

# **Proposed Wind Turbine on Land Near Mithian St Agnes, Cornwall Archaeological Assessment**

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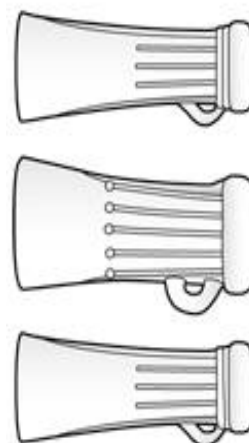
**Date:** April 2012



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## **Acknowledgements**

This study was commissioned by Chloe Bines of Migrid and carried out by Archaeological Consultancy Ltd (AC).

The desk-based research was undertaken by the author, with help kindly provided by Bryn Perry Tapper and Jane Powning (Sites and Monuments Records, Historic Environment), staff at the Cornwall Record Office (CRO) Cornwall Council (CC) and Angela Broome at the Courtney Library (CL). Ross Sinkins and staff at Mining Searches UK provided assistance with the historic maps, whilst Lucy Wilson-Richards of Cornwall Environmental Consultants kindly provided additional images.

The views and recommendations expressed in this report are those of Archaeological Consultancy Ltd and are presented in good faith on the basis of professional judgement and on information currently available.

## **Cover illustration**

Mithian Downs Barrow looking northwest.

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<b>Report Date:</b>	<b>April 2012</b>
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<b>Client:</b>	<b>Migrid</b>
<b>Proposal:</b>	<b>Installation of one wind turbine</b>
<b>Planning Reference:</b>	<b>PA11/06948</b>
<b>Statutory Protection:</b>	<b>None</b>
<b>National Grid Reference:</b>	<b>SW 74040 48824</b>
<b>Civil Parish:</b>	<b>St. Agnes</b>
<b>District:</b>	<b>Central 1</b>
<b>County:</b>	<b>Cornwall</b>
<b>Fieldwork Dates:</b>	<b>March 2012</b>
<b>Accession No:</b>	<b>Forthcoming</b>

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## **Abbreviations**

AC	Archaeological Consultancy Ltd
CC	Cornwall Council
CL	Courtney Library
CRO	Cornwall Record Office
DBA	Desk Based Assessment
EH	English Heritage
HE	Historic Environment, Cornwall County Council
HEPAO	Historic Environment Planning Advice Officer
HER	Cornwall and the Isles of Scilly Historic Environment Record
IfA	Institute for Archaeologists
LB	Listed Building
NGR	National Grid Reference
NMR	National Monuments Record, Swindon
OASIS	Online Access to the Index of Archaeological Investigations
OD	Ordnance Datum
OS	Ordnance Survey
SMR	Sites and Monuments Record
WHS	World Heritage Site
WSI	Written Scheme of Investigation

## **1 Summary**

AC Ltd was commissioned by Chloe Bines of Migrid to undertake an archaeological assessment of the site of a proposed wind turbine near Mithian (NGR SW 74040 48824). This was in accordance with a brief provided by Daniel Ratcliffe (2012), Historic Environment Planning Advice Officer, to facilitate appropriate planning decisions.

The proposed wind turbine site is in an adjacent field to a probable Bronze Age barrow. The site also sits within a rich prehistoric and historic landscape that includes other barrows some of which are Scheduled Monuments, evidence of mining activity and two Listed Buildings.

The proposed development is likely to have minimal impact on the identified sites, the most pertinent being the visual impact of the turbine on Mithian Downs Barrow (Site 6) during its use phase. A watching brief of subsurface works would appropriately mitigate for any subsurface impact.

Given the implementation of the recommendations set out in this report it may be considered that the substantial positive impact of green energy production and the dissemination of the archaeological results appropriately offset the minor negative impacts identified.

## **2 Site location**

### **2.1 Location**

The site is located approximately half a kilometre south of Mithian Downs in the civil parish of St Agnes (NGR SW 74040 48824) (Figure 1), on land characterised as 'Farmland Post-Medieval (Intakes)' by the Historic Landscape Characterisation (Historic Environment Record, Cornwall Council) with a wind turbine sensitivity (Tapper, 2010, Fig 2) ranking of 11 (mid-range).

### **2.2 Topography**

The site is situated on the northern end of a hilltop plateau approximately 130m OD. The ground slopes relatively steeply down to the west and northwest and more gradually on the east side whilst the plateau extends approximately 1.25 kilometres to the south.

### **2.3 Geology**

The bedrock is recorded as Gramscatho Group of mudstone and sandstone. This is sedimentary bedrock formed approximately 364 to 391 million years ago in the Devonian Period. ([www.bgs.ac.uk/geologyviewer](http://www.bgs.ac.uk/geologyviewer)).

## **3 Project background**

### **3.1 Development background**

Following a request for a screening opinion (PA11/06948) for one wind turbine, Cornwall Council responded by requiring an Environmental Impact Assessment

with a separate archaeological assessment. AC was commissioned to carry out the archaeological assessment.

The installation of the proposed wind turbine involves:

- Excavation for and insertion of the foundations for the turbine
- Erection of the turbine components
- The excavation of an electrical cable trench and access track.

### **3.2 Archaeological and historical background**

The large number of burial mounds within the study area and surrounding it are indicative of Prehistoric activity. Although the majority, dated to the Bronze Age, have been eroded or ploughed away, many are still just visible. Others such as the three within the Three Burrows Cluster (SAM29604) are quite well preserved. At Mongoose (SAM29608) the barrow stands approximately 20m diameter by 2.9m in height and is comparable to Mithian Downs (SAM29606) where the barrow is 17m in diameter and 2.1m high. A greenstone axe (MCO1001) was found north of the turbine site and east of Mithian Downs Barrow in the 19<sup>th</sup> Century.

Gover (in Mansell, T. 2003; 8) suggests that the name 'Mithian' may relate to the Welsh word 'midd' meaning enclosed pit or place or 'middi,' a pit or pool in a river. There are two small rivers or streams that this interpretation could refer to.

Mithian is not included in the Domesday Book; it is likely that the land was part of Tywarnehayle or possibly Callestick Manor (Morris, J. 1979). Callestick, the smaller of the two consisted of one hectare, land for four ploughs and ten acres of woodland with twelve slaves, two cattle and thirty sheep. Its value prior to Domesday was 20s and in 1086 was 3s. Tywarnehayle was considerably larger with seven hectares, land for twenty ploughs, twelve acres of woodland and pasture five leagues long and one league wide. There were fifteen villagers, sixteen smallholders and ten slaves with twenty unbroken mares, ten cattle and 250 sheep. Algar held the land before 1066; at Domesday it was held by the Count of Mortain and valued at £14 less 20d.

By 1549 a Manor had been established at Mithian, probably founded some years earlier. The Lord of the Manor John Wynslade was found guilty of involvement in the Prayer Book Rebellion – a fight for the continued use of Latin - in 1549 and was hanged at Tyburn the following year. John's son William escaped execution, though his land was confiscated by King Edward VI and given to Reginald/Reynold Mohun. The land was then bequeathed to his son William, who eventually became Sheriff. The second son of William, another William, took part in the defence against the Armada and assumed ownership in 1588 (Mansell, T. 2003; 62-63).

Nathaniel Mohun was Lord from the 1630s-1680. The Mohuns were supporters of King Charles during the Civil War and Lord Mohun surrendered to Fairfax in 1646 (Mansell, T. 2003; 63). In 1679 Nathaniel is recorded on agreements for the lease of a plot at Tywarnehayle to Peter Butson, a tinner (Henderson



Calendar 14). Presumably this is the same family the nearby mine, and latterly farm, is named after.

William, Lord Warrick Mohun of Boconnoc died in 1737 aged 32 ending the Mohun family line. The estate is said to have passed to Sibella of Trefusis and was bought at some point by Sir Christopher Hawkins. In the late 18<sup>th</sup> Century the Davy family acquired the estate with Richard and Horton Davy inheriting it from their father Stephen. In 1884 Richard dies and it passes to his nephew Joshua Sidney. The Williams family of Caerhays Castle bought the estate in 1900 (Mansell, T. 2003; 63-64).

The OS 1801 Map (Figure 3) depicts the study area as mostly uncultivated land with small patches as fields. Wheal Butson is marked along with some other nearby settlements and as the name has been retained through time, the site can be assumed to be just to the southeast.

The Tithe Map of 1841 (Figure 4) shows the majority of Mithian Downs as Common Land under Mithian Manor, similar to the 1801 OS Map, with rectangular arable fields owned by Stephen and Richard Davy of the Manor and occupied by Thomas James to the east.

The Sites and Monuments Record also includes Post Medieval farmsteads (MCO34842 and MCO34831), of which little trace remains and two Non-conformist chapels (MCO52222 and MCO52223) which add insight into the lives and beliefs of the local population (Figure 2). By far the most abundant site type on the SMR and on early Ordnance Survey maps is mines. The area was exploited for the extraction of copper and tin, indeed the St Agnes Mining District World Heritage Site is 1.5 kilometres to the northwest.

