

Tregustick Farm, Withiel, Geophysical Survey: Statement of Archaeological Implications

Introduction

Historic Environments Projects, Cornwall Council were requested by Mr Bill Jackson, Business Development Manager of Aeolus Power (Wind Energy) Ltd to carry out a geophysical survey of a single wind turbine base and connecting cable at Tregustic Farm, Withiel (Fig 1). The 1 HA survey area was centred on the turbine base and a 20m wide corridor along a short route of cable trench. The purpose of the geophysical survey is to inform further stages of archaeological recording which may be required as part of the planning condition.

The area of the proposed turbine development falls into a historic landscape character zone classified as 'Recently Enclosed Land' (Cornwall County Council 1996). The 'Recently Enclosed Land' in this instance is composed of modern, post-1907 land intake from rough ground. This type of land can often contain upstanding archaeological remains such as barrows and rounds dating to the prehistoric and Romano-British period.

The 1840's Tithe map (Fig 5) shows pale, dashed-line depicted fields to the immediate south of the site. These represent short term intakes of land from common ground and rough pasture, and are elements of early post medieval field systems (MCO21065 and MCO21066). Two of the closest intake fields are recorded in the Tithe apportions as having the typically late field name of Down Park, a third one is simply called Common. The northern extension of MCO21066 lies within the immediate area of the turbine (shown with red lines on figures 1, 3 and 4). The details were plotted during the National Mapping Programme from the following aerial photographs; RAF, 1946, CPE/1904/3188 and 3189; and NMR, 1966, MAL/5766/102. These fields are not shown as extant on the Tithe map or the 1875 Ordnance Survey map of the area (Figs 5 and 4).

The proposed development is adjacent to an area which contains a large number of known and potential Bronze Age barrows to the west and south (Fig 1). These are identified within the HBSMR as MCO3644; MCO3643; MCO2874; MCO2875; MCO2876 and MCO2842. Given the proximity of these sites there was potential for buried prehistoric and medieval sites to survive within the project area and there was scope for the survival of previously unrecorded archaeological remains and artefacts of all periods.

In January 2012, a geophysical survey (magnetometer survey) was carried out over the survey area by GSB Prospection Limited who produced a report detailing the results of their survey (GSB 2012/08).

This statement is intended to assess the results from the geophysical survey and to present the implications for further archaeological mitigation.

Summary of the results

The geophysical survey at Tregustick Farm did not identify any significant archaeological features (Fig 2).

Several linear and curvilinear trends were identified within the data by GSB, but these were not well defined and are unlikely to have archaeological potential. It is likely that they are either natural or associated with local changes in the soil related to agricultural activity. They do not obviously relate to the field divisions shown on the 1840's Tithe map (Fig 5). These field enclosures appear to have been short-lived, and are likely to have been fenced and perhaps never actually formalised. They are not shown on subsequent 1875 OS mapping (Fig 4). The 2005 aerial photograph (Fig 3) shows the proposed turbine site to be located within a largely modern fence defined field, with no obvious surface irregularities.

Occasional marked changes in the magnetic background, recorded as 'noisier' zones (GSB 2012, 1) are also likely to be natural, or the result of late land improvement via stone clearance, ploughing and soil movement. The affect of fenced boundaries has resulted in ferrous responses at the edge of some of the survey grids. On the western side of the survey noisiness reflects the effects of compaction and shift of the Saints Way track.

Two anomalies were identified at the southern end of the survey area and described as being of 'Uncertain' origin. If of anthropogenic rather than natural origin it is possible that the western figure-of-eight shaped anomaly is a double pit or composite feature, while the eastern one is a simple oval pit. Both are shown on figure 2. If these are pits they would have the potential to be archaeologically significant.

Further archaeological recording

Only two potential archaeological anomalies were revealed by the geophysical survey, and these are difficult to interpret. They could be of archaeological interest, but they could also be modern or natural. Given the proximity of a number of barrows in the area, it is likely that the area of these anomalies would need to be archaeologically monitored if disturbed during site works. However, neither lies within the immediate area of the turbine base.

