

# CFA Archaeology Ltd

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*Interpretation, Design & Display*

**Field Lane, South Elmsall  
West Yorkshire**

**Archaeological Evaluation and  
Geophysical Survey**

**Report No. Y101/13**

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## **Summary**

An archaeological evaluation consisting of trial trenching and a geophysical survey was undertaken by CFA Archaeology Ltd on land at Field Lane, South Elmsall, West Yorkshire during July of 2013. The geophysical survey identified anomalies consistent with archaeological features. Subsequently 13 trenches were excavated and a possible Iron Age/Romano-British enclosure and associated features recorded. No finds were recovered.

### **1. INTRODUCTION**

This report presents the results of an archaeological evaluation and geophysical survey undertaken by CFA Archaeology Ltd (CFA) on behalf of Adcrofts Amusements during July of 2013, prior development on land at Field Lane, South Elmsall, West Yorkshire. The proposed development is for the installation of residential caravans, new access, an access road and landscaping. (ref. 11/00790/FUL). All work was undertaken in accordance with a specification issued by the West Yorkshire Archaeology Advisory Service (WYAAS, Appendix 4). The CFA code and number for the project is FLAN/2115.

#### **1.1 Site Location and Description**

The site consists of a rectangular parcel of land to the east of South Elmsall and south-east of the Dale Lane Industrial Estate (Fig. 1, NGR SE 4887 1170). The site is bounded to the north by Field Lane, and to the south, east and west by fields. The site gently slopes from north to south and is currently used as grass pastureland for the upkeep of livestock. The height AOD at the northern end of the site is 42.04m, with a height of 41.06m AOD at the southern end. There were no overhead cables or underground services within the area.

The soils of the area are variable and are described as ‘glacio-fluvial deposits of loam to silty’ (NERC 2013). The geology of the area consists of ‘Cadeby Formation- Dolostone (BGS 2013).

#### **1.2 Archaeological and Historical Background**

Aerial photography undertaken over the years in the South Elmsall area has revealed a dense pattern of small field systems separated by track ways and paths. In general these field systems have proved to be of an Iron-Age or Romano-British origin in date; however, in the area around Field Lane and Doncaster Road some of these field systems have proved to be Bronze Age in date.

The area around the proposed development site appears to have been a focal area of activity during the late Iron-Age. A large number of field systems were in use during this period, and excavations in the area have recorded a number of skeletons adjacent to ditches and track ways associated with these features. The field systems probably remained in use during the Romano-British period.

During the medieval period the landscape around South Elmsall remained largely as fields used for farming, and the remains of ridge and furrow can be seen in aerial photography of the area.

By the mid 1800's South Elmsall was still a fairly rural settlement, but limestone quarrying in the area changed this, with a number of quarries opening up at this time. The start of mining at the Frickley Colliery in 1903 provided work in the area for a number of people, and as a consequence the size and character of the village changed with a number of new shops, houses and schools being built to serve the needs of the new workforce.

### **1.3 Previous Archaeological work**

The proposed development site lies within an area well known to contain archaeological deposits associated with the Iron Age or Romano-British period.

Aerial photography of the area has shown large areas of cropmarks around Field Lane and Doncaster Road. These cropmarks consist of ditches, pits, lanes, enclosures and field systems which probably date to the late prehistoric or Romano British period.

Between 1997 and 1999 a series of archaeological investigations were undertaken on land between Field Lane and Doncaster Road in advance of construction of the current industrial estate which lies to the immediate north and north-east of the proposed development site. During these investigations a number of differing features were identified and excavated including Bronze Age roundhouses and associated structures. In addition to this five Iron Age enclosures were also excavated, along with field systems and track ways.

Aerial photography shows that cropmarks of features associated with those mentioned above in the field immediately adjacent to the proposed development site, and suggests that these features continued into the proposed site.

### **1.4 Project Aims and Objectives**

In accordance with the specification produced by Rebecca Remmer of the West Yorkshire Archaeology Advisory Service (Appendix 4) the general objective was to 'gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the proposed development area, and to record at an appropriate level, archaeological features encountered in the excavation trenches'.

## **2. WORKING METHODS**

### **2.1 Monitoring**

The project was monitored by Rebecca Remmer of the West Yorkshire Archaeology Advisory Service (WYAAS), who was kept informed of developments on site and visited the site for the purpose of monitoring the fieldwork on 2 July 2013. At the meeting it was further work in terms of an 'open area excavation' were discussed.

### **2.2 Geophysical Survey**

A local survey grid was set out using hand tapes and canes from a baseline established during the survey. The baseline and grid corners were then recorded using a *Leica GS08* GPS system to locate them to OS national grid. The location data was then downloaded and imported into AutoCad to allow the gradiometer data to be positioned correctly.

The survey was carried out according to the survey specifications as detailed by CFA Archaeology Ltd. The survey utilised a Bartington Grad 601-2 magnetic gradiometer using the dual-sensor configuration. Readings were taken, on the 100nT range (0.1nT sensitivity), at 0.25m intervals on zig-zag traverses 1m apart within a 30m by 30m grid. The instrument was checked for electronic and mechanical drift at a common point regularly.

A small amount of data processing was undertaken on the collected data in order to better distinguish anomalies, without distorting the data or creating processing artefacts. All processes were carried out within Geoplot 3.0 program by a trained operative after the raw data had been downloaded and reviewed.

The processing flow followed in this survey was as follows:

*Clip: -10nT – 20nT*

*DeStagger – +2 [34-78 DS]*

*De-spike: Threshold = 2.5SD, replacement = mean*

*Zero Mean Traverse: No Thresholds*

*Low Pass Fiiter X=4, Y=1*

*Interpolate x2 (Y Direction)*

### **2.3 Trenching**

Trenches were positioned across the site to test geophysical anomalies identified by the survey undertaken before the start of the evaluation.

Trenches were accurately surveyed using industry standard surveying equipment. All machining was undertaken using a toothless ditching bucket under constant archaeological supervision. Topsoil and other overburden was removed by machine down to the top of natural subsoil or the first significant archaeological horizon, whichever was encountered first.

The topsoil and subsoil were separated during the excavation and trenches were backfilled upon completion of necessary work. Trenches were only backfilled on completion of recording and with the consent of WYAAS.

The spoil was scanned for artefacts during machine excavation, the trenches were then cleaned as necessary and the location of all features and deposits recorded at a scale of 1:50. A representative sample of linear features was excavated (typically 1m per section). Discrete features were sampled at a minimum of 50%.

All archaeological remains were recorded by means of photographs, drawings and written records conforming to IfA standards (1994) and CFA's quality manuals. All features were planned and drawn in section at an appropriate scale (normally 1:10, 1:20 or 1:50). All plans and sections were related in height to the ordnance datum. The photographic record consists of accurately recorded digital photographs.

Environmental samples were taken as necessary from significant archaeological deposits in accordance with current English Heritage guidelines (EH 2011), and generally samples were to be taken from a representative sample of features and from securely stratified primary deposits along with any other deposits identified as showing palaeo-environmental potential. This was to be informed by the professional judgement of the archaeologist on site in conjunction with CFA's environmental specialists and the WYAAS advisor.

Modern finds were recorded on site but not retained unless they were from stratigraphically significant deposits or intrinsically significant, all other finds were to be retained for post-excavation assessment. The requirements of the 1996 Treasure Act (with subsequent amendments) were accorded with.

## **2.4 Standards and Guidance**

CFA Archaeology is a registered organisation (RO) with the Institute for Archaeologists (IfA). All work was conducted in accordance with relevant IfA Standards and Guidance documents (IfA 1994), English Heritage Guidance (EH 2005, 2006, 2007, 2008a and 2008b), CFA's standard methodology and the terms of the specification issued by WYAAS.

## **2.5 Archiving**

The project archive, comprising all CFA record sheets, finds, plans and reports, will be prepared to current guidelines (Brown 2011) ensuring the proper transfer of ownership. The project report shall include an index to the site archive and all digitally generated data. The archive will be retained by CFA until being deposited at a suitable repository.

### 3. RESULTS

#### 3.1 Geophysical Survey

The processed data from the gradiometer survey is presented in Fig. 2a. Despite the ferrous contamination, many of the anomalies discussed below can plainly be seen in the raw data.

Geophysical and archaeological interpretation of gradiometer results is shown in Fig. 2b. The anomalies discussed below have been labelled in this figure.

A. Anomaly A is a well defined positive recti-linear feature that runs roughly east-west across the northern part of the site before turning north. It appears to be the southern element of a rectilinear feature, with the linear turning northwards at both east and west ends of the feature. The anomaly has a positive magnetic gradient and may represent a feature filled with a more magnetic material, such as topsoil or burnt material. It is possible that there are two breaks in the southernmost line of the feature, but this may also be an artefact of data collection.

B. To the south east of Feature A, some weaker positive features have been identified that may also correspond to some form of filled features such as a ditch or gully.

C. Several linear anomalies have been identified across the survey area aligned NNW-SSE. It is most likely that these represent ploughing activity pertaining to previous land-use, although it is impossible to assess whether this relates to medieval/post-medieval agriculture or more recent activity.

D. This area of positive enhancement may represent a dump of more magnetic material, possibly of an archaeological origin. Assuming a typical magnetic susceptibility level of the soil, the amplitude of the anomaly indicates a lower level of enhancement such as that of enhanced topsoil or ash rake out from a fire, rather than, higher levels commonly associated with kilns or furnaces.

