

**Tarrant Abbey Farm  
Tarrant Crawford  
Dorset**

**GROUND PENETRATING RADAR SURVEY REPORT**

for

**AC Archaeology**

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ARCHAEOLOGICAL SURVEYS LTD

**Tarrant Abbey Farm  
Tarrant Crawford  
Dorset**

Ground Penetrating Radar Survey Report

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**AC Archaeology**

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## SUMMARY

Archaeological Surveys Ltd was commissioned by AC Archaeology to undertake a ground penetrating radar survey (GPR) at Tarrant Abbey Farm, Tarrant Crawford in Dorset. The results of the survey demonstrate the presence of planar and complex reflections within the western part of the site that underlie a modern concrete slab floor. The reflections may represent former agricultural surfaces, debris and/or the sub-base make-up to the concrete slab. Dipping surfaces were also located, although deeper anomalies may relate to naturally formed features within alluvium. A small bridge crossing a former leat in the eastern part of the site was located, it is likely to be contemporary with a mill attached to the eastern side of a large stone and brick barn located in the central part of the site. Dipping layers and very low magnitude linear anomalies to the south east of the barn may be associated with former ditch-like features. A possible wall or drain was also located to the south of the barn.

## 1 INTRODUCTION

### 1.1 *Survey background*

- 1.1.1 Archaeological Surveys Ltd was commissioned by AC Archaeology to undertake a ground penetrating radar survey (GPR) at Tarrant Abbey Farm, Tarrant Crawford in Dorset. The site lies within the precinct of Tarrant Abbey, but outside of the scheduled area, and has been outlined for the proposed development of new buildings over the position of demolished buildings within the farmyard complex.
- 1.1.2 The survey was carried out within two main areas, one within the footprint of a removed modern barn to the west of a Grade II\* listed barn (referred to as the threshing barn within this report) and another within an open area to the east where new drainage is proposed. The survey aims to help inform the position of a number of archaeological evaluation trenches.

### 1.2 *Survey objectives and techniques*

- 1.2.1 The objective of the survey was to use GPR to locate geophysical anomalies that may be archaeological in origin so that they may be assessed prior to development of the site. The methodology is considered an efficient and effective approach to archaeological prospection, especially in the location of structural remains.
- 1.2.2 Geophysical survey can provide useful information on the archaeological potential of a site; however, the outcome of any survey relies on a number of factors and as a consequence results can vary. The success in meeting the aims and objectives of a survey is, therefore, often impossible to predetermine.

### 1.3 Standards, guidance and recommendations for the use of this report

- 1.3.1 The survey and report generally follow the recommendations set out by: European Archaeological Council (2015) *Guidelines for the Use of Geophysics in Archaeology*; Institute for Archaeologists (2002) *The use of Geophysical Techniques in Archaeological Evaluations*. The work has been carried out to the Chartered Institute for Archaeologists (2014) *Standard and Guidance for Archaeological Geophysical Survey*. Note: currently Historic England (2018) no longer support the guidelines set out in English Heritage (2008) *Geophysical survey in archaeological field evaluation* and there are currently no plans to update the document. As a consequence other sources of written guidance referring to this document may be out of date and/or contain unsupported information (e.g. Chartered Institute for Archaeologists, 2014).
- 1.3.2 Archaeological Surveys Ltd carries out ground penetrating radar surveys under a Wireless Telegraphy Act licence from Ofcom (No. 078907/01). It is operated in accordance with Ofcom regulations (OfW 350 Requirements and Guidance Notes for Ground Probing Radar).
- 1.3.3 Archaeological Surveys Ltd provide a detailed geophysical survey report and it is recommended that where possible the contents should be considered in full. The Summary provides a brief overview of the results with more detail available in the Discussion and/or Conclusion. The *List of anomalies* within the Results provides a detailed assessment of the anomalies within separate categories which can be useful in inferring a level of confidence to the interpretation. Quality and factors influencing the interpretation of anomalies is also set out within the results.
- 1.3.4 It is recommended that the full report should always be considered when using data and interpretation plots; where this is not possible, in the field for example, the abstraction and interpretation plots should retain their colour coding and be used with a corresponding legend.
- 1.3.5 Where targeting of anomalies by excavation is to be carried out, care should be taken to place trenches over solid lines or features visible on the abstraction and interpretation plots. Archaeological Surveys abstraction and interpretation avoids the use of dashed or dotted line formats, and broken or fragmented lines used in interpretive plots may well correspond closely with truncation of archaeological features.

### 1.4 Site location, description and survey conditions

- 1.4.1 The site is located at Tarrant Abbey Farm, Tarrant Crawford, Dorset. It is centred on Ordnance Survey National Grid Reference (OS NGR) ST 92180 03440, see Figs 01 and 02.

1.4.2 The geophysical survey covers approximately 0.2ha within three survey areas, labelled Areas 1 - 3 for the purposes of this report. Area 1 is 570m<sup>2</sup> and located to the west of the listed threshing barn. The survey area crosses a concrete slab floor of a demolished modern barn. The north western extent of the survey and areas adjacent to the threshing barn and western boundary were restricted by trees, nettles and other vegetative cover. Area 2 is located to the east of the threshing barn and covers an area of grass that overlies gravel, fragmented tarmac and concrete relating to a former farmyard. Area 3 is a very small area located to the north east of the threshing barn that could not be surveyed adequately from the Area 2 baseline. Areas 2 and three combined are 1140m<sup>2</sup>.



*Plate 1: Area 1 looking north east*



*Plate 2: Area 2 looking north west*



- 1.4.3 The ground conditions across the site were variable and often poor within Area 1 due to the presence of debris lying on the concrete slab and vegetation growing from cracks and seams. Weather conditions during the survey were very wet due to persistent, occasionally heavy, rain.

## 1.5 *Site history and archaeological potential*

- 1.5.1 The survey area lies within the former precinct of the medieval Cistercian nunnery of Tarrant Abbey; however, it lies outside of the scheduled area (listed as *Tarrant Abbey, site of, and tithe barn at Abbey Farm*, National Heritage List no. 1002715). A small monastic cell or anchorhold was established for three sisters in the late 12<sup>th</sup> century utilising the parish church 65m east of the survey area. The site became the Cistercian Abbey of St Mary and All Saints at Tarrant around 1228.
- 1.5.2 In the centre of the site lies the Grade II\* listed *Barn 150 metres north east of Tarrant Abbey House*, National List no. 1304075 (referred to here as the threshing barn). The flint and rubble threshing barn, with later brickwork, has 15<sup>th</sup> century origins, but was largely rebuilt in 1759. Early Ordnance Survey mapping shows a leat or mill race, diverted by a sluice from the River Tarrant extending to the south west and then towards and past the eastern part of the threshing barn. It was also recorded as a disused corn mill in 1888 and the leat is likely to be associated, although the leat and sluice could have originated earlier and could, therefore, be associated with the Abbey.
- 1.5.3 The Abbey would have had many ranges of buildings as well as the Abbey church within the precinct, but apart from a few surviving buildings and earthworks the layout and full extent is unknown. There is, therefore, potential that the site may contain further evidence of structural remains associated with the Abbey buildings.

## 1.6 *Geology and soils*

- 1.6.1 The underlying geology is from the Tarrant Chalk Member with overlying alluvial deposits of clay, silt, sand and gravel (BGS, 2017).
- 1.6.2 The overlying soil across the site is mapped as being from the Andover 1 association and is a brown rendzina. It consists of a shallow, well drained, calcareous, silty soil over chalk with deep fine silty soil in valley bottoms. Along the northern edge of the site, the alluvial soil is mapped as from the Frome association and is a calcareous alluvial gley which consists of a shallow, calcareous and non calcareous loamy soil over flint gravel (Soil Survey of England and Wales, 1983).
- 1.6.3 Alluvium and waterlogged soils can be less than optimum for penetration of radar signals; however, the adjacent River Tarrant was completely dry suggesting a very low water table, although localised saturation by prolonged



heavy rainfall may have affected depth.

