are some short incised lines to the east side of the sword blade. The shaft is set in what appeared to be a lump of concrete, but may be its base stone. This base stone, in 1896 when the historian Langdon illustrated it, was buried 0.45m below the ground surface. In 1994 when Andrew Langdon recorded it, the base was still completely buried. This base is visible to the east and south of the shaft and projects 0.42m beyond the shaft to the east and 0.35m to the south. This churchyard cross is believed to be in its original location. The incised and dotted decoration on the shaft and the unusual decoration of the head date t

Large Multivallate hillfort with two bowl barrows known as Castle-an-Dinas, 335m N of Tresaddern Bungalow

COG

The monument includes a large multivallate hillfort which contains two bowl barrows, situated at the summit of a prominent and distinctive hill known as Castle Downs. The hillfort survives as a roughly-circular enclosure covering an area of approximately 7 hectares defined by four concentric ramparts and ditches. The hillfort was first described by Hals (1655 - 1737), and historical research by Henderson in the 1930's suggested post-Roman occupation. The hillfort was partially excavated by Wailes between 1962 and 1964 when earthwork and magnetometer surveys and phosphate analysis were also completed. The work showed that all four ramparts (numbered 1 - 4 inner to outer) were of dump construction. Rampart 3 was much slighter, had up to six entrances and was stratigraphically earlier than the rest, but had never been deliberately back filled. Rampart 2 had a relatively slight outer ditch so was probably a counterscarp bank to rampart 1 which had two phases of construction. The entrance to the fort was in the south west and in rampart 1 the entrance was cobbled, stone faced and slightly inturned. Little evidence of occupation was found within the interior, although only a small area was examined. This located some post holes, the remains of a possible hut, implying short-term occupation. The spring pond on the north side of the interior was investigated for organic remains and, although proven to be artificial, no specific dating or construction evidence could be determined. Within the interior of the hillfort are two bowl barrows. The north western barrow survives as a slight uneven circular mound with some protruding stones. The south eastern barrow survives as a circular mound measuring 17m in diameter and 0.9m high with a central excavation hollow. It was investigated by Borlase in 1871 and produced two pits but no finds. SW9454462367

Wayside cross 330m NNW of Higher Woodley

CO204

The monument includes a wayside cross, situated at a cross roads called Tremore Cross on roads between the settlements of Ruthernbridge, Innis Downs, Tremore and Bodmin, and marking a route to Lanivet church. The cross survives as a decorated wheel-head and shaft set into a hedge. The cross stands to a height of 1m. The head is decorated with a an equal-armed cross with slightly extended arms in relief on both sides. Crisply carved beading surrounds the head and continues down the shaft of the cross. The cross was first illustrated by Blight and fully described by Langdon in 1896. It is believed to have been moved slightly from its original location, on an island in the centre of the crossroads, to its current location. The hedge in which it stands has been built up since 1956 - 8. It also currently marks a modern long distance footpath known as 'The Saints Way'.