In the event that the feature proved to be archaeologically important, then there would need to be an agreed programme of archaeological recording involving excavation, post excavation analyses and publication.

The linear and curvilinear trends identified elsewhere within the survey area have not been identified as having potential archaeological significance. They are likely to be natural or clearance related.

The requirements for any further programme of archaeological recording should be agreed with the Cornwall Council Historic Environment Planning Advice Officer.

References

Cornwall County Council, 1996. *Cornwall landscape assessment 1994*, Report prepared by CAU and Landscape Design Associates, Cornwall County Council, Truro

GSB, 2012, *Tregustick Farm wind turbine, Withiel, Cornwall* (Survey Ref: 2012/08)

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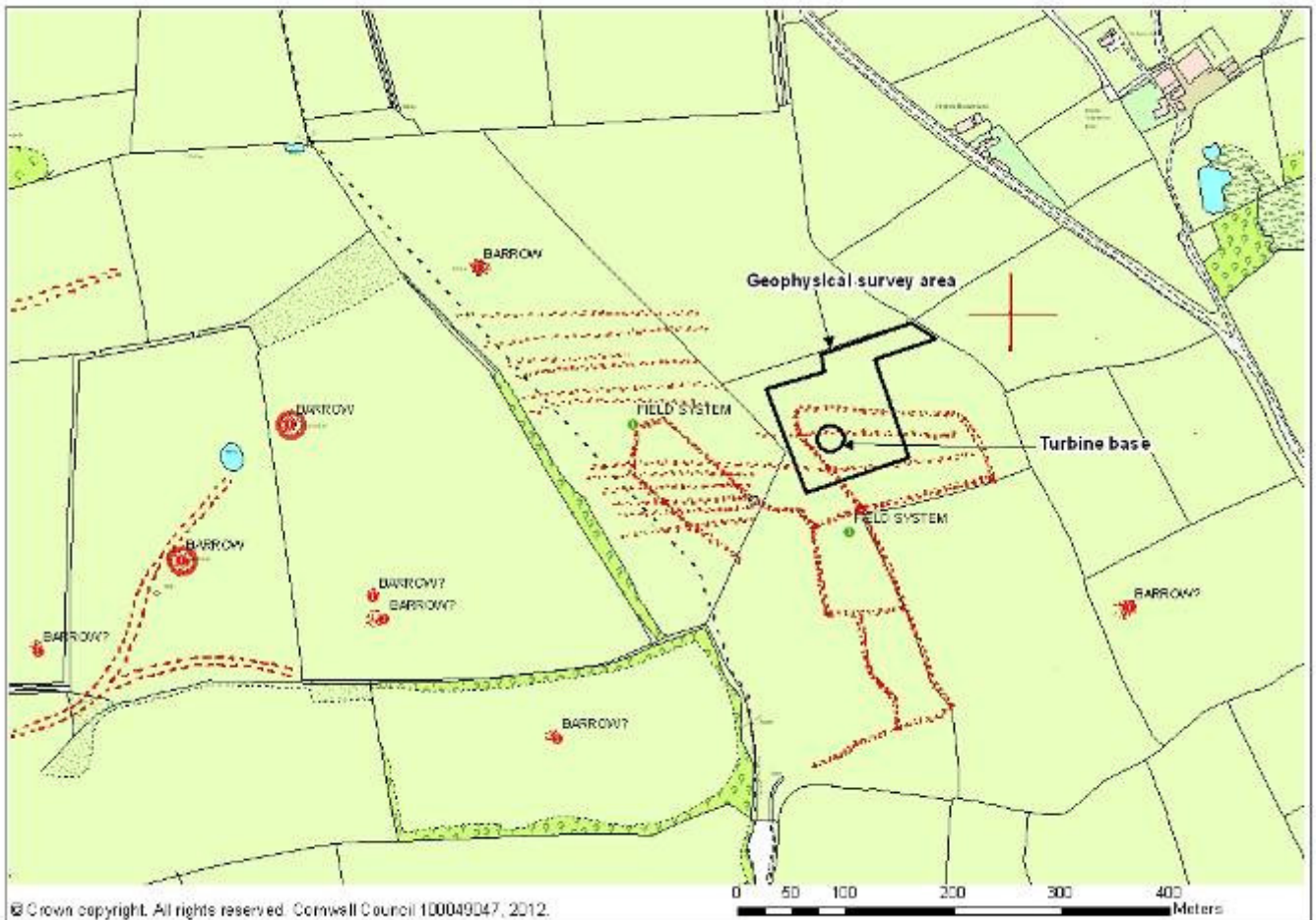


