



Land off Tolponds Road,
Porthleven, Cornwall
Geophysical survey statement



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Acknowledgements

This study was commissioned by the Trevor Osborne Property Group and carried out by Cornwall Archaeological Unit, Cornwall Council.

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

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1 Introduction

1.1 Project background

This report has been commissioned by the Trevor Osborne Property Group to guide a Written Scheme of Investigation (WSI) for a mixed use development on land off Tolponds Road, Porthleven, west Cornwall (NGR SW 62727 26564; Fig 1). The site covers approximately 1.3 hectares and consists of two small fields: the field to the north, rough grassland and scrub, and the southern enclosure, recently cleared scrub.

The site has conditional permission for development (PA18/01070) with Condition 7 of the approval notice relating to buried archaeology.

Following the comments made by Cornwall Council's Senior Development Officer Historic Environment on the submission of an initial WSI (PA19/06556) and further subsequent discussion with him, a geophysical survey was undertaken to provide more information for the basis of the mitigation options within a revised WSI.

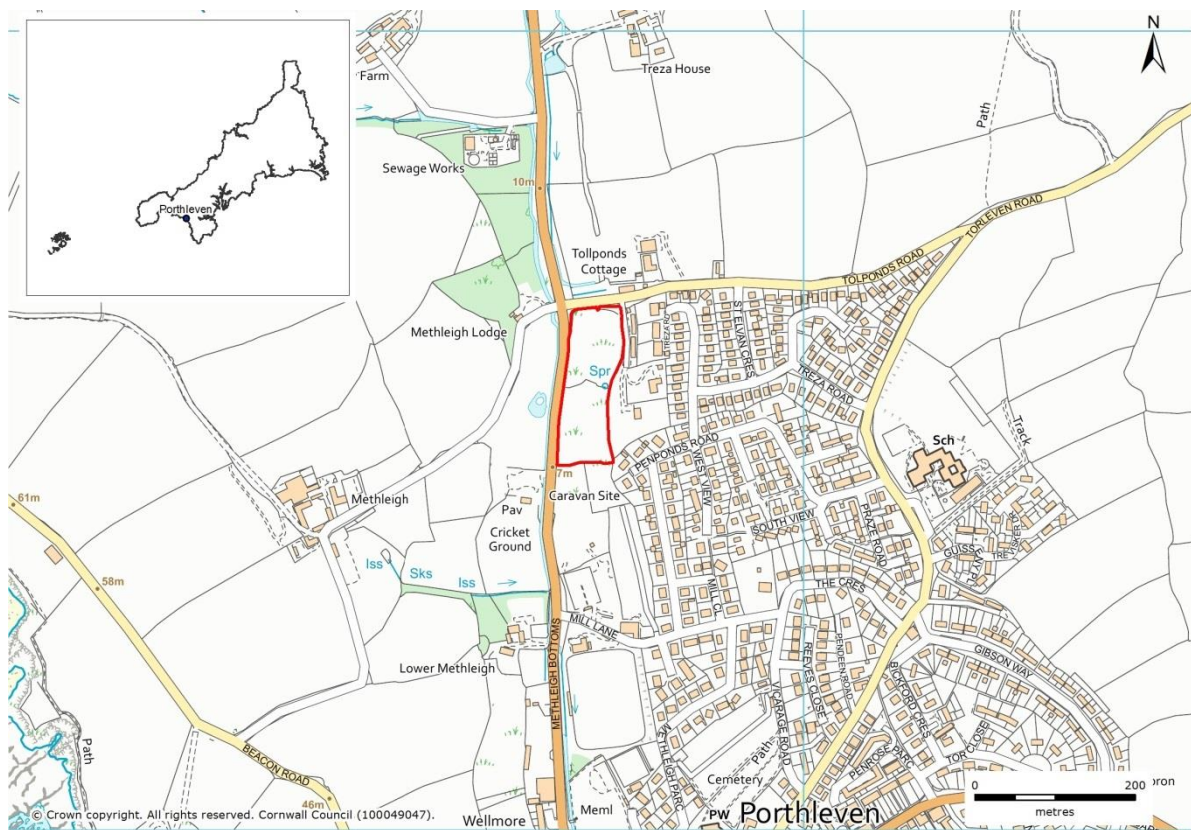


Figure 1 Location map.

This statement assesses the results of a geophysical survey undertaken for the whole site (South West Archaeology 2019) and presents the potential opportunities for further archaeological mitigation.

2 Results of the geophysical survey

See Figures 4 and 5 for surveyed area.