E. This area (Anomaly E) of scattered low-level dipolar responses corresponds to a visibly raised ridge of ground within the field. These low level responses may indicate a history of burning or an admixing of fired and ferrous material. The association of anomalies D and E may indicate an anthropogenic origin. The presence of linear plough marks cutting through the feature indicate that it is likely to have been formed prior to the ploughing activity evidenced by these marks.

F. This is an area of positive magnetic gradient, around 5-10 nT with a central area of readings approaching the mean (around 1nT). This may represent an area of enhanced material around a non-enhanced central area. The amplitude would again indicate the range of material such as enhanced top soil or ash rather than industrial debris.

G. This linear may represent a continuation of those to the north (B) or possibly a separate feature. Alternatively this might be a series of smaller point enhancements possibly associated with anomaly F.



H. A positive linear feature aligned east-west with a scatter of negative magnetic material (with some positive elements) to the north may indicate a smaller feature similar to Anomaly E, or some other mixed deposit.

I. Two other features of note have been identified as discrete weakly positive magnetic anomalies. These may indicate features filled with magnetically enhanced soil. The low level of magnetism suggests that they are not caused by ferrous material.

### *Discussion*

Ferrous contamination was present across the site in the form of ferrous litter, animal feeders, farm equipment, temporary metal sheds and stables. These prevented full survey of the southern part of the site as elevated magnetic values impeded data collection in this area. A scatter of discrete ferrous items has been identified across the site – several of these, but not all, are shown on the drawings. It is probable that these are, in the main, surface or near-surface contamination such as bits of iron or brick, many of these were noted on the ground as the survey was carried out. Two discrete positive features (I) have been identified, however, that do not appear to be ferrous in origin and these may be worthy of investigation.

Despite the high levels of ferrous contamination, several features of possible significance were located. A rectilinear feature (A) at the northern end of the site was located, and this may indicate some form of enclosure or boundary related to past land use. Some other faint positive features (B) just south of this feature may also indicate soil-filled features such as ditches.

Two features indicating anomalies with an elevated magnetic response were identified (C & E) – these may indicate features with a high ferrous content or consisting of fired material. One of these features (C) was located within a scatter of low level dipolar magnetic responses (E). This area corresponds to a visibly raised ridge of ground within the field. These low level responses may indicate a history of burning or admixing of fired and ferrous material.

Linear anomalies identified aligned NNW-SSE are likely to indicate the remains of ridge and furrow cultivation across the site. These anomalies are aligned with current field boundaries and probably relate to fairly recent land use; however as they are only identifiable in a few areas, it is not impossible that some of the remains may relate to medieval or post-medieval farming practices.

### 3.2 Evaluation Trenching

A full list and description of contexts comprises Appendix 1. Tables listing all photographic and drawn records form appendices 2 and 3. A table summarising all results by trench forms is below (Table 1).

Trench No.	Trench Size (m)	Depth of Topsoil (m)	Description
1	32 x 1.7	0.25-0.3	Natural substrate was a yellow sand and stone with patches of red boulder clay in places. Trench itself was generally flat and formed a 'T'-shape with Trench 2. Contained Enclosure Ditch 109 towards its southern end.
2	30 x 1.7	0.2-0.25	Natural substrate as per Trench 1. Trench itself was generally flat and formed a 'T'-shape with Trench 1. Contained Enclosure Ditch 111 and small Pit 113.
3	30 x 1.7	0.3	Natural substrate as per Trench 1. Trench gently sloped from south-north. Contained Enclosure Ditch 105/107 and a number of geological features.
4	30 x 1.7	0.3	Natural substrate as per Trench 1. Trench was generally flat and contained shallow Ditch 115.
5	30 x 1.7	0.3	Natural substrate as per Trench 1. Trench itself gently sloped from north-south. No archaeology was present within this trench.
6	30 x 1.7	0.3	Natural substrate was a yellow-grey sand and stone. Trench was generally flat. No archaeology was recorded within this trench.
7	25 x 1.7	0.2	Natural substrate was only reached at the eastern end of the trench and consisted of yellow silt and stone. Up to 0.8m of colluvium was overlying the natural substrate along the majority of the trench. No archaeology was recorded within this trench.
8	27.5 x 1.7 main 4.5 x 2 extension	0.2	Natural substrate was a yellow-grey sand and stone with patches of red boulder clay in places. Trench was extended to determine line and form of excavated ditch. Trench sloped from centre of the trench to both the north and south. Contained Ditch 116.
9	30 x 1.7 main  4.75 x 4.75 extension	0.15-0.2	Natural substrate as per Trench 8. Trench was extended to determine the form and line of an excavated gully. Trench itself gently sloped from south-north. No archaeology was recorded in this trench, although there were a number of geological features/depressions.
10	30 x 1.7	0.2-0.28	Natural substrate as per Trench 8. Trench sloped from west to east, with the eastern end deeper than the west. No archaeology was recorded within this trench.
11	26 x 1.7	0.25	Natural substrate was a yellow sand and stone. Trench sloped gently from east-west. No archaeology was recorded within this trench.
12	30 x 1.7	0.2-0.3	Natural substrate was a yellow sand and stone with patches of red boulder clay in places. Northern end of the trench showed 0.6m+ of colluvial material overlying the natural substrate. Trench sloped from south-north. No archaeology was recorded within this trench.
13	25 x 1.7	0.4	Natural substrate as per Trench 12. Trench sloped from north-south with 0.8m+ of colluvial material overlying the natural substrate at the southern end of the trench. No archaeology was recorded within this trench.

**Table 1: Trench Summary**

A total of 13 trenches were excavated. Trench 11 was moved in location from the southern end of the site area due to the presence of livestock and modern farming debris, while Trench 13 was moved slightly to the north from its original position to avoid an area of deep

colluvial stratigraphy. Trenches 8 and 9 were extended to test the extent and direction of features identified within the original trench.

The natural substrate for the area under investigation was yellow sand and stone with areas of sterile red clay in places (102). Towards the centre of the site, and recorded within Trench 7, the northern end of Trench 12, and the southern end of Trench 13, was a red-brown colluvium deposit that was 0.5-0.9m in depth (103).

The geophysical survey of the area suggested that extensive features including possible enclosures may be present towards the northern end of the site. After the evaluation excavation of the trenches targeted on these anomalies it appeared that this was the case, with one probable enclosure becoming apparent as well one small pit that was likely associated with the activities related to the enclosures use.

The enclosure was located around trenches 1, 2 and 3 consisted of a series of ditches forming a roughly rectangular feature with an internal area of c.1500 square meters in size within the area defined by the site. Towards the western extent of the enclosure, the ditch was deep and steep sided, with a 'U'-shaped profile (105, 107, Plates 1 and 2) and a fill that contained some degraded animal bone (104), with the ditch itself on a rough north-south orientation and measuring up to 0.58m deep by 1.1 m in width.

The ditches at the southern extent of the enclosure became shallower and more 'V'-shaped in profile (111, Plate 3) and were on a slight north-east to south-west orientation, with sections in Trench 1 at the eastern end of the southern enclosure ditch (109, Plate 4) 0.28m deep by 0.64m in width. One internal feature, a small, shallow pit (113) was also excavated towards the centre of the southern extent of the enclosure, while to the south-west of the enclosure, and within Trench 4, a shallow north-south ditch (115) was excavated.

Towards the southern end of the site the geophysics survey suggested that there was potential archaeology surviving in the form of a number of linear features. Excavation within Trench 8 revealed a ditch (116, Plate 5) with a slight curve in orientation from north to south-west, a steep-sided feature with a concave base measuring 1.58m in width by 0.5m in depth. Geophysics interpretation of a similar ditch to the east proved on excavation to be part of a large geological feature in this area.

No features were recorded within trenches 5-7 and 9-13, with geophysical anomalies in these areas proving to be changes in the natural or geological depressions in the underlying topography (Plate 6).

### *Discussion*

A number of the anomalies detected by the geophysical survey and depicted on aerial photography of the area were tested within the evaluation trenches during this evaluation. The large enclosure identified at the northern end of the site was confirmed to be present within trenches 1, 2 and 3, and although no ceramic dating evidence was recovered from this feature it is likely to be of Iron Age or Romano-British origin in date.

Associated with this enclosure ditch was a small pit and a north-south aligned gully, and as these features were not identified within the interpretation of the geophysical survey, it is likely that a number of other similar features survive in the area.

The anomalies identified within the geophysics as anomaly B proved to be geological changes in the natural subsoil in these areas, with the same applying for anomalies detected in the areas evaluated in Trench 6.

The anomaly marked as E in the geophysics interpretation towards the centre of the site proved to be an area of deep colluvium upon evaluation, with Trench 7, the northern end of Trench 12, and the southern end of Trench 13 all containing varying levels of this material overlying the natural substrate.

The anomalies marked with the areas evaluated by trenches 8 and 9 proved to differ from the interpretation of the survey after evaluation. In Trench 8 a ditch of undetermined date was present, but here it was on a rough north-south alignment rather than the east-west depicted in the geophysical survey, and may be indicative of other features in the area not detected by the geophysics. Within Trench 9 the possible archaeological anomaly noted on the survey interpretation proved to be part of a larger geological depression of material in this area.

#### **4. CONCLUSION**

The evaluation and geophysical survey undertaken at Field Lane, South Elmsall has identified surviving archaeological remains of potential Iron-Age or Romano-British origin in date. In particular the northern extent of the proposed development area has high potential for further surviving features associated with the enclosure ditch recorded during this evaluation and may require further investigation.

Earlier evaluations undertaken at land adjacent to the proposed development site recorded finds of Bronze Age roundhouses and Iron Age enclosures, and it is likely that the enclosure identified during this evaluation is part of the same series of structures and field systems.