## 2 METHODOLOGY

### 2.1 *Technical synopsis*

- 2.1.1 Ground penetrating radar systems transmit an electromagnetic wave into the ground and record the time delay and amplitude of reflections from buried features. Reflections occur from changes in conductivity or dielectric permittivity.
- 2.1.2 Electromagnetic waves are increasingly attenuated as frequency increases and, therefore, lower frequencies provide greater penetration into the subsurface. However, the longer wavelengths associated with lower frequencies reduce the resolution of buried features. Typical frequencies chosen for archaeological prospection are around 500 and 200 MHz.

### 2.2 *Equipment configuration and data collection*

- 2.2.1 Ground penetrating radar data were acquired using an Utsi Electronics Groundvue 3A system running with a 400MHz shielded antenna. The system utilises a wheeled encoder system on a small cart. A dielectric constant of 10 was used in the field to set up the instrument and view data. The value is for display purposes only and does not affect the recorded data.
- 2.2.2 A value of 80ns (nanoseconds) was chosen for the time sweep (two way GPR signal travel time) in order to balance potential depth of penetration and resolution.
- 2.2.3 Data were collected from scans recorded at 0.02914m along parallel traverses separated by 0.5m. The data captured along each traverse were logged to an internal disk drive to allow further processing and analysis.

### 2.3 *Survey referencing and base mapping*

- 2.3.1 Ground penetrating radar data were collected along traverses originating from a common baseline, see Figure 02. The start position for each traverse along the baseline from the start point or origin was measured using a hand tape. A parallel tape was used as a guide to ensure that traverses were surveyed perpendicular to the baseline and parallel to adjacent traverses.
- 2.3.2 Baselines were then referenced to the OSGB36 datum using a Leica GS10 RTK GNSS. The GNSS is used in conjunction with Leica's Smartnet service, where positional corrections are sent via a mobile telephone link. Positional accuracy of around 10 – 20mm is possible using the system. The instrument is regularly checked against the ETRS89 reference framework using Ordnance Survey ground marker C1ST7784 (Horton).

2.3.3 Digital base mapping was supplied by the client. The mapping was not georeferenced or accurately scaled and has been adjusted to several control points collected during the survey using RTK GNSS. However, the accuracy of both the scaling and georeferencing of the base mapping cannot be guaranteed. Features added to the base mapping for the purpose of plotting the geophysical data, abstracting and interpreting are shown as georeferenced by RTK GNSS.

## 2.4 *Data processing and presentation*

2.4.1 Ground penetrating radar data were analysed using REFLEX v8 software. Each traverse was analysed as an individual profile to allow a manual assessment of anomalies. In addition, profiles across each survey area were combined and processed in order to create time slices showing the variation in reflector amplitude at various depths. The following processing has been carried out on GPR data captured during this survey:

- background removal - improves the appearance of the data by removal of strong horizontal bands,
- gain - increased with time in order to amplify weaker reflections from deeper features,
- bandpass filtering - lowers noise by the removal of energy below 200MHz and above 800MHz.

2.4.2 Time slices were analysed using both absolute and envelope reflectivity strengths. The latter use a square root function of the energy at an instant in time and is generally the preferred option; however, occasionally the absolute values provide more detailed anomalies.

2.4.3 An abstraction and interpretation is offered for all anomalies located by the survey that are clearly not related to modern features. A brief summary of each anomaly, with an appropriate reference number, is set out in list form within the results (Section 3) to allow a rapid and objective assessment of features within each survey area. Approximate depth to anomalies is added to the abstraction and interpretation plot.

2.4.4 The main form of data display prepared for this report is the colour scale plot derived from Reflex as TIF files. Generally blue shades indicate very low amplitude reflections with green and yellow relating to mid range reflections and red indicative of high amplitude reflections.

2.4.5 Anomalies are abstracted using colour coded points, lines and polygons. All plots are scaled to landscape A3 for paper printing.

2.4.6 The raster images are combined with base mapping using ProgeCAD Professional 2016 creating DWG file formats. All images are externally referenced to the CAD drawing in order to maintain good graphical quality. A

digital archive, including raster images, is produced with this report, see Appendix D below.

## 3 RESULTS

### 3.1 *General assessment of survey results*

- 3.1.1 The GPR survey located linear, discrete and complex anomalies within the survey areas. In addition, numerous dipping layers were noted within the GPR profiles. The majority of the anomalies are shallow and relate to recent agricultural use of the site; they are associated with buried tarmac, concrete, gravel, etc., to the east of the threshing barn and the concrete base slab of a demolished modern barn to the west of it.
- 3.1.2 An average GPR wave velocity of 0.08m/ns for Area 1 was calculated using hyperbola matching. Shallow anomalies have a higher velocity of 0.1m/ns due to the properties of the concrete slab with deeper anomalies around 0.06m/ns. The velocity within Area 2 was calculated at 0.06m/ns.

### 3.2 *Data quality and factors influencing the interpretation of anomalies*

- 3.2.1 The GPR data were collected with due consideration given to surface conditions, obstructions and area constraints. GPR signals appear to have achieved moderate penetration within all survey areas and maximum depth is likely to be approximately 1.2 - 1.5m. Data were collected within very wet conditions across the site although no significant problems were encountered. The data quality generally appears good.
- 3.2.2 Uneven surfaces were frequently encountered and as a consequence antenna coupling is occasionally poor resulting in small patches of increased noise. It is unlikely that these have obscured more significant features. The area available for survey was restricted by vegetative cover especially in the north western part of the site and immediately adjacent to the threshing barn.
- 3.2.3 Although the adjacent River Tarrant was dry, prolonged periods of heavy rain in the period before (and during) the survey were considered likely to have penetrated deeply into the soil possibly limiting the maximum depth of detection.
- 3.2.4 Interpretation is limited by the weak and fragmented nature of anomalies and a lack of characteristic morphology. Relatively modern features have caused strong anomalies that have the potential to obscure or confuse deeper features of low magnitude. For clarity, modern features have not been abstracted.

### 3.3 Data interpretation

3.3.1 The list of sub-headings below attempts to define a number of separate categories that reflect the range and type of features located during the survey. A general explanation of the characteristics of the magnetic anomalies is set out for each category in order to justify interpretation, see Table 1.

Interpretation category	Description and origin of anomalies
<b>Anomalies with archaeological potential</b>	Anomalies have the characteristics of a range of archaeological features such as walls, structures, etc..
<b>Anomalies with an uncertain origin</b>	The category applies to a range of anomalies where <u>there is not enough evidence to confidently suggest an origin</u> . Anomalies in this category <u>may well be related to archaeologically significant features, but equally relatively modern features, geological/pedological features and agricultural features should be considered</u> .
<b>Anomalies associated with land management</b>	GPR reflections that may be related to features that are long and/or form rectilinear elements and they may relate to topographic features or be visible on early mapping.
<b>Anomalies with a modern origin</b>	Reflections clearly related to modern features such as services, inspection chambers etc.
<b>Anomalies with a natural origin</b>	Reflections caused by geological/periglacial/pedological features, tree roots, fluvial features etc.

Table 1: List and description of GPR interpretation categories

### 3.4 List of ground penetrating radar anomalies - Area 1

Area 1 centred on OS NGR 392153 103431, see Figs 03 - 08.

#### *Anomalies with an uncertain origin*

(1) - Widespread planar and complex GPR reflections at depths of approximately 0.3m - 0.5m. The responses may represent former surfaces below the modern concrete slab, it is also possible that reflections are caused by modern sub-base material or structural debris. The south western part of the area contains somewhat deeper complex reflections, perhaps relating to earlier surfaces associated with agricultural buildings immediately to the south.

(2) - A zone of deeper reflections (approximately 0.5m - 0.9m) in the northern part of the survey area that may be associated with dipping surfaces to the west and east. The responses may relate to made ground or an area of infill. It is possible that they are associated with former buildings located to the north.

(3) - Deep linear anomalies (0.8m - 0.9m) within the central part of the survey area

are of uncertain origin and may relate to drains.

(4) - A curvilinear feature in the southern part of the survey area at a depth of approximately 0.5m. The anomaly is apparent as a null zone within higher magnitude reflections. It may represent a former cut feature containing a fill that absorbs GPR energy (e.g. damp clayey soil) or a layer/surface where GPR energy is reflected away from the antenna.

(5) - A shallow curvilinear anomaly may represent a feature adjacent to the entrance to the threshing barn.

