



# Wimborne Showground, Lake Farm, Wimborne Minster, Dorset

Report on Geophysical Surveys, September 2024

Megan Clements, Neil Linford, Paul Linford, Andrew Payne and Sandra Hahn



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# Summary

Caesium magnetometer (13.06ha) and Ground Penetrating Radar (GPR) (11.2ha) surveys were conducted over two fields located at Wimborne Showground, Lake Farm, Wimborne Minster, Dorset in response to a casework request from Historic England's South West Regional Team to assess any possible damage that may have been caused to the scheduled remains of a Roman vexillation fort by a recent incident of mole-ploughing. A secondary aim of the project was to investigate the adjacent field to the north for any evidence of further buried archaeology. The caesium magnetometer survey confirms results from previous fluxgate gradiometer surveys over the scheduled monument and its surrounding environs, while the results from the GPR survey have identified the extent and estimated depth of the mole-ploughing and suggest it may be deep enough to impinge on the upper layers of the underlying archaeological remains.

## Contributors

Fieldwork was conducted by Megan Clements, Neil Linford, Paul Linford, Andrew Payne and Sandra Hahn.

## Acknowledgements

The authors are grateful to the landowner for permission to conduct the survey. The cover image shows the caesium magnetometer survey in Field 1 with Wimborne Minster in the background (photo by Andrew Payne).

## Archive location

Historic England, Fort Cumberland, Fort Cumberland Road, Portsmouth, PO4 9LD.

## Date of survey

The fieldwork was conducted between the 2nd and 4th of September 2024. The report was completed on 30th of September 2024.

## Contact details

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# Introduction

Caesium magnetometer and Ground Penetrating Radar (GPR) surveys were conducted over two fields at Wimborne Showground, Lake Farm, Wimborne Minster, Dorset, in response to a casework request by the South West Regional Team following the use of a mole-plough within the bounds of the Scheduled Monument containing the remains of a Roman vexillation fortress. A field-walking survey was conducted by Historic England following the initial report of the mole-ploughing, to look for any cultural material brought to the surface by the ploughing. Additionally, three sondages were excavated to look for evidence of the mole-ploughing blade and the tunnel formed by the 'torpedo' head at the base of the blade. A hand auger was also used to examine the soil at s0007 (see location of test-holes in Figure 14:Cromwell 2024). The survey was intended to assess the extent of any possible damage to the monument, contained within the southern field (Field 2 in Figures 1 and 2), and attempt to estimate the burial depth of the Roman archaeological remains. A secondary aim was to investigate the field to the north of the Scheduled Monument, (Field 1 in Figures 1 and 2), enhancing previous fluxgate gradiometer surveys by collecting a higher spatial resolution caesium magnetometer data set and complementing this with GPR coverage to better understand the potential for further buried Roman remains. This information will be used to inform the future management of the site.

The Roman fort at Lake Farm (National Heritage List for England: 1003803 and 1002418; Historic England 1968), near Wimborne Minster, is believed to be of significance as it represents a 1st century Roman fort that did not later transform into a town. The area has previously been surveyed by the Ancient Monuments Laboratory (later to become part of English Heritage and Historic England) in the 1970s and 1980s (David 1977; David and Thomas 1980; David and Bolton 1983; David *et al.* 1983). More recently, in 2016, Bournemouth University undertook an extensive fluxgate gradiometer survey of the fort and its surrounding landscape (Stewart *et al.* 2020).

The bedrock geology consists of West Park Farm Member (clay), with sedimentary deposits of Alluvium (clay, silt, sand and gravel) across Field 1 and with river terrace stepped deposits of sand and gravel across Field 2 (Geological Survey of Great Britain 1991; British Geological Survey 2024). Soils are listed as loamy and clayey flood plain soils with naturally high groundwater of the Fladbury 1 (813b) association in Field 1, and freely draining, slightly acidic and loamy soils of the Hucklesbrook (571w) association in Field 2 (Soil Survey of England and Wales 1983; Soilscales 2024).

The two fields are separated by a ditch with a stream heading toward the river Stour and, while flat, there is a noticeable change in topography between them. Both fields were

down to grass at the time of the survey. Field 2 is used for weekend car boot sales and at the time of survey cones were placed along the worn track within the field and to mark temporary subdivisions. The weather was mostly dry and cloudy during fieldwork apart from the final day when heavy rain prevented the continuation of GPR acquisition.

# Method

## Caesium Magnetometer survey

Magnetometer data were collected along the instrument swaths shown in Figure 1 using an array of six Geometrics G862 caesium vapour sensors mounted on a non-magnetic sledge (Linford *et al.* 2018). The sledge was towed behind a low-impact All-Terrain Vehicle (ATV) which housed the power supply and data logging electronics. Five sensors were mounted 0.5m apart in a linear array transverse to the direction of travel and, vertically at a height approximately 0.36m above the ground surface. The sixth was fixed 1.0m directly above the centre of this array to act as a gradient sensor. The sensors were sampled at a rate of 25Hz resulting in an along-line sample density of approximately 0.12m given typical ATV travel speeds of between 2.5 and 3.0m/s. As the five non-gradient sensors were 0.5m apart, successive survey swaths were separated by approximately 2.5m to maintain a consistent traverse separation of 0.5m. Navigation and positional control were achieved using a Trimble R8s Global Navigation Satellite System (GNSS) receiver mounted on the sensor platform 1.65m in front of the central sensor and a second R8s base station receiver established using the Ordnance Survey VRS Now correction service. Sensor output and survey location were continuously monitored during acquisition to ensure data quality and minimise the risk of gaps in the coverage.

After data collection, the corresponding readings from the gradient sensor were subtracted from the measurements made by the other five magnetometers to remove any transient magnetic field effects caused by the towing ATV or other nearby vehicles. The median value of each instrument traverse was then adjusted to zero by subtracting a running median value calculated over a 50m 1D window (see for instance Mairing *et al.* 2002). This operation corrects for any remaining biases added to the measurements owing to the diurnal variation of the Earth's magnetic field. Histogram equalised greyscale images of the minimally processed data are shown superimposed over the base Ordnance Survey (OS) mapping in Figure 3. Figure 5 displays the data from the northern field, Field 1, as a truncated trace plot ( $\pm 100\text{nT/m}$ ) and as a linear greyscale image between limits of  $\pm 5\text{nT/m}$  after the application of a low-pass Gaussian filter with a radius of 2.5m. Figure 6 displays the data from the southern field, Field 2, as a truncated trace plot ( $\pm 100\text{nT/m}$ ) and as a linear greyscale image between the limits of  $\pm 5\text{nT/m}$ .

## Ground Penetrating Radar survey

A 3d-Radar (Kontur) MkIV GeoScope Continuous Wave Step Frequency (CWSF) Ground Penetrating Radar (GPR) system was used to conduct the survey collecting data with a multi-element DXG1820 vehicle towed, ground coupled antenna array (Linford *et al.* 2010; Eide *et al.* 2018). A roving Trimble R8s Global Navigation Satellite System (GNSS)

receiver was mounted on the GPR antenna array, that together with a second R8s base station was used to provide continuous positional control for the survey collected along the instrument swaths shown on Figure 2. The GNSS base station receiver was adjusted to the National Grid Transformation OSTN15 using the Trimble VRS Now Network RTK delivery service. This uses the Ordnance Survey GNSS correction network (OSNet) and gives a stated accuracy of between 0.01 and 0.015m per point with vertical accuracy being half as precise.

Data were acquired at a 0.075m by 0.075m sample interval across a continuous wave step frequency range from 40MHz to 2.99GHz in 4MHz increments using a dwell time of 2ms. A single antenna element was monitored continuously to ensure data quality during acquisition together with automated processing software to produce real time amplitude time slice representations of the data as each successive instrument swath was recorded in the field (Linford 2013).

Post-acquisition processing involved conversion of the raw data to time-domain profiles (through a time window of 0 to 75ns), adjustment of time-zero to coincide with the true ground surface, background and noise removal, and the application of a suitable gain function to enhance late arrivals. Representative profiles from the full GPR survey data set are shown on Figure 7. To aid visualisation amplitude time slices were created from the entire data set by averaging data within successive 2.5ns (two-way travel time) windows (e.g. Linford 2004). An average sub-surface velocity of 0.104m/ns was assumed following constant velocity tests on the data and was used as the velocity field for the time to estimated depth conversion. Each of the resulting time slices therefore represents the variation of reflection strength through successive approximately 0.13m intervals from the ground surface, shown as individual greyscale images in Figures 4 and 8 to 10. Further details of both the frequency and time domain algorithms developed for processing this data can be found in Sala and Linford (2012).

Due to the size of the resultant data set a semi-automated algorithm has been employed to extract the vector outline of significant anomalies shown on Figure 13. The algorithm uses edge detection to identify bounded regions followed by a morphological classification based on the size and shape of the extracted anomalies. For example, the location of possible pits is made by selecting small, sub circular anomalies from the data set (Linford and Linford 2017).

# Results

## Caesium Magnetometer survey

A graphical summary of significant magnetic anomalies [m1-28] discussed in the following text superimposed on the base OS mapping data is provided in Figures 11 (Field 1) and 12 (Field 2).

Around the edges of the fields are areas of highly magnetic ferrous activity [m1] due to the presence of wire fencing. Along the northern border of Field 2 is a strongly magnetic ferrous rectangular anomaly [m2] that correlates with plastic and wire mesh vehicle ground protection noted at the time of the survey. In addition, the presence of a ferrous pipe [m3] has been identified extending from the bridge over the A31 towards the field gate.

### Field 1

The caesium magnetometer results for Field 1 have been affected by a spread of ferrous detritus (Figure 3), possibly from green waste, which may have obscured any anomalies from archaeological remains, if present (Gerrard *et al.* 2015). A low-pass Gaussian filter has been applied to the data presented in Figure 5 in an attempt to minimise the effects of ferrous responses. Comparing the current data to the 2016 survey (Stewart *et al.* 2020), confirms the presence of three clusters of intense bipolar anomalies [m4]. Given the proximity to the Roman fort, the possibility that these represent additional contemporaneous features must be considered. However, comparison with anomalies caused by known Roman-fired features suggests the anomalies are more likely to be due to buried ferrous objects (see Appendix) and may thus relate to the more recent agricultural use of the site. The high magnitude discrete anomaly [m5], with a negative centre surrounded by a positive halo, found towards the entrance to the field, may also indicate a buried ferrous object of modern origin.

Bands of raised positive response [m6] and an area of higher magnitude readings [m7] have been identified in the centre of the field and are likely to have been produced by geomorphological processes. The linear negative anomalies [m8] may also be geological in origin but could alternatively be the result of surface animal runs. The discrete positive pit-type responses [m9] with a magnitude of response between 55nT/m and 163nT/m are of unknown origin, while the discrete negative anomalies [m10] possibly relate to animal burrows. The discrete negative anomaly [m11], located along the southern edge of the field, is possibly related to modern activity associated with the adjacent stream.