SX02078650559

Church of St. Clement

6762

Parish church. C13 foundation; nave and chancel probably of C14; alterations of mid-late C15. C19 restoration. Slatestone and granite rubble with granite dressings. South aisle, porch and west tower in granite ashlar. Slate roof with crested ridge tiles and raised coped verges to gable ends. Plan: Nave and chancel in one; in circa mid C15, the north chancel aisle was added and the east end of the chancel rebuilt. Later C15 addition of south aisle and south porch, and west tower. Exterior: Nave only visible on north side; has two 3-light windows with Perpendicular tracery and relieving arch, and central pointed arched doorway, chamfered, with C19 door with studs. C19 ashlar stack. The chancel east end is on a moulded plinth, continuous with both aisles; pilasters surmounted by tall panelled piers with crocketed pinnacles; 5-light Perpendicular east window with 4-centred arch, hood mould with label stops. North chancel aisle of 3 bays, with no plinth on the north side; all windows are 3- light, with cusped lights and square hood mould. To east the verge is swept down from the chancel, with a 2-light window with cusped lights, Y tracery, 4-centred arch ad hood mould. The south aisle is of 6 bays on a hollow-chamfered plinth, with porch in second bay from west. All windows are 3-light, with cusped lights, central light taller with 4centred arch, hood mould with label stops. West end has similar larger window. East end has similar taller 4-light window with Y tracery. Gabled south porch on hollow-chamfered plinth. The outer doorway has tall 4-centred arch, hollow-chamfered with nook-shafts. C18 slate sundial with gnomon above and cross finial. Interior of porch has granite paved floor and benches to sides. C15 ceiled wagon roof with carved ribs and wall-plates, bosses probably re-carved in early C19. Holy water stoup to right with carved shield. Inner doorway has tall 3- centred arch, rollmoulded with recessed spandrels, tympanum with carved shield and leaves with wave-moulded surround. C19 door with good ironwork. The west tower is in 3 stages on chamfered plinth, setback weathered buttresses and embattled parapet with octagonal piers with crocketed pinnacles. West door with 4- centred arch and hood mould, C19 door with studs; 3-light west window with cusped lights, 4-centred arch and hood mould, 3-light bell-openings at third stage with cusped lights and Perpendicular tracery, 4-centred arch and hood mould, with wooden louvres. To north east, there is no buttress, but a stair tower with lancets. Interior: The south aisle walls are plastered, the rest in stone rubble. The nave and chancel have early C19 wagon roof with carved bosses, of similar workmanship to those at Church of St Meubred, Cardinham (q.v.). The south aisle has wagon roof with some carved ribs and wall-plate of C15, and similar bosses. The north aisle roof is ceiled. Tall round tower arch with imposts. The nave has 6-bay south arcade with Pevsner A-type piers and 4-centred arches; similar 3-bay north arcade with a C19 wooden screen across. Opening for the rood in the north and south arcades. The wall is stepped back by the north arcade at the point where the north aisle was added. Fittings: C19 wooden benches in nave and wooden pulpit; all with Gothic decorative detail. C19 marble reredos. Fine stone font in nave, probably C15, with octagonal bowl with carved panels, on octagonal carved stem with panels and cable moulding. In the north aisle, 2 carved wooden figures fixed to a scrolled board; these are probably surviving from an early screen or as corbels to the roof. Monuments in chancel: slate headstone to Henry Vyvyan, 1811, with carved figures in Gothic style; oval stone tablet to Grace Phillipps, 1818; marble tablet with urn, to Richard Frewren, 1792. The north aisle has floor paved with early C19 headstones. Glass: fragment of C15 stained glass in the east window of the south aisle, showing a shieled of arms and a bishop's mitre. Sources: Pevsner, N.: Buildings of England: Cornwall 1970. SW9942665384