The 1<sup>st</sup> edition OS Map (Figure 5) is considerably different from the Tithe Map as all the land has been enclosed into approximately rectangular fields with straight boundaries. Little change is visible on the 2<sup>nd</sup> edition OS Map (Figure 6), though Wheal Butson Farm had been developed on the site of the mine and the extant track had been constructed.

Wheal Davey Farm was established by at least 1914 (Figure 1), with Henry Stephens the farmer until 1926. Henry Johns was the farmer from 1930-1955 (Mansell, T. 2003; 124).

## **4 Project aims and objectives**

The principal aims were to (Goacher, H. 2012):

- Draw together the historical and archaeological information about the site.
- Identify from planning records the location and type of turbine applications already consented (this information is available in GIS form from the Historic Environment Record team)
- Review and analyse historic map evidence for the site.
- Inform whether archaeological recording of any extant remains is required.

- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Apply recently published EH guidance on the assessment of the setting of Heritage Assets.

## **5 Method statement**

### **5.1 General methodology**

AC complies with the guidelines set out in the IfA's Standards and Guidance and follows the IfA code of conduct.

### **5.2 Desk-based assessment (DBA) and walk over survey**

An initial DBA concentrated on the Sites and Monuments Records (SMR), Cornwall Historic Environment Records, sources at the Courtney Library and a map regression exercise.

A walk over survey recorded extant visible remains on the site. Designated sites within a two-kilometre radius were also considered allowing the existing plan to be annotated with archaeological detail and the impact of the proposed turbine to be assessed.

The potential intervisibility between sites and the proposed wind turbine was evaluated using a combination of visiting the locations or the nearest right of way to them, vegetation assessment, line of sight assessment and a study of map contours. Consideration has to be given to the fact that the turbine was not in place and that the assessment was of the perceived rather than calculated height of the turbine.

Selective scaled digital colour photography was used to facilitate interpretation and to illustrate the report.

### **5.3 Impact Assessment**

A gazetteer of designated heritage assets within 2km and relevant heritage assets within 1km of the site includes a statement of their significance. Studies have been undertaken to identify the locations of current and proposed wind turbines within a 5km radius and the specific nature and impact of the turbine proposed for the site. This includes consideration on the construction, use and end-of-life impacts of the turbine. The cumulative impact of these turbines on the heritage assets has been considered to enable further recommendations and planning decisions to be made.

## **5.4 Report**

The discussion element of the report specified in the WSI is incorporated into the gazetteer and impact sections below. This archive report describes the results of the archaeological assessment. Copies of the archive report will be submitted to: the client; the County Historic Environment Record (HER); Cornwall Record Office; National Monuments Record (NMR) in Swindon and all significant contributors where (with the exception of the client's and contributors' copies) they will be available for public consultation. The report will additionally be uploaded to the online OASIS grey literature library where it will be available to the general public.

## **5.5 Archive**

The archive will be of a documentary nature and will be deposited in a suitable form with the Cornwall Record Office, within six months of the completion of the final report and confirmed in writing with the HEPAO.

## **6 Results**

Sites of archaeological significance identified within the study area are located on the site plan, numbered from 1-36 working from those closest to the turbine site and then outwards in an approximately clockwise order within a 2km radius of the site (Figure 2).

The significance of each site is graded as follows:

WHS- World Heritage Site

- S Scheduled Monument
- L Listed Building
- A Site of National Importance
- B Site of Regional Importance
- C Site of Local Importance
- D Natural Feature or non-antiquity

The condition of each site was assessed during the walk over survey from 1-4:

- 1 No surviving remains evident above ground
- 2 Poor preservation
- 3 Fair preservation
- 4 Good preservation

The sites have been given one of seven overall impact grades, from positive/substantial which approximates to preservation in situ with dissemination of additional archaeological findings to negative/substantial which equates to complete destruction. The full scale is:

- Positive/substantial

- Positive/moderate
- Positive/minor
- Neutral
- Negative/minor
- Negative/moderate
- Negative/substantial
- Negative/unknown (for potential, unidentified sub-surface features).

Excerpts within the description are taken from the relevant SMR or Listed Building records. Information within the brackets refers to sources used in the compilation of, and listed at the end of, the SMR/LB record.

Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
1	Turbine Field Granite Gravel Deposit	74061 48882	Deposit of large granite gravel and blocks with occasional other material including wire and wood extending for the majority of the length of the north boundary of the field and 2-3m into it. Much of the gravel was very firmly compacted into the topsoil. Many of the larger blocks appeared to have been worked or faced as if once part of the building and the pile was overgrown with brambles. The landowner believes this deposit was a result of fly tipping of building rubble prior to his ownership.	Modern	D	3	Neutral-Positive/ minor
2	Turbine Field Disused Shaft	74117 48824	Sub-circular feature approximately 11.5m diameter with 2-3m high enclosing banks. The banks were overgrown with grass and gorse. On the south side the bank was only a metre in height and access could be gained into a shallow depression that occupied the southern half of the internal space. In the northern half was the shaft with vertical walls probably consolidated with stone although the extent of vegetation and risks of close inspection made this difficult to determine. The shaft was filled with vehicle tyres and more tyres had been scattered around the whole area. There was evidence of burning across a significant proportion of the vegetation, though recovery was occurring.	Post Medieval	C	3	Negative/ minor
3	Turbine Field Eroded Boundary	74114 48812	Stone-faced earth bank with grass and gorse which had been significantly eroded down to less than a metre with stone apparently removed. Vegetation was less dense and grew to the sides.	Post Medieval/ Modern	C	3	Neutral
4	Turbine Field Southwest Corner	73990 48761	The whole corner was significantly overgrown with brambles and grass with some gorse. The west and south boundaries probably joined together though the density of vegetation makes this less than certain. There was also a small grass mound 1-1.5m in height that maybe related to the mining activity described in Site 7.	Post Medieval/ Modern	C	1	Neutral
5	Turbine Field Boundaries	74040 48824 centre point	The boundaries, except where stated elsewhere in this table were stone-faced earth banks. The stone was predominantly slate with occasional quartz and granite. They were all overgrown with grass with discrete areas of brambles and gorse in significant quantities. Rabbit burrowing had caused a considerable amount of damage on all sections.	Post Medieval/ Unknown	C	3	Negative/ minor
6	Mithian Downs	73919	SMR entry MCO3123 1972 revised 1997: "A well preserved barrow 2.1m high and 17m across (b2). It was named 'Mithian Barrow' by Thomas in	Bronze Age	S	3	Negative/

Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
	Barrow	48933	1851 (b2). There is no apparent ditch and it appears to have been excavated in the middle (h6). It is now covered by scrub. The barrow is clearly visible as a circular grassy mound on air photographs (p1) and was plotted as part of the NMP. The monument was included in the Schedule on 19/7/1972 and the scheduling was revised on 25/7/1997." Barrow was clearly visible with quite steep sides and covered with grass and brambles. It had been fenced off to prevent livestock accessing it.		(SAM29606)		minor
7	Wheal Cornwall Mine	74000 48800	SMR entry MCO12886: "Wheal Cornwall was part of North Consols from 1834 to 1837 (b2). It is mentioned by Collins (b1) and located by Hamilton Jenkin (b4). Shafts are shown on the OS map of 1962 (b3). A single shaft is visible on air photographs (p1). Another, 200m to the north west, may be part of this mine or, alternatively, part of Burrow and Butson (41066). Both features were plotted as part of the NMP." No clearly discernible shaft or other features were identified. An area in the southwest corner of the field, south of the plotted location was disturbed and overgrown with brambles.	19 <sup>th</sup> Century	C	1	Neutral
8	Wheal Butson Mound	73830 49050	SMR entry MCO34844: "A subcircular grassy mound, 10m in diameter, is visible on air photographs (p1) and was plotted as part of the NMP. The date and function of this feature are uncertain: it may be the remains of a shaft associated with Wheal Burrow and Butson (41066) or, alternatively, might be a round barrow (there is a barrow nearby [19081])." No upstanding feature was discernible from the gateway or from the adjacent proposed turbine field. The field was given over to short pasture at the time of recording.	Undated	C	1	Neutral
9	Burrow and Butson Mine	74000 49100	SMR entry MCO11904: "Burrow and Butson mine was also known as Wheal Davey in 1735, Wheal Butson from 1748 to 1794, and as United Mines North or North Consols from 1834 to 1837 (b9). The mine produced copper and zinc blende, and engine houses at SW 7400 4921 and 7401 4915, a weighing machine at SW 7405 4922, magazine at SW 7396 4899, and chimney at SW 7401 4913 are located on the OS map of 1877 (b5). The mine is shown as disused on the OS map of 1962 (b10). The site has since become overgrown but a line of shafts and associated spoil tipping, and a possible openwork are visible on air photographs (p1&2) and were plotted as part of the NMP."	18 <sup>th</sup> -19 <sup>th</sup> Century	C	1	Neutral

Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
			No clearly identifiable mining buildings or shafts. Farm buildings may obscure this evidence.				
10	Wheal Davey Mine	73912 49132	<p>SMR entry MCO39554: "The earliest known reference to Wheal Davey was 1735, when miners were busy driving an adit from which they raised a few tons of copper ore, but were forced to give up due to lack of funds. Another company was formed soon after and succeeded in extending the adit and with the aid of a 14' diameter waterwheel managed to raise copper ore to the value of £50,000. A third group of adventurers also drove the adit cross-cutting a number of lodes about 22 fathoms from surface. The mine was later almost identical to Wheal Butson (163338) for which see detailed history."</p> <p>No clearly identifiable mining buildings or shafts were visible from the client's access road adjacent. Farm buildings and dwellings may obscure the evidence.</p>	18 <sup>th</sup> -19 <sup>th</sup> Century	C	1	Neutral
11	Wheal Butson Mine	73912 49130	<p>SMR entry MCO39536: "Wheal Butson, an eighteenth century mine, was almost identical to Wheal Davey and was active before 1748 since it appears on Martyn's Map of that year. In 1791a 36" Boulton and Watt engine was erected at the mine, but it closed in 1794 due to the prevailing low price of copper (b1). The sett was again taken up in 1819 and an engine erected on Wheal Burrow Shaft which was then sunk to 62 fathoms below adit. In 1834 the property was purchased by a London company who worked it under the name United Mines North or North Consols. The materials were up for sale in 1836 (b1). The mine appears on the 1880 OS map as Wheal Burrow and Butson, a disused copper and blende mine. Two engine houses are shown at SW 73972 49153 and SW 74042 49222, but had vanished by 1907."</p> <p>No clearly identifiable mining buildings or shafts were visible from the client's access road adjacent. Farm buildings and dwellings may obscure the evidence.</p>	18 <sup>th</sup> -19 <sup>th</sup> Century	C	1	Neutral
12	Wheal Butson Bridge	73461 49037	<p>SMR entry MCO48358: "An early C19 road bridge over a stream survives at Wheal Butson. In 1988 EH listed the structure and described as a Killas rubble single-span bridge of lintelled and arch construction. On the south side the bridge has a round arch with rubble voussoirs and on the other side it is spanned by a granite lintel. The parapets are low rubble."</p>	19 <sup>th</sup> Century	L -Grade 2 (DCO5494)	3	Neutral



Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
			At least two coping stones were missing from the parapet walling on the northwest side of the bridge.				
13	Bevas Moor Mine	73300 49100	SMR entry MCO11840: "Bevas Moor mine was also known as Old East Tywarnhayle, and as Wheal Clifton. It worked from 1835 to 1837 producing copper (b2, 3, 4). Shafts are marked on the OS maps of 1877 and 1962. An extensive line of shafts and spoil tips, and a possible building are visible on air photographs (p1) and were plotted as part of the NMP.  A significant depression approximately 10m diameter was evident in the southeast corner of field. The line of shafts was not clearly visible but likely to be within dense vegetation surrounding the site."	19 <sup>th</sup> Century	C	3	Neutral
14	Hurling-barrow Mound	73000 48880	SMR entry MCO34862: "An oval mound, 20m x 15m, is visible as a crop mark on air photographs (p1) and was plotted as part of the NMP. This is the easternmost of a line of six such mounds in the vicinity (the others being 53738-53742). They are likely to be shafts or pits associated with Bevas Moor mine to the east, but the possibility should not be discounted that they are the plough-levelled remains of Bronze Age barrows forming part of barrow group 19190."  This site was not viable from the proposed turbine site or rights of way in the vicinity.	Undated	B/C	1	Neutral
15	Blights Farm Enclosure	73152 48839	SMR entry MCO34859: "A possible curvilinear enclosure, 80m in width, is partially visible as a faint crop mark ditch on aerial photographs (p1) and was plotted as part of the NMP. The feature has the appearance of a large Iron Age/Romano-British round but this is not certain from aerial photo evidence alone."  This site was not viable from the proposed turbine site or rights of way in the vicinity.	Undated	B	1	Neutral
16	Hurling-barrow Field System	73050 48710	SMR entry MCO34834: "An extensive series of field boundaries are visible as crop mark ditches and banks on air photographs (p1&2) and were plotted as part of the NMP. The boundaries fit into the highly regular pattern of existing rectangular fields and are likely to be of contemporary origin. This is recognised as an area of Recently Enclosed Land and the form of these fields is characteristic of late post medieval enclosure."	Post Medieval	C	2	Neutral



Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
			The removed boundaries were not discernible at ground level.				
17	Southern-wood Mine	73300 49250	SMR entry MCO34858: "A series of tips and extraction pits are visible on air photographs (p1) and were plotted as part of the NMP. These are clearly the surface remains of mining activity, possibly forming part of Bevas Moor mine (41076) or Burrow and Butson mine (41066). At the time of the photographs, the tips were in the process of being razed." Within woodland and low scrub, trees had possibly been coppiced, not clearly visible.	Post Medieval	C	1	Neutral
18	Wheal Valley Field System	73820 49650	SMR entry MCO34846: "A series of small, rectilinear fields are visible as low earth banks on air photographs (p1) and were plotted as part of the NMP. The fields are situated in an area considered to be Recently Enclosed Land and are probably post medieval in origin. The presence of hints on the photographs of irregular bumps and hollows in one of the fields suggests that there may be an abandoned smallholding associated with the system." Area steeply sloped and densely wooded, no direct access possible though system was not discernible at ground level.	Post Medieval	C	1	Neutral
19	Lowertown	73932 49691	Slate rubble built shed or small barn with large areas repaired with modern concrete blocks and cement, particularly on east wall and used to block window in north wall. Plastic and fibreboard corrugated roof. Located immediately next to the road. Surrounded by tall (approx 20m) trees and stone-faced earth banks with dense brambles and grass that lined the road and formed field boundaries.	Unknown	L -Grade 2 (DCO5485)	3	Neutral
20	Wheal Valley Mine	73800 49800	SMR entry MCO13182: "Wheal Valley was working from 1805 to 1817 (b2), and between 1807 and 1810 it worked with Wheal Liberty (b3). The mine was re-opened in 1825 and worked until 1829 (b2). A line of five large spoil tips, presumably associated with the workings, and a possibly associated openwork (this could alternatively be an unrelated quarry) are visible on air photographs (p1) and were plotted as part of the NMP." Within a deep valley with mine workings. The valley is significantly overgrown and subject to fly tipping. No upstanding remains were identified.	19 <sup>th</sup> Century	C	2	Neutral

Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
21	Wheal Valley Stream Works	73700 49680	SMR entry MCO34849: "Two irregular, parallel banks and a series of pits and mounds along the valley floor are visible on air photographs (p1) and were plotted as part of the NMP. These features are likely to be the spoil tips associated with tin streaming."  Within a deep valley with mine. The valley is significantly overgrown and subject to fly tipping. No upstanding remains were identified.	Post Medieval	C	2	Neutral
22	Goonbell Mound	73380 49610	SMR entry MCO34851: "A subcircular mound, 20m in diameter, is visible on air photographs (p1) and was plotted as part of the NMP. Although likely to be the remains of a mineshaft associated with Wheal Valley (41089) it is possible that this feature may be a denuded round barrow. Its precise date and function are uncertain from air photo evidence alone."  No upstanding remains were identified within the field which was planted with daffodils up to 0.3m high at the time of recording.	Undated	C	1	Neutral
23	Great West Chiverton Mine	74700 49600	SMR entry MCO12144: "Great West Chiverton Mine was first tried in the 1860's for argentiferous galena. It had only a brief life and worked between 1869 and 1874 and in the 1880's, the latter working under the management of the Great West Chiverton Mining Co. (b3). Between 1882-3 6 people were employed (b4). The mine is located in 1869 by Brenton (b1). The site of the mine is not apparent on the 1880 OS Map and nothing shows up on the NMP data."  Within private woodland.	19 <sup>th</sup> Century	C	Unknown	Neutral
24	Whitestreet Non-conformist Chapel	74495 49108	SMR entry MCO52222: "Whitestreet Wesleyan Methodist chapel is recorded on the 1st and 2nd Edition 1:2500 1880 and 1907 OS Maps. The Mastermap shows some walls surviving."  Partial survival of some walls, partially covered by corrugated iron roof with scrub vegetation around it and trees on field boundaries.	Post Medieval	C	2	Neutral-negative/ minor
25	Cold-harbour Farmstead	74840 48970	SMR entry MCO34842: "A farmhouse, outbuilding, and a series of field boundaries are visible on air photographs (p1) and were plotted as part of the NMP. Although the farm was still in use in 1946 (p1), it has since been totally destroyed. It is likely to be a small holding dating from the late post medieval period."  Direct access not possible. Local inhabitants indicated that only some	Post Medieval	C	2	Neutral

Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
			walls depict outline of buildings.				
26	Cold-harbour Mound	74600 48840	SMR entry MCO34836: "A subcircular mound, 20m in diameter, is visible as a crop mark on air photographs (p1) and was plotted as part of the NMP. The date and function of the mound are uncertain, but it is likely to be the remains of a spoil tip associated with a mineshaft, possibly part of Wheal Cornwall (41090) which is located 500m to the west."	Undated	C	1	Neutral
27	Silverwell Mine	74800 48600	SMR entry MCO12510: "Silverwell mine was originally known as Wheal Treasure, and was tried several times for galena (b2,3). In the 1860's it worked some of the time with East Downs mine (b1) before being tried again shortly before 1914. Never a great success, the principal shaft was noted as being 15 fathoms below adit (5). It closed in the interwar period and much of its equipment lay rusting at the surface before being taken away for scrap in World War II. Hamilton Jenkin notes the removal of the engine in 1942 (b3). The mine had an unusual iron chimney stack surmounted with a brick top. Shafts are shown on the OS map of 1962 (b4). A shaft and associated linear spoil tip are visible on air photographs (p1) and were plotted as part of the NMP."  Direct access was not possible with significant vegetation in the surrounding area.	19 <sup>th</sup> Century	C	1	Neutral
28	Silverwell Non-conformist Chapel	74549 48216	SMR entry MCO52223: "Silverwell Primitive Methodist chapel is recorded on the 1st and 2nd Edition 1:2500 1880 and 1907 Maps. It is not shown on the current Mastermap."  No direct access with significant vegetation on substantial (up to 2m high) stone-faced earth banks surrounding.	19 <sup>th</sup> Century	C	Unknown	Neutral
29	Silverwell Farmstead	74180 48380	SMR entry MCO34831: "An oval mound, 20m x 10m, and two field boundaries are visible as crop marks on air photographs (p1) and were plotted as part of the NMP. On the 1880 1st Edition OS map further field boundaries are shown at this location and a settlement shown at the site of the mound. The site is likely to be a post medieval farmstead which has since been destroyed."  No upstanding features identified. The field was currently being used as pasture or rough grass up to 0.1m high.	Post Medieval	C	1	Neutral
30	Goonlaze Downs	73200	Approximately eight barrows with varying degrees of survival, one known to have been destroyed during road construction and others regularly	Bronze Age	S (SAM32925)	1/2	Neutral-negative/

Site No.	Name	NGR (SW)	Description	Probable date	Significance	Condition	Overall Impact
	Barrow Cemetery	50400	ploughed over. Other mounds in the vicinity maybe part of this group. A total of five have been designated Scheduled Ancient Monuments in two groups.		SAM29613)		minor
31	Three Burrows	75020 47060	An extensive group of barrows including three relatively well-preserved examples though ploughing has reduced their size.	Bronze Age	S (SAM29604)	2	Neutral
32	Mongoose Barrow	72760 48370	Well preserved barrow 20m in diameter and 2.9m high located on high ground.	Bronze Age	S (SAM29608)	3	Neutral
33	Creegtol Barrow	75470 48810	Partially ploughed out barrow believed not to have been robbed at any point with a visible surrounding ditch.	Bronze Age	S (SAM29621)	2	Neutral
34	Mongoose Barrow	72800 48310	Oval mound 20m in diameter and 2.9m high.	Bronze Age	S (SAM29609)	3	Neutral
35	Hurling-barrow Barrow	72500 48900	A group of eight although only one is scheduled and only two are still visible in the landscape. Not marked on the OS maps.	Bronze Age	S (SAM29607)	1/2	Neutral
36	St Agnes Mining District		The southeastern extremities of the Mining District extend just within the study area. The designated World Heritage Site was created to protect the mining landscape and associated buildings reflecting the influence mining had on settlement, particularly within St Agnes.	Post Medieval	WHS	3	Neutral-Negative/ minor

## **7 Statements of Significance**

Many of the sites have already had their significance assessed by Scheduling or Listing. Where sites are Scheduled or Listed they have not been considered under the Sites and Monuments Records category below, even though they feature on that list, to avoid duplication.

### **7.1 World Heritage Sites (Site 36)**

These sites are designated and defined by UNESCO (UNESCO website):

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.

Sites inscribed on the World Heritage List benefit from the elaboration and implementation of a comprehensive management plan that sets out adequate preservation measures and monitoring mechanisms. In support of these, experts offer technical training to the local site management team.

The inscription of a site on the World Heritage List brings an increase in public awareness of the site and of its outstanding values, thus also increasing the tourist activities at the site. When these are well planned for and organized respecting sustainable tourism principles, they can bring important funds to the site and to the local economy.

### **7.2 Scheduled Monuments (Sites 6, 30, 31, 32, 33, 34, 35)**

Scheduled Monuments have Statutory Protection under the Ancient Monuments and Archaeological Areas Act 1979. These are sites that have been identified by English Heritage, the Government's archaeological advisory body, as being of national importance, and are included in the County Lists maintained by the Secretary of State for Culture, Media and Sport. A schedule has been kept since 1882 of monuments whose preservation is given priority over other land uses. The current legislation, the Ancient Monuments and Archaeological Areas Act 1979, supports a formal system of Scheduled Monument Consent for any work to a designated monument.

Likely subsurface and associated remains are of equal significance.

### **7.3 Listed Buildings (Sites 12, 19)**

Sites are Listed to mark their special architectural and historical interest; they are protected by law and Listed Building Consent must be granted for any alterations to the building. Sites 12 and 19 have been designated a Grade II listing and are therefore considered 'nationally important and of special interest' (English Heritage Website).

## **7.4 Sites and Monuments Records**

### **7.4.1 Regional Significance (Site 15)**

The site of formerly visible remains is considered of regional significance and is set within a wider prehistoric and historic landscape. A number of sites within the vicinity are Scheduled Monuments. Likely subsurface and associated remains are of equal significance.

### **7.4.2 Regional or Local Significance (Site 14)**

The site of formerly visible remains is considered of regional or local significance depending on the weighting applied to the setting and upstanding evidence. It is set within a wider prehistoric and historic landscape and a number of sites within the vicinity are Scheduled Monuments. Likely subsurface and associated remains are of equal significance.

### **7.4.3 Local Significance (Sites 7, 8, 9, 10, 11, 13, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29)**

The upstanding remains or sites of formerly visible remains are considered of local significance and are set within a wider prehistoric and historic landscape. A number of sites within the vicinity are Scheduled Monuments. Likely subsurface and associated remains are of equal significance.

## **7.5 Additional Sites (Sites 1, 2, 3, 4, 5)**

These sites relate to Post Medieval farming and mining activities and are considered to be of local importance. The extant boundaries (Sites 3 and 5) may be considered "important" hedgerows under the Section 97 (hedgerows) of the Environment Act 1995 as they have existed for more than 30 years and incorporate or lie beside archaeological features recorded in the Sites and Monuments Record.

Within the current legislation (Hedgerow Regulations 1997) the following extract explains the criteria used to assess the archaeological and historical importance of hedgerows:

For the purposes of Section 97 (hedgerows) of the Environment Act 1995 and these Regulations, a hedgerow is "important" if it, or the hedgerow of which it is a stretch:

- (a) has existed for 30 years or more; and
- (b) satisfies at least one of the criteria listed in Part II of Schedule 1.

Part II of Schedule 1 provides the following 'historic' criteria:

1. The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose "historic" means existing before 1850.
2. The hedgerow incorporates an archaeological feature which is included in the schedule of monuments compiled by the Secretary of State under section 1



(schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979; or recorded at the relevant date in a Sites and Monuments Record.

3. The hedgerow is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and is associated with any monument or feature on that site.

4. The hedgerow marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Sites and Monuments Record or in a document held at that date at a Record Office; or is visibly related to any building or other feature of such an estate or manor.

5. The hedgerow is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Enclosure Acts; or is part of, or visibly related to, any building or other feature associated with such a system, and that system is substantially complete; or is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic.

Boundary features are the most abundant archaeological feature to be found in Cornwall. Whilst some may be of recent origin, many have older origins and are thus of considerable importance in telling the story of the development of agriculture in the rural landscape, their layout, inter-relationships and phasing allowing sequences of land clearance and enclosure for agriculture to be read. They are important visually (as landscape features) and archaeologically.

## **8 Impacts**

The impacts of the turbine are broken down into three phases; construction, operational and end of use. A visual impact and limited auditory impact throughout the operational phase is present in some degree for all the sites, whilst construction and end of use impacts only concern the immediate vicinity of the turbine, its access and cable run.

Impacts identified are:

### **World Heritage Sites (Site 36)**

The WHS will not be physically affected and is outside the audible range at all three phases. The site and/or the turbine may be visible from areas of higher ground within the designated area. There are turbines already visible from the area and this proposal will not further significantly detract from the landscape. The overall impacts are considered to be neutral-negative/minor.

### **Scheduled Monuments (Sites 6, 30, 31, 32, 33, 34, 35)**

The Monuments will not be physically affected by construction or subsurface works though associated noise may have a minor impact on Site 6 Mithian Downs Barrow (Plate 4). The affect of the noise will depend on the wind strength and direction. The turbine field is diagonally adjacent and although the

ground surface is not visible the proposed turbine would be visible above the field boundary. At least 11 turbines are already visible from Mithian Downs Barrow. The impact is considered to be negative/minor.

The turbine field will not be visible from any of the other sites which are nearly 2km away; though the turbine blades are most likely be visible from these. There will be no audible impact. Other turbines are visible from the majority of these sites. The impact is considered to be neutral.