The presence of surviving archaeology towards the southern end of the proposed development site is also significant, and although undated by material finds, it is impossible to rule out a similar date to the feature as to those of the potential enclosures identified to the north.

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## Appendix 1: Context Summary

Context	Trench/es	Type	Width (m)	Length (m)	Max Depth (m)	Description
100	All	Layer			0.2-0.35	Dark brown organic silty clay. Topsoil for the majority of the site.
101	All	Layer			0.05-0.15	Light brown silty clay band of subsoil present in some areas of the site.
102	All	Layer				Yellow-grey sand and stone natural, with some areas of red boulder clay. Natural substrate layer for the majority of the site.
103	7,12 and 13	Deposit			0.5-0.85	Dark red-brown silty sand colluvium deposit. Sterile and no finds recovered.
104	3	Fill	1.08		0.60	Fill of Ditch 105. Dark brown silty clay fill of a shallow ditch, with stones throughout. Some degraded animal bone recovered. Equivalent to 106.
105	3	Cut	1.08		0.60	Cut of enclosure ditch. Ditch on a north-west to south-east alignment, consists of steep sloping sides with a 'U'-shaped profile.
106	3	Fill	>0.60		0.38	Fill of Enclosure Ditch 107. A mid brown clay-sand with charcoal fragments and some small stones throughout. Equivalent to 104.
107	3	Cut	>0.60		0.38	Cut of enclosure ditch. Ditch itself on a north-south alignment and this section represents the turn of the feature to the north-west. Consisted of steep sloping sides with a 'U'-shaped profile.
108	1	Fill	0.66		0.28	Fill of Enclosure Ditch 109. A red-brown clay-sand with occasional small stone inclusions throughout.
109	1	Cut	0.66		0.28	Cut of enclosure ditch. Ditch on a north-east to south-west orientation and consists of moderately sloping sides with a 'U'-shaped profile.
110	2	Fill	1.05		0.38	Fill of Enclosure Ditch 111. A red-brown clay-sand with occasional stone inclusions throughout.
111	2	Cut	1.05		0.38	Cut of enclosure ditch. Ditch on a north-east to south-west orientation and consists of moderately sloping sides with a 'V'-shaped profile.
112	2	Fill	>0.46	c.0.6	0.22	Fill of Pit 113. A red-brown sandy clay with small stone inclusions throughout.
113	2	Cut	>0.46	c.0.6	0.22	Cut of pit. Located to the north of enclosure and consisted of irregularly sloping sides with a rounded base.
114	4	Fill	>2		0.12	Fill of Ditch 115. A red-brown sandy clay with small stones throughout. Compacted.
115	4	Cut	>2		0.12	Cut of ditch. Ditch on a north-west to south-east orientation and consists of shallow sides with a flat base. Possible remains of a early plough furrow.
116	8	Cut	1.56		0.52	Cut of ditch. Ditch on a rough north-south orientation with a slight curve to the south-west at the southern end. Consists of steep sides with a concave base and a 'U'-shaped profile.
117	8	Fill	1.56		0.52	Fill of Ditch 117. A grey-brown silty sand with small stone inclusions throughout, and

Context	Trench/es	Type	Width (m)	Length (m)	Max Depth (m)	Description
						larger sub-angular stones towards the base of the feature.
118	9	Cut	0.98		0.08	Cut of gully through geological depression. Shallow and with a flat base. Originally thought to be an archaeological feature but later investigation proved to be part of a large geological anomaly. Equivalent to 120.
119	9	Fill	0.98		0.08	Fill of gully through geological feature. A grey-brown sandy silt. Equivalent to 121.
120	9	Cut	2.3	5		Cut of large geological depression. Equivalent to 118.
121	9	Fill	2.3	5		Fill of large geological depression. Equivalent to 119.

## Appendix 2: Photographic Register

No	Contexts/description	Facing	Conditions
1	Plan shot of Trench 5 after strip, looking north	North	Sunny
2	Plan shot of Trench 4 after strip, looking west	West	Sunny
3	Plan shot of Trench 6 after strip, looking east	East	Sunny
4	Plan shot of Trench 1 after strip, looking south	South	Sunny
5	Plan shot of Trench 2 after strip, looking west	West	Sunny
6	Plan shot of Trench 3 after strip, looking south	South	Sunny
7	Plan shot of Trench 8 after strip, looking north	North	Sunny
8	Plan shot of Trench 8 after strip, looking south	South	Sunny
9	Plan shot of Trench 9 after strip, looking north	North	Overcast
10	Plan shot of Trench 9 after strip, looking south	South	Overcast
11	Plan shot of Trench 10 after strip, looking west	West	Overcast
12	Plan shot of Trench 10 after strip, looking east	East	Overcast
13	Plan shot of Trench 11 after strip, looking east	East	Overcast
14	Plan shot of Trench 11 after strip, looking west	West	Overcast
15	Plan shot of Trench 12 after strip, looking north	North	Overcast
16	Plan shot of Trench 12 after strip, looking south	South	Overcast
17	Plan shot of Trench 13 after strip, looking south and showing colluvial deposits in this area	South	Overcast
18	Plan shot of Trench 7 after strip, looking west and showing depth of colluvium in this area	West	Overcast
19	Trench 13 geological feature below colluvial layer	South-east	Overcast
20	Trench 4, Ditch 115 north-facing section	South	Overcast
21	Trench 2, Ditch 111 south-west facing section	North-east	Overcast
22	Trench 1, Ditch 109 oblique shot of east facing section	North-west	Overcast
23	Trench 1, Ditch 109 east facing section	West	Overcast
24	Trench 3, Ditch 105 north-west facing section	South-east	Overcast
25	Trench 3, Ditch 107 north facing section	South	Overcast
26	Trench 3, Ditch 107 east facing section	West	Overcast
27	Trench 8, Ditch 116 east facing section	West	Overcast
28	Trench 8 extension showing line of Ditch 116	East	Overcast
29	Plan shot of Trench 8 after strip, looking north	North	Overcast
30	Plan shot of centre of Trench 8 showing Ditch 116 and line of feature through trench extension	North	Overcast
31	Plan shot of Trench 9 after strip, looking north	North	Overcast
32	Plan shot of Trench 9 extension after strip and showing large geological depression	West	Overcast
33	Trench 3, shot of sondage through geological feature	West	Overcast
34	Trench 3, plan shot of trench showing line of enclosure ditch down western edge, with Ditch 105 in foreground	North-west	Overcast
35	Trench 9, section through geological gully 118	North-west	Sunny
36	Trench 9, plan shot of extension showing large geological depression	North-west	Sunny
37	Trench 9, plan shot of extension showing large geological depression and section through associated gully 118	North-west	Sunny
38	Trench 9, oblique shot of section through geological pit/depression	South-west	Sunny
39	Trench 9, oblique shot of section through geological pit/depression	South-east	Sunny
40	Trench 9, shot of section through geological pit/depression	South	Sunny
41	General shot of backfilled trenches post excavation	South	Sunny
42	General shot of backfilled trenches post excavation	South	Sunny



### Appendix 3: Drawing Register

No.	Sheet No.	Scale	Plan / Section	Description/contexts
1	1	1:50	Plan	Plan of Trench 3, southern end
2	1	1:20	Section	North facing section of Ditch 107
3	1	1:20	Section	South-west facing section of Ditch 109
4	1	1:20	Section	South-west facing section of Ditch 111
5	1	1:20	Section	South-east facing section of Ditch 105
6	1	1:50	Plan	Trench 1 plan, southern end
7	1	1:50	Plan	Plan of western end of Trench 2
8	1	1:20	Section	North-west facing section of Pit 113
9	2	1:50	Section	North-east facing section of Ditch 116
10	2	1:20	Section	South-east facing section of Ditch 118
11	2	1:50	Plan	Plan of Trench 8, middle section
12	2	1:50	Plan	Plan of Trench 9, middle section
13	3	1:50	Plan	Plan of Trench 4, middle section
14	3	1:20	Section	North facing section of Ditch 115