Church of St. Wenna

71325

Parish church. C15, with additions of later C15. Rebuilt 1825 with work to tower and porch (dated in porch) and restored 1868 (I.C.B.S. board in vestry). Granite rubble with granite dressings. West tower in granite ashlar. Slate roof with crested ridge tiles and gable ends with scalloped slate bargeboards. Plan: Nave and chancel in one, of C15. Later C15 north and south aisles, with a south porch set in the angle between the south aisle and the nave, probably rebuilt early C19. The west tower is of the late C15, rebuilt, probably circa early C19, after partial collapse. C19 north vestry. Exterior: The nave is concealed by the aisles. The chancel has a 3-light C19 Perpendicular east window with 4-centred arch and hood mould. The north aisle is of 2 bays. Two 3light windows to north, of C19, with cusped lights, 4-centred arch and hood mould. 3-light east window, probably of the early C17, with 4-centred arches, roll-moulded, with the central light taller. Slate tablet attached to the east wall, to James Retalick, 1753. The south aisle is also of 2 bays; there are two windows to south and one to east, all as on north aisle. Gabled south porch with 4-centred arched moulded doorway, with C19 cast iron gate with mid panel of circle design. The interior of the porch has granite floor and one bench. C19 common rafter roof. Inner 4centred arched doorway with roll mouldings and recessed carved spandrels, C19 door with strap hinges. Oval slate tablet recording the rebuilding of the church in 1825, by John Gilbert, vicar and James Collins, builder. West tower in 2 stages, on tall moulded plinth with frieze of quatrefoils and chevron decoration; set back buttresses with demi-shafts with crocketed finials, moulded string course and embattled parapet. West doorway with 4-centred arch and moulded surround with recessed spandrels and square hood mould; C19 door with strap hinges. West window of C15, of 4 narrow lights with Y tracery, 4-centred arch and hood mould. East and west at second stage a 3-light bell-opening with the central light taller, 4-centred arch with hood mould and louvres. The first stage to south has a slate sundial dated 1860. North vestry is gabled, with 2-centred arched chamfered north doorway, C19 door with strap hinges; 2-light west window with cusped lights. Interior: Tiled floor and plastered walls. Nave and chancel have C19 arched-brace roof with one tier of windbraces. C19 common rafter roof in the aisles. Tall 4centred tower arch, piers with ring-moulded capitals. 3-bay north and south arcade, which may be of the rebuilding of 1825; the piers have 4 outer shafts and 4 thinner inner shafts, the capitals carved with leaves and flowers, moulded 4-centred arches. Fittings: C12 font in nave, a circular bowl with chevron carving, with four masks at the corners over outer shafts, with central circular stem, C19 benches in nave and aisles, Pair of C19 Gothic sanctuary chairs in the chancel, Polychromatic tiled reredos in the chancel, by Powell and Sons, circa 1873. Monuments in north asile: polychromatic tiled memorial with brass tablet, to Thomas Hawkey, 1850. Tne nave has slate ledger stones, to John Liddicoat, 1826, Mary Liddicoat, 1824, Phillippa Phillippa, 1804,

Martha Merifield, 1845 and William and Ann Varcoe, both 1825. The east window of the chancel has painted grisaille glass of 1873, by Powell and Sons. Sources: Pevsner, N.: Buildings of England: Cornwall 1970 SW9679064835