### **Listed Buildings (Sites 12, 19)**

Wheal Butson Bridge (Plate 5) and Lowertown are not intervisible with the turbine field and construction will not affect these sites. The construction noise may have a minimal short-term impact. The top of the turbine may be visible from Wheal Butson Bridge during the use phase due to the more open and minimally vegetated landscape and the considerably lower height above ordnance datum. The impact is thus considered to be neutral.

Lowertown is less exposed and surrounded by tall deciduous trees. Even when not in leaf the density of vegetation with the addition of multiple vegetated field boundaries and gradient of the landscape means that the turbine will not be visible. It is unlikely that any phases of the turbine will be audible. The impact upon Lowertown is considered to be neutral.

### **Sites and Monuments Records (Sites 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29)**

Excavations for the turbine and its associated access and cabling will not impact on any of these sites and are unlikely to impact on related deposits. If all parts of the turbine are removed at the end of its life, there is the potential for further minimal subsurface disturbance and unlike visual impacts, physical impacts cannot be reversed at this stage.

Nine of the above sites are mining related (Sites 7, 9, 10, 11, 13, 17, 20, 23, 27) but were not clearly visible or identifiable. At Burrow and Butson and Wheal Davey (Sites 9 and 10) buildings likely to have been mining related were upstanding but had been comprehensively converted, predominantly into dwellings. These were screened by modern walls and hedging and existing field boundaries that had gorse growth adding to their height. It is likely that the top of the turbine will be visible and, depending on the wind direction, may be audible at all phases from Sites 7, 9, 10 and 11. Given the lack of surviving evidence at these sites and the level of screening already in place the impact is considered neutral. The remaining mining sites are at a greater distance and are separated by considerable vegetation including trees. It is unlikely that anything more than the turbine hub may be visible and there should not be any audible impact. The overall impact on these sites is considered neutral.

Four sites have been categorised as barrows or undated mounds (Sites 8, 14, 22, 26). Site 8 Wheal Butson at only approximately 300m northwest of the turbine field is the closest but was not discernible in the relatively flat field of short grass. There are at least three 'Cornish hedges' of approximately 3m in



height between the turbine field and Site 8 but the majority of the turbine will be visible and probably audible at all phases, though the extent of this impact will depend on wind direction. Given the lack of physical and dating evidence the impact is considered to be neutral.

The remaining three mounds are all undated and could relate to mining activity or Prehistoric burial practices. All are out of audible range and have at least 'Cornish hedges' of approximately 2m in height surrounding them whilst Hurlingbarrow (site 14) and Coldharbour (Site 26) have a screen of trees. This minimises any visual impact from the sites. The impacts of the turbine are therefore considered neutral.

The other sites on the SMR (Sites 15, 16, 18, 21, 24, 25, 28, 29) consist of field systems, farmsteads, chapels and a stream works. The ground level of the turbine field cannot be seen from any of these sites and all are screened by varying degrees of vegetation from approximately 2m high 'Cornish hedges' to large trees. Only the top of the turbine is likely to be visible. All are beyond the range for audible impacts at every phase of development. The impacts are considered neutral for all these sites.

#### **Additional Sites (Sites 1, 2, 3, 4, 5)**

No subsurface works will affect Sites 2, 3 or 4 though there will be visual and noise impacts at all stages. Given the poor state of repair of Site 2 the Disused Shaft this will have only a very minimal negative/minor impact (Plate 2, Plate 3). For Sites 3 and 4 the impact is considered to be neutral because of the poor state of repair, difficulty with identification and local significance.

Site 1 Granite Gravel Deposit could be a result of mining activity but the occurrence of worked stone and other building materials is more strongly indicative of the fly tipping of building waste. Subsurface works through Site 1 are required for the cable trench but given the visually detractive nature of the material this, and the wind turbine itself, is not considered a negative effect. It is probable that this material will have to be cleared in advance of construction thus creating a positive impact. The overall impact is considered neutral-positive/minor.

The north boundary of the turbine field, forming part of Site 5 will not be substantially impacted by the construction of the access and cable route as this is located immediately along the south side. The route will have to pass through the eastern boundary where there is not currently any breaks. Any additional breaks have potential for archaeological deposits to be exposed and recorded. However, this section has already been degraded by the Granite Gravel Deposit of Site 1 and significantly so by rabbit burrowing. The turbine will be visible and audible during construction and operation from all boundaries. The effect is considered to be negative/minor.

## **9 Summary Impacts**

The existing wind turbines visible from the above sites currently have a neutral impact (Plate 1). The addition of this turbine, together with the pre-existing

ones, may reinforce a precedent allowing more turbines in the area. The cumulative impact of more turbines would have a greater negative effect than the proposal considered in this report.

Cables for the turbine will be subsurface which should require archaeological mitigation. However, once installed, they will have no further negative impact on their surroundings.

The undertaking of this assessment together with the recommendations below and resultant dissemination of this and associated reports are considered to be a positive/substantial impact for this proposal. Negative/minor and subsurface impacts are considered to be appropriately offset by these and the environmental benefits of the wind turbine.

## **10 Recommendations**

The following recommendations should minimise the impact of the proposal upon recognised and likely archaeological sites in the study area:

- 1 Controlled topsoil stripping or watching brief and recording, including section drawing, photographs and palaeo-environmental sampling as appropriate, of any breaks made through Site 5 (extant eastern field boundary).
- 2 Controlled topsoil stripping or watching brief of the excavations for the turbine base, access and cable routes and appropriate resultant excavation and recording.
- 3 The relatively free-draining hilltop soils on site and likely plough damage are unlikely to produce much palaeo-environmental data, though sampling should be considered as part of the above works, for deep, stratified archaeological deposits.
- 4 Appropriate dissemination of the results of archaeological work.

## **11 Conclusion**

Significant prehistoric archaeology was identified within the study area as part of the assessment and a number of similar sites have been identified in the surrounding area. Long-term ploughing has significantly reduced the majority of these archaeological features, though archaeological deposits are likely to survive subsurface.

Given the adoption of the recommendations for archaeological recording the proposal is likely to have very limited archaeological impact. There are other wind turbines in the area, which although visible do not detract from the surroundings. The cumulative effect of future turbine installations is likely to have greater impact and an assessment of each additional proposal would need to assess this effect, particularly if closer to the World Heritage Site. From the Post Medieval period onwards, Cornwall has been subject to substantial visual impacts from quarrying and mining industries and although these are no longer operational they are considered an integral part of the current landscape

generally and specifically within this study area, in addition to electrical and transport infrastructure. In the future, it maybe envisaged that wind turbines will also become, an integral part of that same landscape. The environmental benefits of the turbine and dissemination of the archaeological data are considered appropriate mitigation for the minimal predominantly visual negative impacts of this proposal.

## 12 The Archive

The AC Ltd project number is AC12005E.

The project's archive is housed temporarily at the offices of Archaeological Consultancy Ltd, Goodagrane, Halvasso, Penryn, Cornwall, TR10 9BX before transferral to the Cornwall Record Office, Old County Hall, Station Road, Truro, Cornwall. The archive is documentary in nature in A4 format. It includes: site notes, research notes as well as copies of the brief, WSI and site report.

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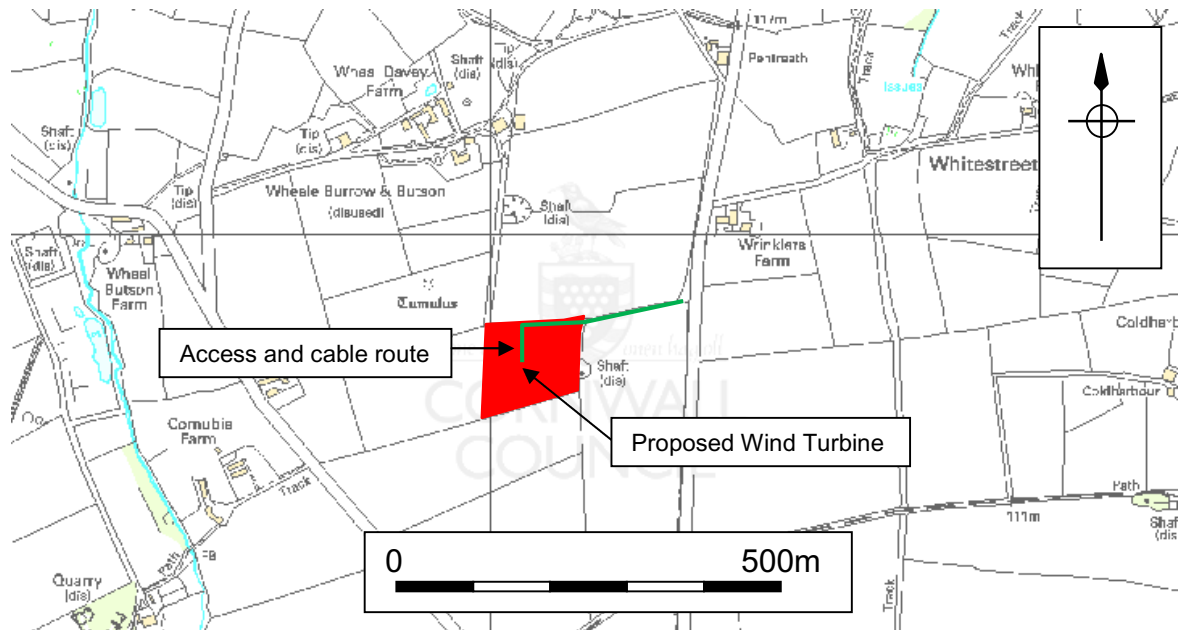
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*Figure 1 Site Location Map. Courtesy of Cornwall Council.*