(6) - Dipping layers/surfaces were located along most traverses within the survey area. There is a general trend for increasing depth of make-up within the central part of the area and this is most pronounced towards the northern end, see anomaly (2). The general trend may relate to erosion of surfaces or features within an earlier farmyard with the formation of a shallow bowl that has been infilled; however, it is possible that it is associated with preparation of the sub-base of the concrete pad or could even relate to a naturally formed depression in the land surface. In the south eastern part of the area more complex deeply dipping surfaces could even relate to fluvial features within the underlying geology, although former ditches of archaeological potential should also be considered.

#### *Anomalies with a modern origin*

(7) - Shallow linear null responses likely to be related to services/drains. The features appear to disrupt zones of high energy reflections suggesting they have been cut into layers immediately beneath the concrete pad.

### 3.5 List of ground penetrating radar anomalies - Area 2

Area 2 centred on OS NGR 392202 103447, see Figs 03 -07 & 09.

#### *Anomalies with archaeological potential*

(8) - Within the eastern part of Area 2 two hyperbolic reflections are visible below planar reflections at an approximate depth of 0.5m. The anomalies represent a former bridge crossing a leat or race that formerly ran through the area from north east to south west, turning towards the north west adjacent to the threshing barn with the water flow used as a source of power for milling and other activities.

(9) - Planar and complex reflections relating to a path/track running across the leat bridge (8). The southern end of the track may turn towards the south west.

#### *Anomalies with an uncertain origin*

(10) & (11) - Dipping planar reflections, anomalies labelled (10) approximately 0.3m

- 0.6m deep in the southern part of the site, may relate to or be associated with a former track/path. However, a linear null zone, anomaly (11), may indicate the presence of a former ditch-like feature of which (10) may be the upper part of its fill along the southern side. There is some evidence for dipping GPR reflections along the northern side of (11) that could represent a similar fill. The archaeological potential of these features should be considered.

(12) - A linear null zone running parallel with anomalies (10) & (11) crossing the southern part of the area with an east west orientation. The null response may indicate the fill of a ditch-like feature. Beyond its western end a well has been mapped, and it is possible that there is an association. The feature may also be related to (10) & (11).

(13) - A linear feature to the south of the threshing barn is resolved between approximate depths of 0.5m - 1.1m. It is possible that it relates to the remains of a former wall although a drain is also possible. Its archaeological potential should be considered.

(14) - A very weak linear feature (approximately 0.4m deep) at the eastern side of the survey area may define the edge of the former leat that is known to have been infilled in the 20<sup>th</sup> C in this part of the site.

(15) - Linear features that may define the edge of the former leat close to the threshing barn. However, this part of the site contains buried gravel and tarmac relating to a former farmyard and the GPR reflections are very shallow. It is possible that surfacing materials associated with the yard have sunk into the former leat channel and additional material has been added, resulting in linear GPR anomalies representing the leat edges.

#### *Anomalies with a modern origin*

(16) - A zone of mainly shallow planar reflections relating to the extant metalled track but also to a buried track surface to the north of it.

(17) - Narrow linear anomalies likely to be associated with services.

### 3.6 List of ground penetrating radar anomalies - Area 3

Area 3 centred on OS NGR 392178 103451, see Figs ??.

#### *Anomalies of uncertain origin*

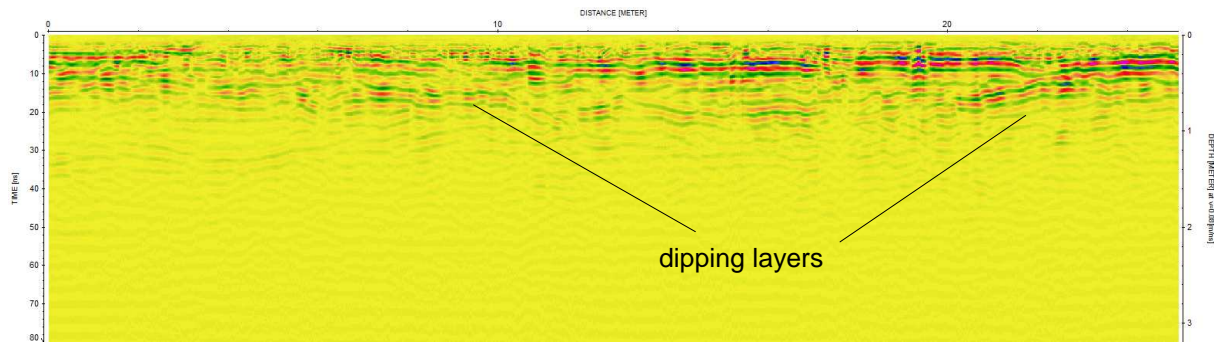
(18) - A broad linear zone of deep complex reflections (approximately 0.6m - 1.2m). Although the anomaly may relate to a path or track, it is possible that it is associated with an infilled leat known to have crossed this part of the site.

(19) - The area also contains dipping layers/surfaces that could be associated with ground make-up and landscaping.

## 4 DISCUSSION

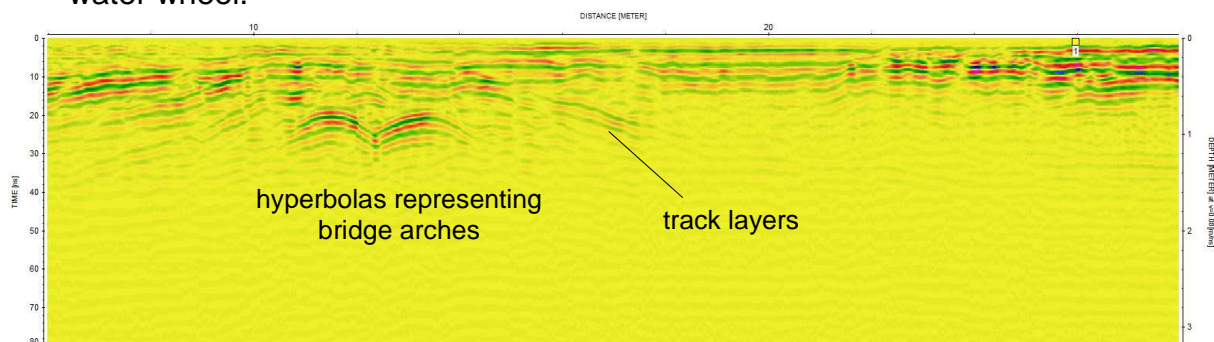
- 4.1.1 The GPR survey located numerous anomalies across the site although few could be confidently interpreted as having archaeological potential. Several factors have influenced the level of confidence expressed when considering the anomalies. The surface of the concrete slab to the west of the threshing barn was largely covered in moss, fragments of wood, roofing material, etc., and a significant portion of it contained vegetation growing from cracks and encroaching from adjacent areas. The surface contamination is likely to have added some additional noise to the data as a result of variable ground coupling by the radar antenna. In addition, vegetation and other obstacles constrained the area available for survey and fragmented survey adjacent to the western side of the threshing barn. To the east of the threshing barn again vegetation prevented survey immediately adjacent to the building. Within this area it was clear that recent landscaping had buried and grassed over gravel, fragmented tarmac, concrete, etc. associated with a former farmyard; these modern layers produced high magnitude near surface reflections that potentially obscure weak anomalies due to loss of wave energy and multiple reflections.
- 4.1.2 Although no structural remains were clearly visible within data from Area 1, to the west of the threshing barn, zones of complex and planar reflections were recorded and it is possible that surfaces or structural debris are represented below the modern concrete slab. Potentially deeper layers of material were identified within the northern part of the survey area, to the south of where a range of agricultural buildings are mapped on 19<sup>th</sup>C Ordnance Survey mapping, and in the south western part of the survey area. The anomalies from these zones may represent ground make-up with structural debris and former surfaces. Similar but shallower anomalies from the central and western parts of Area 1 may relate to former agricultural surfaces and/or the sub-base make-up of the concrete slab.
- 4.1.3 Dipping surfaces or layers were visible mainly towards the western and eastern sides of Area 1, see Radargram 1. This may infer the presence of a former hollow or depression beneath the concrete slab which could be related to erosion of the surface associated with a long period of agricultural activity. It could also indicate the infill and levelling of natural depression. More irregular dipping and unevenness towards the south eastern part of Area 1 could relate to naturally formed fluvial features within alluvium although former cut feature of archaeological potential are also possible.