Church of St Gomonda

70980

Parish church. C14, largely rebuilt mid C15; in 1822 substantially altered for the Rev. Thomas Fisher, later alterations, probably to the south porch, and restoration of 1890 by J. D. Sedding. Tower in squared granite, granite rubble, with granite dressings, Polyphant arcade, Slate roofs with ridge coping tiles, raised coped verges to the north transept, Plan West tower, nave and south aisle, north transept, chancel and south porch. The north transept is said to be on Norman foundations, largely rebuilt in the C14. The tower is of C15. In 1822, the nave, chancel and south aisle were rebuilt, the south arcade removed and the east front formed as one gable end. At some time after this, the south porch was probably rebuilt. In 1890, J.D. Sedding carried out a restoration, which re-instated the arcade between the south aisle and the nave, and renewed the roofs. There was a further proposal in 1900 for a vestry, which was not built, only the doorway through the east wall of the transept. Perpendicular style. 3-stage tower on moulded plinth, with set-back weathered buttresses rising to embattled parapet with polygonal corners, each supported by a carved figure or mask; no pinnacles. String courses to each stage. The west doorway has a 4-centred arch with roll-mouldings and recessed spandrels, square head with hood mould and square stops; plain C19 door. 4-light C15 Perpendicular window above, with Y tracery and cusped lights, hood mould and relieving arch. The top stage has 3-light bell-opening to each side, with 4-centred arch, cusped lights and upper tracery, slate louvres and hood mould. Clock at 2nd stage to east and north. 3-bay nave without plinth, has 2 north windows of 1822, with 4-centred arch an intersecting tracery. The north transept is of a single bay with gable end to north with cross finial, one similar early C19 window in north gable end stair descending to cellar to west, to a 4-centred arched doorway hollow-chamfered, with studded door. C19 east doorway with pointed arch. The south aisle is of 6 bays, with raised coped verges and cross finial. Windows of 1822, with intersecting tracery, porch in 2nd bay from west. The east gable end has a window of 1890, a copy of the tower west window, of 4-lights, with cusped lights and Y tracery, with hood mould. Gabled south porch has raised coped verges and cross finial, on plinth. 4-centred arched outer doorway, chamfered, with cast iron gates with diamond finials. Inner doorway is a tall 4-centred arch with roll-moulding and hood mould, much rebuilt, with C19 studded double doors. Granite floor and C19 arched-brace roof. The chancel has large east window of 1890, as at east end of aisle, of 6 lights, with cusped lights, Y tracery and hood mould with angel stops. Cross finial. Interior Tall 4-centred arch to tower; tower has north west door to stair, hollow- chamfered, with C19 studded door. Stone newel stair. The tower arch has triple shafts to sides with a concave moulding between each shaft, 3 orders of mouldings to arch, convex and concave. Nave and chancel in one, with wagon roof of 1890, ceiled over the chancel; similar roof to south aisle. The south arcade is of 6 bays, in polyhant, with standard A-type piers and lightly Tudor arched heads. Plain 4-centred chamfered arch to north transept, and at upper level to the east of the arch, the rood stair door, hollow-chamfered, with 4-centred arch and step stops. 2 steps remain at upper level on the north transept side. North transept also has C19 roof. Fittings: Fine late C12 Bodmin-type font in south aisle, in Pentewan stone; a large bowl on central stem with 4 corner shafts with bases. The shafts end in carved angels' heads, much restored and With one angel replaced. The bowl has interlaced snakes under chevron rim. In the nave, a pulpit, probably by Sedding, in Polyphant, on plinth with flight of steps. Royal arms over the south door, oil on canvas, probably cica 1800. Slate monument in the north transept, with incised nowy head, central cherub's head with wings, crossed bones to left and skull to right. Latin inscription and English verses, to Richard Treweeke, rector of the parish, 1732. The dedication is also refered to as St Gonandus, or St Gomand. Sources: Radcliffe, E.: Buildings of England: Cornwall 1970. Creswell Payne, H.M.: The Storey of the Paris of Roche 1946. SW9879659796

Ruthern Bridge

67605

Bridge over the River Ruthern. Circa 1450. Granite and slatestone rubble. Two 4- centred arches wih recessed slatestone arch rings. On the upstream side, there is a central triangular cutwater with refuge, in granite ashlar; smaller triangular cutwater with refuge, also in ashlar, to the outer side of each arch. On the downstream side the arches are rounded, with recessed slatestone arch rings. Similar central and outer cutwaters, also in ashlar. The parapet walls are about ½ metre high, in granite rubble with chamfered granite coping; there are three refuges on the upstream side, the parapet wall is returned about 12 metres to east, diminishing in height. The bridge is about 20 metres long and about 4 metres wide. Ruthern Bridge lies on an old road from Bodmin over Hustyn Down to Padstow; it is named in 1494 as Rothyn Brygge. Ancient monument no. 76. Sources: Henderson, C. and Coates, H.:Old Cornish Bridges and Streams, 1928. SX0130066830