*Plate 1 View from the Wind Turbine Field showing other wind turbines in the vicinity. Looking Southeast. Courtesy of Lucy Wilson-Richards Cornwall Environmental Consultants Ltd.*



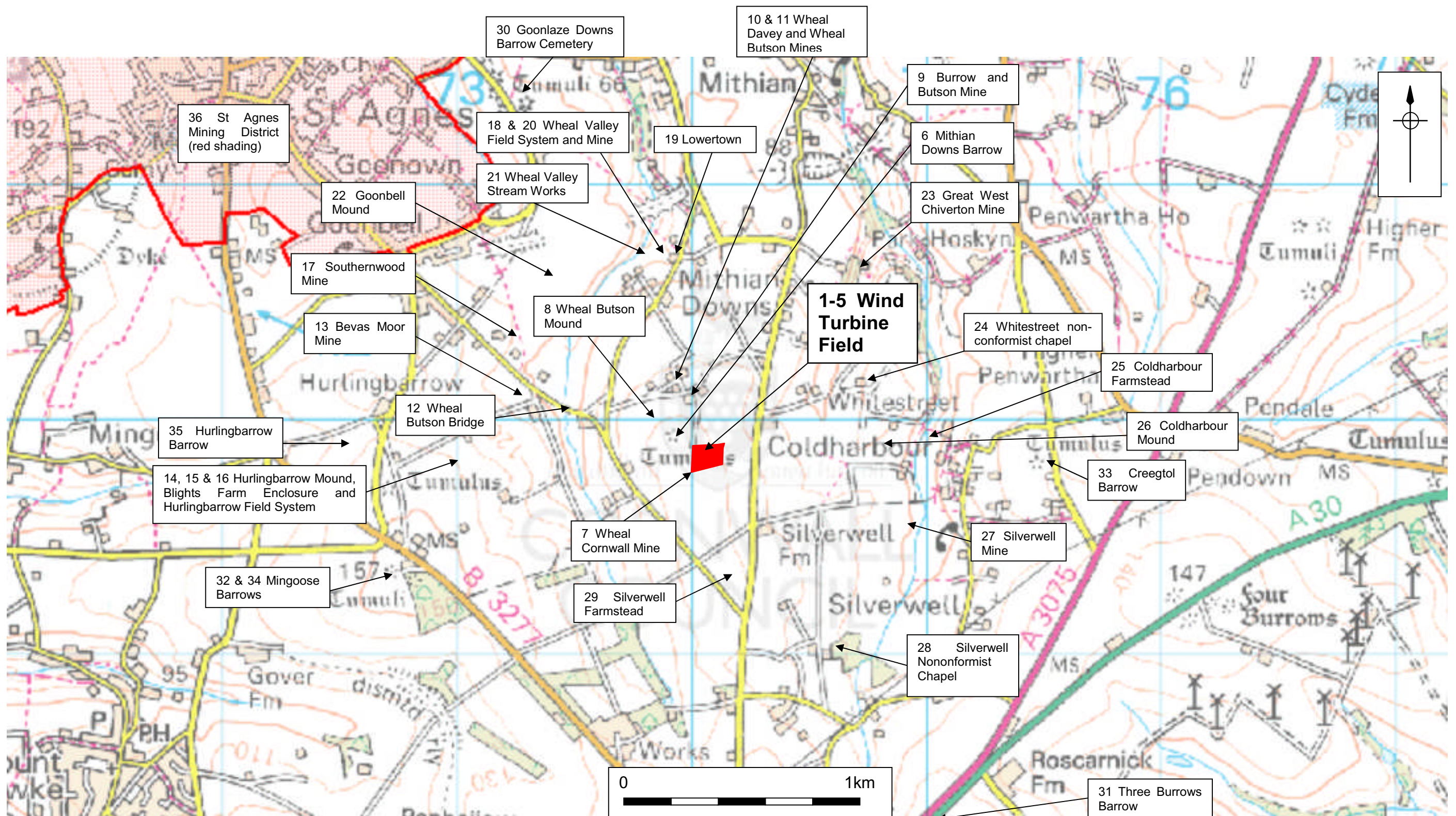


Figure 2 Locations of gazetteer sites. Map courtesy of Cornwall Council.



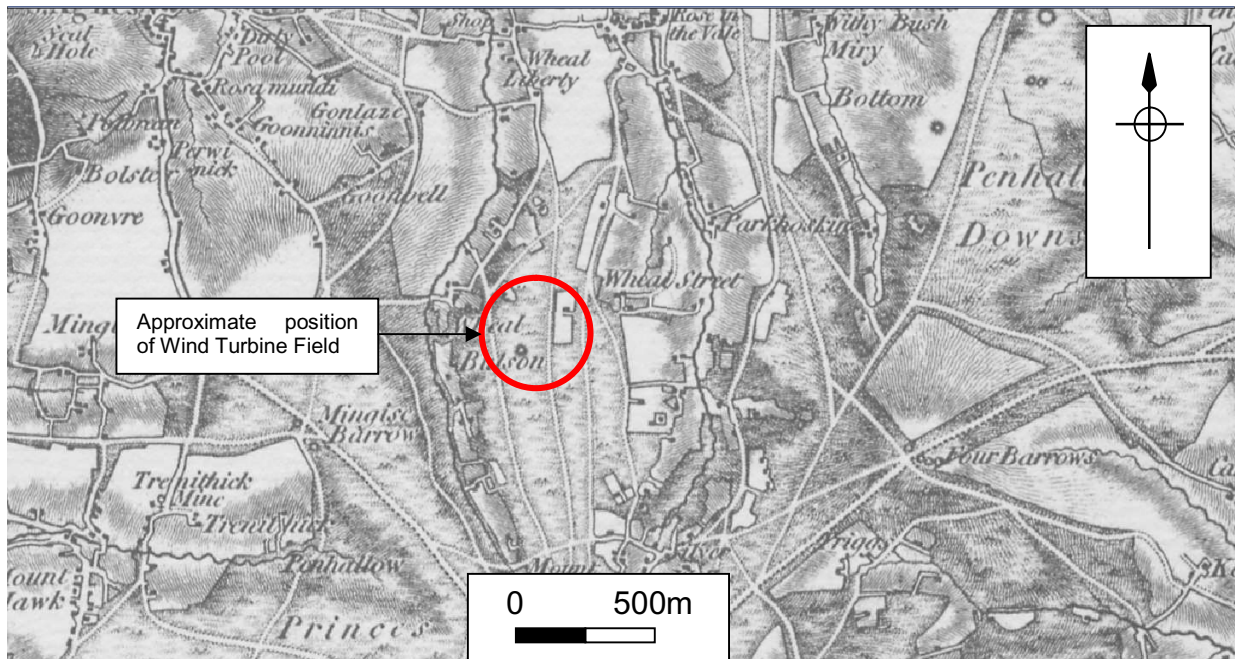


Figure 3 1801 Ordnance Survey 1 inch map.