Fig 1 Modern digital mapping showing the study area, HBSMR identified sites, NMP (National Mapping Programme) mapped sites identified from aerial photographs shown as red dashed lines, and the two Scheduled barrows shown with solid red lines. The black dashed line marks the parish boundary and Saints Way between Withian and St Wenn.

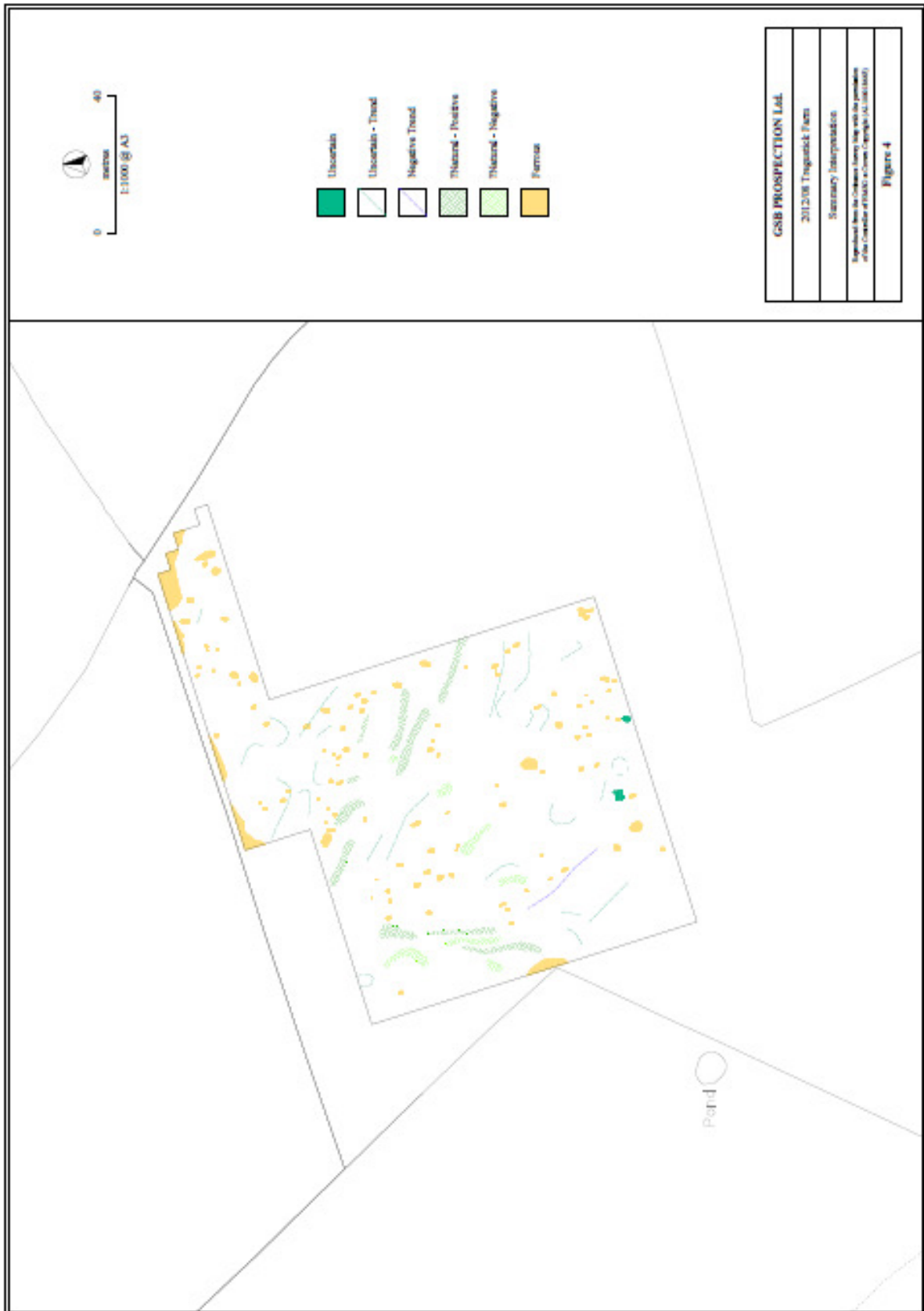


Figure 2: Tregustick Farm, Withiel: the geophysical survey results.

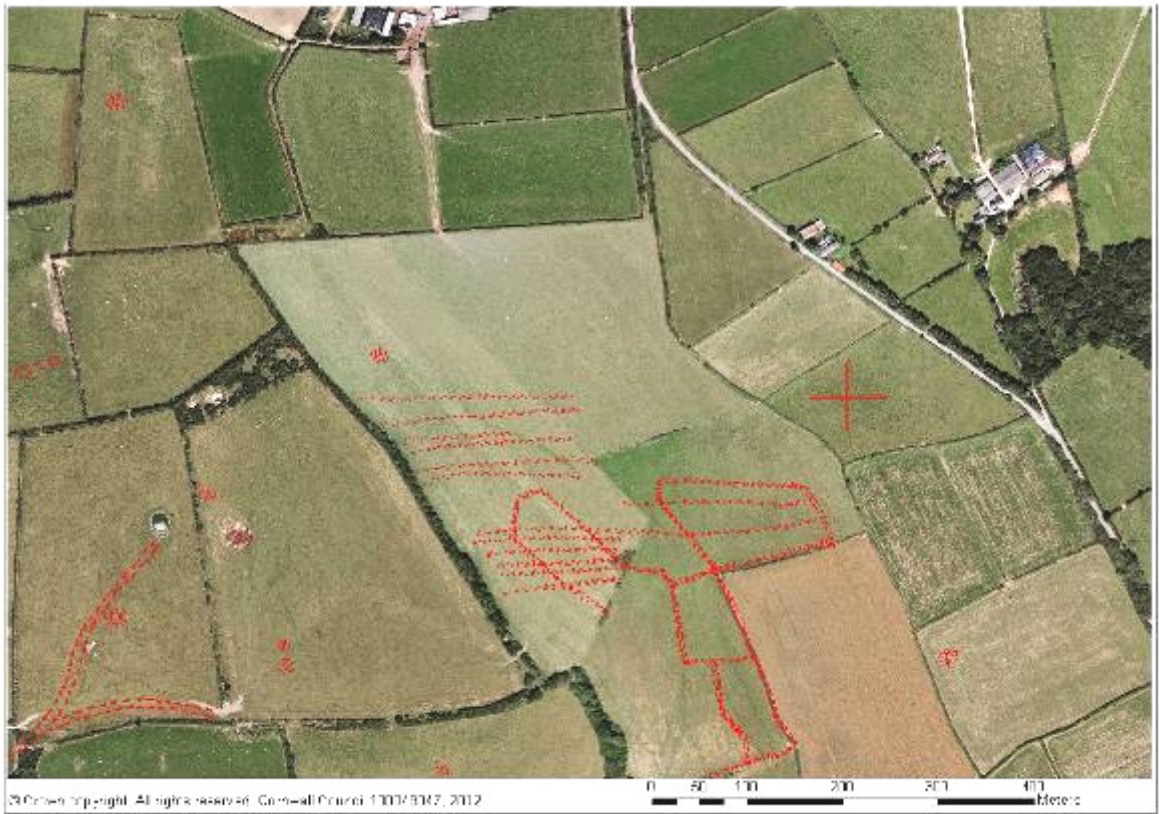


Fig 3 Aerial photograph 2005 showing the open character of the study area and the predominance of ploughing and pasture. The study area at the time of the geophysical survey was under pasture.