*Radargram 1: File T006 from northern part of Area 1 showing dipping layers*

- 4.1.4 Within Area 2, to the east of the threshing barn, the survey located clear anomalies relating to a former bridge crossing a mill leat, see Radargram 2. The structure appears to consist of two small arches and layers relating to a track surface. The feature is mapped as a leat crossing on 19<sup>th</sup>C Ordnance Survey mapping and is presumed to allow access to a river sluice and a small enclosed piece of land. The bridge may be contemporary with a small extension on the eastern side of the threshing barn that probably contained a water wheel.



*Radargram 2: File T148 from the eastern part of Area 2 showing hyperbolas and layers relating to the leat bridge*

- 4.1.5 Although the survey located the remains of a leat bridge there is no clear evidence from the data for the course of the leat itself. This would imply that the feature was backfilled with soil having similar properties to the natural into which the leat was cut and that any facing stone/brick was removed. Several weak linear anomalies on the probable line of the course of the leat were abstracted and may relate to the upper edge of the leat, although interpretation is tentative.
- 4.1.6 Dipping surfaces and low magnitude or 'null' anomalies were located in the southern part of Area 2 to the south east of the threshing barn. These anomalies may indicate former ditch-like features in this part of the site. It is tentatively suggested that they may relate to former leats or water channels perhaps associated with the abbey complex further to the west although this cannot be stated with any confidence.
- 4.1.7 A possible wall or drain was located as a short linear feature running from the

southern end of the threshing barn beneath the extant track. Two linear anomalies relating to services were also located in the vicinity as well as evidence of a buried track or consolidated surface possibly associated with recent agricultural use of the site.

- 4.1.8 Area 3 was a small area of infill survey to the north east of the threshing barn. Anomalies in this area may relate to the former leat with dipping layers indicative of more recent landscaping.

## 5 CONCLUSION

- 5.1.1 The results of the GPR survey indicate the presence of numerous anomalies across the site although shallow and near surface reflections relate to recent agricultural use and landscaping. To the west of the threshing barn, the modern concrete slab overlies planar and complex reflections likely to relate to former agricultural surfaces and sub-base consolidation and make-up. Dipping reflections indicate the potential for an infilled shallow bowl-like former surface profile beneath the slab, but it is unclear as to whether this is related to surface erosion by earlier agricultural activity, or whether it is part of the natural land profile. Deeper reflections located under the northern and south western parts of the slab may indicate an increased depth of ground make-up possibly related to extant and former agricultural structures nearby. Deeply dipping layers to the south east of the slab could relate to former cut features, although it is possible that they are naturally formed within alluvial deposits.
- 5.1.2 To the east of the threshing barn, the GPR survey located clear evidence of a small bridge crossing a leat, and it is considered likely that the structure is associated with the use of the threshing barn as a mill in the 19<sup>th</sup> century. No clear evidence for the leat channel was obtained, although a short section of survey to the north east of the threshing barn may have located part of an infilled channel between the mill and river. Dipping and low magnitude anomalies to the south east of the threshing barn may relate to former ditch-like features possibly related to an earlier water course, although interpretation is tentative.

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## Appendix A – digital data archive

Archaeological Surveys Ltd hold the primary digital archive at offices in Wiltshire (see inside cover for address). Data are backed-up onto an on-site data storage drive and at the earliest opportunity data are copied to CD ROM for storage on-site and off-site.

Surveys are reported on in hardcopy using A4 for text and A3 for plots (all plots are scaled for A3). The distribution of both hardcopy report and digital data is considered the responsibility of the Client unless explicitly stated in the survey Brief, Written Scheme of Investigation or other contractual agreement.

A PDF copy will be supplied to the Dorset Historic Environment Record with printed copies on request. The report will also be uploaded to the Online Access to the Index of archaeological investigations (OASIS).

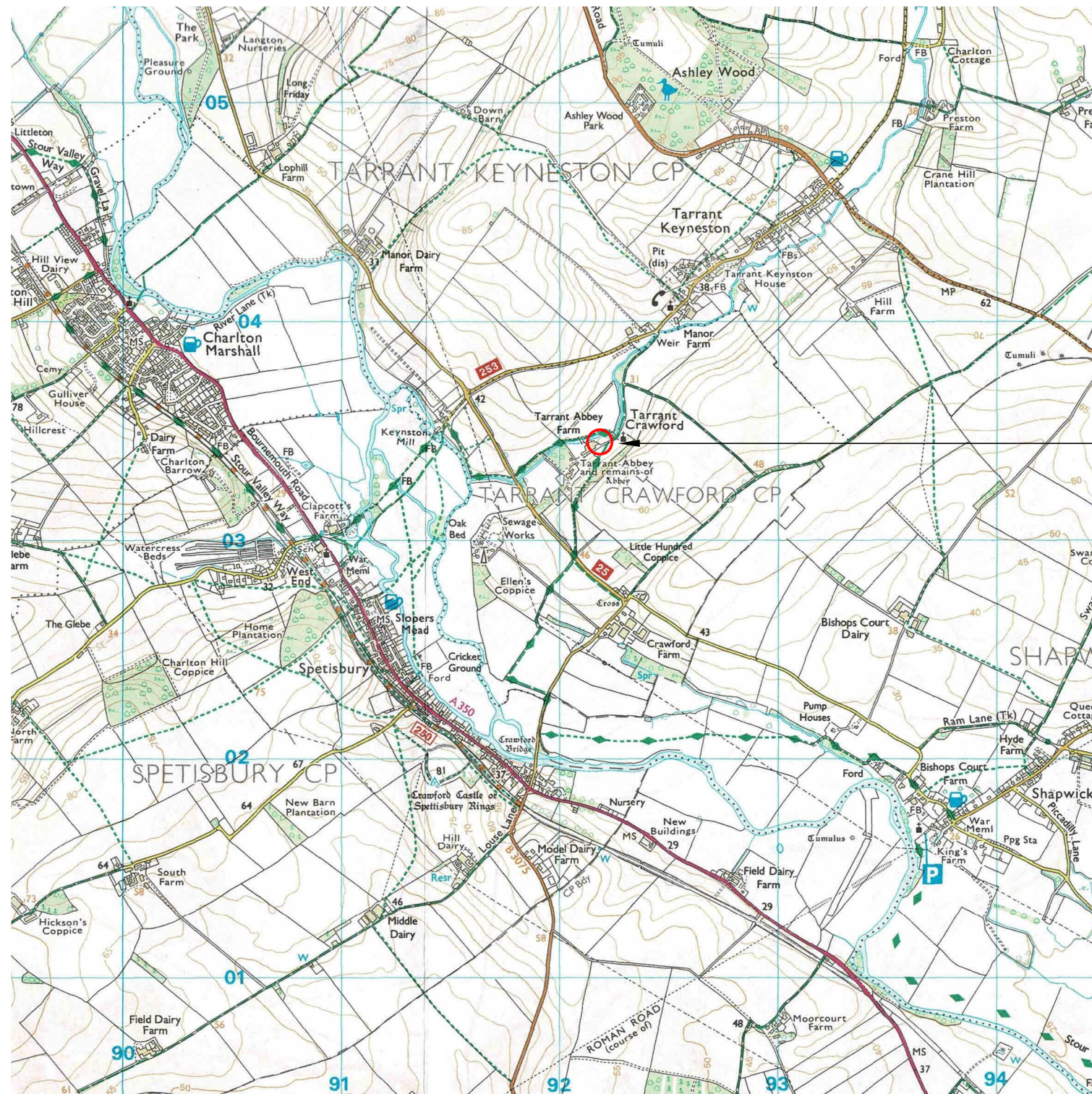
This report has been prepared using the following software on a Windows XP platform:

- Reflex v8 (GPR data analysis)
- ProgeCAD Professional 2016 (report plots),
- OpenOffice.org 4.1.1 Writer (document text),
- PDF Creator version 0.9 (PDF archive).