## FIGURES 1 – 3



Area of Geophysical Survey

Evaluation  
Trenches



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Fig. No:	1	Revision:	A
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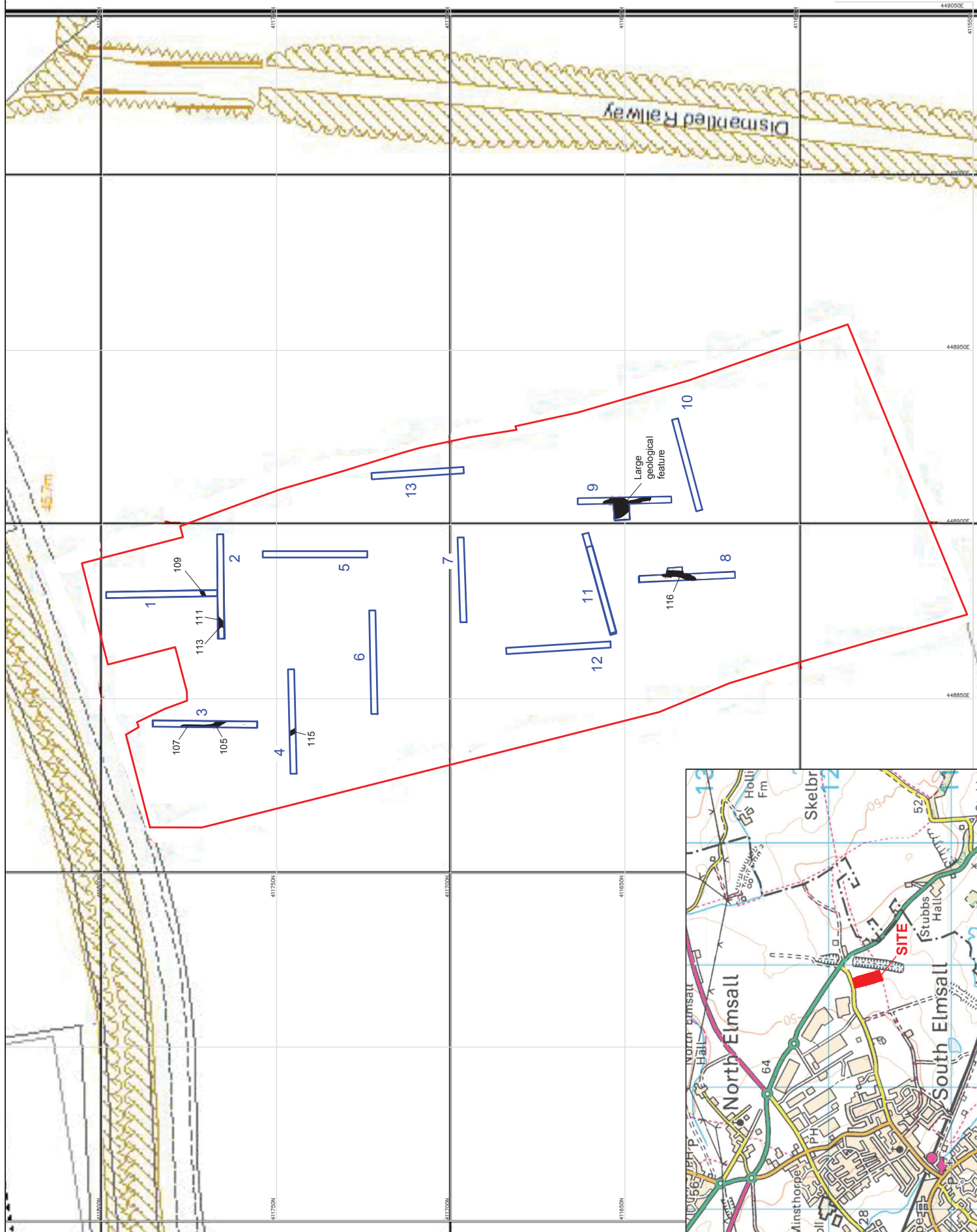
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Project:  
Field Lane, South Elmsall  
West Yorkshire  
Archaeological Evaluation and  
Geophysical Survey

Client: Adcrofts Amusements Ltd

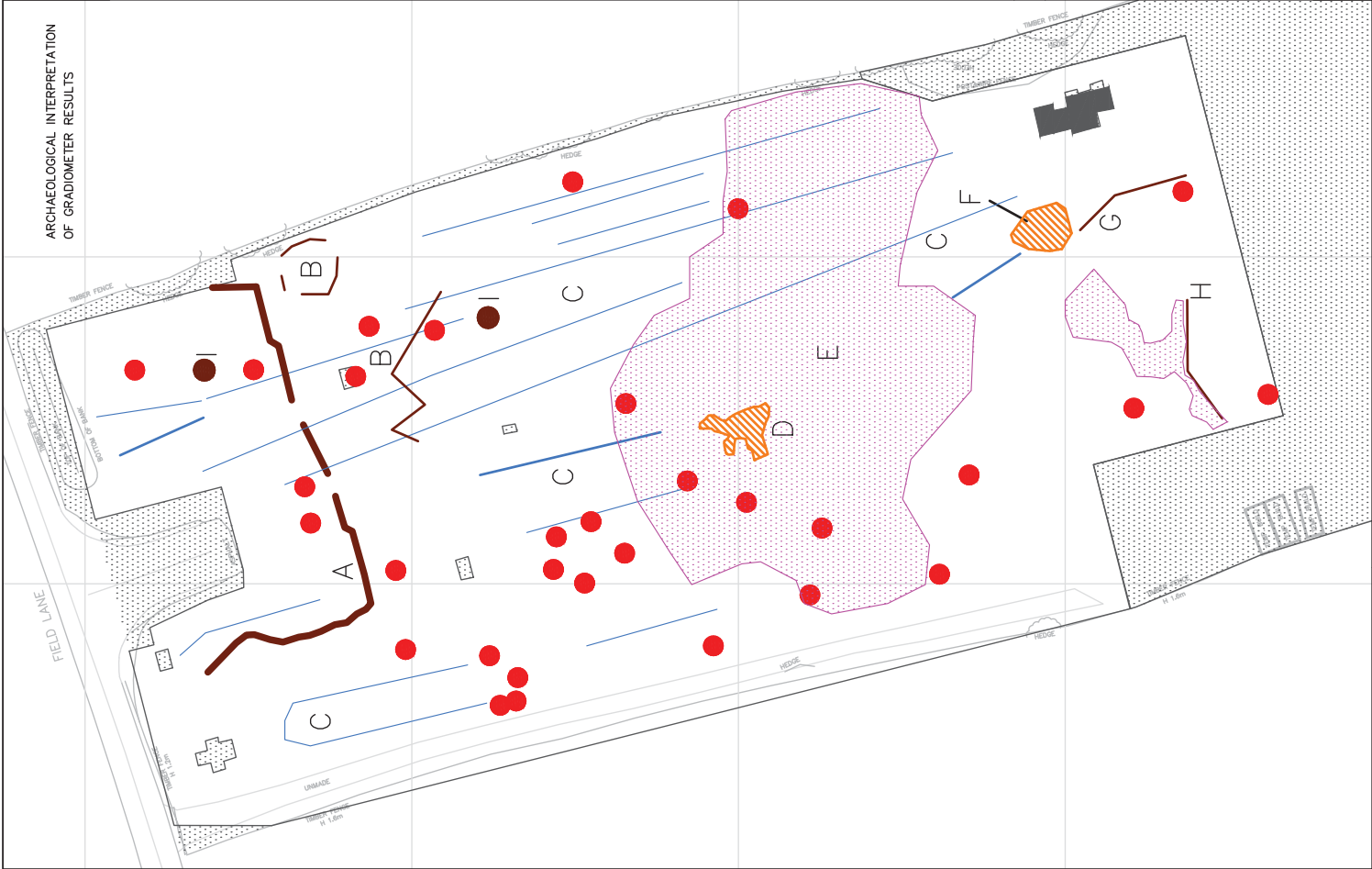
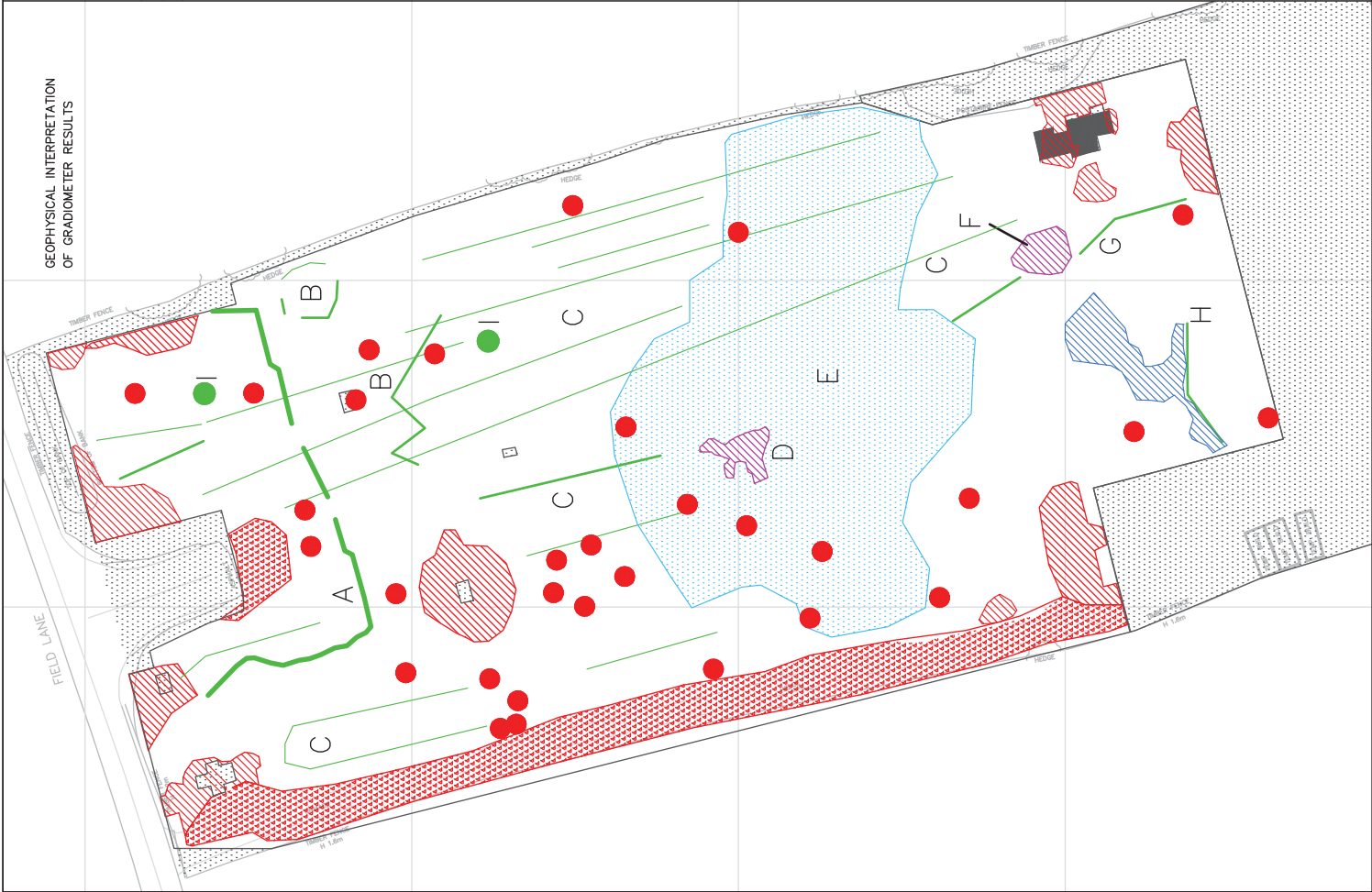
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Key:

