Appendix 9.2

Summary Interim Note

Steeple Solar

For

Pegasus Planning Group

On Behalf Of

RES Ltd

Magnitude Surveys Ref: MSSK1773

January 2025

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Abstract

Magnitude Surveys was commissioned to assess the subsurface potential of c. 943.5ha of land at Sturton le Steeple, Nottinghamshire. A magnetic gradiometer survey has successfully been undertaken across c. 683ha. Anomalies of an archaeological origin were detected across the survey area, in particular the route of a Romano-British road, with associated enclosures and structures, was identified in the east of the survey area. Archaeological anomalies were also detected in the form of further enclosures in the west, northeast and east of the survey area. Further anomalies of a possible archaeological origin have been detected although they cannot be positively dated. In addition, anomalies relating to agricultural activity were detected across the landscape in the form of ploughing regimes, drainage features and field boundaries, both mapped and unmapped. Anomalies of an undetermined origin were also noted across the survey area. While these are likely to be of natural, modern, or agricultural origin, an archaeological origin cannot be fully excluded. Modern interference is generally limited to buried services, pylons, overhead cables, railway lines and extent field boundaries. Green waste was also present across the southwest of the survey area, which may have obscured further anomalies from being visible.

List of Figures

1.1. Summary

1.1.1. The geophysical results are presented in combination with satellite imagery and historical maps (Figures 4).

1.1.2. A fluxgate gradiometer survey was successfully undertaken across c. 683ha of the survey area. Modern interference was generally limited to field boundaries, pylons, overhead cables, railway lines and buried services.

1.1.3. Numerous foci of archaeological activity have been identified across the survey area. The most notable is a part of a Romano-British street in the southeast of the survey area. This focus lies parallel to the extent Littleborough road, within Areas 85 and 90, and is representative of a street, oriented northwest to southeast, with associated enclosures and features to its north and south. The street detected likely leads to and is associated with the former Romano-British town of Segelocum, which has been recorded immediately southeast of the survey area (NHLE Ref: 1003669).

1.1.4. To the north of this focus within Area 74, anomalies of a possible archaeological activity have been identified, in the form of parallel linear anomalies, as well as two possible rectilinear enclosures. These present differing signals and morphologies to the archaeological anomalies within Areas 85 and 90 but may be representative of archaeological features of a different time period.

1.1.5. In the northeast and east of the survey within Areas 17 and 43 anomalies of further probable archaeological activity have been identified in the form of sub-rectangular enclosures with internal divisions. Although the signal for these anomalies is weaker than that of those detected in Areas 85 and 90 the defined edges and concentration are indicative of cut features of Romano-British activity.

1.1.6. Anomalies of a possible archaeological origin have been detected to the south of Area 17 in Area 23. These include a possible sub-rectangular enclosure with internal and external divisions and a linear anomaly. Although these anomalies have a similar morphology to the probable archaeological activity described above the signal is weaker and within an area of natural enhancement. Given these factors a more confident interpretation is not possible with the data alone.

1.1.7. Within Area 82 a group of curvilinear anomalies were identified forming a large enclosure with a break in the eastern boundary. A single linear extending from the break into the enclosure possibly as a form of an internal division with a further curvilinear extending outward to the west from the east boundary eventually curving back around to the enclosure in a 'hook' shape. Other associated curvilinear anomalies were detected directly to the south and northeast. The collection in the northeast possibly forms an enclosure with clear boundaries on its north, west, east and south with a break in the eastern boundary and a further linear within the enclosure as a possible interior division.

1.1.8. A series of linear and curvilinear anomalies forming two distinct enclosures with further associated anomalies have been identified within Area 79. The enclosures appear to

have internal divisions formed by the inclusion of interior linears. Further associated linear anomalies could possibly be of land division use.

1.1.9. Anomalies of a possible archaeological origin were also recorded within Areas 23, 52, 77, 81/100, 82 & 85 (Figure 4). These are mostly isolated from the probable archaeology. Their discontinuous form and weaker magnetic signal are not conductive to the ascription of a positive date.

1.1.10. Agricultural activity has been identified throughout the survey area in the form of modern and historic ploughing regimes. The anomalies identified as modern ploughing trends align with modern ploughing visible in satellite imagery. Further ploughing trends identified present curving morphologies which are indicative of historical ridge and furrow ploughing.