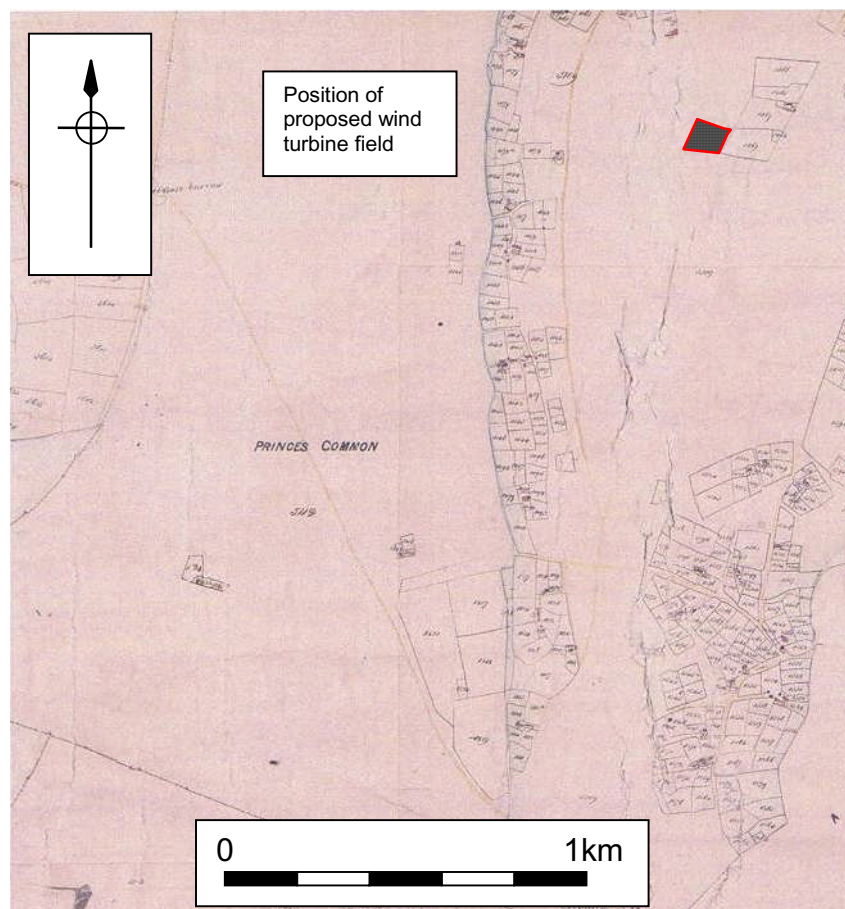


Figure 4 Tithe Map 1841 for St. Agnes Parish

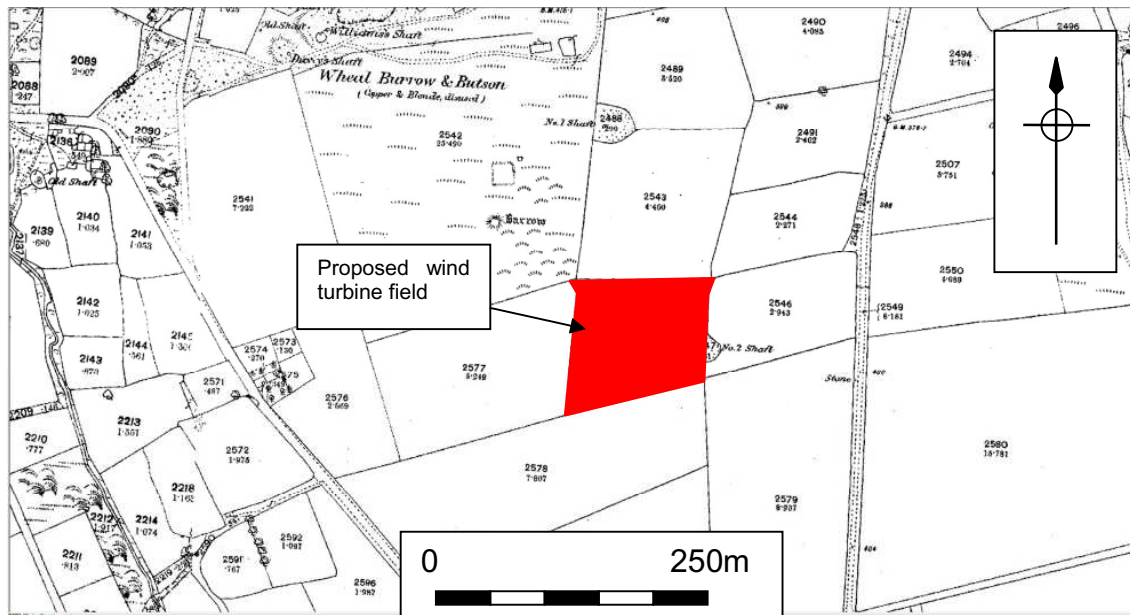


Figure 5 Part of 1880 Ordnance Survey 1<sup>st</sup> edition 25 inch map

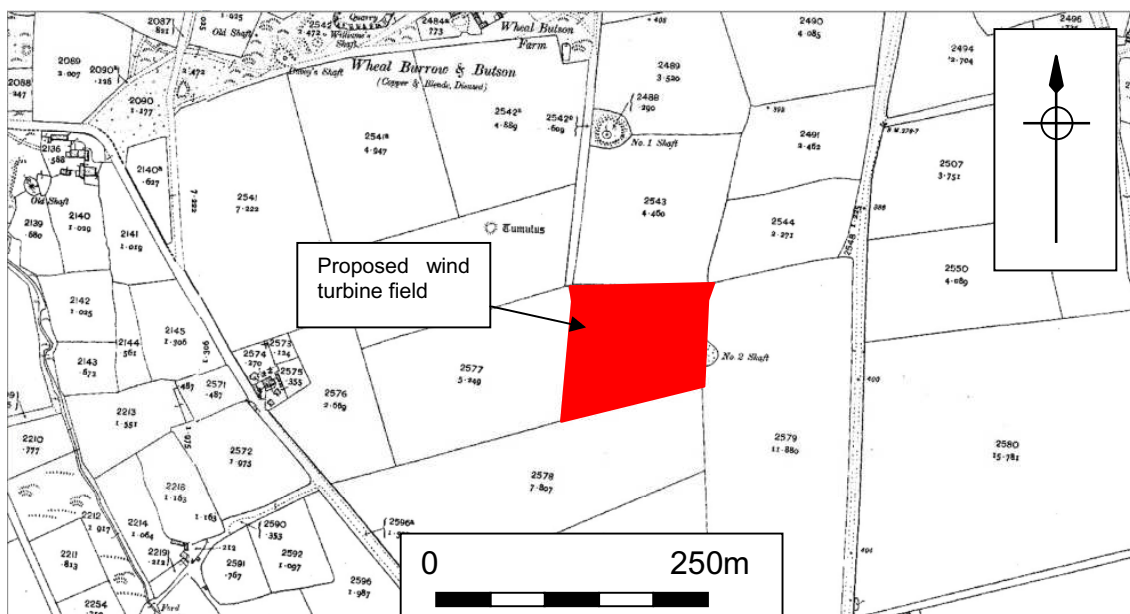


Figure 6 1907 Ordnance Survey 2<sup>nd</sup> edition 25 inch map





*Plate 2 Wind Turbine Field looking east towards shaft (Site 2).*



*Plate 3 Site 2 Shaft showing evidence of burning and fly tipping of tyres. Looking north.*



*Plate 4 View from Site 6 Mithian Downs Barrow (SAM29606) looking southeast towards proposed turbine site.*



*Plate 5 Site 12 Wheal Butson Bridge. Looking northwest.*



## **Appendix 1 Brief**

### **BRIEF FOR ARCHAEOLOGICAL ASSESSMENT**

**Date:** 08/03/12

**Site:** Request for EIA Screening Opinion for siting of proposed wind turbine

**Address:** Land To South West Of Wrinklers Farm Mithian Downs St Agnes Cornwall TR5 0PX

**Application Number:** PA11/06948 |

**Historic Environment Planning Advice Officer:** Dan Ratcliffe

**Planning Case Officer:** Laura Potts

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

#### Contractors Written Scheme of Investigation (WSI)

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

### **1 Introduction**

This brief has been written by the HEPAO and sets out the minimum requirements for an archaeological assessment of the above site.

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

### **2 Site Location and Description**

This site (centred on) SW 7403 4884 constitutes a post medieval agricultural enclosure to the south of St Agnes in a historic mining district. The proposal would involve the construction of a wind turbine and preparation of a 4m wide access track to the installation and a 12m square platform for crane erection and turning of HGVs. The turbine would be 24m to hub.

### **3 Planning Background**

A positive (ES required) screening opinion was given to the applicant by the LPA under the above planning reference number. It is the advice of the HES that any application should include a heritage assessment in order to comply with the requirements of PPS5 in particular policy HE6 dealing with information requirements. An Archaeological Desk Based Assessment including an assessment of the impacts of the development on the setting of the Scheduled Monument to the north of the site should be required.

### **4 Archaeological Background**

This site lies to the south of an area, shown on historic maps as rough ground. The HER records the find of a prehistoric greenstone axe (19122) 100m to the north of the site; Scheduled Bowl Barrow (NationalRef 1017503) 80m to the NW; Wheal Davey and Wheal Butson post medieval mines to the north; and Wheal Cornwall potentially within the site. A number of relict mining features are apparent around the site on maps and aerial photographs.

## **5 Requirement for Work**

Ground works on this site may disturb extant and buried archaeological remains. In order to understand the site and its potential for recording archaeological remains an assessment is required. This would involve a desk based assessment including a map regression plus a walk over survey of the extant remains of the site. This would provide evidence for any recommendations for archaeological recording.

The site specific aims are to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map evidence for the site.
- Whether historic/architectural features should be retained.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Identify the construction, use and 'end of life' impacts of the current proposals on the 'national importance' of Scheduled Monuments, the 'Outstanding Universal Value of the World Heritage Site' and on undesignated historic assets as described in PPS5.

## **6 General Guidance**

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

## **7 Results**

- 7.1 The full report including all specialist assessments of artefact assemblages shall be submitted within a length of time (but not exceeding six months) to be agreed between the applicant and the archaeological contractor, Cornwall Council Historic Environment

Service and the Cornwall Record Office or Royal Cornwall Museum. A further digital copy shall be supplied on CD-ROM preferably in 'Adobe Acrobat' PDF format.

- 7.2 The archaeological contractor will undertake the English Heritage/ads online access to the index of archaeological investigations (OASIS).
- 7.3 This report will be held by the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation.
- 7.4 The report must contain:
- A concise non-technical summary of the project results.
  - The aims and methods adopted in the course of the investigation.
  - A discussion of the archaeological findings in terms of both the site specific aims and the desk based research.
  - A location map, a drawing showing those areas examined as part of the archaeological recording, and copies of historic maps and plans consulted and any archaeological plans and sections. All plans shall be tied to the national grid.
  - All specialist reports and assessments.
  - A summary of the archive contents and date of deposition.
  - A copy of the brief and the approved WSI will be included as an appendix.