Because of ground conditions and remaining piles of cleared scrub the survey covered approximately 0.7 hectares of the site. The magnetometer (gradiometer) survey was undertaken in dry and sunny conditions on the 20th August 2019.

The geophysical survey did not identify any archaeological anomalies within the site.

3 Significance of the results from the survey

The results of the geophysical survey confirm that the site has been subject to significant dumping of waste material.

Other than the field boundary, no heritage assets were noted during fieldwork and much of the site (except its western edge) was covered with a thick spread of made ground which included visible fragments of post-medieval pottery, modern concrete, tarmac, plastic and scrap metal.

The Phase 1 Contaminated Land Survey submitted as part of the planning application notes that the site was used to dump inert material in the 1980s (Approved Site Investigations 2018, 6).

Subsequent Geotechnical Investigation (GI) (Fig 6) has shown the depth of this material is between 0.1m-2m deep. At depth, the GI assessment established that there are thick deposits of alluvium, generally brown and grey slightly sandy clays and silts, with occasional silts, and the occasional interbedded bead of sand. The thickest deposits of made ground were located in the lowest part of the site, in the western and central areas close to the stream. Partially decayed organic matter was observed as disseminated material and rootlets in the clays and sands in several of the boreholes (WS01; WS03, WS04, WS06) with a narrow lens of peat recorded in WS02 (Ian Farmer Associates 2019).

It is also possible, that the site has seen some spreading of mine waste, although this is unlikely as the spoil heap recorded opposite the site at Penpons (MCO35785) and a potential shaft on the site noted by the c1840 Tithe survey (see below) are likely to have been minor features.

Analysis of historic maps shows that the site was divided into five small enclosures.

The c1840 Tithe Map for Sithney recorded these as all owned by the Trustees of Sir John St Aubyn, leased by Thomas Richards and occupied by James Pascoe and part of the tenement of Tolponds (Fig 2).

Apportionment number	Field-name	State of cultivation
2819	Moor	Arable
2820	Slip	Arable
2821	River Field	Arable
2822	Shaft Field	Arable
2823	Crooked Field	Arable

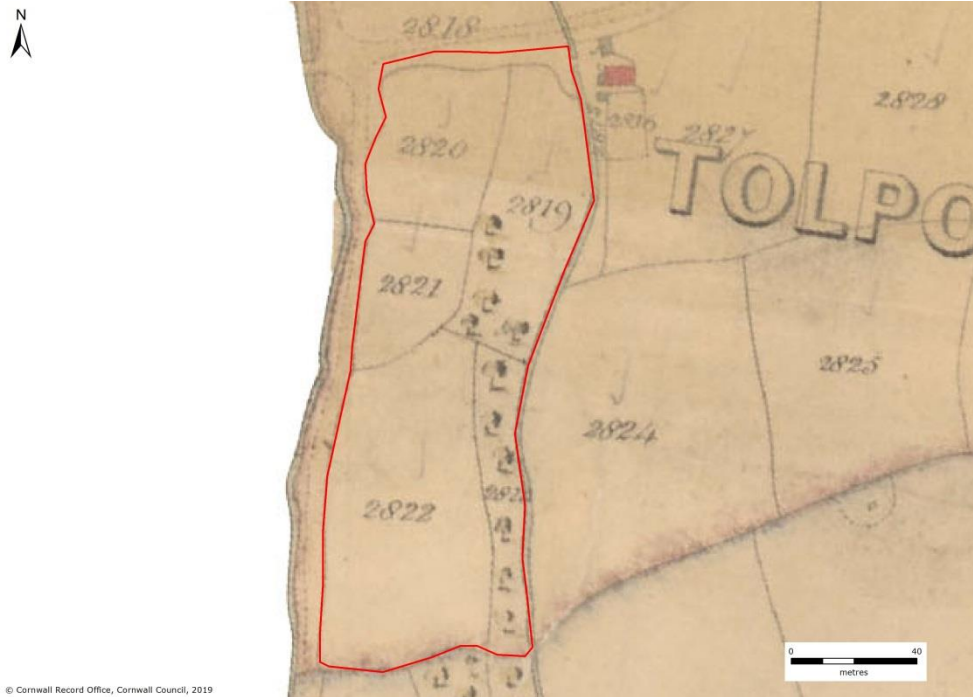


Figure 2 c1840 Tithe Survey (with the approximate boundary of the site shown).

The 1878 Ordnance Survey (OS) map shows the fields as improved ground except for what was the 'Crooked Field' which is recorded as an orchard (but with a reduced extent than in c1840) (Fig 3). A similar arrangement to the landscape is recorded by the 1908 OS map although the remaining orchard had been grubbed out by this time.