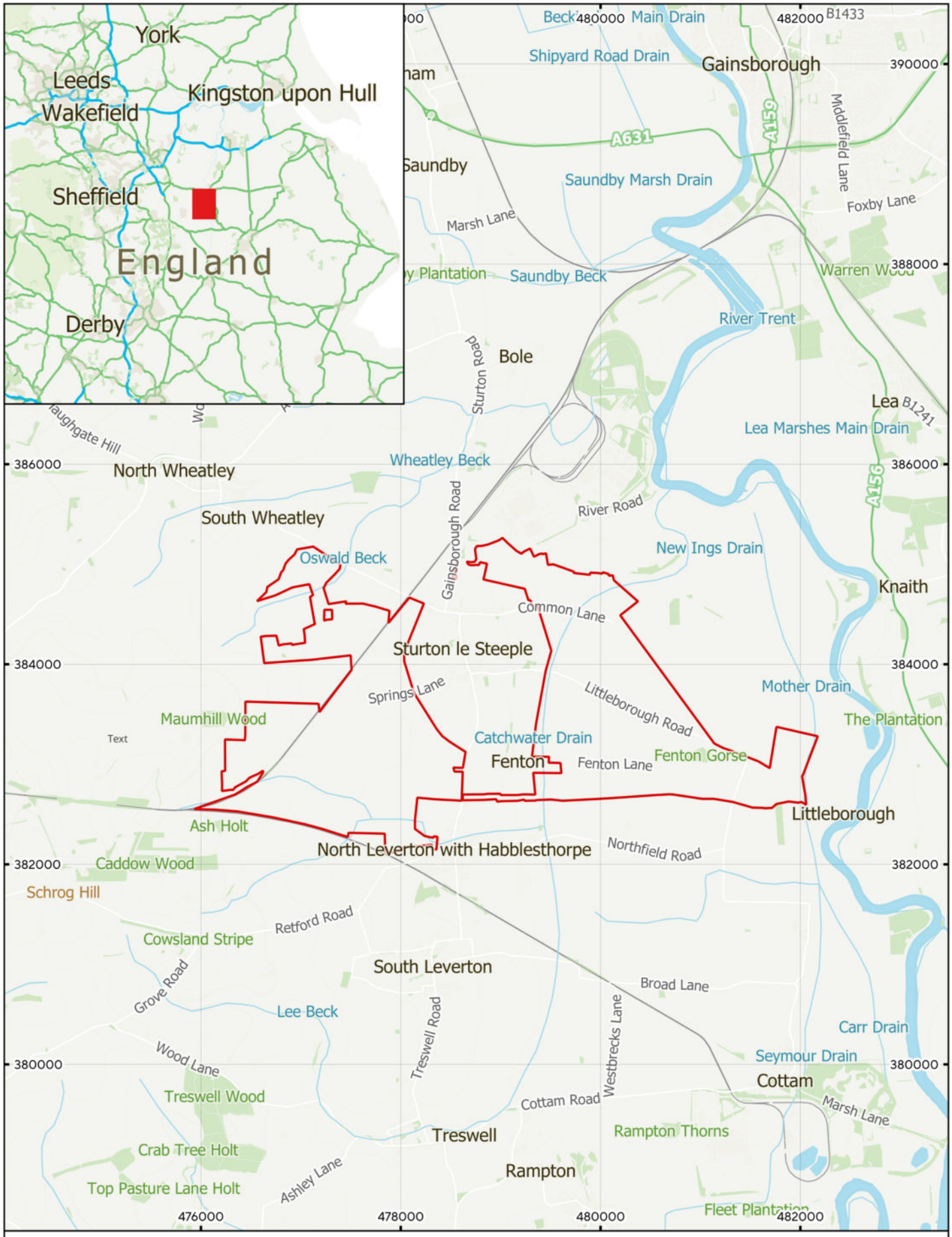
1.1.11. Evidence of former field boundaries are present throughout the survey area. The majority of these align with boundaries visible within historic mapping. Unmapped boundaries, which do not align with any features within historical mapping, have also been identified which present signals or morphologies similar to that of the mapped former field boundaries.

1.1.12. Anomalies of a natural origin have been identified most notably in the southeast of the survey area in the form of a probable paleochannel with multiple branches. This former watercourse aligns with changes of the subsurface geology, but also lies in proximity to archaeological features. It is possible that some of these anomalies may have been reutilised for anthropogenic uses.

1.1.13. Several anomalies of an undetermined origin have been detected across the survey area. These lack the contextual evidence required for a confident classification. Although they are likely of agricultural, modern or natural in origin, an archaeological origin cannot be ruled out by the geophysical data alone.