Tregolls Farmhosue

Farmhouse. Mid C19 with few later alterations. Stone rubble with granite quoins and brick dressings. Slate roof with ridge tiles and gable ends. Gable end stacks with brick shafts. Plan: Double depth plan; entrance set off-centre to right, with larger principal room to left and smaller room to right. Kitchen to rear left and dairy to rear right, with rear central single storey outhouse attached, heated from a gable end stack. Exterior: 2 storeys, nearly symmetrical 4-window front; all windows are C19 12-pane sashes with cambered brick arches and brick jambs. 4-panelled door with margin- glazed overlight set second from right. The right side has similar 12-pane sash at first floor to left. At the rear, at first floor there are two similar 12-pane sashes and central 18-pane sash lighting the stair, with small single C20 light. Ground floor to left has 6-pane window, plate-glass sash and 12-pane sash; to right a 12-pane sash. The single storey outhouse has 2light 3-pane casement to each side and plank door at the left side. Interior: Not inspected. SW9834266118

Tregustick Farmhouse

676148

Farmhouse. Early - mid C19, with some later alterations. Slatestone rubble with granite quoins. 2-span slate roof with lead rolls to ridge and gable ends. Gable end stacks with brick shafts. Plan: Double depth plan in 2 parallel ranges, each with a room to right and left heated from gable end stacks. Former kitchen to left and unheated dairy to right. There is a pig house attached to front left which forms a screen wall between the garden to the front of the house and the farm yard at the left. Exterior: 2 storeys, a symmetrical 3-window front; first floor has three 16-pane sashes. Ground floor has 20-pane sash to left and 16-pane sash to right, all windows of C19 with cambered brick arches. Central half-glazed door with overlight and C20 gabled wooden porch. Attached to front left is the low single storey pig house with pitched slate roof; on the outer side there are 3 doors. The left side of the house has small C20 lean-to to left and C20 single light at first floor. The right side has C20 9-pane light at ground floor to right, 16-pane sash with cambered brick arch at first floor to right. The rear has 20-pane sash with cambered brick arch at ground floor to left and right, similar 16-pane sash to right and left at first floor with central 12-pane sash lighting the stair. Interior: Not inspected, but may retain good features of the C19, such as a staircase and joinery details.

SW9886466189

Withiel House and outbuildings attached to the rear

67621

Rectory, now house. Circa 1815, incorporating some earlier materials, and with later alterations and additions, some C20 alterations. Granite ashlar front and sides; slatestone rubble. Hipped slate roof with deep eaves and crested ridge tiles. Axial stacks with ashlar shafts and cornices. Partly slate-hung at the rear. Plan: Double depth plan, with central entrance hall and principal room to front left and right. Stair hall to rear centre, and principal room to rear right; to rear left is the service wing of 3-room plan, which is returned to rear to enclose a rear yard for stabling and further services. Exterior: 2 storeys, symmetrical 3-window front, on plinth, with band course and rusticated quoins. First floor has 12-pane sashes with cambered arches and keystones, external shutters. Ground floor has C20 window in original opening to right and left, with external shutters. Central painted Doric portico with cornice and inner round-arched doorway with recessed arch, half-glazed double doors with fanlight. Right side has three 20-pane sashes at ground floor and first floor, all with cambered stone arches and keystones. The left side has 3 C20 windows at ground floor and three 12-pane sashes at first floor in similar surrounds. Rear wing to left, of 2 storeys, with 3 lateral ashlar stacks. The right a 12-pane sash lighting the service stair. Ground floor has 4-pane sash, three 12-pane sashes with cambered arches and keystones; first floor has 4-pane sash and 12-pane sash. The rear of the wing is slate-hung with a hipped roof, 12-pane sash at ground and first floor. The return wing is attached to left, also slate-hung with 12-pane sash at ground and first floor. To the left, there is a 28-pane sash at ground floor and a lean-to at the end. Facing the service yard, to right there are C20 garage doors with a 16-pane sash above. Enclosing the service yard is a sandstone rubble wall with doorway with brick segmental arch. Inside the service yard, the rear of the main house has a round-arched 15-pane sash lighting the stair with splayed glazing bars; to left an inset stone shield of arms with hand and lion. Steps leading down to a cellar door. The inner side of the service wing is rendered and lined out, with random fenestration. Attached to the right side of the house is a screen wall, in rubble, with lean-to's attached to the rear; this extends about 25 metres, and is taller at the front, about 4 metres high, about 2 metres high at the rear. Interior; The entrance hall has roundarched niches; stone paved floor. The rear stair hall also has a stone paved floor, with open-well stair set on a curve, with stick balusters and wreathed handrail. The rooms to front and rear left are now one room; the rear room retains a marble chimneypiece of circa 1815. The room to front right has C19 marble chimneypiece and plain cornice. All 6-panelled doors at ground floor SW9936465296