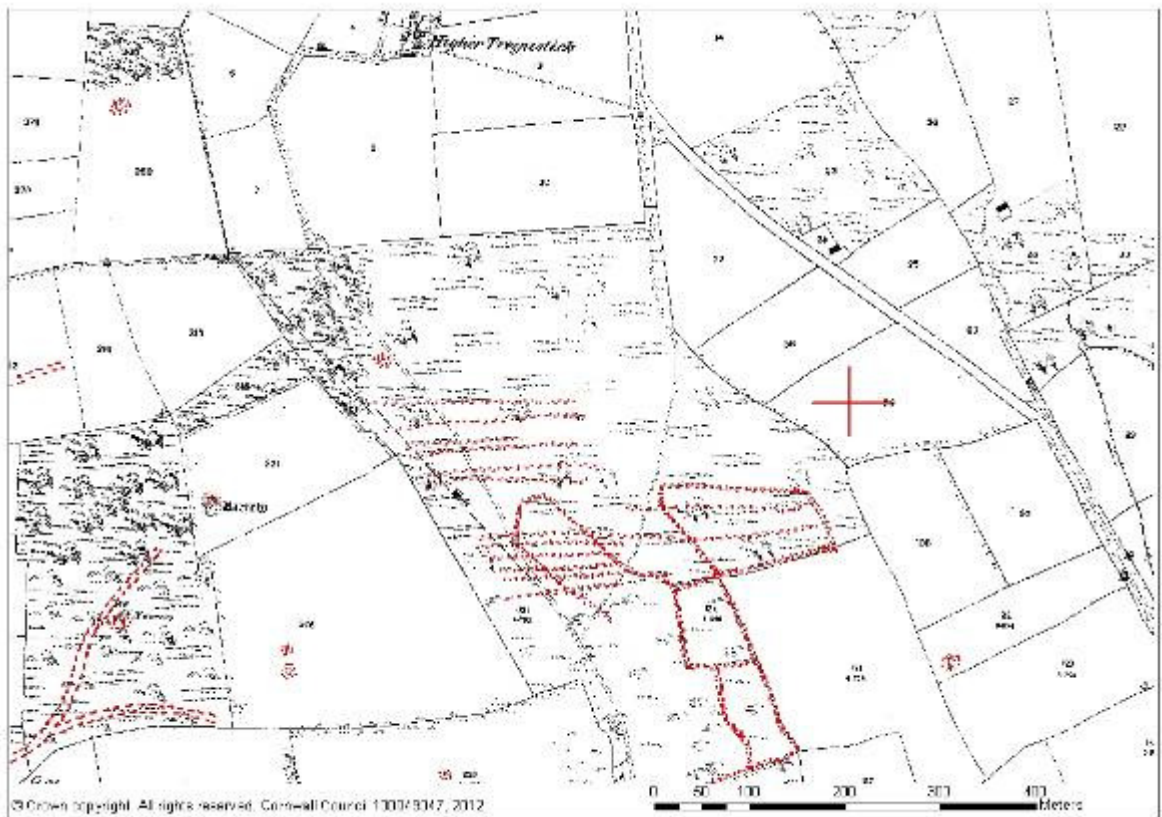


Fig 4 Extract from the 1875 Ordnance Survey map showing NMP (National Mapping Programme) mapped boundaries identified from aerial photographs and the Tithe map in red.



Fig 5 1842 Tithe map for the parish of Withiel, showing the location of the turbine base.