2. Document History

Version	Comments	Author	Checked By	Date
Summary Note 0.1	Initial draft for Project Lead to Review	LAG	FPC	23 December 2024
Summary Note 0.2	Correction from Client		LAG	10 January 2025



MSSK1773 - Steeple Solar, Nottinghamshire
Figure 1 - Geophysical Survey Location
1:50,000 @ A4

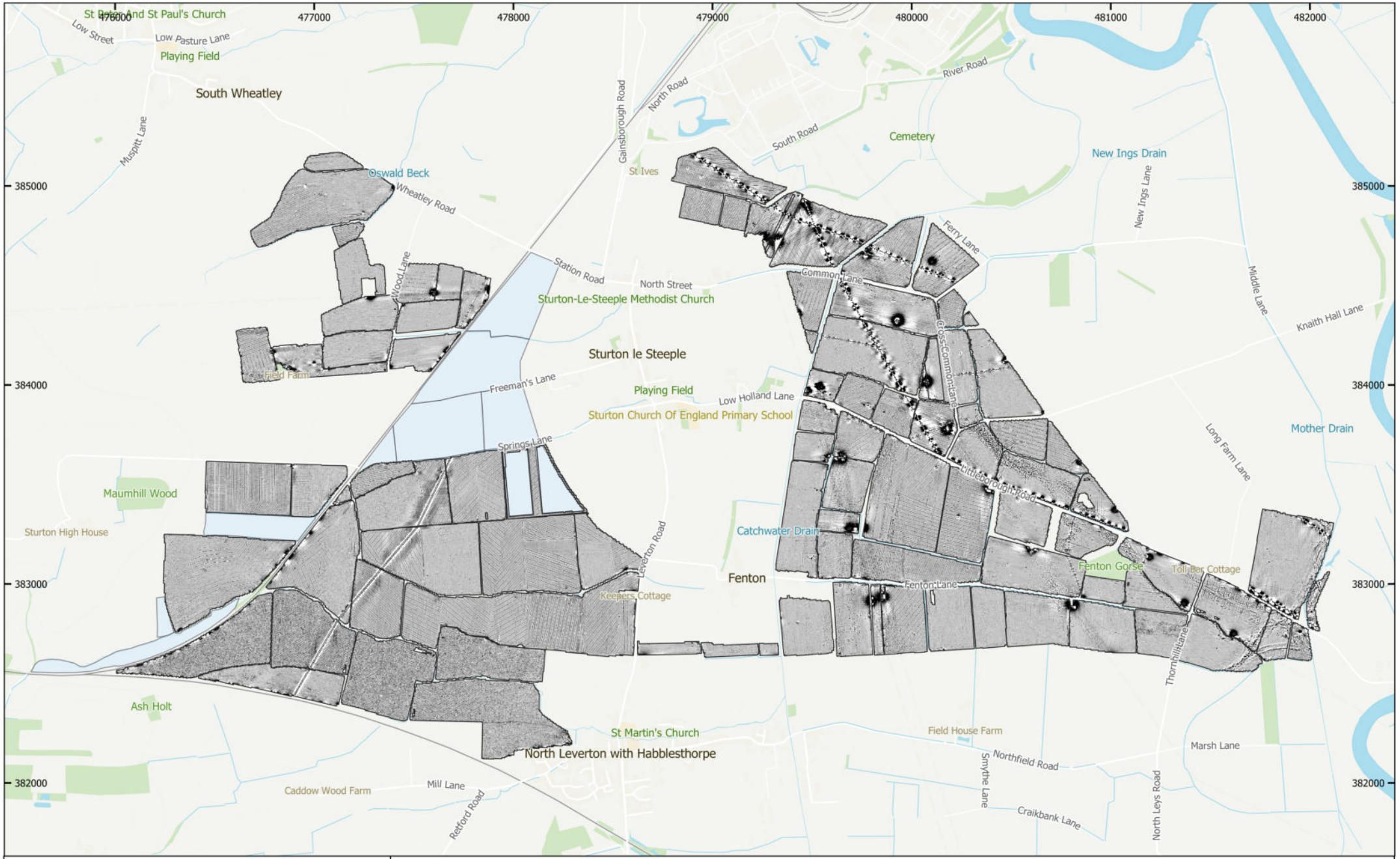
Geophysical Site

0 1 2 km

MSSK1773 - Steeple Solar, Nottinghamshire
Figure 2 - Location of Survey Areas
1:17,500 @ A3