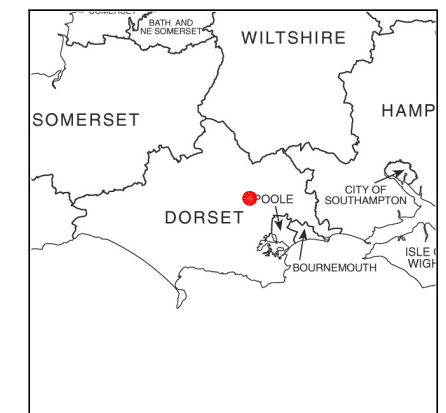


**Geophysical Survey  
Tarrant Abbey Farm  
Tarrant Crawford  
Dorset**

**Map of survey area**



Survey location



● Survey location

Site centred on OS NGR  
ST 92180 03440

SCALE 1:25 000



SCALE TRUE AT A3

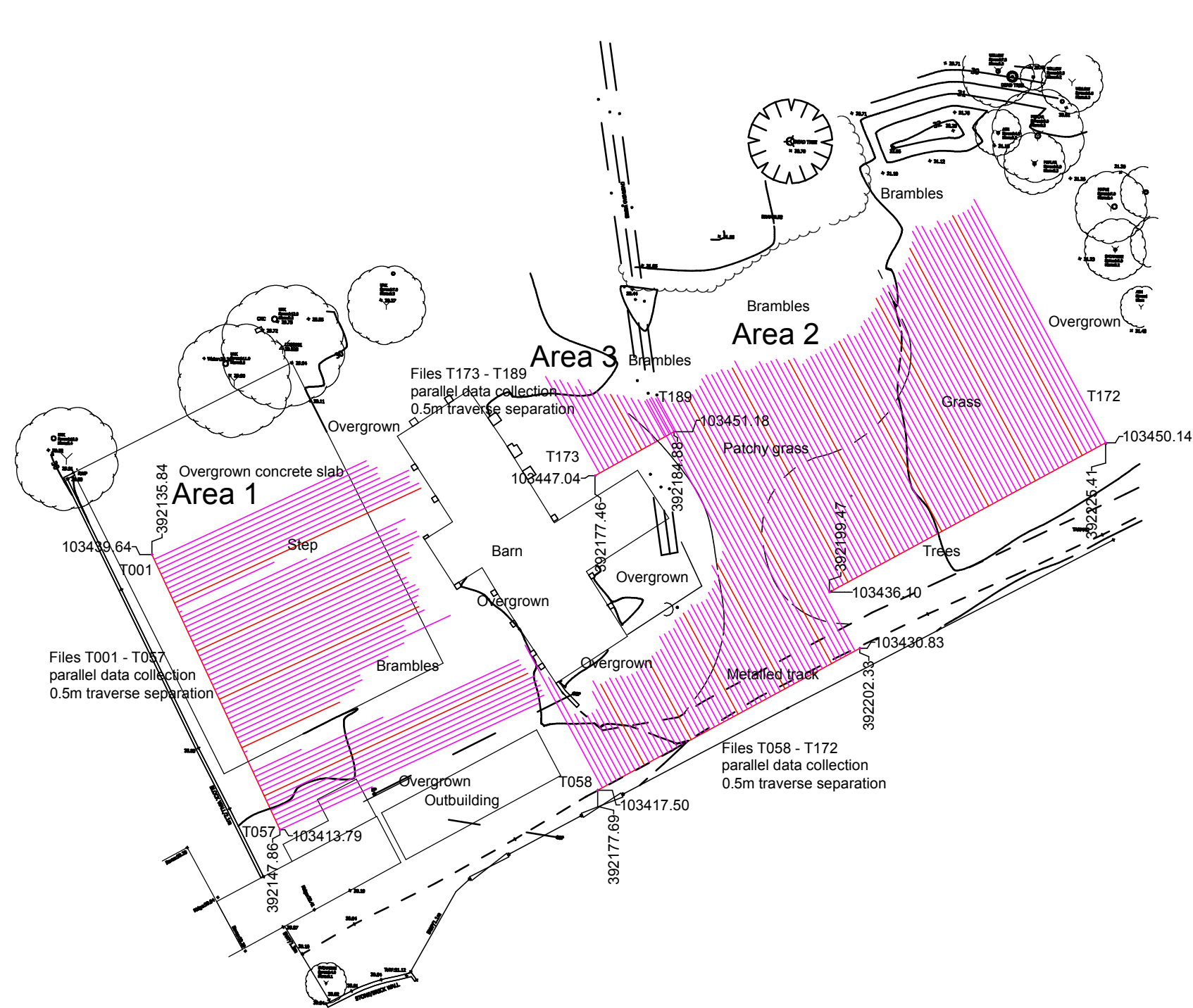


**Geophysical Survey  
Tarrant Abbey Farm  
Tarrant Crawford  
Dorset**

**Ground penetrating radar survey  
referencing**

Baseline coordinates referenced to  
OSGB36 datum using RTK GNSS

Traverse separation - 0.5m



SCALE 1:500



SCALE TRUE AT A3

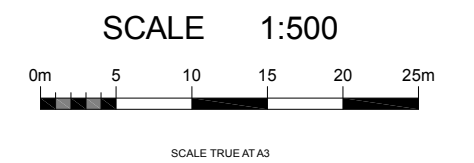
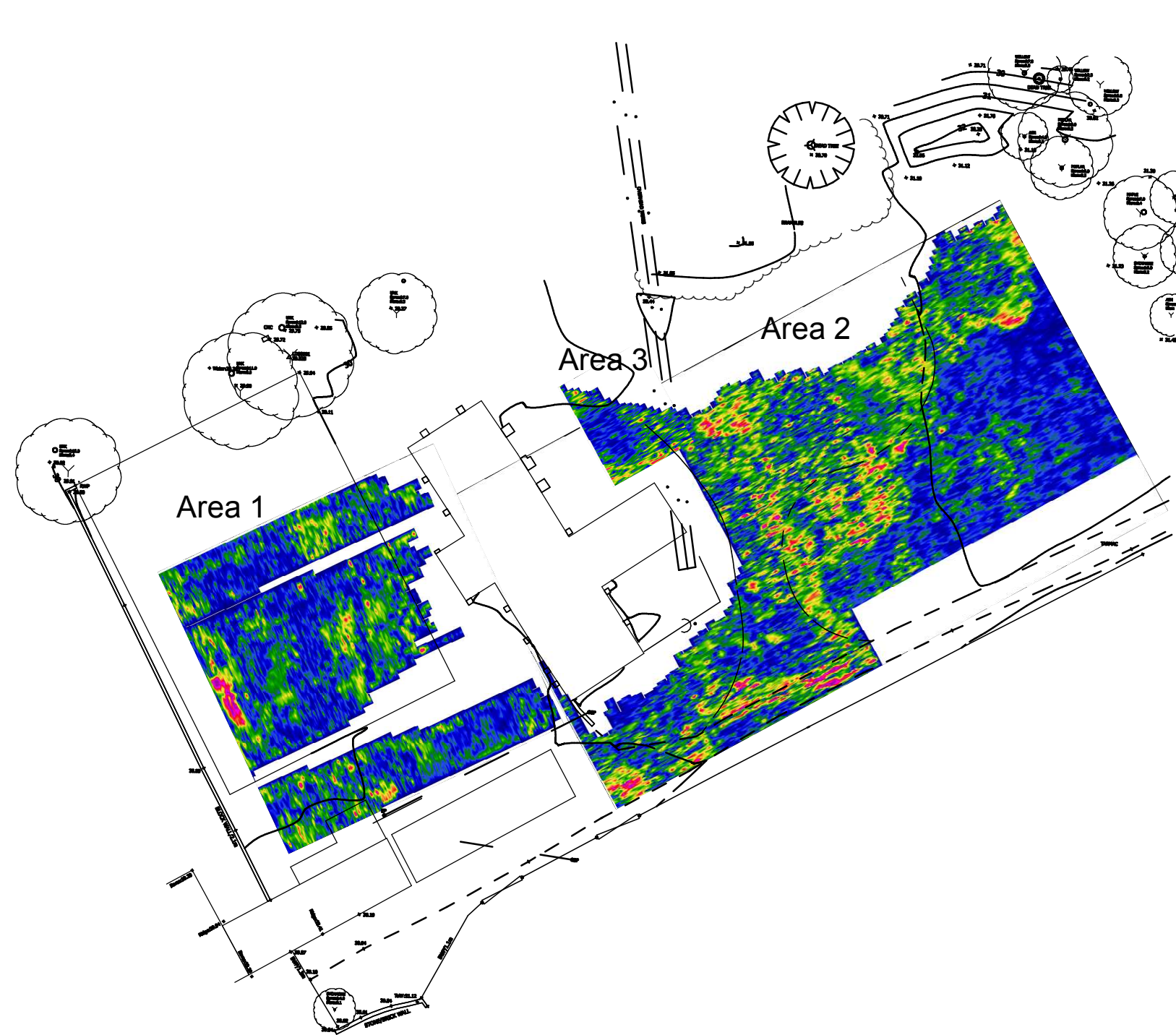
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FIG 02