### Field 2

The Roman fort identified within Field 2 has been interpreted and discussed in previous publications (David 1977; David and Thomas 1980; David and Bolton 1983; David *et al.*

1983; Stewart *et al.* 2020), therefore, only a limited summary shall be given here. In addition, toward the end of the current survey when the headland traverses were being collected parallel to the field-edges, technical issues with one of the six caesium sensors resulted in a striping effect being introduced into the datasets in areas near the northern and western field boundaries. As only one sensor was affected, the degradation in data quality is minor and has not hindered the interpretation of the results.

The outer-ditch forming the north-east corner and northern section of the fort's defences appears as a linear positive anomaly [m12], parts of which have a negative response on either side. The highly magnetic discrete anomalies [m13] contained within what would have likely been the inner rampart, could indicate the remains of thermoremanent features such as hearths and burnt material, organic deposits such as refuse pits, or the rotted remains of wooden structures. The negative linear anomalies abutting [m12] and [m13] have likely been produced due to changes in the material associated with the berm against the rampart and the remains of the barracks [m15].

The internal area of the fort has been divided by rectilinear ditch-type anomalies [m14], creating *insulae*. Ditch-type linear [m15] and discrete, likely post-hole, [m16] anomalies with a positive to strong positive magnitude of response within the outer *insulae*, possibly indicate the footprint of former buildings. While anomalies of various magnetic strength and polarity have been detected within the inner *insulae* in the centre of the fort, it is less clear if any buildings were present here. However, the cluster of responses at [m17], [m18] and [m19] along the south-eastern boundary of Field 2, may indicate the location of some form of activity.

Several negative linear anomalies [m20] have been detected, appearing on differing alignments and not respecting the grid layout of the fort and are likely to represent drains. Two drain-type anomalies in the north [m21] bisect the fort's outer-ditch and are orientated north-south and downslope towards the stream at the northern field boundary. It is likely [m21] represent more recent efforts to improve field drainage.

Outside the fort to the east is a curvilinear band [m22] that adjoins and contains a series of discrete pit-type anomalies [m23]. Both [m22] and [m23] also appear to be bounded by the linear varied anomaly [m24], which Stewart *et al.* (2020) interpreted as an additional outer ditch. On the eastern side of [m24] are positive [m25] and negative [m26] rectilinear anomalies possibly delineating additional enclosures or structures. Also within this area of activity is a further positive linear anomaly [m27]. While a geomorphological origin may be a possibility, especially for [m22], the magnitude of response of [m23-27] and the regular arrangement of [m24-26], perhaps suggests an anthropogenic causation.

Along the northern boundary of the field is a collection of five discrete positive anomalies [m28] with a peak magnitude of response of 102nT/m. While likely to be a response to modern debris, their proximity to each other and semi-circular arrangement suggests deliberate placement and an origin of archaeological significance cannot be ruled out.

## Ground Penetrating Radar survey

A graphical summary of the significant GPR anomalies, [gpr1-22] discussed in the following text, superimposed on the base OS map data, is provided in Figure 13.

Reflections have been recorded throughout the 75ns two-way travel time window, although there are few significant responses beyond a two-way travel time of ~45.0ns (2.36m) where the signal is more heavily attenuated.

### Field 1

Near-surface responses between 0.0 and 5.0ns (0.0 to 0.26m) are associated with the most recent agricultural pattern, vehicle ruts [gpr1] and some evidence for animal burrows [gpr2]. From 5.0ns (0.26m) onwards a series of high-amplitude anomalies [gpr3] are found against the field boundaries with the stream heading toward the river Stour to the south and a drainage ditch to the east. It is possible that [gpr3] represents material dredged from the water courses or, perhaps, hard-standing introduced for temporary events, such as the recent travelling circus, staged in this field. More rectilinear morphology within [gpr3] between 7.5 and 15.0ns (0.39 to 0.79m) at [gpr4] may also be due to temporary event infrastructure.

A diffuse linear response [gpr5], found between 2.5 and 5.0ns (0.13 to 0.26m), is possibly also agricultural in origin (cf [m4]). However, two deeper parallel linear anomalies [gpr6] between 10.0 and 15.0ns (0.53 to 0.79m) in the vicinity of [gpr5], together with an amorphous area of response [gpr7], could be more significant but extend beyond the current survey coverage.

### Field 2

A series of broad anomalies [gpr8] together with a recent linear agricultural pattern (not shown on Figure 13) are found in the very near-surface and appear to be associated with recent land use at the site. There is also a rectilinear response [gpr9] over the vehicle ground protection [m2] visible on the surface close to the field entrance gates. A further broad linear anomaly [gpr10] continues south from the entrance gates following the route of a footpath shown on historic mapping to the bridge over the A31 road and former railway (OS Historic County Mapping Series: Dorset 1843-1939 Epochs 1 to 4). A linear anomaly [gpr11], parallel to [gpr10], correlates with the ferrous service identified at [m3].

From between 5.0 and 12.5ns (0.26 to 0.66m) a series of linear, high-amplitude anomalies [gpr12] spaced approximately 3 to 6m apart extend from the northern boundary with the brook south through the central portion of the field. It seems likely that [gpr12] represents evidence for the reported mole-ploughing over the site and it appears to extend eastwards

from [gpr10] for approximately 200m. However, it is unclear whether the mole-ploughing covers this entire area due to the variation in response.

The remains of the vexillation fort become apparent from approximately 7.5ns (0.39m) onwards, first as a diffuse high-amplitude anomaly [gpr13] with a low-amplitude response to the ditch [gpr14] evident from between 10.0 and 50.0ns (0.53 to 2.62m). Both [gpr13] and [gpr14] are best defined over the north-east corner where the fort defences also appear to be expressed as a topographic anomaly. A short section of ditch [gpr15] is found inside [gpr14] together with a series of parallel low-amplitude linear anomalies [gpr16] that partially corresponding with the regular grid layout within the fort. Other discrete pit-type anomalies [gpr17] are scattered throughout the interior of the fort but it is unclear how these are related to the Roman remains.

One linear response [gpr18] towards the south, crosses [gpr10] and meets a circular anomaly [gpr19] approximately 20m in diameter found against the west field boundary of the site. Anomaly [gpr19] appears between 7.5 and 17.5ns (0.39 to 0.92m), suggesting it may not, necessarily, be associated with more recent land use. However, the absence of any corresponding magnetic anomaly hampers a more definitive interpretation of [gpr19].

There is little evidence within the GPR data for any structural remains beyond a few fragmented high-amplitude anomalies [gpr20], although these may also be associated with gravel filled ditches (cf [m17]). Other high-amplitude linear anomalies [gpr21] seem more likely to be associated with later land use and continue beyond the fort ditch to the east. Amorphous areas of high-amplitude response [gpr22] are found over the lower lying ground to the east of the fort are difficult to interpret and may be natural in origin.

## Conclusions

The caesium magnetometer survey of Field 1 confirms the previous fluxgate magnetometer results and has detected no new anomalies of archaeological significance. However, the nature of the magnetic response suggests modern land use and possibly soil improvement or green waste deposition may be compromising magnetic prospection over this area. While a technical fault with one sensor slightly degraded survey quality in Field 2, the new magnetic survey again closely replicates the previous fluxgate results. The caesium magnetometer survey has been unable to detect a characteristic anomaly caused by the mole-ploughing reported over the scheduled monument although, from comparison with previous data sets, its effects do not seem to have significantly impacted the magnetic response from the buried archaeological remains. By contrast, the Ground Penetrating Radar (GPR) survey has detected a series of linear anomalies that appear to indicate the location of the intervention due to the mole-ploughing. While there is no apparent degradation of the magnetic response, the depth of the mole-ploughing estimated from the GPR data suggests it will most likely impinge on the uppermost layers of the underlying archaeology, but perhaps has not disturbed basal deposits containing the most enhanced magnetic material.

# Appendix: bipolar magnetic anomalies in Field 1

The three clusters of intense bipolar anomalies [m4] in Figure 11 must be due to either buried thermoremanent or ferrous material and, given their proximity to the remains of the Roman fort in Field 2, the possibility they represent remains of Roman fired features such as kilns or furnaces must be considered. Plate 1 shows trace and greyscale plots of the three anomaly clusters in parts c), d) and e) in comparison to magnetic anomalies due to Roman kilns at Little London in Hampshire, which were confirmed by subsequent excavation (Linford *et al.* 2016), in parts b) and f).

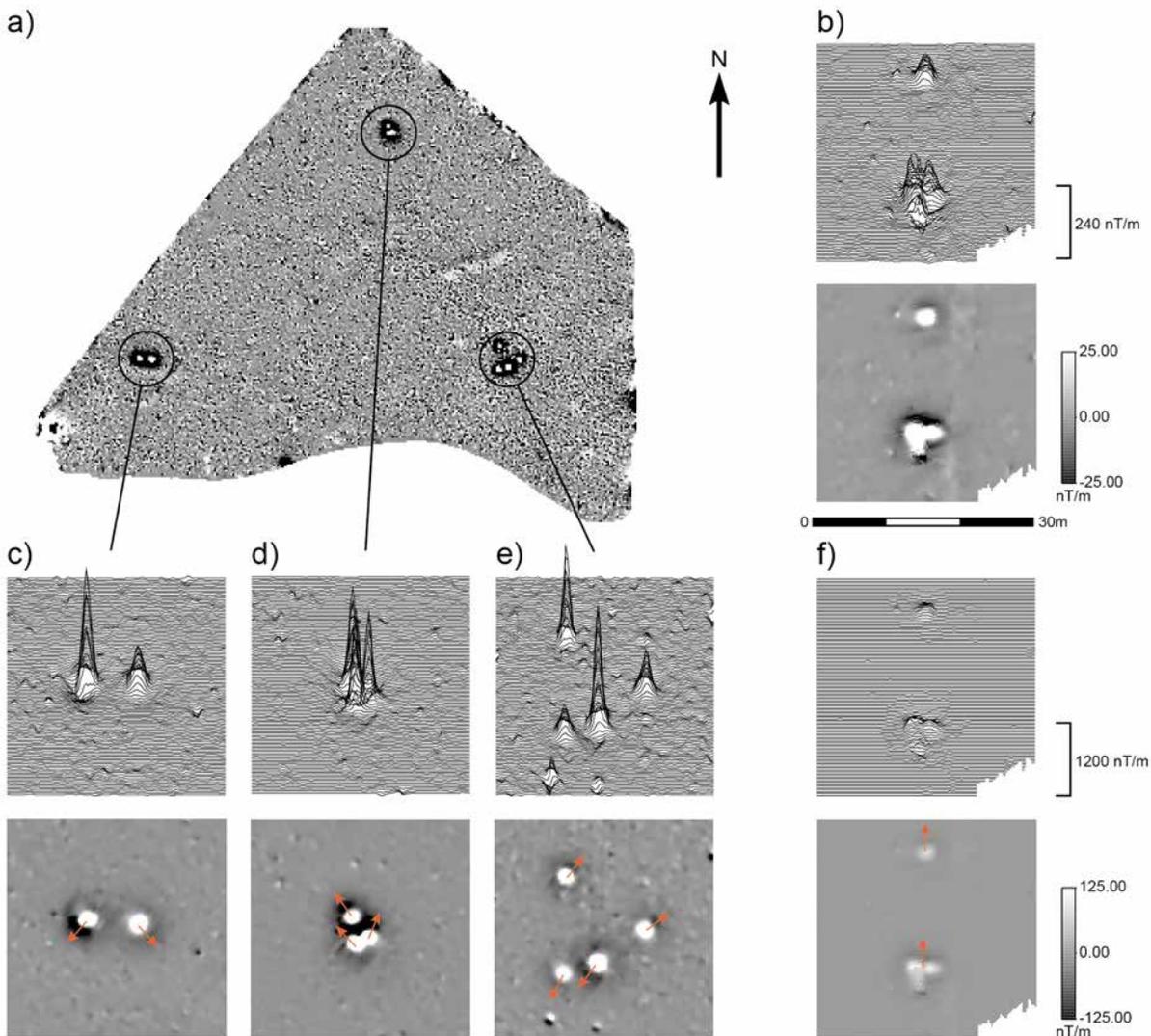


Plate 1: a) greyscale image of Field 1 at an arbitrary scale showing the relative locations of the three clusters of intense bipolar anomalies; b) trace and greyscale plots of the Little London Roman kilns; c) to e) trace and greyscale plots of each of the three clusters of anomalies in Field 1 plotted at the same spatial scale as b) but with a plotting range 5 times wider; f) the Little London Roman kilns replotted with the same plotting ranges used for c) to e). Red arrows on c) to f) show estimates of the anomalies' magnetisation directions.