**GEOPHYSICAL INTERPRETATION**

- POSITIVE MAGNETIC GRADIENT ANOMALIES
- NEGATIVE MAGNETIC GRADIENT ANOMALIES
- SCATTERED LOW INTENSITY SPURIAL ANOMALIES
- AREA OF CONCENTRATED SPURIAL RESPONSES - POSSIBLY ASSOCIATED WITH TROdden TRACKS / ROADWAY
- POSITIVE SPURIAL RESPONSE - CAUSE OF RESPONSE AS NOT SURFACE DEBRIS OR OBJECTS BUT POSSIBLY SUBSURFACE
- NEGATIVE SPURIAL RESPONSE - POSSIBLY DITCH OR TRENCH
- DISCRETE SPURIAL RESPONSE
- DISCRETE POSITIVE RESPONSE
- AREA NOT SURVEYED DUE TO POOR QUALITY OF DATA / ADVERSE WEATHER DUE TO HIGH CONDUCTIVITY OF METALLIC / BURIED MATERIALS ON SURFACE

**ARCHAEOLOGICAL INTERPRETATION**

- FEATURES SPONGE ELATED MAGNETIC RESPONSE
- POSITIVE SPURIAL RESPONSE - CAUSE OF RESPONSE AS NOT SURFACE DEBRIS OR OBJECTS BUT POSSIBLY SUBSURFACE
- NEGATIVE SPURIAL RESPONSE - POSSIBLY DITCH OR TRENCH
- DISCRETE SPURIAL RESPONSE
- DISCRETE POSITIVE RESPONSE
- AREA NOT SURVEYED DUE TO POOR QUALITY OF DATA / ADVERSE WEATHER DUE TO HIGH CONDUCTIVITY OF METALLIC / BURIED MATERIALS ON SURFACE

**Met**  
GEO ENVIRONMENTAL

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Fig. No: 2b Revision: A

Title:  
Magnetic Gradiometer  
Survey Interpretation

Project:  
Field Lane, South Elmsall  
West Yorkshire  
Archaeological Evaluation and  
Geophysical Survey

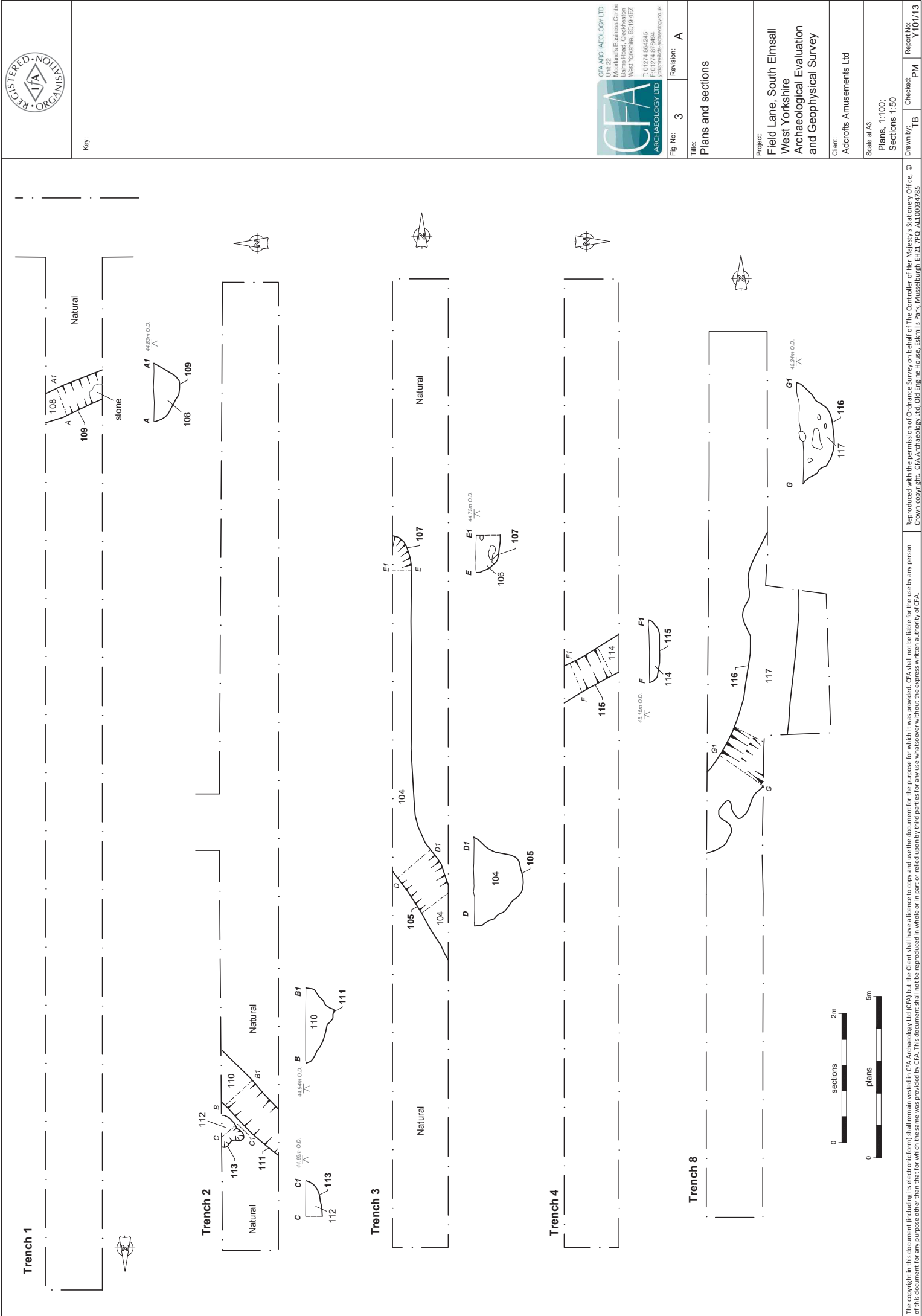
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Adcrofts Amusements Ltd

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TB

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PM



Report No:  
Y101/13



		Key:	
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Fig. No:	3	Revision:	A
Title: Plans and sections			
Project: Field Lane, South Elmsall West Yorkshire Archaeological Evaluation and Geophysical Survey			
Client: Adcrofts Amusements Ltd			
Scale at A3: Plans: 1:100; Sections: 1:50			
Drawn by: TB	Checked: PM	Report No: Y107/13	

**PLATES 1 –6**



Plate No: <b>1-2</b>		Revision: <b>A</b>	Project: <b>Field Lane, South Elmsall West Yorkshire Archaeological Evaluation and Geophysical Survey</b>			 <div> <b>CFA ARCHAEOLOGY LTD</b>  Unit 22  Moorland's Business Centre  Balme Road, Cleckheaton  West Yorkshire, BD19 4EZ    T: 01274 864245  F: 01274 878494  <a href="mailto:yorkshire@cfa-archaeology.co.uk">yorkshire@cfa-archaeology.co.uk</a> </div>
Drawn by: <b>TB</b>	Checked: <b>ML</b>	Report No: <b>Y101/13</b>	Client: <b>Adcrofts Amusements</b>			

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Plate. 3 - South-west facing section of Ditch 111



Plate. 4 - East facing section of Ditch 109

Plate. No: <b>3-4</b>	Revision: <b>A</b>	Project: Field Lane, South Elmsall West Yorkshire Archaeo- logical Evaluation and Geophysical Survey			<b>CFA ARCHAEOLOGY LTD</b> Unit 22 Moorland's Business Centre Balme Road, Cleckheaton West Yorkshire, BD19 4EZ  T: 01274 864245 F: 01274 878494 yorkshire@cfa-archaeology.co.uk
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Plate. 5 - East facing section of Ditch 116



Plate. 6 - Large geological feature within Trench 9 taken facing north-west

## **Appendix 4: Specification**

# WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE (WYAAS): SPECIFICATION FOR GEOPHYSICAL SURVEY AND TRIAL TRENCHING TO EVALUATE AND RECORD ARCHAEOLOGICAL REMAINS IN ADVANCE OF DEVELOPMENT AT LAND AT FIELD LANE, SOUTH ELMSALL

Specification prepared on behalf of Wakefield Metropolitan District Council at the request of Graham Newton of Ramsden and Partners Architects (Planning Application reference 11/00790/FUL)

## 1.0 Summary

1.1 A limited amount of archaeological work consisting of geophysical survey and trial trenching is proposed to help establish the below ground archaeological survival at the above site and to record it if encountered. **Any significant additional work that may be necessary will be covered by a supplementary specification.** This specification has been written by the West Yorkshire Archaeology Advisory Service (WYAAS), the holders of the West Yorkshire Historic Environment Record.

NOTE: The requirements detailed in paragraphs 6.3, 6.4, 6.5, 6.6, 9.1 & 10.3.2 are to be met by the archaeological contractor **prior** to the commencement of fieldwork by completing and returning the attached form to the WY Archaeology Advisory Service.