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Ground penetrating radar  
time slices at 10ns



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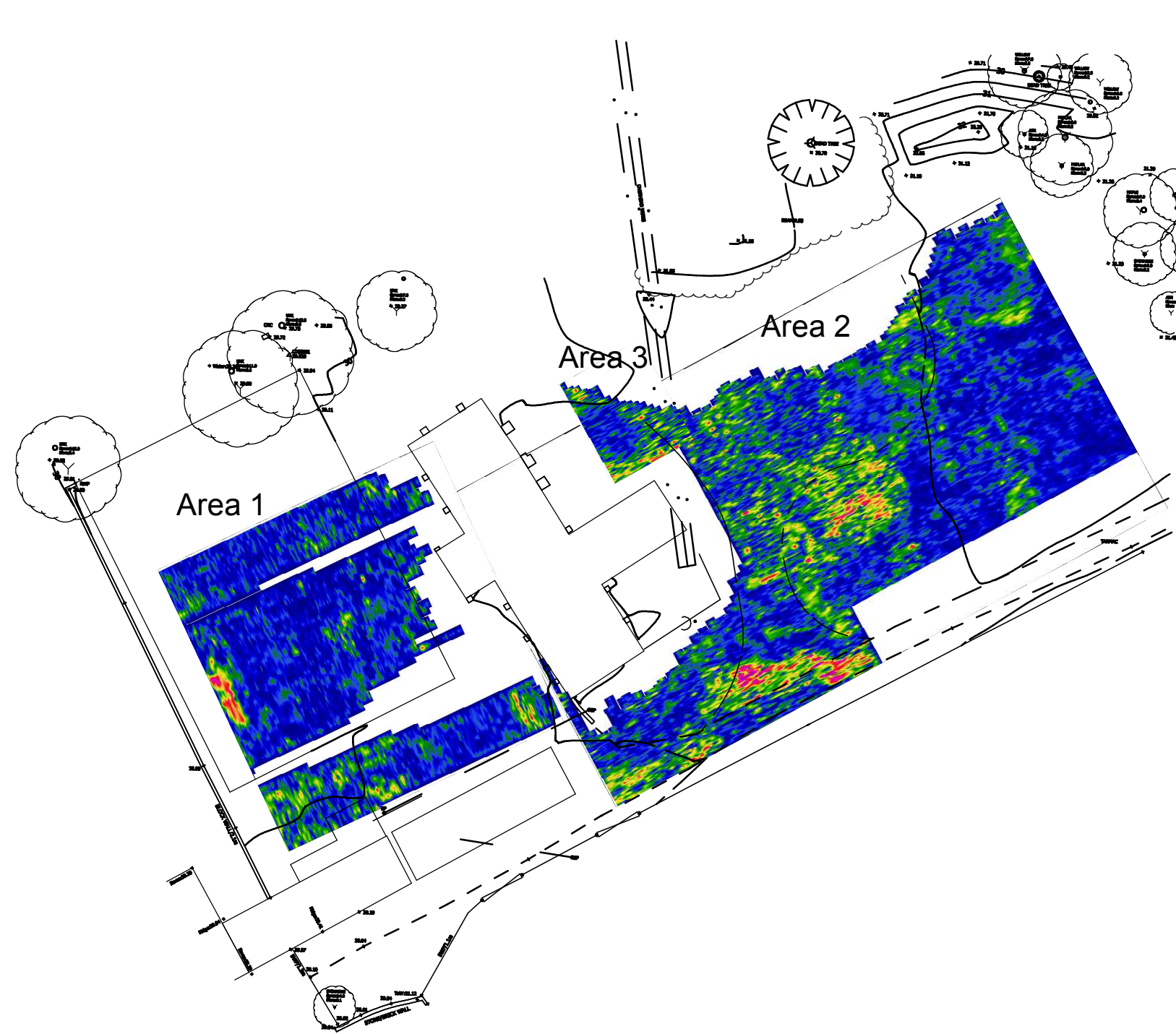
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FIG 03



Geophysical Survey  
Tarrant Abbey Farm  
Tarrant Crawford  
Dorset

Ground penetrating radar  
time slices at 12.5ns



SCALE 1:500



SCALE TRUE AT A3

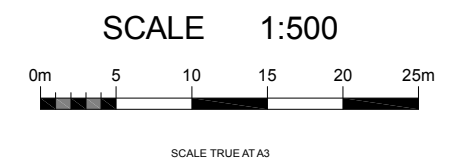
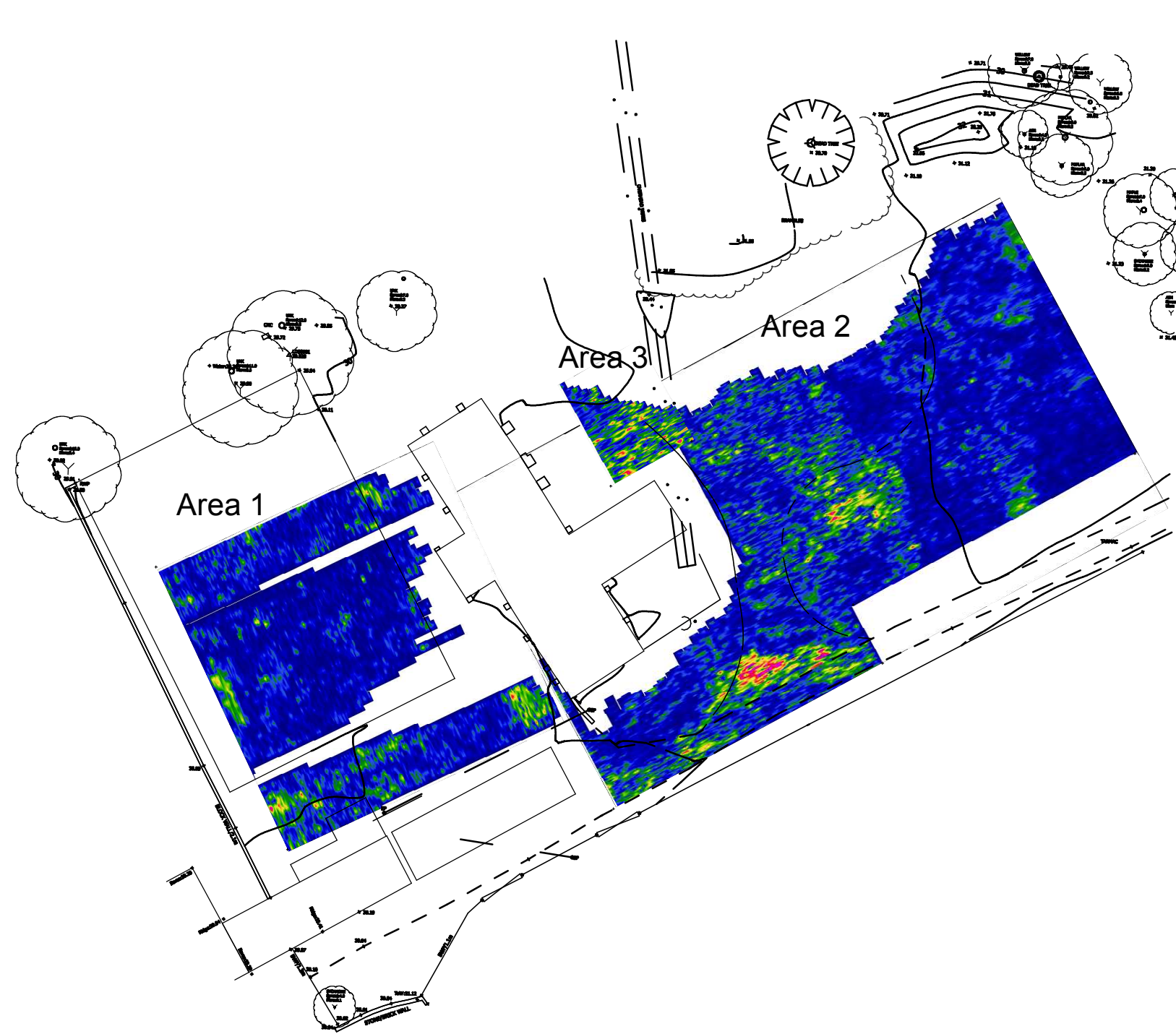
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FIG 04