The old rectory

Rectory or parsonage, now house. Probably C17 or earlier origin, said to have been built by Prior Vyvyan of Bodmin; extended and remodelled in early C19, circa 1815, with C20 alterations. Granite rubble; rendered front. Asbestos slate roof over the main range, with gable end to right, hipped to left. Gable end stack to right and axial stack to left, with brick shafts. The coach house/parish room to front right has a hipped slurried scantle slate roof. Plan: Originally a 2-room plan, with larger room to left and smaller room to right, each heated from a gable end stack. Circa 1815, an addition of one-room plan was made to the left end, heated from a fireplace backing on to the original gable end fireplace to left. The house was re-fronted in Gothick style, and a straight stair inserted in the fill width of the passage between the 2 rooms. At about the same time, an addition was made to right, forming a wing to front; This contains coach- houses to rear, entered at the right side, and a room to front which may have been used as a parish room. Later C19 single storey, service wing behind the addition to left, originally heated from a gable end stack with oven ; with a later small single storey addition at the end. Exterior; 2 storeys, asymmetrical 4-window front; all windows are early C19. Gothick style casements with pointed arched lights and Y tracery with square hoodmoulds. Embattled parapet carried round a shallow 2-storey porch. The porch has a pointed arched outer doorway with hoodmould, inner door of C19, half-glazed with Gothick glazing. Single casement above. To right a 2-light casement at ground and first floor. To left a 2-light casement at ground and install floor. The end bay is slightly set back with 2-light casement at ground and first floor. The wing to front right is in sandstone rubble at ground floor smaller blocks of granite rubble above, probably raised in height; plank door with segmental brick arch at ground floor to front. The right side has two C19 16-pane sashes at ground floor and one at first floor to right; C20 window at first floor to left. The wall is stepped forward to right, with 2 double carriage doors with segmental brick arches. The rear of the coach-house has 2 rows of square pigeon holes under the eaves, with 9pane light and blocked door. The left side of the house has half-glazed C20 door; the service wing has 4 C20 windows and curved oven at the end, stack truncated. The rear of the main range has a 2-panelled door with slate hood; 9-pane light with HL hinges and timber lintel at first floor to left, small single light at first floor to right, possibly the site of an early stair. The service wing

has 4-pane light, door and 9-pane C20 light, with single storey small addition at end. Interior: The house retains good Gothick features internally; 6-panelled doors with pointed arched panelling, similar shutters to windows and a pair of cupboards in the room to left of the entrance. Straight stair inserted in the passage, with Gothick pilasters. The room to right has Gothick door, and fireplace with timber lintel. The room to left has fireplace with cambered moulded timber lintel. At first floor, the feet of the principal rafters are boxed in, roof not accessible. Over the porch is a small cupboard, with moulded wooden frame. To left, in the back wall, there is a single light with deep splayed reveal, possibly an early stair site.

Pair of gate piers, gate and garden walls attached to E of Old Rectory

67624

Pair of gate-piers, gate and garden walls. Early-mid C19. Granite rubble with cast and wrought iron gate. The wall is about 30 metres long and about 3 metres high, with rubble and slate coping. Central pair of square plan rubble piers with pyramidal caps. C19 cast and wrought iron gate with central scroll and flower decoration, round arched top rail and knob finials.