Comparing plots c) to e) with b) and f) indicates that the Field 1 bipolar anomalies [m4] are far more intensely magnetised than the Little London kilns by factors between 5 and 10. Furthermore, fired features would be expected to exhibit thermoremanent magnetisations in the direction of the Earth's magnetic field at the time of firing. Throughout the Roman period the declination of the Earth's field was close to zero degrees (Batt *et al.* 2017) and thus the magnetisation direction would be expected to be close to north. The red arrows superimposed on the greyscale plots in c) to f) show estimates of each anomaly's magnetisation direction determined using the location of the main negative minimum of each bipole relative to its central positive peak. It can be seen in c) to e) that these magnetisations are in apparently arbitrary directions while for the Little London kilns depicted in b) and f) the magnetisation is close to north as would be expected for Roman thermoremanent features.

Hence, given both the very intense magnetisation strengths and apparently arbitrary magnetisation directions of the Field 1 bipolar anomalies, it is most likely they represent buried ferrous objects rather than thermoremanent fired features.

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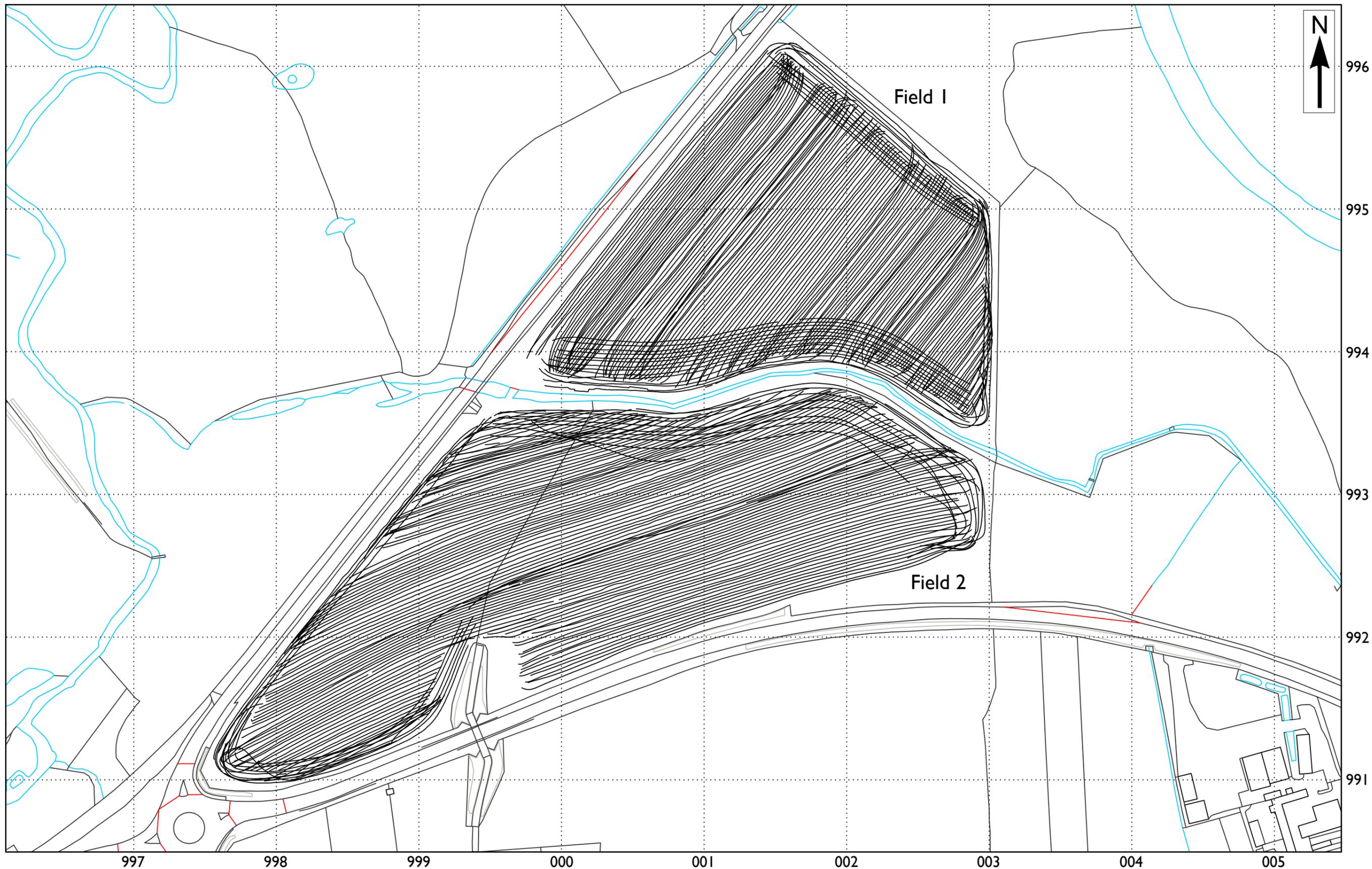
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# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Location of caesium magnetometer swaths, September 2024

SZ0099



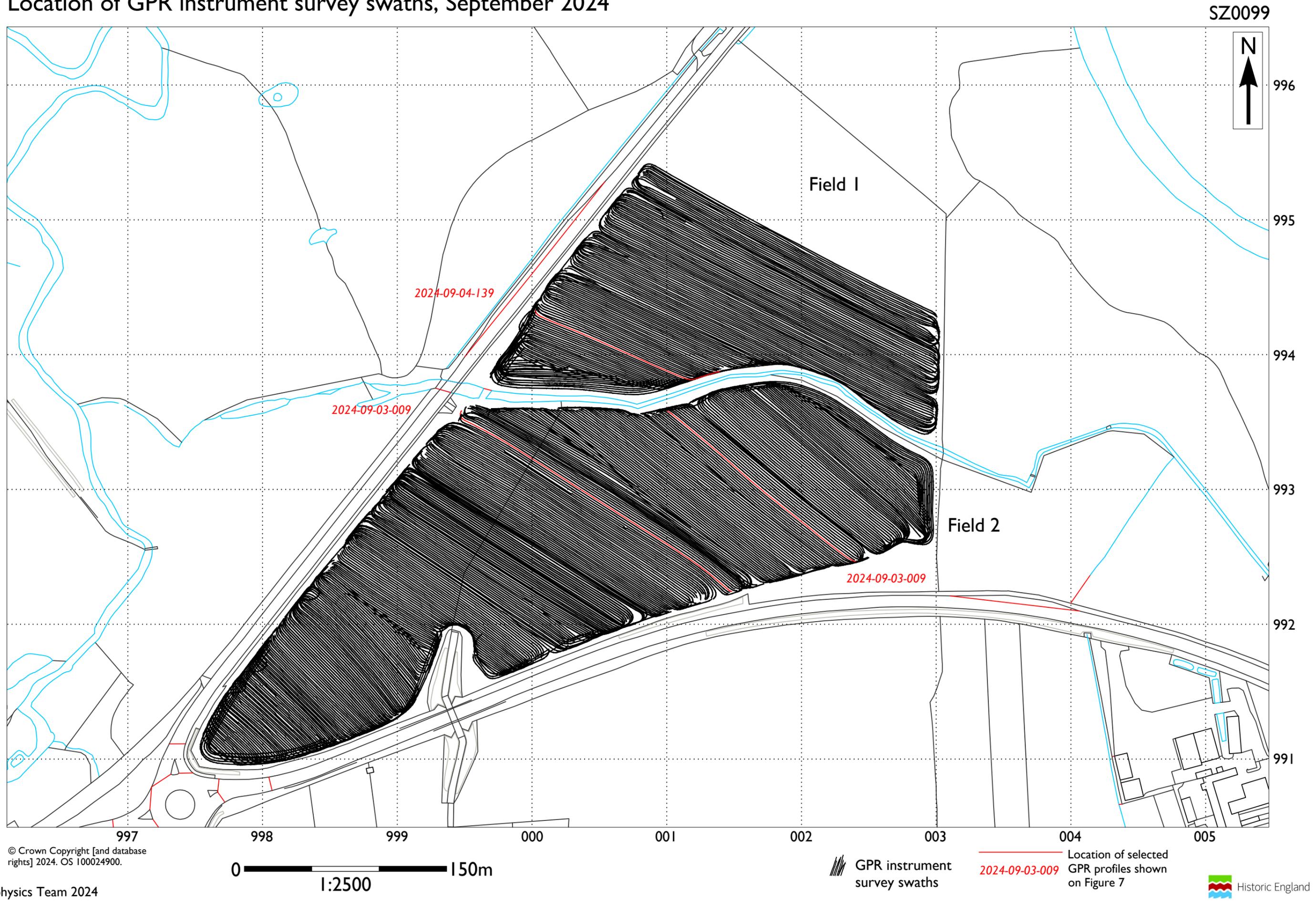
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0 150m  
1:2500

caesium magnetometer instrument  
survey swaths

# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

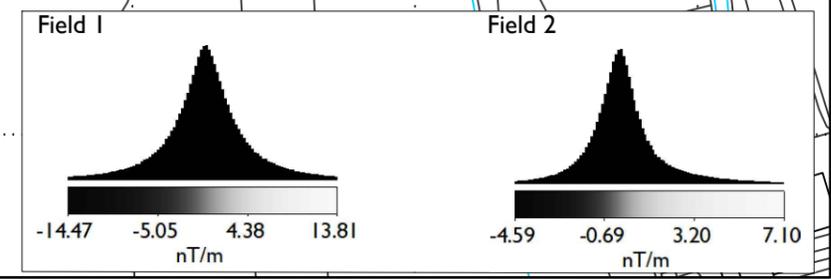
## Location of GPR instrument survey swaths, September 2024



# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Histogram equalised greyscale image of caesium magnetometer data, September 2024

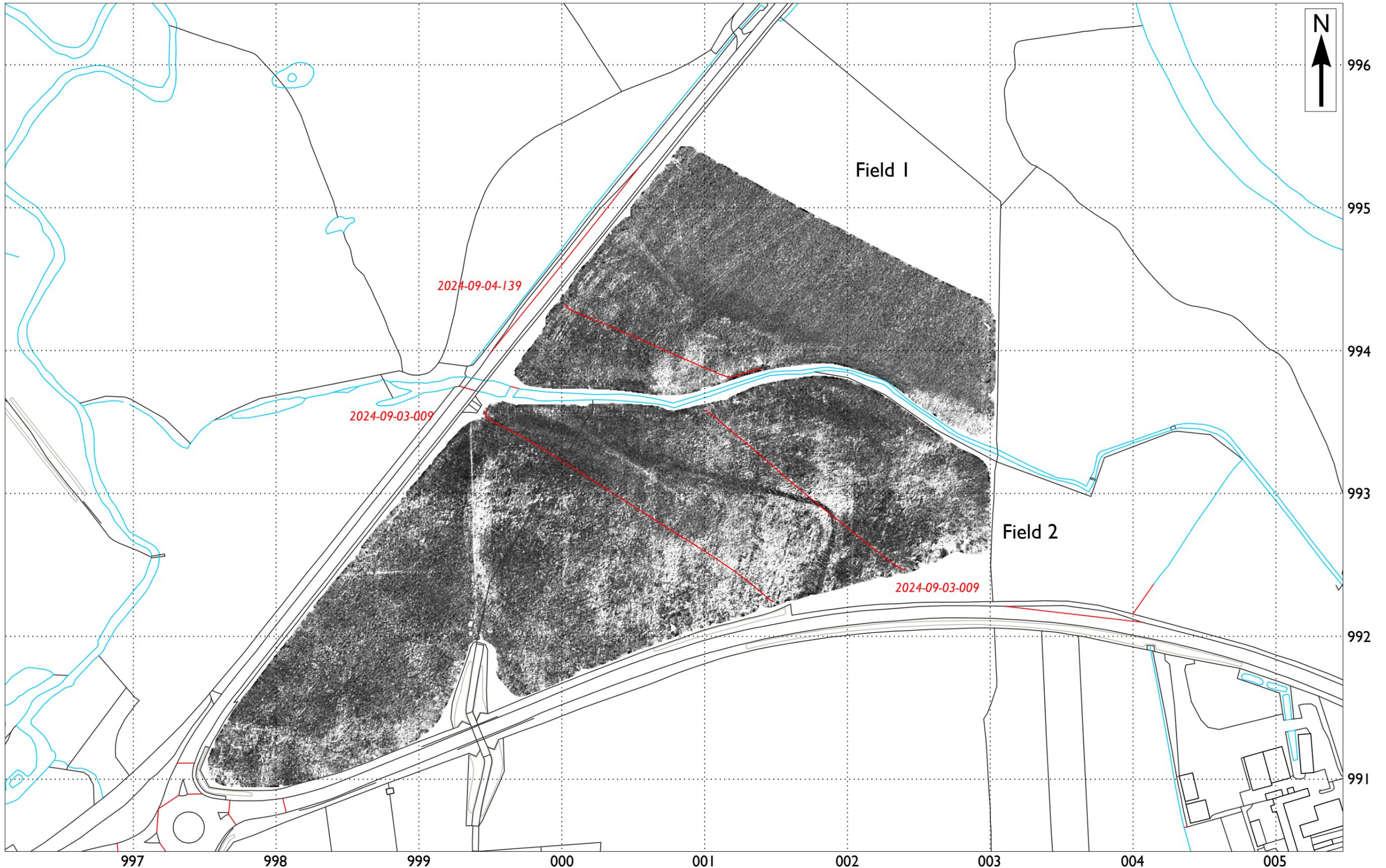
SZ0099



# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## GPR amplitude time slice between 22.5 and 25.0ns (1.18 to 1.31m), September 2024

SZ0099



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0 150m  
1:2500

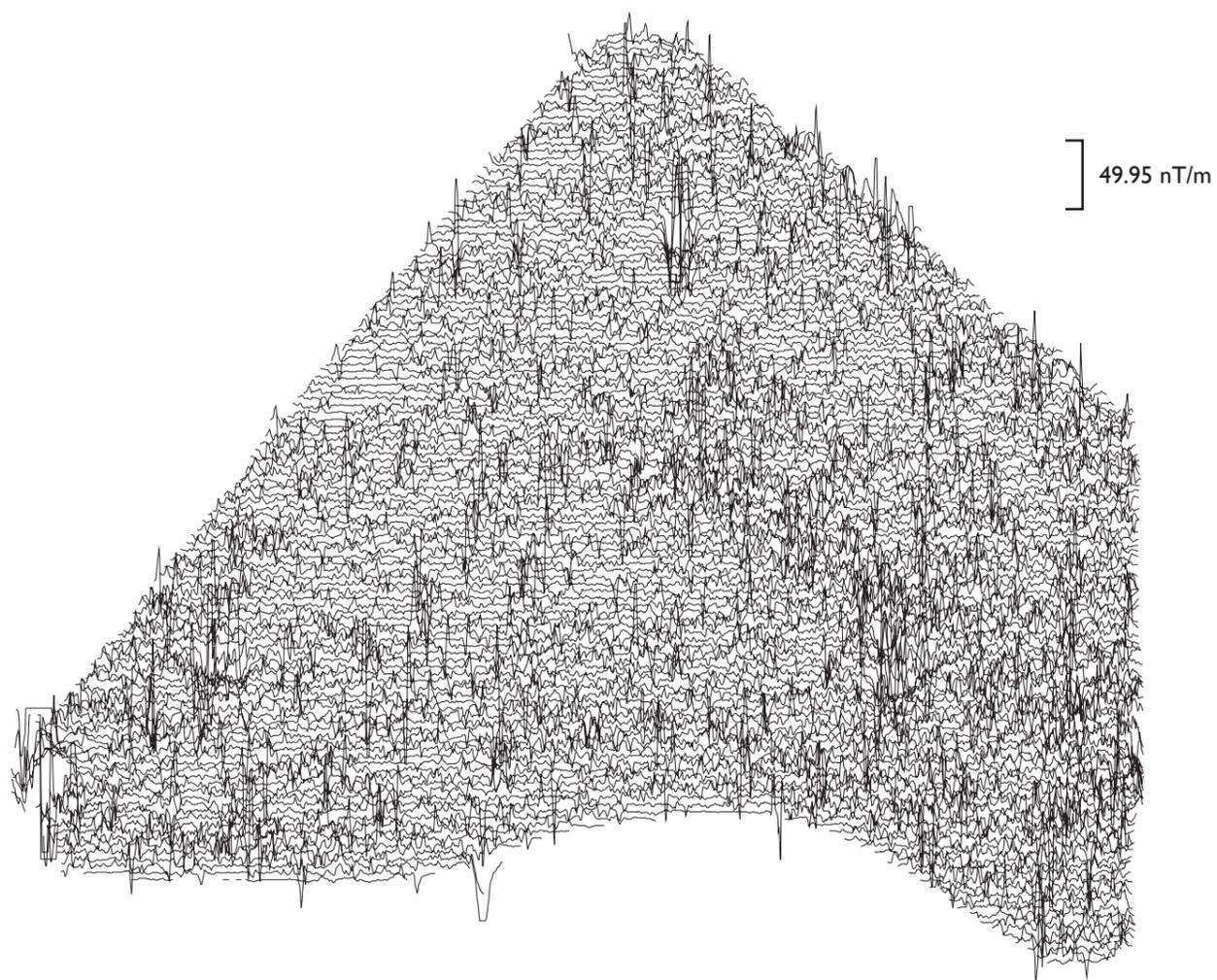
Low High  
relative reflector strength

2024-04-30-001  
Location of selected GPR profiles shown on Figure 7

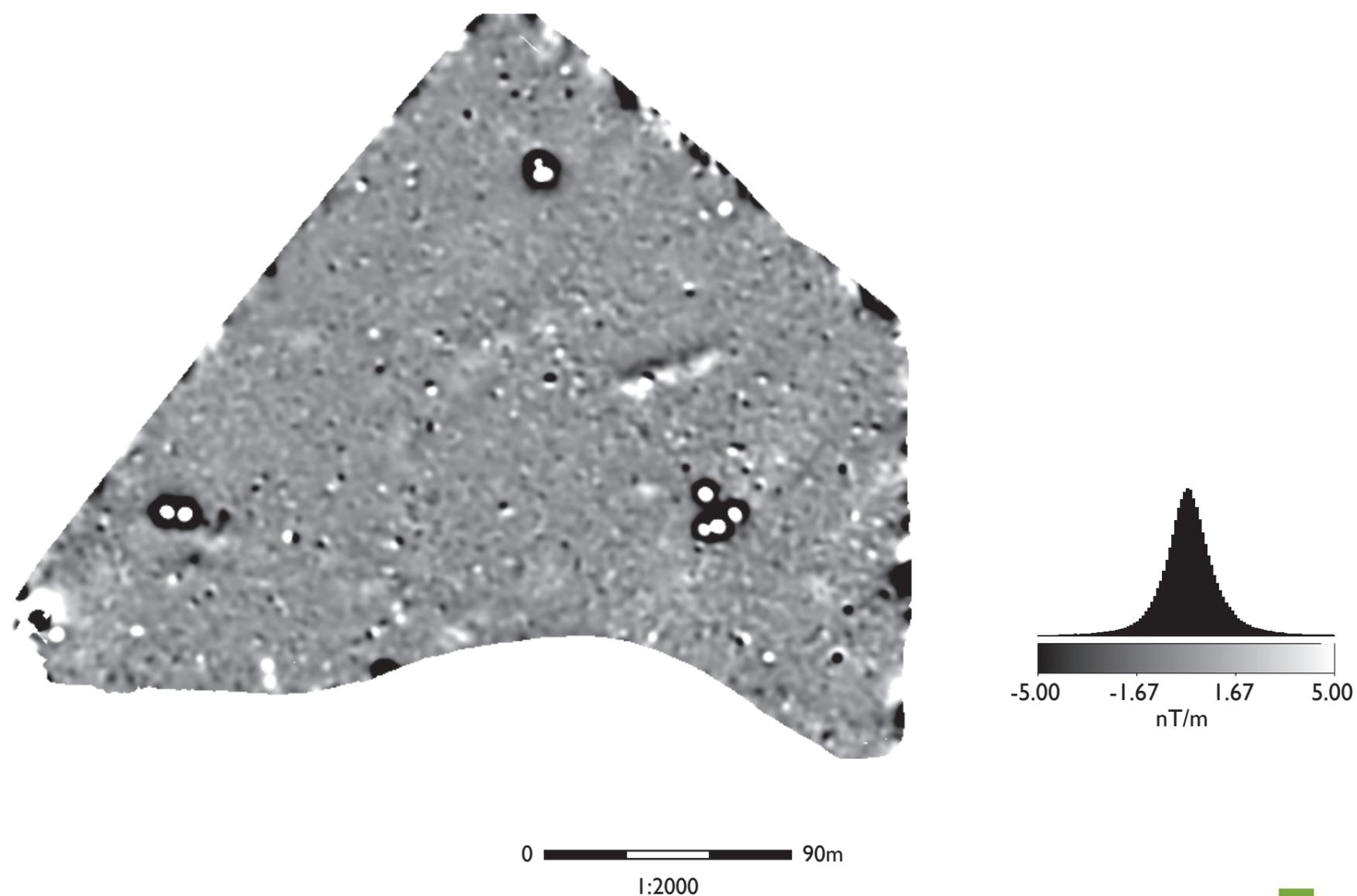
# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Caesium magnetometer survey - Field I, July 2024