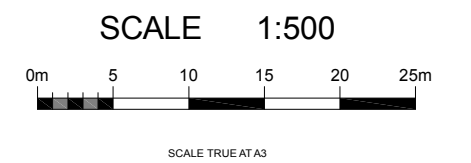
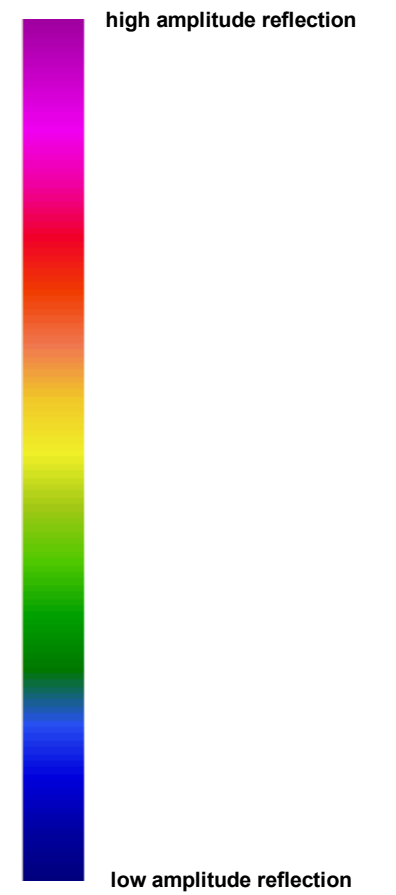
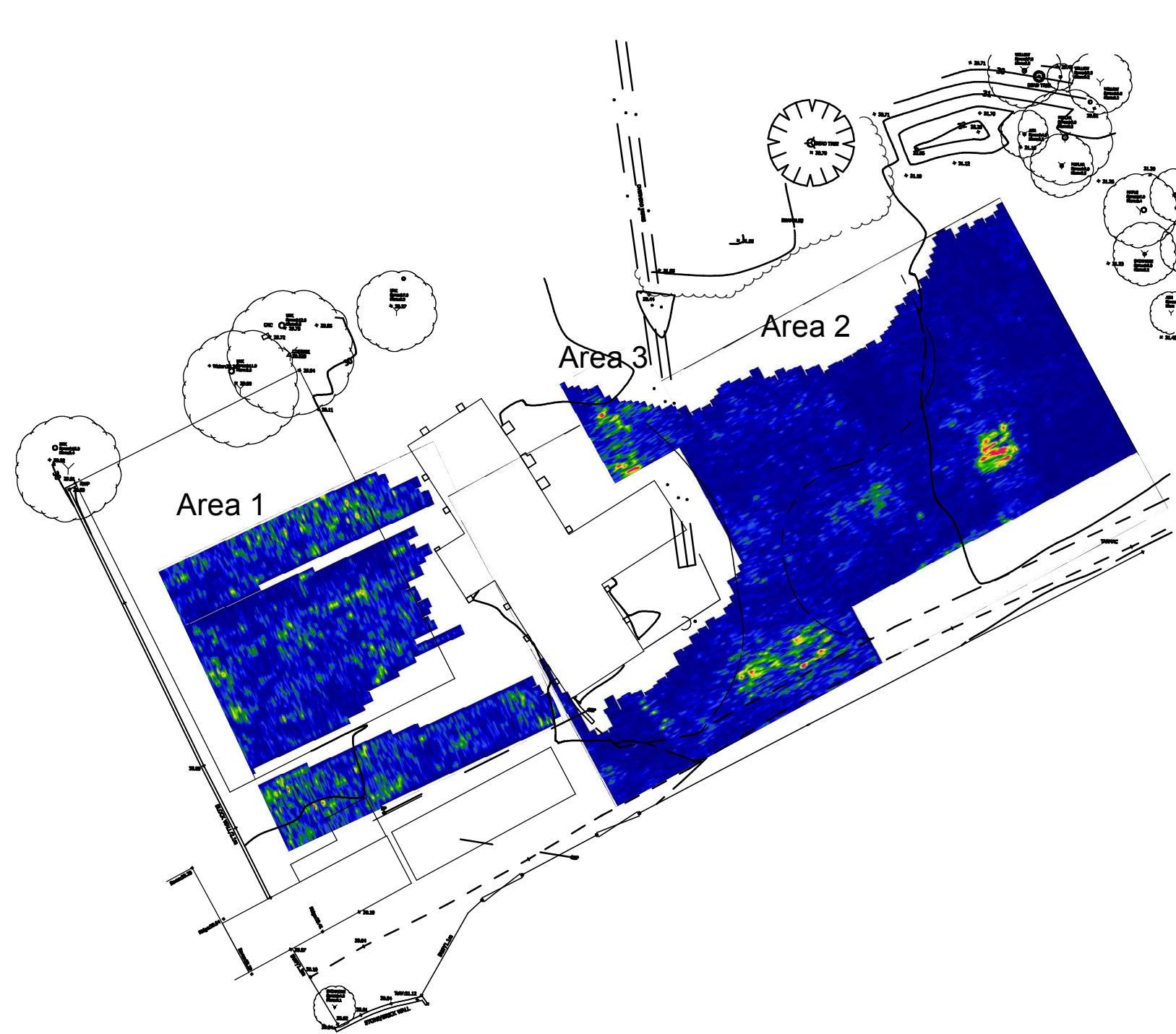
Geophysical Survey  
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Ground penetrating radar  
time slices at 15ns