Both historic OS maps record a small spring which is still shown on modern OS mapping.

The area is low lying and probably seasonally quite damp: as indicated by the Moor field-name recorded on the c1840 Tithe survey and the reeds and rushy ground recorded on the historic OS maps below Penpons (on the opposite side of the road).

Analysis of the 1946 RAF aerial photograph shows the field system recorded on the 1908 OS map still in place, but the field boundaries were removed in the late 20th century to leave the arrangement of the two fields now found on site (leaving an irregularly shaped field boundary).

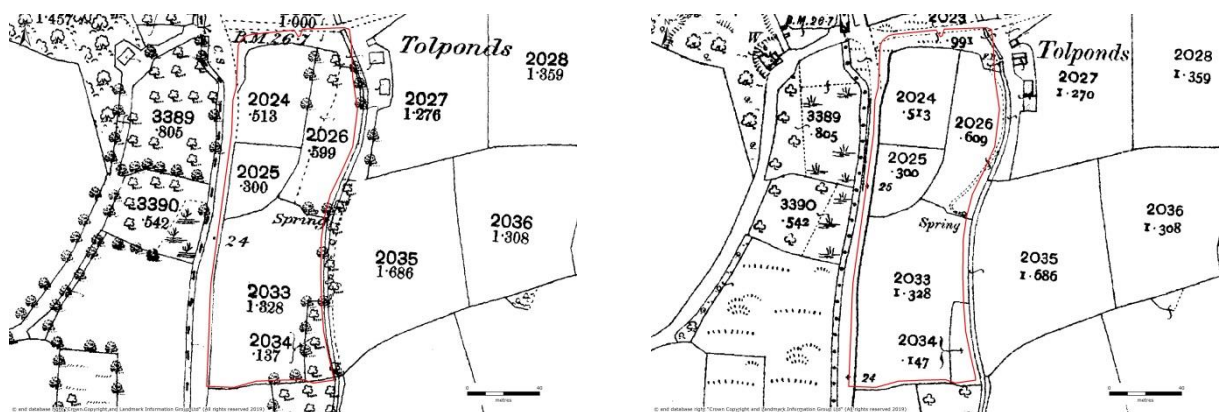


Figure 3 1878 OS map (left) and 1908 OS map (right).

4 Recommendations for further archaeological recording

The geophysical survey has identified no anomalies and the archaeological potential for the site is uncertain. The GI assessments also revealed little other than made ground and a thin lens of peat.

The GI report for the site recommends the use of end-bearing piles to secure the buildings and that these are likely to be 9m to 12m in length and inserted via percussive methods. Floor slabs for the buildings will be suspended and not be ground bearing. In relation to the roads and hard standings it is likely that these will be formed in both the made ground and alluvium, depending on the ground conditions in each area (Ian Farmer Associates 2019).

The peat deposit identified by GI works was located in borehole WS02, as a narrow lens within a silty-clay between 2.5m and 3.10m below the surface. Mike Austin of Ian Farmer Associates (pers comm) has confirmed that the borehole cores have not been retained and that the peat was ephemeral and localised on site (based on the data retrieved from the other boreholes and the interpretation of the ground conditions).

None of the buildings will be developed in the area of the peat located in WS02 (see Fig 6).

In light of the geophysical survey results, together with those of the GI assessments, and the proposed piling construction methodology we consider it unlikely that an archaeological watching brief would reveal archaeological features of any significance.

Subject to the requirements of the Local Planning Authority (LPA), however, it is possible that further stages of archaeological recording may be required.

4.1 Mitigation by record

This section summarises the options to reduce or mitigate adverse impacts on the archaeological/historic resource expected to result from the proposed development.

These options are provided for guidance and the actual requirements for archaeological recording will be set by the Local Planning Authority (LPA).

4.1.1 Palaeoenvironmental analysis

Further sampling and analysis of the peat deposit located in the vicinity of the borehole WS02. If suitable, the deposits could be analysed for past flora and fauna and if suitable, radiocarbon dating.

4.1.2 Field boundary recording

Recording by section drawing, photography, and soil sampling as appropriate for early or otherwise significant examples of the surviving historic boundary banks (i.e., those shown on the 1840 Tithe Map and / or covered by the Hedgerow Regulations) and associated ditches where disturbance is unavoidable.

4.1.3 Analysis and publication

Should the results merit it a programme of post-excavation analysis and publication may be required by the LPA.