(A) Trace plot of minimally processed data after range truncation ( $\pm 100$  nT/m)



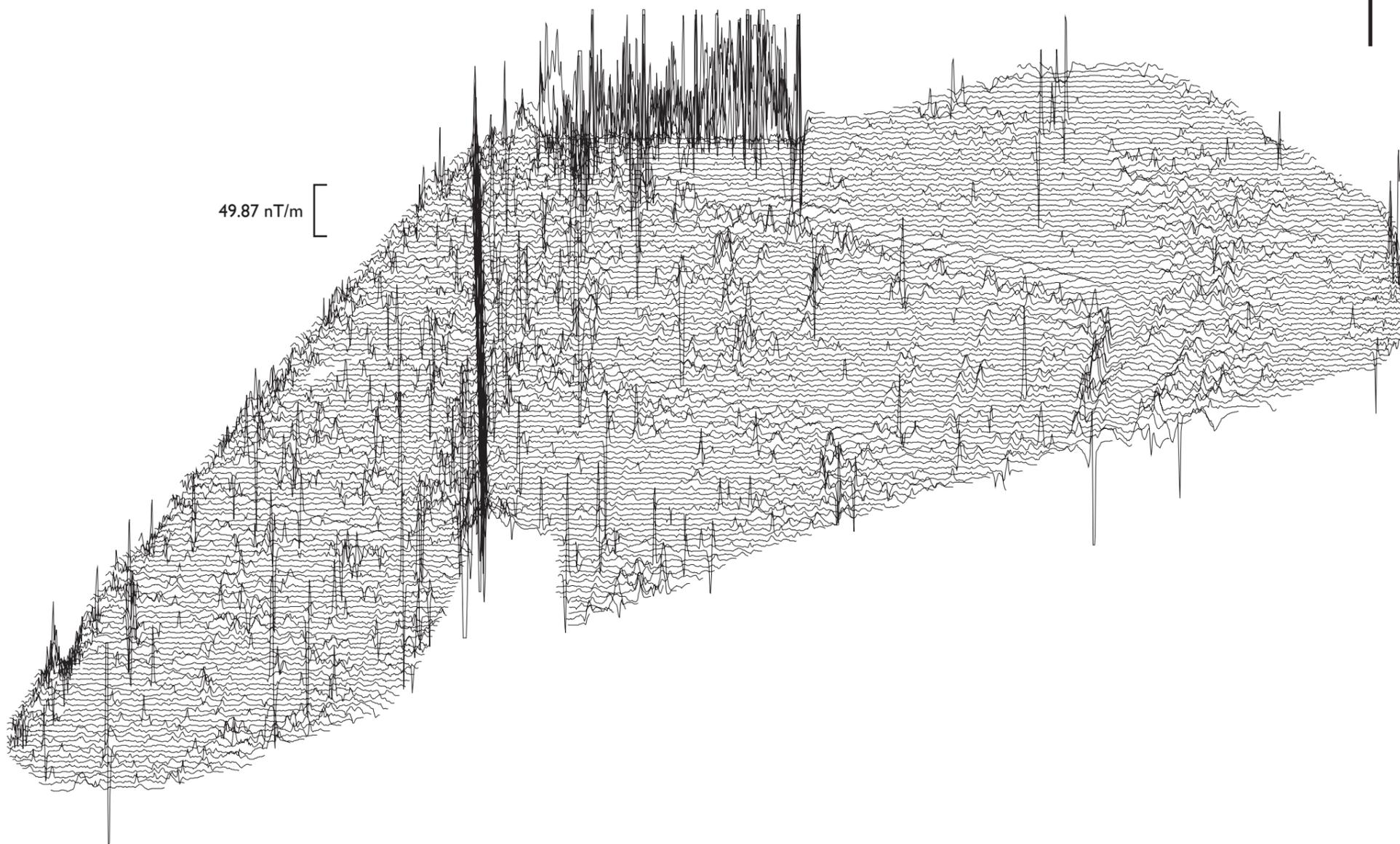
(B) Linear greyscale image of processed data after low-pass Gaussian filter



# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Caesium magnetometer survey - Field 2, July 2024

(A) Trace plot of minimally processed data after range truncation ( $\pm 100$  nT/m)



(B) Linear greyscale image of minimally processed data



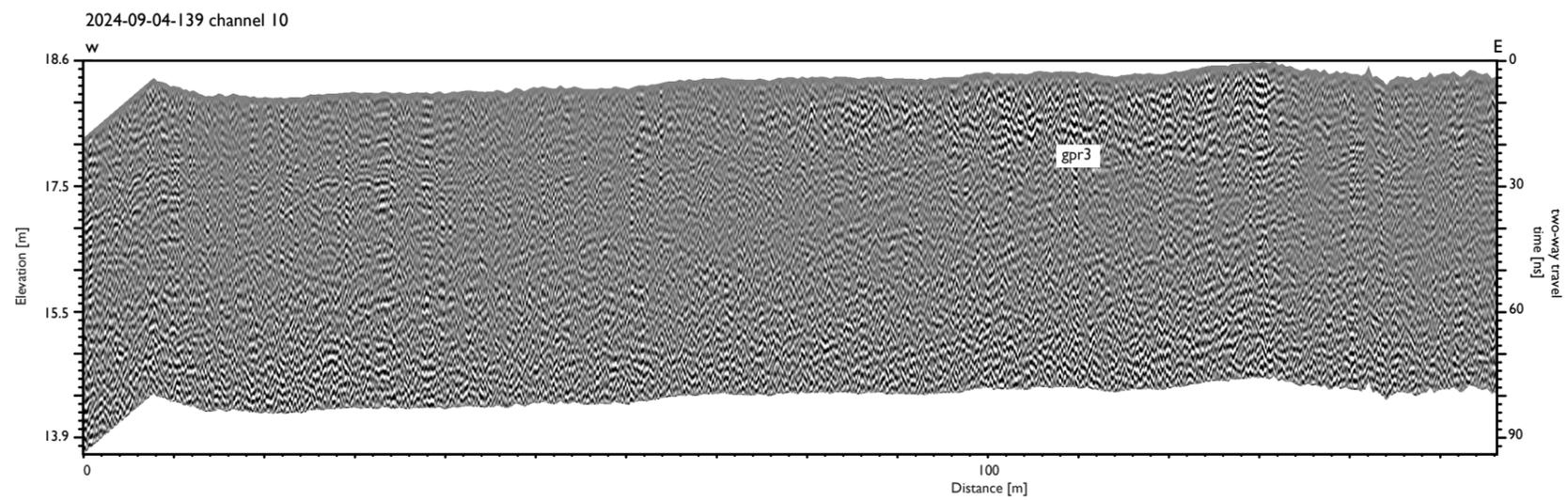
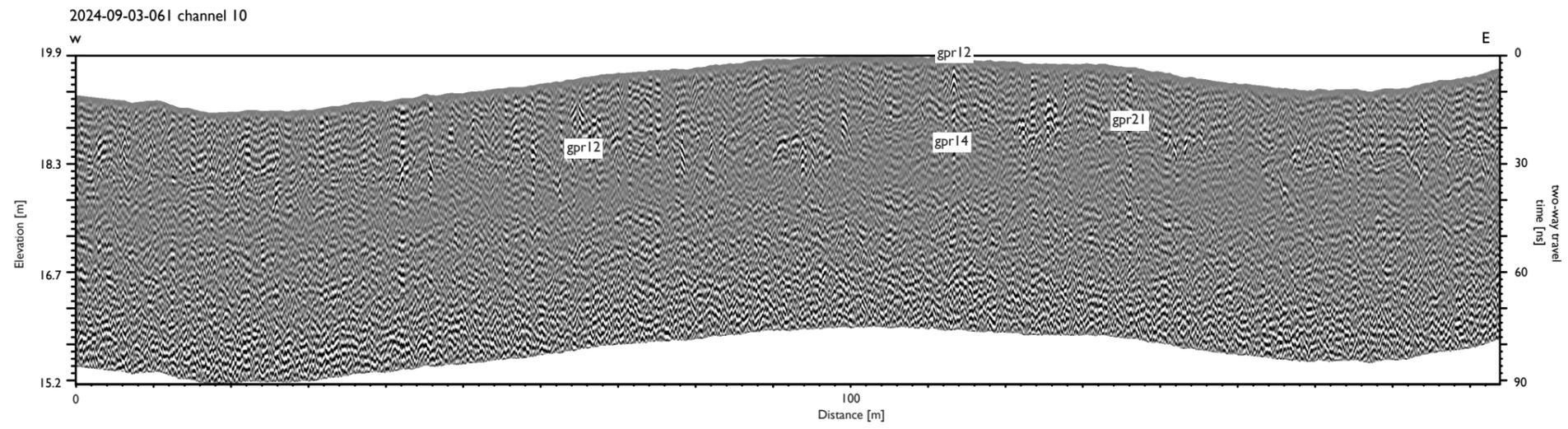
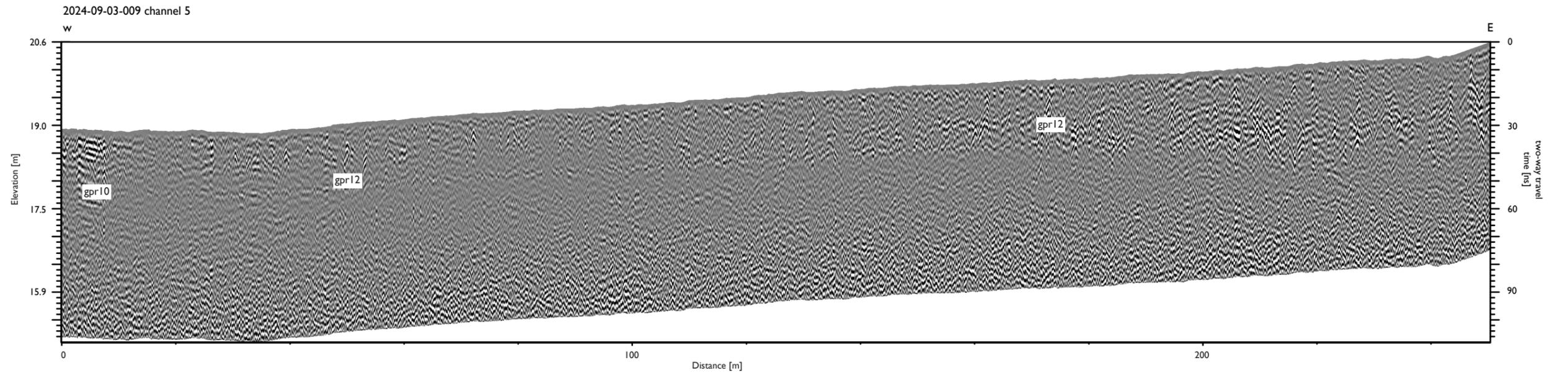
0 90m