Geophysical Survey  
Tarrant Abbey Farm  
Tarrant Crawford  
Dorset

Ground penetrating radar  
time slices at 25ns



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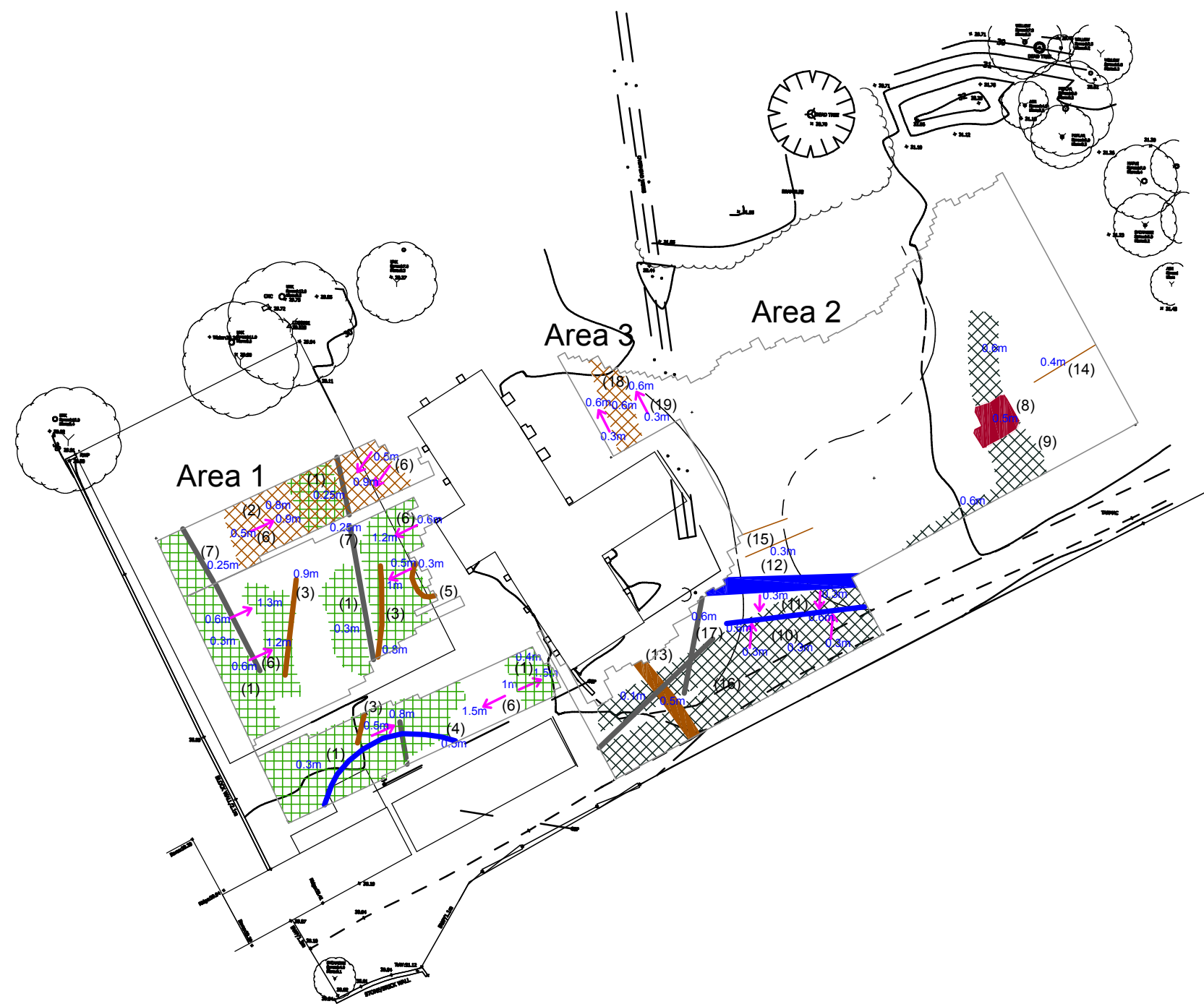
CHECKED BY  
KTD











FIG 06



Tarrant Abbey Farm  
Tarrant Crawford  
Dorset

Abstraction and interpretation of  
ground penetrating radar  
anomalies



-  Linear feature of uncertain origin
-  Low amplitude linear anomaly - possible cut feature
-  Linear feature - service/drain
-  Planar and complex reflections associated with ground make-up beneath modern concrete
-  Planar and complex reflections relating to deep ground make-up or area of infill
-  Reflections relating to paths/tracks
-  Reflections relating to bridge structure
-  Dipping surface/layer with approximate depths
-  0.3m Approximate depth below surface
-  (1) Anomaly label

SCALE 1:500



SCALE TRUE AT A3











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FIG 07

Tarrant Abbey Farm  
Tarrant Crawford  
Dorset

Abstraction and interpretation of  
ground penetrating radar  
anomalies - Area 1

-  Linear feature of uncertain origin
-  Low amplitude linear anomaly - possible cut feature
-  Linear feature - service/drain
-  Planar and complex reflections associated with ground make-up beneath modern concrete
-  Planar and complex reflections relating to deep ground make-up or area of infill
-  Reflections relating to paths/tracks
-  Reflections relating to bridge structure
-  Dipping surface/layer with approximate depths
-  0.3m Approximate depth below surface
-  (1) Anomaly label

SCALE 1:200

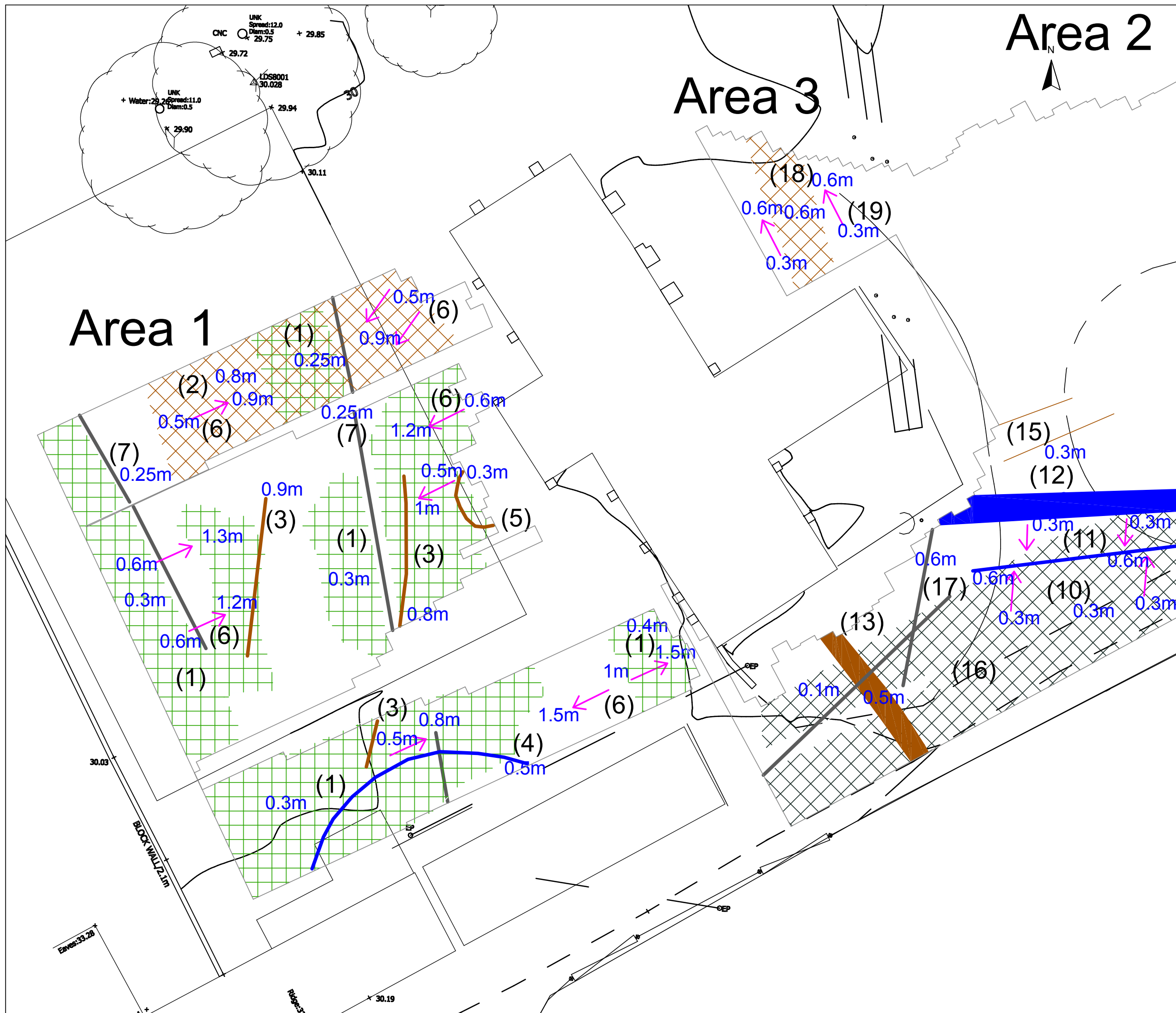


SCALE TRUE AT A3

DRAWN BY  
DJS











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FIG 08



Tarrant Abbey Farm  
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Abstraction and interpretation of  
ground penetrating radar  
anomalies - Areas 2 & 3

-  Linear feature of uncertain origin
-  Low amplitude linear anomaly - possible cut feature
-  Linear feature - service/drain
-  Planar and complex reflections associated with ground make-up beneath modern concrete
-  Planar and complex reflections relating to deep ground make-up or area of infill
-  Reflections relating to paths/tracks
-  Reflections relating to bridge structure
-  Dipping surface/layer with approximate depths
-  0.3m Approximate depth below surface
-  (1) Anomaly label