5 References

5.1 Primary sources (in chronological order)

Tithe Map and Apportionment, c1840. *Parish of Sithney*

Ordnance Survey, 1878. *25 Inch Map First Edition*

Ordnance Survey, 1908. *25 Inch Map Second Edition*

Royal Air Force, 12th July 1946, *Vertical monochrome aerial photograph (A36 4279)*

Ordnance Survey, 2019. *MasterMap Topography*

5.2 Publications

Approved Site Investigations, 2019. *Contaminated Land Survey Phase 1: Tolpoods, Porthleven* (dated 16th March 2018; A417/P1/JW).

Ian Farmer Associates, 2019. *Ground Investigation report; Tolpoods, Porthleven, TR13 9LF* (July 2019).

South West Archaeology, 2019. *Land at Tolpoods Road, Porthleven, Cornwall; Results of a Geophysical Survey*.

5.3 Websites

<http://www.heritagegateway.org.uk/gateway/> Online database of Sites and Monuments Records, and Listed Buildings

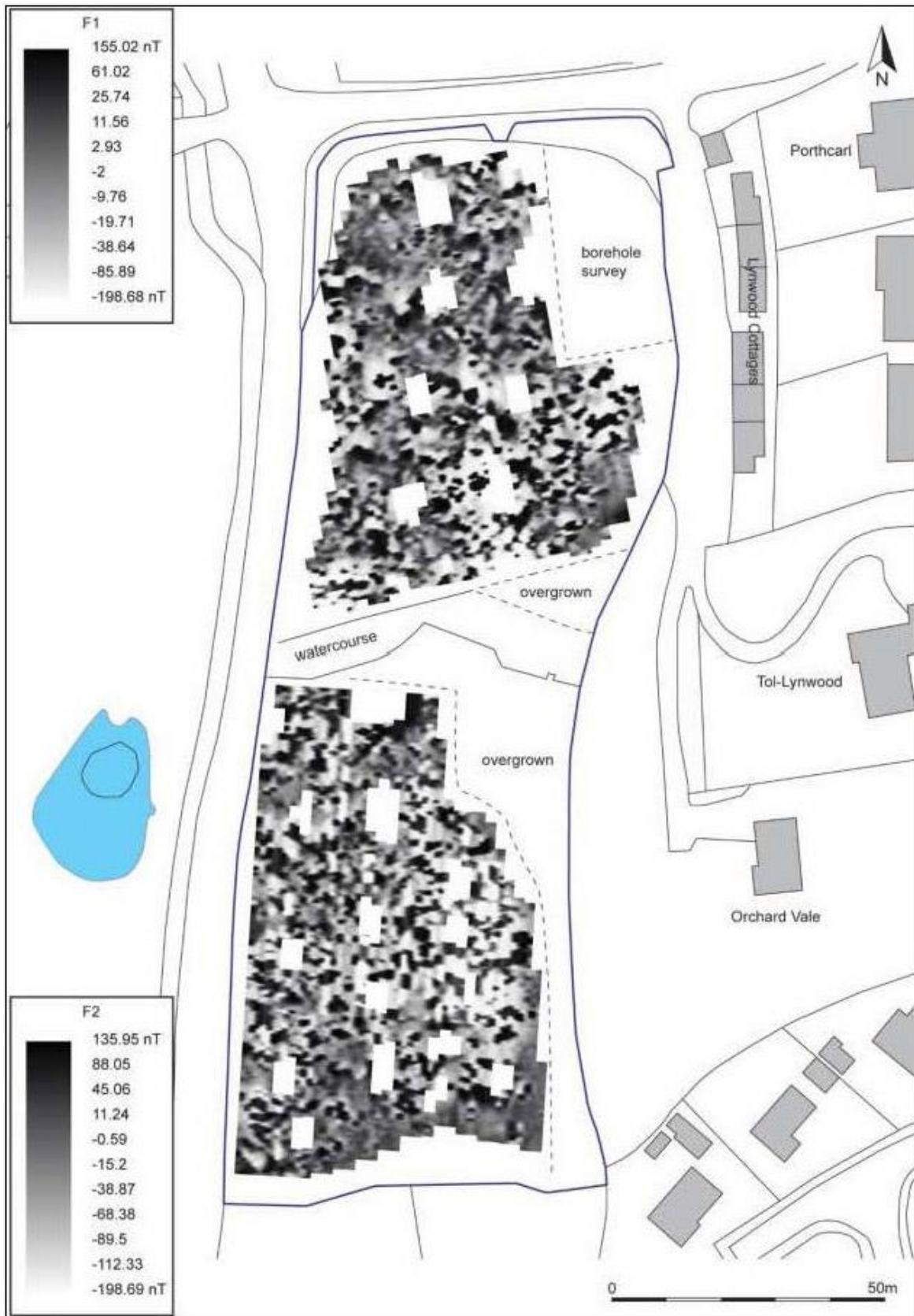


Figure 4 Shade plot of gradiometer survey data; gradiated shading; bandweight equalised (site boundary outlined in blue).