1:2000

# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Representative topographically corrected GPR profiles, September 2024

Figure 7



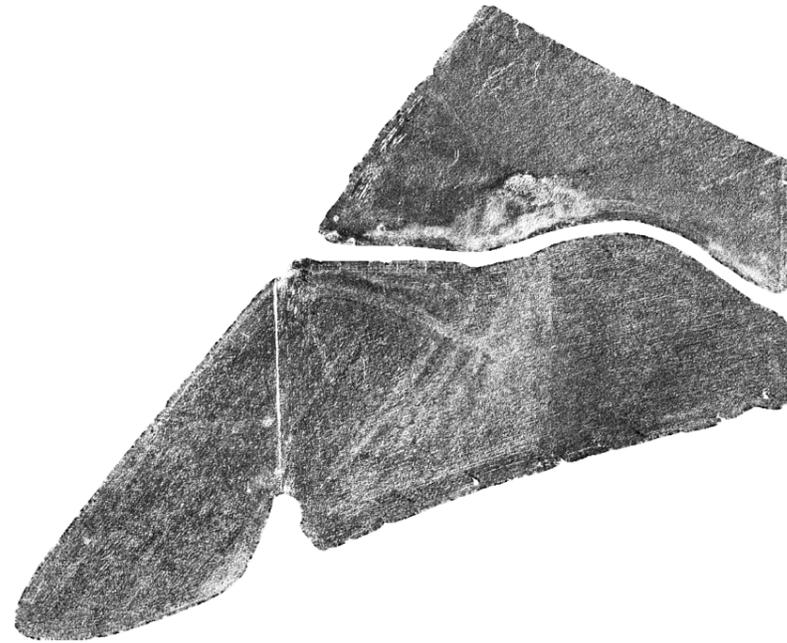
# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

GPR amplitude time slices between 0.0 and 15.0ns (0.0 to 0.79m), September 2024

0.0 - 2.5ns (0.0 - 0.13m)



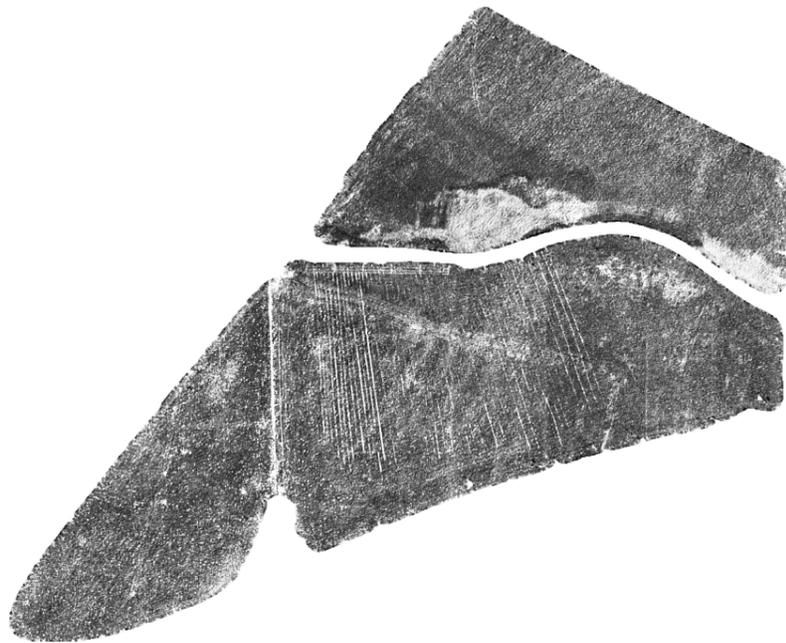
2.5 - 5.0ns (0.13 - 0.26m)



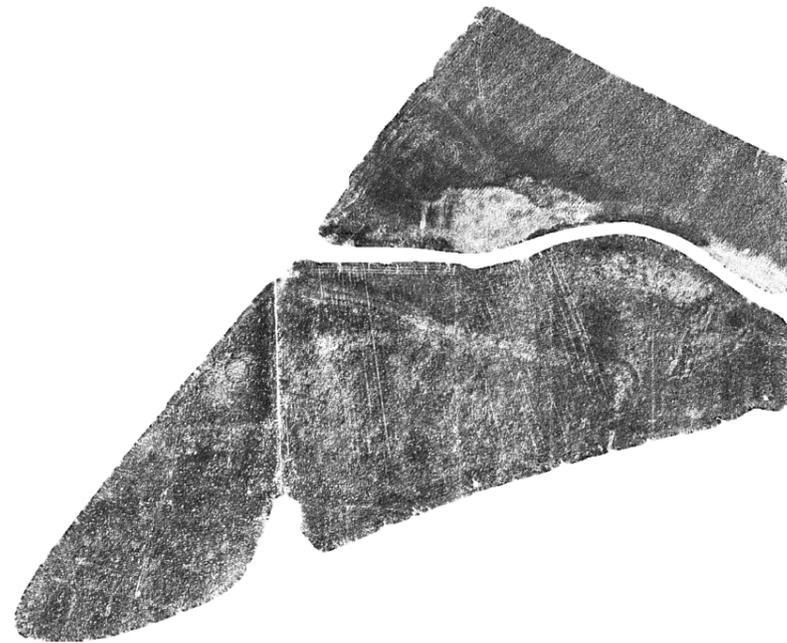
5.0 - 7.5ns (0.26 - 0.39m)



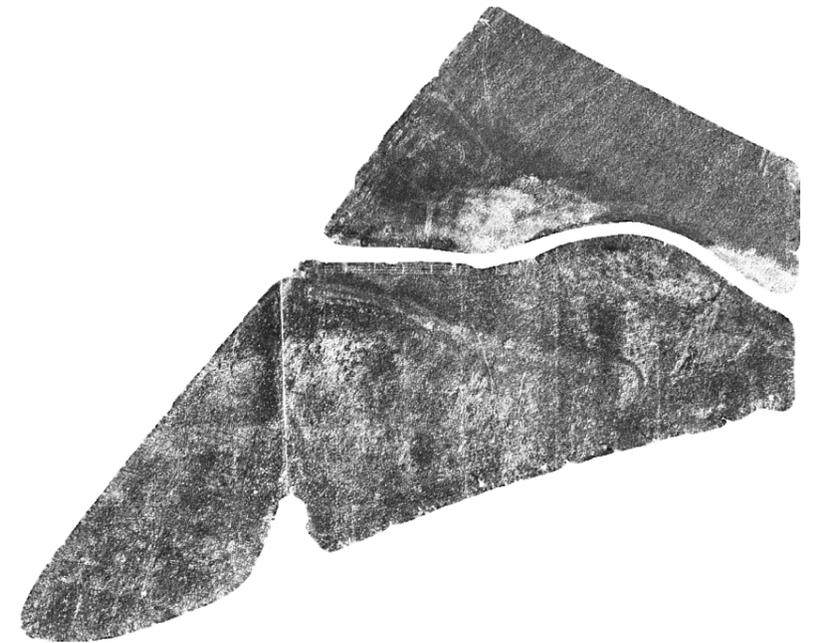
7.5 - 10.0ns (0.39 - 0.53m)



10.0 - 12.5ns (0.53 - 0.66m)



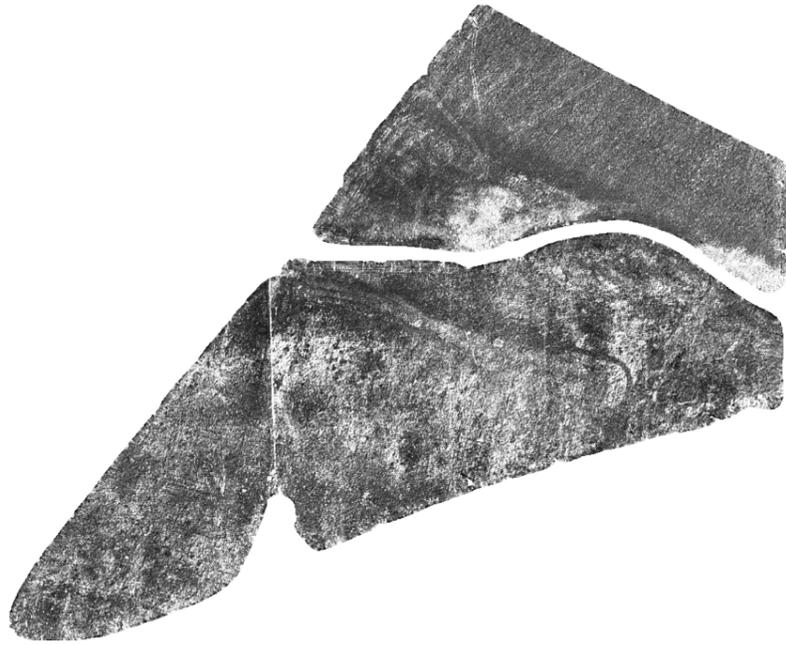
12.5 - 15.0ns (0.66 - 0.79m)



# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

GPR amplitude time slices between 15.0 and 30.0ns (0.79 to 1.57m), September 2024

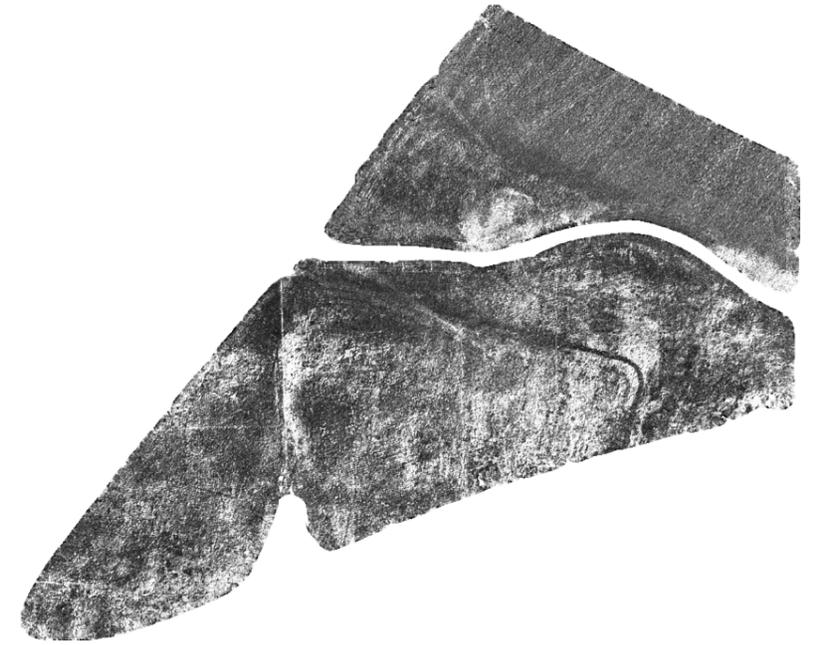
15.0 - 17.5ns (0.77 - 0.92m)