## 2.0 Site Location & Description

### Grid Reference (centred): SE 4887 1170

2.1 The site consists of a rectangular parcel of land to the east of South Elmsall and southeast of the Dale Lane Industrial Estate. The site is bounded to the north by Field Lane and to the south, east and west by fields. The site is level and grassed and is currently used as an arable field. There are no overhead cables and access can be gained via a gate off Field Lane.

2.2 The geology of the site consists of Dolostone of the Cadeby Formation, which is overlain by soils which are described as freely draining lime rich loams.

## 3.0 Planning Background

3.1 Planning permission (11/00790/FUL) has been granted for use of the land for travelling showpeople, including the siting of residential caravans, new access, access road and landscaping. A condition requiring an archaeological scheme of works has been placed on the permission.

3.2 The Planning Authority have been advised by the West Yorkshire Archaeology Advisory Service that there is reason to believe that important archaeological remains may be affected by the proposed development. This specification is for a post-determination archaeological evaluation. Depending upon the results obtained, additional archaeological work governed by separate specifications of work, may be required.

3.3 This specification has been prepared by the West Yorkshire Archaeology Advisory Service at the request of Mr. Graham Newton of Ramsden and Partners Architects ([g.newton@ramsdenandpartners.net](mailto:g.newton@ramsdenandpartners.net). 0844 8440070) to detail what is required for the evaluation and to allow an archaeological contractor to provide a quotation.

#### **4.0 Archaeological Interest**

4.1 The proposed development site lies within an area likely to contain archaeological deposits associated with the Iron Age or Romano British Period.

4.2 Aerial photographs show large areas of cropmarks around Field Lane and Doncaster Road. These cropmarks consist of ditches, pits, lanes, enclosures and field systems which probably date to the late prehistoric or Romano British period.

4.3 Between 1997 and 1999 a series of archaeological investigations were undertaken on land between Field Lane and Doncaster Road in advance of the construction of the current industrial estate which lies to the immediate north and north-east of the site. A wide range of features were excavated, including Bronze Age roundhouses and associated structures. Five Iron Age enclosures were also excavated, along with field systems and trackways.

4.4 Aerial photographs show cropmarks of features associated with those mentioned above in the field immediately adjacent to the proposed development site, and suggest that these features continue into the proposed site.

#### **5. Aim of the Specified Work**

5.1 The aim of this project is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the proposed development area, and to record at an appropriate level, archaeological features encountered in the excavation trenches.

5.2 It is conceivable that a larger, more open area excavation may be identified as being warranted, or alternatively a wider watching brief may be required during ground-works for the development, possibly with provision for rapid salvaging recording. All possibilities will be considered depending upon the results of this exercise and it would be anticipated that if further significant fieldwork is required, then the contractor would draft the specification and agree it with the WYAAS. It is a primary aim of the specified work that all aspects should be placed in the public domain by depositing the results with the WY Historic Environment Record (Registry of Deeds, Newstead Road, Wakefield WF1 2DE)

#### **6. General Instructions**

##### **6.1 Health and Safety**

6.1.1 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations. The WYAAS and its officers cannot be held responsible for any accidents or injuries that may



occur to outside contractors while attempting to conform to this specification. Any Health and Safety issues which may hinder compliance with this specification should be discussed with WYAAS at the earliest possible opportunity (see section 13.2).

## **6.2 Location of Services, etc.**

6.2.1 The archaeological contractors will be responsible for locating any drainage pipes, service pipes, cables *etc.* which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

## **6.3 Confirmation of Adherence to Specification**

6.3.1 Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to the WYAAS, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the West Yorkshire Archaeology Advisory Service to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor. **Modifications presented in the form of a re-written specification/project design will not be considered by the WYAAS.** Any technical queries arising from the specification detailed below should be addressed to the WYAAS *without delay*.

## **6.4 Confirmation of Timetable and Contractors' Qualifications**

6.4.1 Prior to the commencement of *any work*, the archaeological contractor **must** provide WYAAS **in writing** with:

- a projected timetable for the site work;
- details of the staff structure and numbers;
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*),

6.4.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

## **6.5 Notification**

6.5.1 WYAAS should be provided with **as much notice as possible in writing** (and certainly not less than one week) of the intention to start work. A copy of the archaeological contractor's risk assessment of the site should accompany the notification.

6.5.2 The museums officer named in paragraph 9.1 should be notified in writing of the commencement of fieldwork at the same time as WYAAS.

6.5.3 As a courtesy, English Heritage's Science Adviser, Andy Hammon, should also be notified of the intention to commence fieldwork. (Tel.: 01904 601983; email: andy.hammon@english-heritage.org.uk).

## **6.6 Documentary Research**

6.6.1 Prior to the commencement of *fieldwork*, the HER should be visited by either the project manager or the site supervisor, in order to gain an overview of the

archaeological/historical background of the site and environs. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted. Please note that the HER makes a charge for consultations of a commercial nature. The results of this exercise should be used to inform the whole project. A formal desk-based report is not required and the results of this stage of work should be incorporated in the final report.

## 7.0 Geophysical Survey Methodology

Geophysical survey contractors are expected to adhere to the English Heritage *Geophysical Survey in Archaeological Field Evaluation* (2008), but also see para. 7.2 below.

### 7.1 Data Collection

7.1.1 The area of the proposed development to be subject to a 100% magnetic (gradiometer) survey recording data at 0.25m intervals. Data is to be recorded at 0.25m. stations on 1.0m. spaced traverses. Data may be acquired by rapid survey measuring to (nominally) 0.1nT or better in the first instance. If during the survey, it appears that useful results might only be obtained by higher resolution measurements, and if this would add significantly to the survey time, then the client and the WYAAS should be contacted and the matter discussed and agreed before implementation. The gradiometer survey is to be carried out over the entire site area.

### 7.2 Data Presentation

The results of the gradiometer survey should be processed and the results then discussed at a meeting between the contractor and the WYAAS (the client may also wish to attend). The results of the gradiometer survey should be presented in at least two different formats at a minimum 1:500 scale, one of which must be an X/Y trace plot. There must also be an accompanying interpretation drawing at an appropriate scale.

## 8.0 Trenching Methodology

### 8.1 Trench Size and Placement

7.1.1 The work will involve the excavation of fifteen 30m by 2m trenches, which can be machine-opened. The contractor should also allow for a contingency amount of 60 square metres. The use of the contingency will depend upon the results obtained in the initial trial trenching. The use of the contingency will be at the decision of the WYAAS, whose decision will be issued in writing, if necessary in retrospect after site discussions. Proposed trench locations are shown on Figure 2, however, **please note that these locations are for tendering purposes only and may be subject to change following the results of the geophysical survey.**

Total site area: **21230m<sup>2</sup>**

Total area of trenching: **900m<sup>2</sup>**

Contingency trenching: **60m<sup>2</sup>**

### 8.2 Method of Excavation

8.2.1 The trial trenches may be opened and the topsoil and recent overburden removed down to the first significant archaeological horizon in successive level spits of a **maximum** 0.2m. thickness, by the use of an appropriate machine using a wide toothless ditching blade. **Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits.** Any machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon may be exposed by the machine, but must then be cleaned by hand and inspected for features and then dug by hand.

8.2.2 All archaeological remains will be hand excavated in an archaeologically controlled and stratigraphic manner sufficient to meet the aims and objectives of the project. The **complete** stratigraphic sequence, down to naturally occurring deposits will be excavated and the work will investigate and record **all** inter-relationships between features. The contractor should make provision for the use of shoring/stepping to accomplish this if necessary. All trenches are to be the stated dimensions at their base. The following strategy will be employed:

- Linear boundary features: a minimum sample of 20% of each linear boundary feature such as ditches and trackways. Each section should be at least 1m wide and, where possible, sections will be located and recorded adjacent to the trench edge. All intersections will be investigated to determine the relationship(s) between the component features. All termini will be investigated.
- Other linear and discrete features: all stake-holes, post-holes, pits, ring ditches, kilns, and other structural/funerary/industrial features will be 50% excavated in the first instance, recorded in section, and then fully excavated. All intersections will be investigated to determine the relationship(s) between the component features. Where possible, sections will be located and recorded adjacent to the trench edge.
- Built structures: walls, floors etc will be excavated sufficient to establish their form, phasing, construction techniques. All intersections will be investigated to determine the relationship(s) between the component features.

8.2.3 All artefacts are to be retained for processing and analysis except for unstratified 20<sup>th</sup>-century material, which may be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in First Aid for Finds (3<sup>rd</sup> edition).

### 8.3 Method of Recording

8.3.1 The trenches are to be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each area is to be recorded, even when no archaeological deposits have been identified.

8.3.2 Section drawings (at a minimum scale of 1:20) must include heights A.O.D. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features. At least one section of each trench edge, showing a representative and complete sequence of deposits from the modern ground surface to the natural geology, will be drawn.



8.3.3 The actual areas of excavation and all archaeological (and possibly archaeological) features should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a detailed archive and report on the material. The trench locations, as excavated, will be accurately surveyed, tied into the O.S. National Grid and located on an up-to-date 1:1250 O.S. map base.

8.3.4 Except where otherwise requested, black and white photography using orthodox monochrome chemical development should be used. Film should be no faster than ISO400. Slower films should be used where possible as their smaller grain size yields higher definition images. Technical Pan (ISO 25), Pan-F (ISO50), FP4 (ISO125) and HP5 (ISO400) are recommended. The use of dye-based films such as Ilford XP2 and Kodak T40CN is unacceptable due to poor archiving qualities. Black and white photography should be supplemented by colour photography; this should be in transparency format (i.e. slides or digital photography as an acceptable alternative, see paragraph 8.3.5 below).