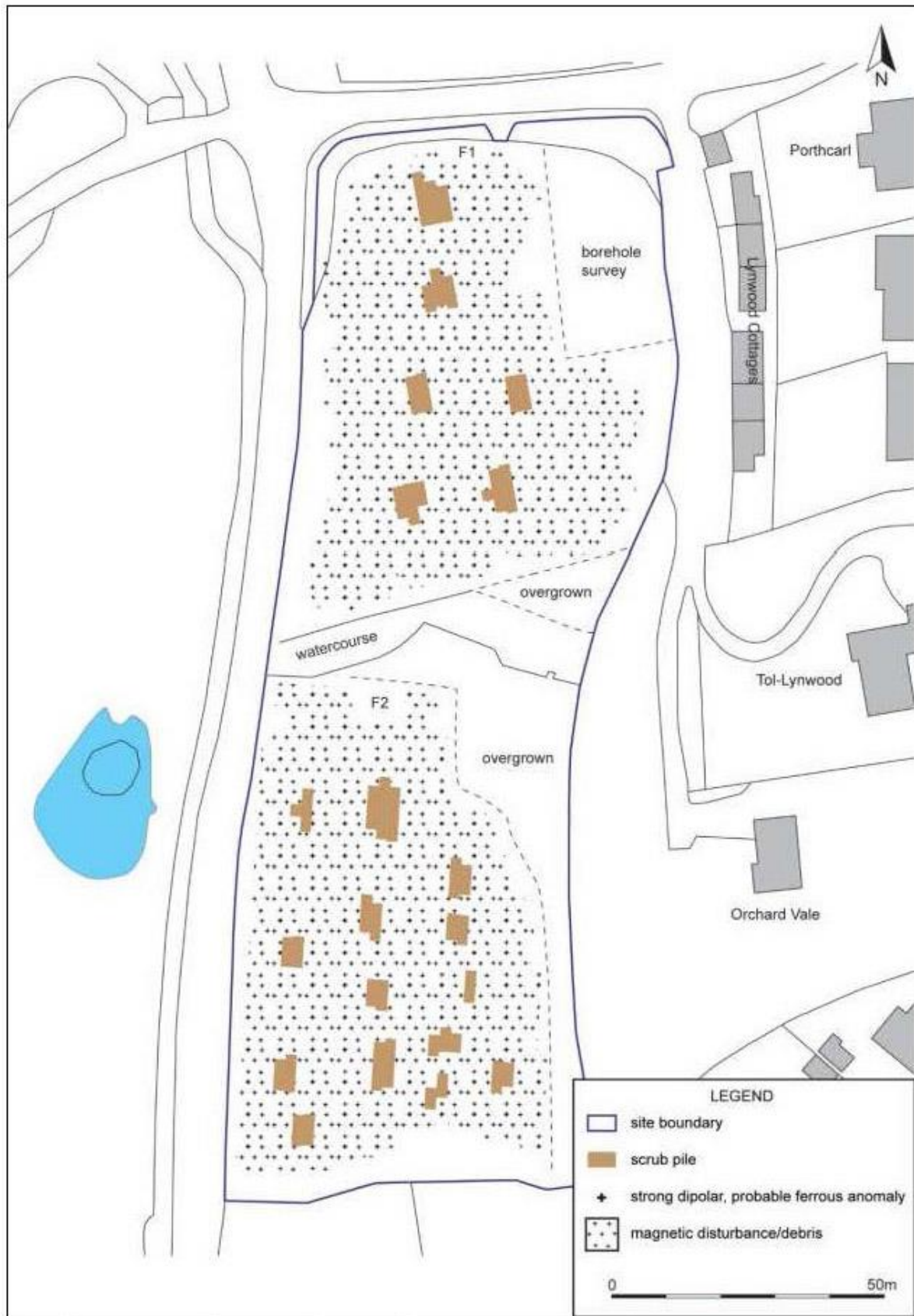


Figure 5 Interpretation of gradiometer survey data.



Figure 6 Location of boreholes (taken from Ian Farmer Associates 2019, fig A1.2).

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