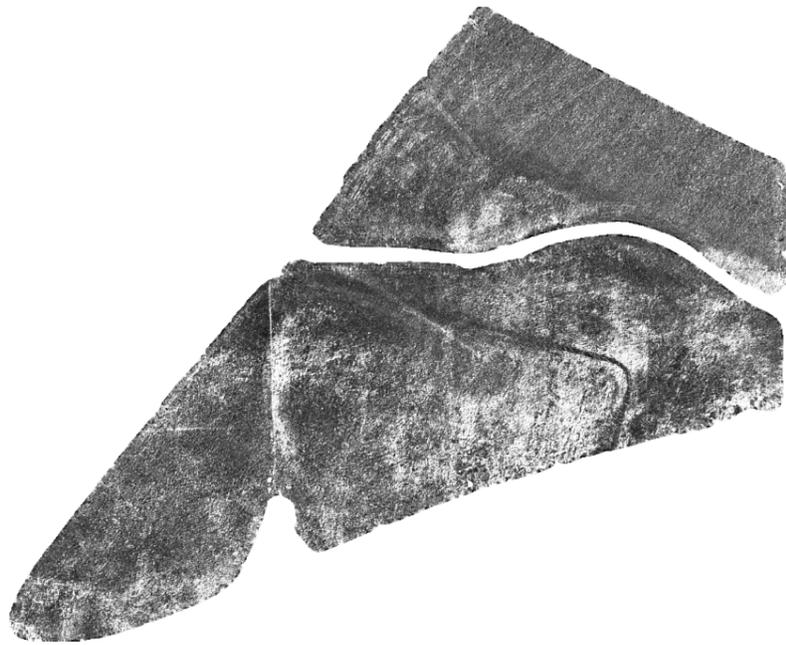
17.5 - 20.0ns (0.92 - 1.05m)



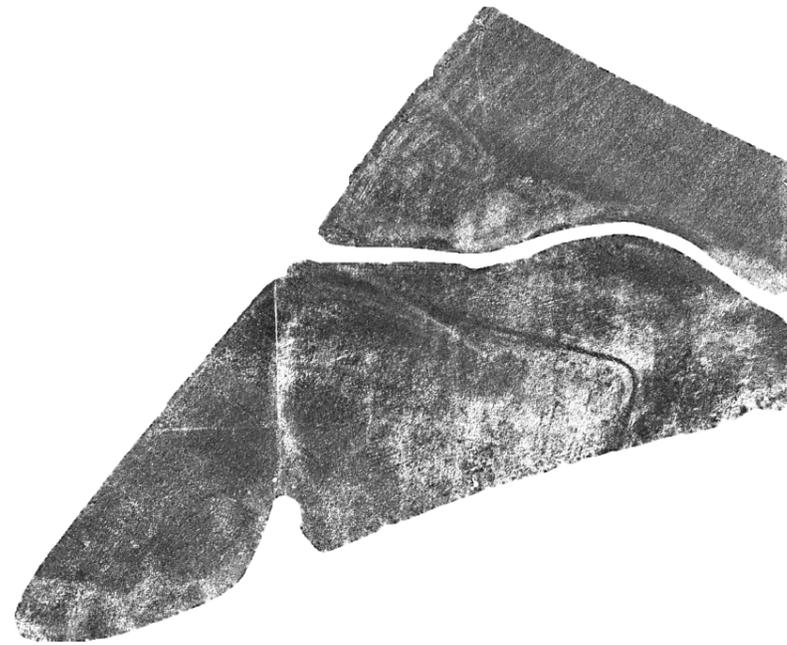
20.0 - 22.5ns (1.05 - 1.18m)



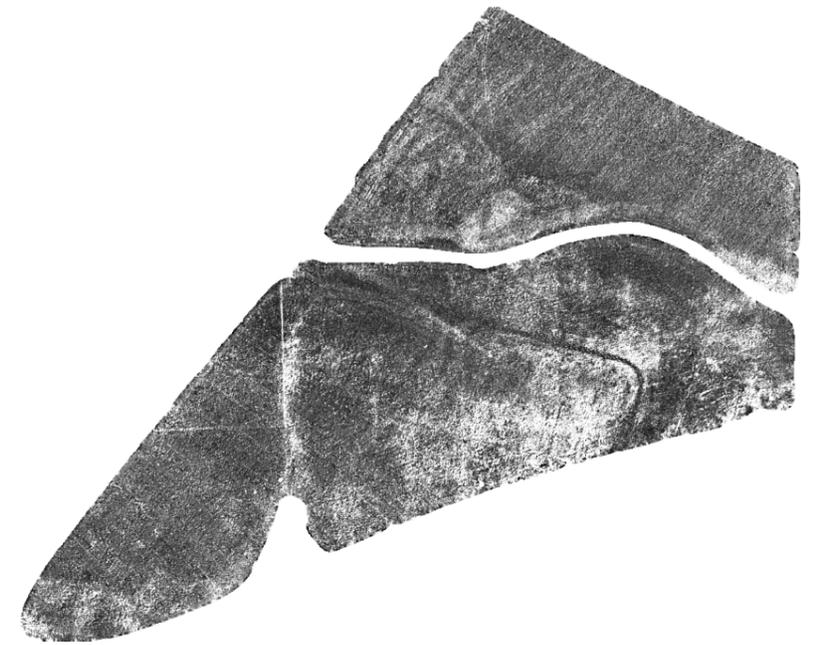
22.5 - 25.0ns (1.18 - 1.31m)



25.0 - 27.5ns (1.31 - 1.44m)



27.5 - 30.0ns (1.44 - 1.57m)



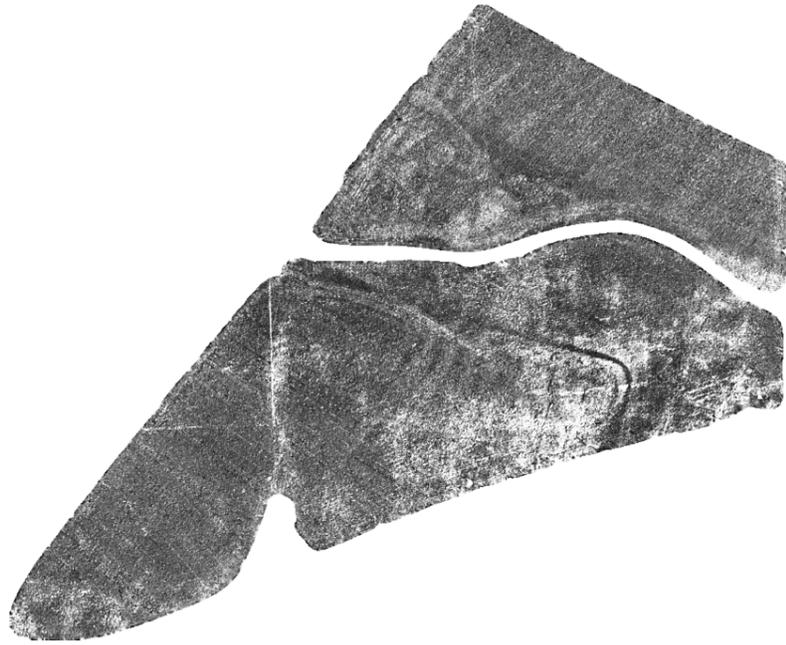
0 180m  
1:5000

Low High  
relative reflector strength

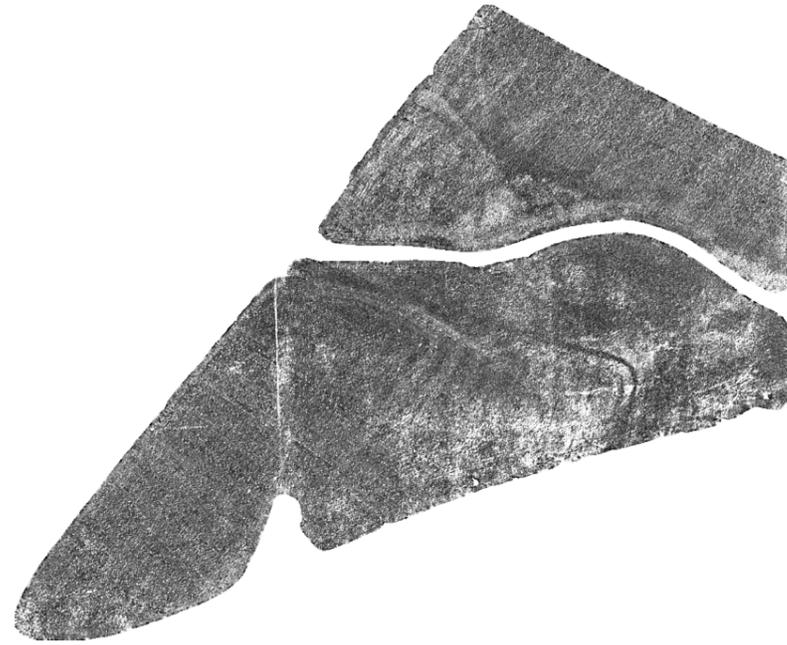
# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

GPR amplitude time slices between 30.0 and 45.0ns (1.57 to 2.36m), September 2024

30.0 - 32.5ns (1.57 - 1.71m)



32.5 - 35.0ns (1.71 - 1.84m)



35.0 - 37.5ns (1.84 - 1.97m)



37.5 - 40.0ns (1.97 - 2.1m)



40.0 - 42.5ns (2.1 - 2.23m)