Wall with gateway and attached privy along the south side of the churchyard of St Clement

67626

Wall with gateway along the south side of the churchyard, with attached privy. C19. Slatestone and granite rubble; stone and slate coping to the wall. Cast iron gates. Privy in rubble with slate roof with gable ends. The wall extends along the south side of the churchyard, with slate coping for the range to west and with moulded terracotta tiles as coping to the east range; about 70 metres long and about 1½ metres high. At the west end there is a gateway with square plan rubble piers with pyramidal caps, single east iron gate with rounded top rail and knob finials. Attached at the west end a small privy, with pointed arched door, and blind pointed arched panel in rubble above the door. Opposite the south porch of the church is a gateway with pair of granite piers with arched tops and pointed arched panel to front; pair of similar cast iron gates with 4-centred arched top rail and knob finials, the mid rails with a circle design.

Buscomb monument in the churchyard about 3m E of S Aisle of Church of St Clement

67627

Headstone. C18. Slate. Segmental head, shouldered; incised border to inscription panel; good lettering. To Phillip Buscomb, 1753. SW9944265381

Lavender Cottage; Withiel Post Office

67628

Pair of attached houses. Circa mid - late C18, with some later alterations and additions. Granite rubble. Slate roof with ridge tiles and gable ends. Gable end stacks and axial stack with brick shafts. Plan: Lavender Cottage is to left, of 2-room plan, each room heated from a gable end stack; it he stack to right is in an axial position. Withiel Post Office is to right, of one-room plan, with segmental arches at ground floor. Central C20 plank door. At the left side is a single storey rendered lean-to, probably originally a kitchen/scullery, with C20 window to front and large stack at the left side. Withiel Post Office is 2-storey, asymmetrical 2-window front; all windows are C19 4- pane sashes with cambered brick arch to the window at ground floor to right. C20 half-glazed door and small single light to left. C19 single storey addition at the right side with C20 window to front. Interior: Not inspected.

SW9947765411

Menaghyty

67629

House. Early/Mid C19 with few later alterations. Granite and slatestone rubble. Slate roof with ridge tiles and gable ends. Gable end stacks with brick shafts. Plan: 2-room plan with central entrance; a larger room to left and small room to right, each heated from a gable end stack. Exterior: 2 storeys, a nearly symmetrical 2-window front. All windows are C19 16- pane sashes with cambered brick arches. Off-centre to right a C20 2-panelled door. Interior: Not inspected. Included for group value.

South View

67630

House. Early C19 with few alterations. Stone rubble with stucco front. Hipped slurried slate roof with ridge tiles. Stacks to sides with brick shafts. Plan: Double depth plan, with central entrance and principal room to front left and right, each heated from a stack at the side. Shallow rear service rooms. Addition of one-room plan of the later C19 at the left side, heated from a stack at the left side. Exterior: 2 storeys, a symmetrical 3-window front; all windows are early C19 12-pane sashes with Gothic margin glazing. Central C20 door. The addition to left also has a hipped roof; C20 window at ground and first floor to front. The left side has C20 window at first floor to left. At the rear there is central 18-pane sash lighting the stair. 12-pane sash at first floor to right and left. C20 door to left and C20 window at ground floor to right. Interior: Not inspected but may retain good features of the C19, such as staircase and joinery details.

Gateway with gate at the south entrance to Withiel house

67622

Gateway with gate. Circa 1815. Granite ashlar gateway with cast iron gate. The gateway has flanking walls, about 1½ metres high in ashlar, the coping stones with a roll-moulding. Rectangular plan terminal piers with similar coping stones. Central wide cast iron gate with a cross design of rails with lead rosettes at the intersections, the top rail raised in a curve over 3 ovals. The base rail has railings with spear finials.