8.3.5 Digital photography: as an alternative for colour slide photography, good quality digital photography may be supplied, using cameras with a minimum resolution of 8 megapixels. Note that conventional black and white print photography is still required and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied in three file formats (as a RAW data file, a DNG file and as a JPEG file). The contractor must include metadata embedded in the DNG file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. **Any digital images are to be supplied to WYAAS on gold CDs by the archaeological contractor accompanying the hard copy of the report.**

#### 8.4 Use of Metal Detectors

8.4.1 Spoil heaps are to be scanned for non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19<sup>th</sup>-century material and earlier should be retained.)

8.4.2 If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not. To avoid financial claims under the Treasure Act a suggested wording for this formal agreement with the metal detectorist is: "In the process of working on the archaeological investigation at *[location of site]* between the dates of *[insert dates]*, *[name of person contributing to project]* is working under direction or permission of *[name of archaeological organisation]* and hereby waives all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996."

## 8.5 Environmental Sampling Strategy

8.5.1 Bulk samples must be taken from **all** securely stratified deposits using a strategy which combines systematic and judgement sampling, but which also follows the methodologies outlined in the English Heritage (2011) 'Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition)' guidance

8.5.2 Samples for specialist environmental analysis and scientific dating (soil profiles, archaeomagnetic dating, dendrochronology etc.) should be taken if suitable material is encountered during the excavation. The English Heritage Science Advisor should be consulted (Dr Andy Hammon, tel.: 01904 601983, email: andy.hammon@english-heritage.org.uk) and provision should be made for an appropriate specialist(s) to visit the site, take samples and discuss the sampling strategy, if necessary.

## 8.6 Conservation Strategy

8.6.1 A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle, only artefacts of a “displayable” quality would warrant full conservation, but metalwork and coinage from stratified contexts would be expected to be x-rayed if necessary, and conservation costs should also be included as a contingency.

## 8.7 Human Remains

8.7.1 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WYAAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* published by English Heritage (2005), a valid Ministry of Justice licence, if appropriate, and any local environmental health regulations.

## 8.8 Treasure Act

8.8.1 The terms of the Treasure Act 1996, as amended, must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the “Code of Practice”. Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

## 8.9. Unexpectedly Significant or Complex Discoveries

8.9.1 Should there be unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the archaeological contractor should urgently contact the WYAAS with the relevant information to enable them to resolve the matter with the developer.

## **8.10 Access/Monitoring Arrangements**

8.10.1 The representative of the WYAAS will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. The WYAAS' representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all trenches, any finds made that are still on site, and any records not in immediate use. It is anticipated that the records of an exemplar context that has previously been fully recorded will be examined. Any observed deficiencies during the site visit are to be made good to the satisfaction of the WYAAS' representative, by the next agreed site meeting. Access is also to be afforded at any reasonable time to English Heritage's Regional Archaeological Science Advisor.

8.10.2 Please note that WYAAS now make a charge for site monitoring visits. An invoice will be raised on the archaeological contractor. One monitoring visit will be charged for this project. Please contact us for the current charge.

## **9. Excavation Archives Deposition.**

9.1 Before commencing the project, the archaeological contractor must contact the archaeological curator of the museum to determine the museum's requirements for the deposition of an excavation archive. In this case the contact is Wakefield M.D.C. Museum and Arts, Pontefract Museum, 5 Salter Row, Pontefract, WF8 1BA. telephone 01924 305352; Museums Curatorial and Collections Officer: Mr David Evans (daviddevans@wakefield.gov.uk).

9.2 It is the policy of Wakefield Museums to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the District that it serves.

9.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with Wakefield Museum.

9.4 It is the responsibility of the archaeological contractor to meet Wakefield Museums' requirements with regard to the preparation of excavation archives for deposition

## **10. Post-Excavation Analysis and Reporting**

### **10.1 Requirement for Further Fieldwork**

10.1.1 It is anticipated that upon (or approaching) completion of fieldwork a meeting with WYAAS will be arranged by the archaeological contractor, either at the WYAAS offices or on site, to discuss the results and agree what, if any, additional work may be warranted. The developer should also be invited to attend this meeting. The meeting may take the form of a telephone discussion at WYAAS' discretion. Following the meeting the archaeological contractor will either produce a report (if no further archaeological work is warranted), or draft a specification (if further work is

required) to be submitted to WYAAS for written approval prior to the commencement of any further work.

10.1.2 If further fieldwork is required, the results of the evaluation will be integrated into an overall report encompassing all stages of work. However, if a different contractor is employed by the developer to undertake subsequent works, then a full, formal evaluation report (see paragraph 10.3 below) should be prepared and accepted by WYAAS before further fieldwork commences.

## 10.2 Finds and Samples

10.2.1 On completion of the fieldwork, any samples taken shall be processed and any finds shall be cleaned, identified, assessed/analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines.

10.2.2 Samples should be processed for the recovery of artefactual material, animal/fish/human bones, industrial residues (including hammerscale), shell, molluscs, charcoal and mineralised plant remains as a minimum. 'Specialist' samples (e.g. monoliths, cores, plant/invertebrate macrofossils) should be processed separately as appropriate.

10.2.3 Material suitable for scientific dating (e.g. charcoal) should be identified to species and assessed for suitability by an environmental specialist prior to submission to a dating laboratory. Any human remains submitted for C14 dating should also have carbon (delta 13C) and nitrogen isotope analysis carried out by the radiocarbon laboratory.

10.2.4 All finds and biological material must be analysed by a qualified and experienced specialist.

10.2.5 Following identification, finds of 20<sup>th</sup>-century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19<sup>th</sup> century or earlier date should be retained and archived.

## 10.3 Field Archive

10.3.1 A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints/slides. Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum, 2007). The contractor should also take account of any additional requirements imposed by the recipient museum (see section 9.1 above). An index to the field archive is to be deposited with the West Yorkshire Archaeology Advisory Service (preferably as an appendix in the report).

10.3.2 Prints may be executed digitally from scanned versions of the film negatives, and may be manipulated to improve print quality (but **not** in a manner which alters detail or perspective). **All digital prints, including those in the report, must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If**

**digital printing is employed, the contractor must supply details of the paper/inks used in writing to the WY Archaeology Advisory Service, with supporting documentation indicating their archival stability/durability.** Written confirmation that the materials are acceptable must have been received from the WYAAS prior to the commencement of work on site.

10.3.3 The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see para. 9.4 above). In the absence of this agreement the field archive (less finds) is to be deposited with the West Yorkshire Archaeology Advisory Service.

## **10.4 Report Format and Content**

10.4.1 A report should be produced, which should include background information on the need for the project, a description of the methodology employed, and a full description and interpretation of results produced. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers.

10.4.2 Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the site investigated (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Site plans should be at an appropriate scale showing trench layout (as dug), features located and, where possible, predicted archaeological deposits. Upon completion of each evaluation trench all sections containing archaeological features will be drawn. Section drawings (at a minimum scale of 1:20) must include heights O.D. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features. Where no archaeological deposits are encountered at least one long section of each trench will be drawn.

10.4.3 Artefact analysis is to include the production of a descriptive catalogue, quantification by context and discussion/interpretation if warranted, with finds critical for dating and interpretation illustrated.

10.4.4 Environmental analysis is to include identification of the remains, quantification by context, discussion/interpretation if warranted, and a description of the processing methodology. Radiocarbon results must be presented in full (laboratory sample number, conventional radiocarbon age, delta C13 value, calibration programme). Copies of the laboratory-issued dating certificates must be included as an appendix to the report.

10.4.5 Details of the style and format of the report are to be determined by the archaeological contractor, but should include a full bibliography, a quantified index to the site archive, and as an appendix, a copy of this specification.

## **10.5 Summary for Publication**

10.5.1 The attached summary sheet should be completed and submitted to the WYAAS for inclusion in the summary of archaeological work in West Yorkshire to be published on WYAAS' website.

## **10.6 Publicity**



If the project is to be publicised in any way (including media releases, publications etc.), then it is expected that the WYAAS will be given the opportunity to consider whether it wishes its collaborative role to be acknowledged, and if so, the form of words used will be at the WYAAS' discretion.

## **11. Report Submission and Deposition with the HER**

**11.1 A hard copy of the report (including a digital copy of gold disk) is to be supplied directly to the WYAAS within a period of two months following completion of fieldwork**, unless specialist reports are awaited. In the latter case a revised date should be agreed with the WYAAS. Completion of this project and advice from WYAAS on an appropriate mitigation strategy are dependant upon receipt by WYAAS of a satisfactory report which has been prepared in accordance with this specification. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS.

11.2 The report will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record where it will be publicly accessible once deposited unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposition.

11.3 Copyright - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act 1988* (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for non-commercial use by third parties, with the copyright owner suitably acknowledged.

11.4 A copy of the final report (in .pdf format) shall also be supplied to English Heritage's Science Advisor (Andy Hammon, English Heritage, 37 Tanner Row, York YO1 6WP).

11.5 The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

## **12. General Considerations**

### **12.1 Authorised Alterations to Specification by Contractor**

12.1.1 It should be noted that this specification is based upon records available in the West Yorkshire Historic Environment Record and on a brief examination of the site by the WYAAS. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or

then it is expected that the archaeologist will contact WYAAS as a matter of urgency. If contractors have not yet been appointed, any variations which the WYAAS considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, WYAAS will resolve the matter in liaison with the developer and the Local Planning Authority.