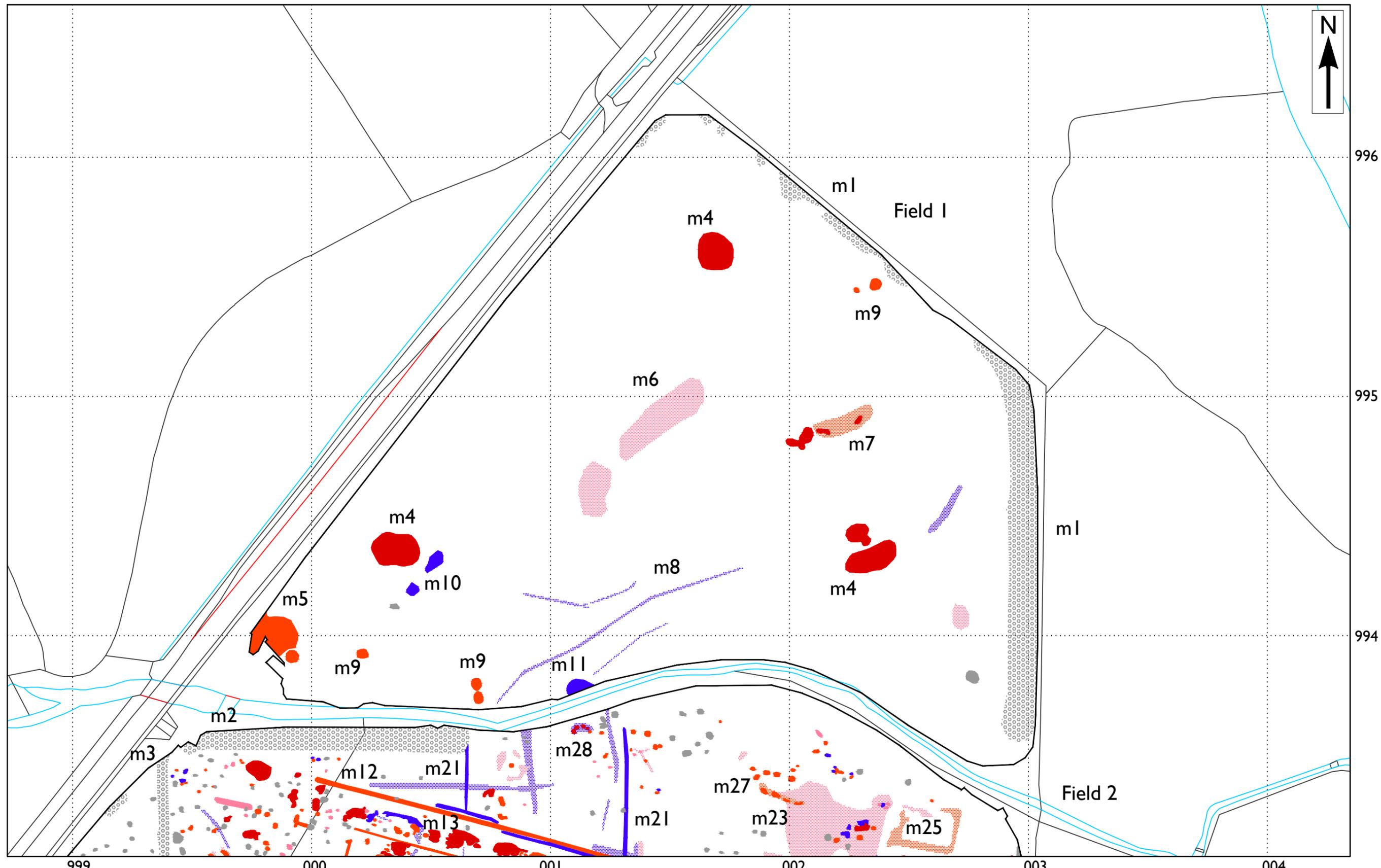
42.5 - 45.0ns (2.23 - 2.36m)



# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Graphical summary of significant caesium magnetometer anomalies - Field I, September 2024

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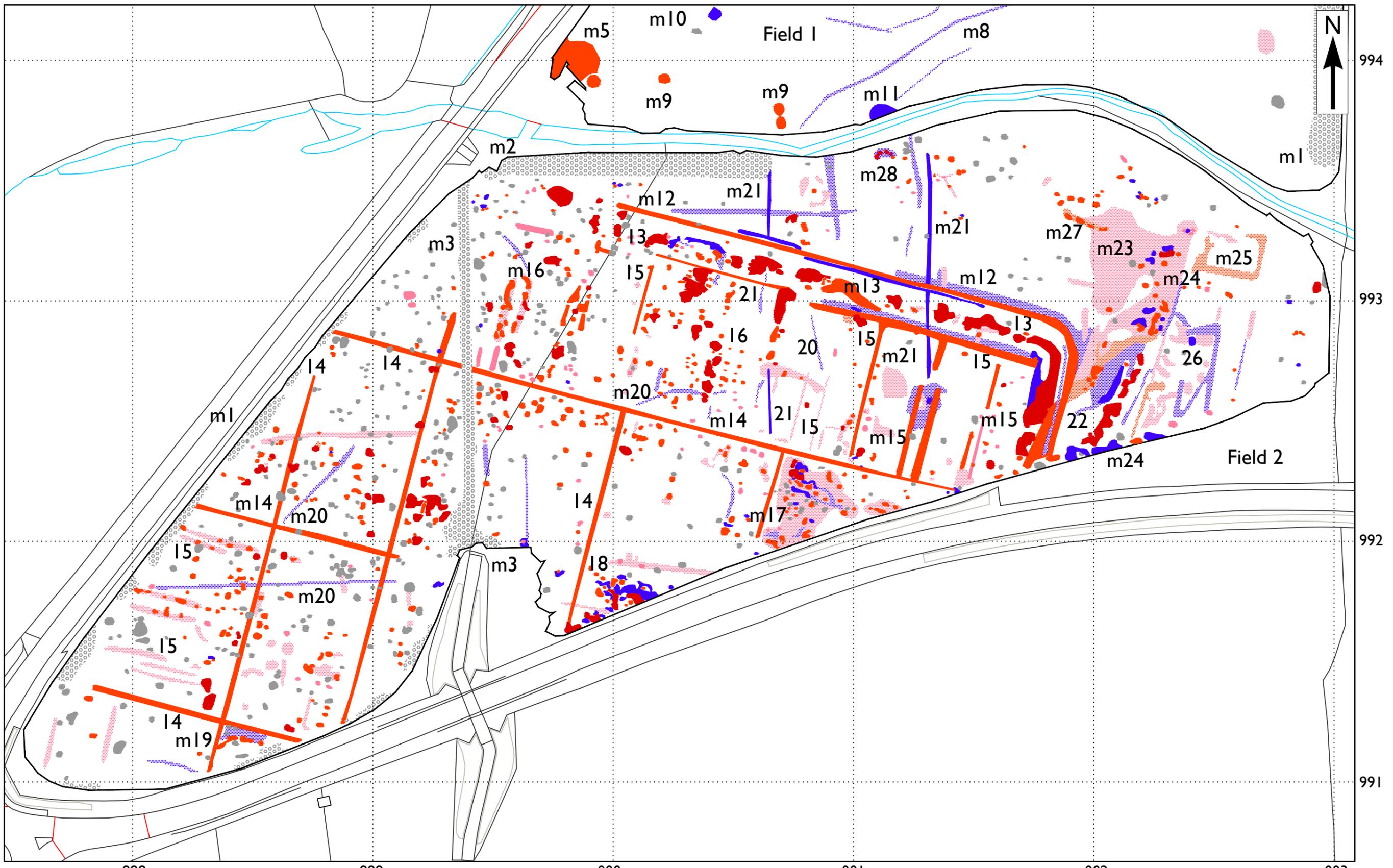
0 60m

1:1500

- raised magnetic
- positive magnetic
- strong positive magnetic
- negative magnetic
- magnetic noise

# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Graphical summary of significant caesium magnetometer anomalies - Field 2, September 2024



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0 60m

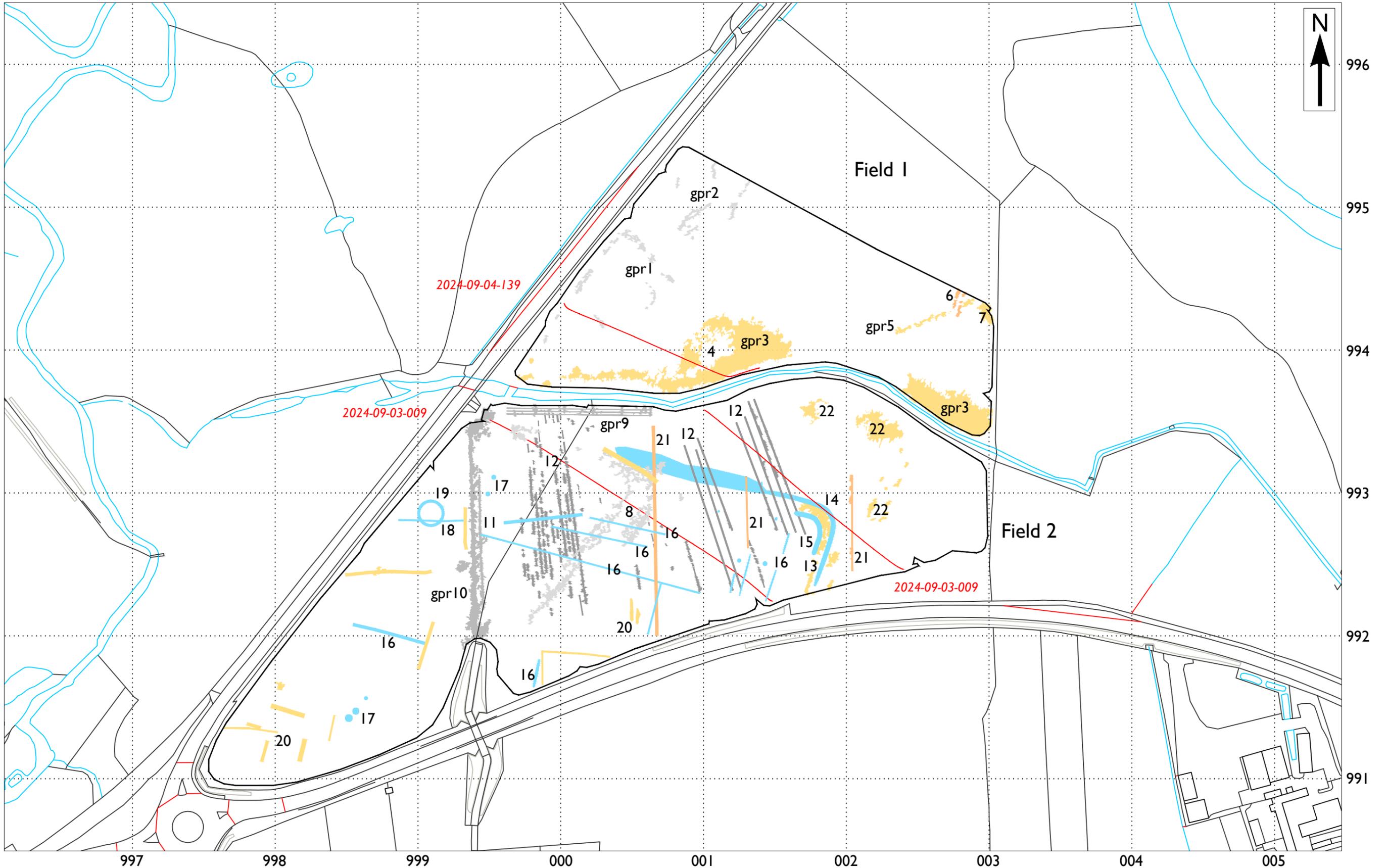
1:1500

- raised magnetic
- positive magnetic
- strong positive magnetic
- negative magnetic
- magnetic noise

# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Graphical summary of significant GPR anomalies, September 2024

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0 150m  
1:2500

■ low amplitude reflectors     anomalies of known or recent origin  
 high amplitude reflectors

— Location of selected GPR profiles shown on Figure 7  
2024-09-03-009

# WIMBORNE SHOWGROUND, LAKE FARM, WIMBORNE MINSTER, DORSET

## Combined graphical summary of selected significant anomalies with the location of sondages, September 2024

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0 150m  
1:2500

caesium magnetometer anomalies GPR anomalies sondages





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