SW9943165125

Steps walls and coffin rest at the west entrance to the churchyard of St Wenna

71326

Steps, walls and coffin rest. Circa mid - late C19. Granite. Flight of 8 granite steps. Low flanking walls in rubble, with chamfered granite coping; stepped up at the entrance to the churchyard, about 6 metres long. The entrance at the top has a central coffin rest with granite monolith top, and a grid of granite bars to each side to prevent animals entering the churchyard. SW9677064829

Farmhouse 100m NW of church of St wenna

71329

Farmhouse. Probably C18 origin, remodelled circa mid C19, with few later alterations. Granite rubble, partly rendered. Slate roof with ridge tiles and gable ends. Gable end stacks with brick shafts. Stack to rear right to the outshut with brick shaft. Plan: 2-room plan with central entrance to passage; each room heated from a gable end stack. Circa mid C19, an outshut was added to rear, of single storey, with kitchen to right heated from a stack at the right side and unheated room to left. Exterior: 2 storeys, symmetrical 3-window front. First floor has central C19 16- pane sash, with C19 2-light 8-pane casement to right and left, one light of the casement to left replaced in C20. Ground floor has central doorway with C19 plank door; C20 window to right nad C19 2-light 6-pane casement to left. All ground floor openings have granite lintels. The left end has a single storey lean-to. At the right end, the upper level is rendered. 2-light casement to the outshut. At the rear there is a central C20 door, with casements to the outshut. Interior: Both rooms at ground floor have C19 beams, and fireplaces rebuilt in C20. \$\$W9675564879\$

Appendix 3

HVIA Jpegs



Cross at Higher Woodley, set alongside the road; from the east.



View of the southern gates into Withiel House, showing the local blocking; from the south.



View of cottages and barns within the village of Withiel, to the east of the church; from the north-west.



View of the north side of the main street in Withiel, with the row of Listed cottages; from the south-west.



Withiel Church; from the north-east.



The wall of the churchyard, to the south and the walls to Withiel House; from the east-south-east.



View of the monuments to the south of the churchyard and the south-east corner, showing the local blocking from the church and the cohesive churchyard 'setting'; from the west-south-west.



Shot of the service ranges and farm buildings to the north & north-west of Withiel House; from the east.



View into the wooded grounds and gardens of Withiel House, from the gate to the church, showing the local blocking; from the north-east.



View of the slight hillfort at Demelza; from the west.



View of the wooded churchyard at St Wenn, the northern side, between the church and the proposed turbine, to the north; from the west-south-west.



View of the church at St Wenn, in its churchyard, across the school playing ground; from the north.



View of the farm to the north-west of the church in St Wenn; from the north-north-east.



View back to Demelza Farm, with the hillfort visible, set amongst the fields; from the road between St Wenn and Withiel; from the north-east.



Landscape view of Withiel; from the north-north-east.





View of the farmhouse and buildings immediately south of Tregustick Farm; from the west-north-west.



View of Tregolls Farm, with all of its buildings; from the south-east.



View of the large Tregolls farmhouse, in its walled garden; from the south.



View across Tregustick Farm to the high ground to the north-west, where the proposed turbine will stand, showing the setting of the farm, amongst the trees; from the east-south-east.



View of Hustyns Downs, now dominated by the modern plantation of conifer trees, showing an outlying barrow on the edge of the trees; from the south.



View across the south-western part of Hustyn Downs, showing some shallow barrows, within the fields on the edges of the plantation; from the south-south-east.



View of the barrow near St Breock Farm; from the south-east.



View across St Breock Downs; form the south-east.



View across to funerary monuments at Pawton Springs; form the south-south-east.



View of the barrow north of Tregolls farm; from the west-north-west.



View of one of the barrows near Pennatile; from the south-west.



One of the barrows near Pennatile; from the south-east.



The funerary monuments on St Breock Downs, set amongst the wind turbines of the wind farm; from the south-south-east.



The monolith and cairn on St Breock Down; from the east-south-east.



The Old Dairy
Hacche Lane Business Park
Pathfields Business Park
South Molton
Devon
EX36 3LH

Tel: 01769 573555 Email: mail@swarch.net