## **8 Archive Deposition**

- 8.1 An ordered and integrated site archive will be prepared in accordance with: *Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006* upon completion of the project. The requirements for archive storage shall be agreed with the Royal Cornwall Museum. Please check the accessioning and deposition information on the Royal Cornwall Museum website and fill in the 'Notification of Fieldwork' form. Once this has been accepted an accession number will be provided by the museum.

<http://www.royalcornwallmuseum.org.uk/policies/>

- 8.2 Where there is only a documentary archive this will be deposited with the Cornwall Record Office as well as the Courtenay Library of the Royal Institution of Cornwall.
- 8.3 A copy of the report will be supplied to the National Monuments Record (NMR) Swindon.
- 8.4 A summary of the contents of the archive shall be supplied to the HEPAO.
- 8.6 Only on completion of 8.1 to 8.5 (inclusive) will there be a recommendation for the discharge of any archaeological recording condition.

## **9 Monitoring**

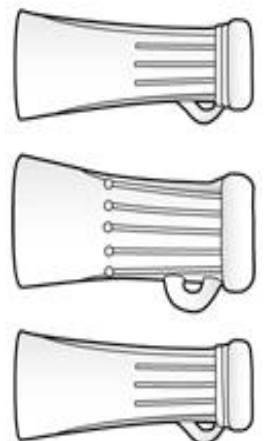
- 9.1 The HEPAO will monitor the work and should be kept regularly informed of progress.
- 9.2 Notification of the start of work shall be given preferably in writing to the HEPAO at least one week in advance of its commencement.
- 9.3 Any variations to the WSI shall be agreed with the HEPAO, preferably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

# **Appendix 2 Written Scheme of Investigation Proposed Wind Turbine on land near Mithian, St. Agnes, Cornwall.**

## **Archaeological Assessment: Written Scheme of Investigation.**

<b>Author:</b>	Hayley Goacher BA (Hons) PlfA
<b>Report Date:</b>	05.03.2012
<b>Client:</b>	Migrid
<b>Project No:</b>	AC12005E
<b>Planning Reference:</b>	PA11/06948
<b>Statutory Protection:</b>	None
<b>Proposal:</b>	Installation of one wind turbine
<b>Civil Parish:</b>	St. Agnes
<b>District:</b>	Central 1
<b>County:</b>	Cornwall
<b>Country:</b>	England
<b>National Grid Reference:</b>	SW 73991 48856

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## **1 Summary**

The proposed wind turbine site on land near Mithian (NGR SW 73991 48856) is within a landscape with archaeological potential. This landscape is also becoming increasingly favoured for the erection of wind turbines which potentially impacts historic environment assets and their setting.

Archaeological Consultancy Limited (AC) has been commissioned by Chloe Bines of Migrid, to provide an archaeological assessment to facilitate appropriate planning decisions. This document sets out the proposed methodology for the assessment.

## **2 Site location**

### **2.1 Location**

The site is located approximately one kilometre south of Mithian Downs in the civil parish of St. Agnes (NGR SW 73991 48856).

### **2.2 Topography**

The site is situated on the northern end of a hilltop plateau approximately 130m OD. The ground slopes relatively steeply down to the west and northwest and more gradually on the east side whilst the plateau extends approximately 1.25 kilometres to the south.

### **2.3 Geology**

The bedrock is recorded as Gramscatho Group of mudstone and sandstone. This is sedimentary bedrock formed approximately 364 to 391 million years ago in the Devonian Period. ([www.bgs.ac.uk/geologyviewer](http://www.bgs.ac.uk/geologyviewer)).

## **3 Project background**

### **3.1 Development background**

Following a planning application (PA11/06948) for one wind turbine, Cornwall Council responded by requiring an Environmental Impact Assessment with a separate archaeological assessment. AC was commissioned to carry out an archaeological assessment on the screening application.

### **3.2 Archaeological and Historical background**

The site is in the adjacent field to a probable Bronze Age barrow (Scheduled Monument No 29606) which according to the citation is quite well preserved. Evidence of a Prehistoric landscape surrounds the site with in excess of ten barrows within approximately 2 kilometres, with more sites, including two possible settlements just outside this area.

In addition, the site is surrounded by historic mining activity including shafts and tips. Some of these are likely to relate to parts of the Cornwall Mining World Heritage Site. All the mine sites close by, are now disused but some of the names are preserved within current place names, 'Wheal Butson Farm' for



example. There are also multiple Post Medieval farmsteads, bridges and nonconformist chapels, none are apparently listed.

## **4 Project aims and objectives**

The principal aims will be to:

- Draw together the historical and archaeological information about the site.
- Identify from planning records the location and type of turbine applications already consented (this information is available in GIS form from the Historic Environment Record team)
- Review and analyse historic map evidence for the site.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Apply recently published EH guidance on the assessment of the setting of Heritage Assets.

## **5 Method statement**

### **5.1 General methodology**

AC complies with the guidelines set out in the IfA's Standards and Guidance and follows the IfA code of conduct.

### **5.2 Desk-based assessment (DBA) and walk over survey**

An initial DBA will draw together existing published and unpublished materials pertinent to the site including detailed searches and analyses of registers of archaeological sites; a map regression exercise; review of available aerial photographs.

This will include material at the Cornwall HER, the Cornwall Record Office, the Courtney Library, the Cornish Studies Library, material available on Heritage Gateway, recent excavation reports and other material held in the AC library as appropriate.

Further research will be undertaken as necessitated by the findings.

A walk over survey will record any extant visible remains on the site. Existing plans will be annotated with archaeological detail typically at 1:1000 or 1:2,500 with additional details as required.

### **5.3 Impact Assessment**

A gazetteer of designated heritage assets within 2km and relevant heritage assets within 1km of the site will include a statement of their significance. Studies will then be undertaken to determine the locations of current and proposed wind turbines within a 5km radius and the specific nature and impact of the turbine proposed for this site. This will include consideration on the construction, use and end-of-life impacts of the turbine. The cumulative impact of these turbines on the heritage assets will then be considered to enable further recommendations and planning decisions to be made.

### **5.4 Report**

A single archive report will be prepared to describe the results of the archaeological work. The final report will contain: summary, aims and methods, discussion, conclusion, location and other relevant plans tied in to the OS grid and an archive index including intended date of deposition. Appendices will include the WSI and any specialist reports as appropriate.

Copies of the archive report will be submitted to: the client; the County Historic Environment Record (HER); Cornwall Record Office; National Monuments Record (NMR) in Swindon and all significant contributors where (with the exception of the client's and contributors' copies) they will be available for public consultation.

### **5.5 Archive**

The site archive will be prepared in line with the brief.

The archive will be of a documentary nature and will be deposited in a suitable form with the Cornwall Record Office within six months of the completion of the final report and confirmed in writing with the HEPAO.

### **5.6 Web-based publications**

The online OASIS record will be completed when the report is submitted and a digital version of the report will be uploaded.

## **6 Project management and structure**

### **6.1 Staff**

The project will be managed by Matt Mossop (AC) who will supervise and assist Hayley Goacher in the undertaking of the desk-based assessment, walk-over survey and compilation of the report.

#### **Matt Mossop MA (Hons) MGSDip MIAI Project Manager**

Matt has extensive archaeological experience in England, France and Ireland from 1992 onwards, becoming a licensed director in Ireland (2001). He has directed numerous excavations and presented papers for the World Archaeological Congress, Royal Society of Antiquaries of Ireland, universities and local groups in Ireland and the UK.

### **Hayley Goacher BA (Hons) PlfA Project Officer**

Hayley completed her BA in archaeology at The University of Durham in 2009 and has archaeological experience, from 2004 onwards, of both excavation and post-excavation, principally with contractual archaeological firms. She joined AC in July 2010 and has since undertaken a number of site assessments, walkover and photographic surveys, watching briefs and evaluations, most recently including Trewarthenick, Gwel An Mor and Treverbyn Farm.

Whilst we endeavour to avoid changes to senior project staff, AC reserves the right to change the nominated personnel if necessary.

### **6.2 Project facilities and infrastructure**

The project will be based at the AC office in Halvasso, Penryn. AC has a computer network running Windows XP Professional and Vista. Report texts are generated in Word 2007.

### **6.3 Timetable**

The work is anticipated to commence as soon as we have written approval from the Planning Officer and Historic Environment Planning Advice Officer (HEPAO) and have notified the HEPAO of our intention to be on site. The fieldwork stage of the project is expected to take one day.

An archive report will be completed within 6 months of the end of the fieldwork. If the site proves complex or specialist reports are required, an interim statement will be produced in the same time frame. The archive will be deposited with the Cornwall Record Office within six months of the completion of the final report.

### **6.4 Health and safety**

AC complies with all relevant health and safety guidelines and legislation. A risk assessment will be prepared for the site work and all staff will be briefed on the contents of the final version. PPE will be issued and used as required.

### **6.5 Insurance**

AC has adequate insurance for employer's liability, public liability and professional indemnity. Further details are available on request.