Geophysical Site
Yet to be Surveyed

Magnitude Surveys

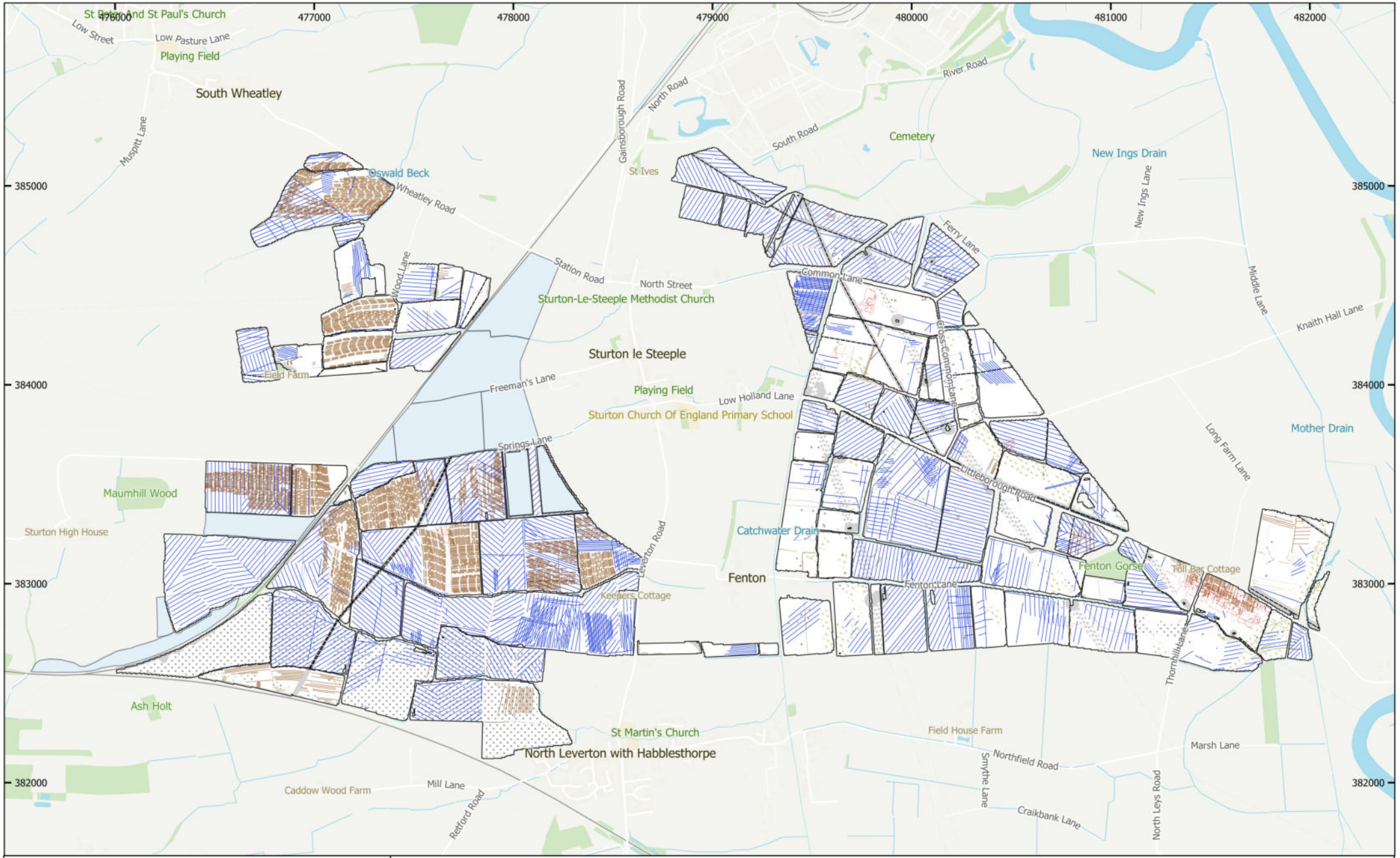


MSSK1773 - Steeple Solar, Nottinghamshire
Figure 3 - Magnetic Gradient
1:17,500 @ A3

-1 nT 2

Magnitude Surveys

0 150 300 450 600



MSSK1773 - Steeple Solar, Nottinghamshire
Figure 3 - Magnetic Interpretation over Historical Mapping and Satellite Imagery
1:17,500 @ A3

- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Agricultural (Strong)
- Agricultural (Weak)
- Agricultural (Spread)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Natural (Strong)
- Natural (Weak)
- Natural (Spread)
- Undetermined (Strong)
- Undetermined (Weak)
- Overhead Cables
- Agricultural (Trend)
- Ridge and Furrow (Trend)
- Drainage Feature
- Service
- Ferrous (Spike)

Magnitude Surveys

0 150 300 450 600