## **12. 2 Unauthorised Alterations to Specification by Contractor**

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained WYAAS' consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in WYAAS being unable to recommend determination of the planning application to the Local Planning Officer based on the archaeological information available and are therefore made solely at the risk of the contractor.

## **12.3 Technical Queries**

Similarly, any technical queries arising from the specification detailed above, should be addressed to WYAAS without delay.

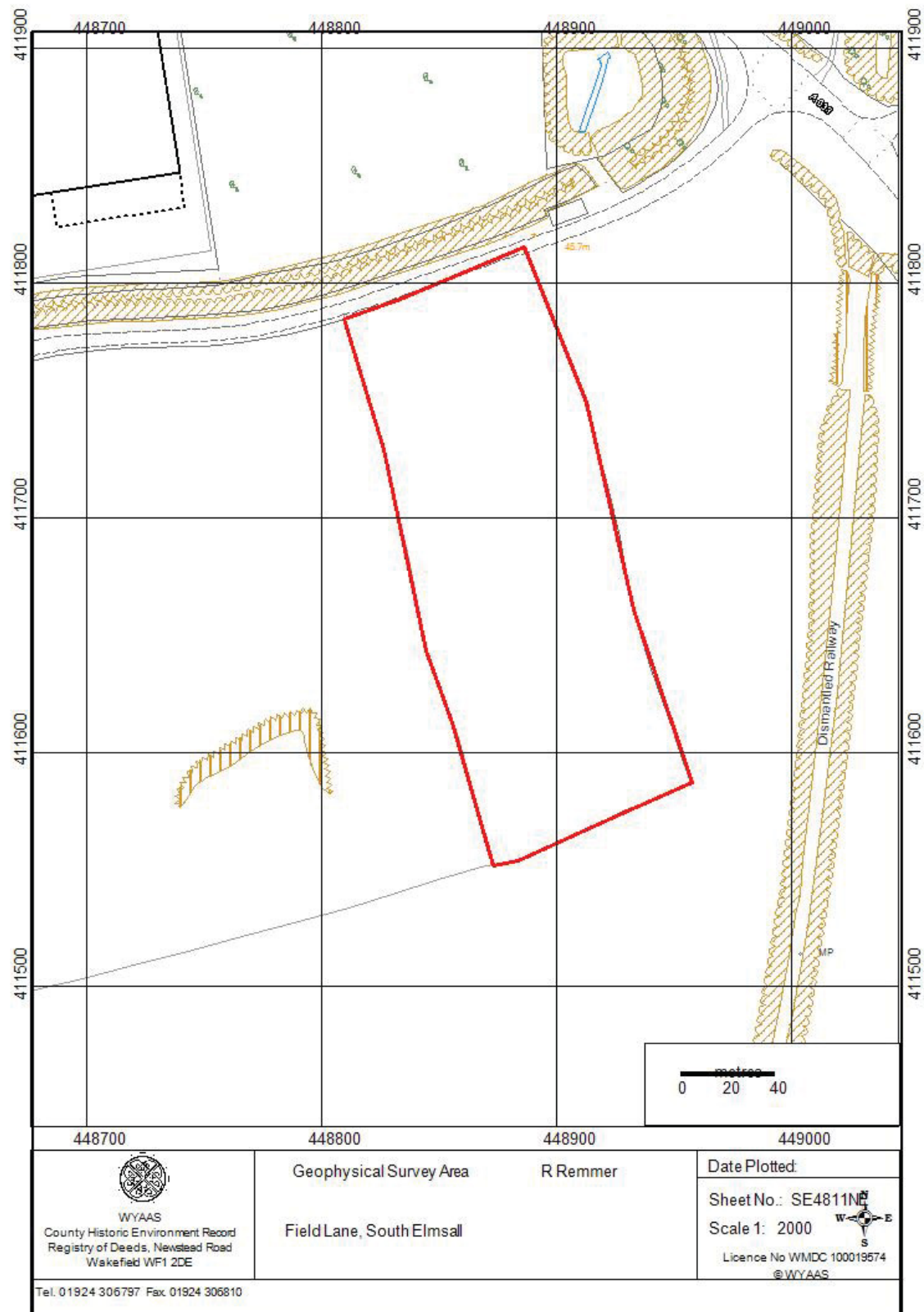
## **12.4 Valid Period of Specification**

This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

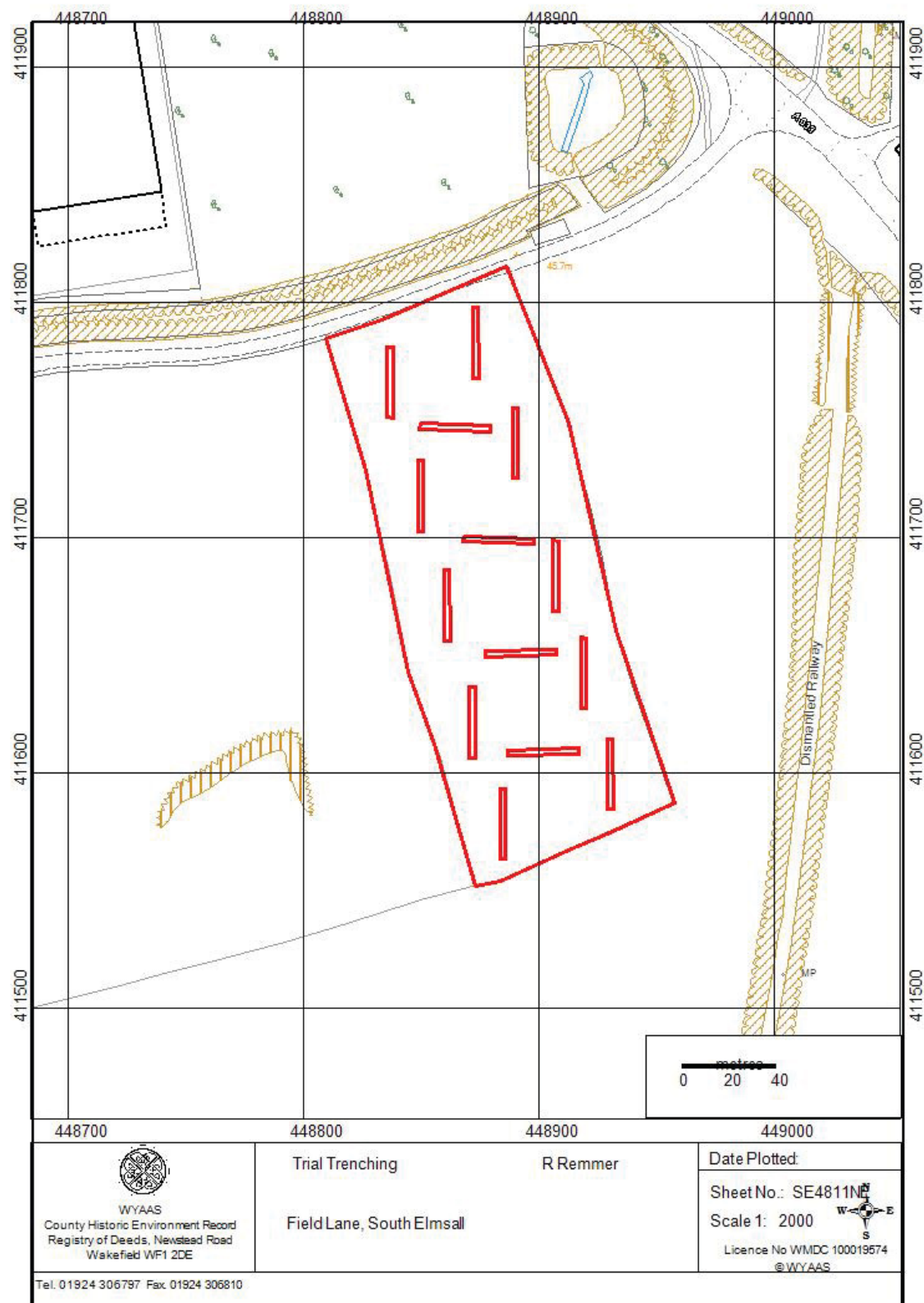
**West Yorkshire Archaeology Advisory Service**  
**Rebecca Remmer**

**May 2013**

**Historic Environment Record**  
**West Yorkshire Archaeology Advisory Service**  
**Registry of Deeds**  
**Newstead Road**  
**Wakefield**  
**WF1 2DE**  
**Telephone: (01924) 305992**  
**Fax: (01924) 306810**  
**E-mail: rremmer@wyjs.org.uk**







***WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE SUMMARY SHEET  
ARCHAEOLOGICAL FIELDWORK IN WEST YORKSHIRE***

<b>Site name/ Address:</b> Field Lane, South Elmsall	
<b>Township:</b> South Elmsall	<b>District:</b> Wakefield
<b>National Grid Reference:</b> SE 4887 1170	
<b>Contractor:</b> CFA Archaeology	
<b>Date of Work:</b> July 2013	
<b>Title of Report:</b> Field Lane, South Elmsall West Yorkshire Archaeological Evaluation and Geophysical Survey	
<b>Date of Report:</b> 11/07/13	
<b>SUMMARY OF FIELDWORK RESULTS:</b>  An archaeological evaluation consisting of trial trenching and a geophysical survey was undertaken by CFA Archaeology Ltd on land at Field Lane, South Elmsall, West Yorkshire during July of 2013. The geophysical survey identified anomalies consistent with archaeological features. Subsequently 13 trenches were excavated and a possible Iron Age/Romano-British enclosure and associated features recorded. No finds were recovered.	
<b>Author of summary:</b> Martin Lightfoot	<b>Date of summary:</b> 11/07/2013