



WYAS
**Archaeological
Services**

**Birmingham Resilience Project
Stourport to Frankley**

Archaeological Evaluation

Report no. 2796
November 2015

Clients: Jacobs UK Ltd
Severn Trent Water

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Birmingham Resilience Project

Stourport to Frankley

Archaeological Evaluation

Summary

Archaeological Services WYAS (ASWYAS) were appointed by Jacobs UK Ltd to undertake an archaeological evaluation consisting of the excavation of 39 trenches and 30 test pits at specific locations along certain sections of the scheme. The work was on behalf of Severn Trent Water Ltd for the proposed development of an alternative source of potable water for Birmingham. The evaluation confirmed the findings of the geophysical survey, that anomalies represent agricultural features in the main. No significant archaeological remains or deposits were encountered, although a very small collection of residual flint artefacts were recovered and a possible prehistoric enclosure of medium potential and regional significance was investigated.



Report Information

Client: Jacobs UK Ltd
Address: Shrewsbury Business Park, Sitka Drive, Shrewsbury, SY2 6LG
Report Type: Archaeological Evaluation
Location: Stourport to Frankley
County: Worcestershire
Grid Reference: SO 79054 72685 to SP 00164 79908
Period(s) of activity represented: Prehistoric to post-medieval/early modern
Report Number: 2796
Project Number: 6074
Site Code: BRP15
Planning Application No.: N/A
Museum Accession No.: Not allocated
Date of fieldwork: 3rd-28th August 2015
Date of report: November 2015
Project Management: Jane Richardson PhD MCIfA
Fieldwork supervisor: Marina Rose, Rosie Scales
Report: David Williams, Jane Richardson
Illustrations: David Williams
Photography: ASWYAS site staff

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1 Introduction

Archaeological Services WYAS (ASWYAS) were commissioned by Jacobs UK Ltd on behalf of their client Severn Trent Water Ltd to carry out archaeological evaluation along the proposed route of a water pipeline and associated infrastructure (Figs 1-4). Areas for archaeological evaluation were determined following geophysical survey undertaken between April and September 2015, the results of which can be found in a separate technical report (Sykes and Williams 2015). The areas selected for excavation were assigned unique block numbers, running from west to east.

Trenches in Block 11 were aborted due to the boggy nature of the ground, and the risk of ecological damage. Block 13 was not evaluated by test pitting due to the presence of a crop and a delayed harvest schedule.

Site location, topography, geology and land-use

Given the linear nature of the project, topography, geology, soils and land-use have been tabulated by block below (Table 1). Online resources provided by the British Geological Survey (2015) were used to obtain geological data.

Table 1. Geographical and geological detail by block

Block	Grid ref. (centred)	Height mOD (centred)	Bedrock geology	Superficial geology	Current land-use
1	SO 79054 72685	20.67mOD	Bridgnorth Sandstone Formation	None recorded	Pasture
2	SO 81947 72708	25.32mOD	Wildmoor Sandstone Formation	Power House Terrace Deposits (river Severn) - Sand and Gravel	Pasture
3	SO 82197 72705	25.50mOD	Wildmoor Sandstone Formation	Power House Terrace Deposits (river Severn) - Sand and Gravel	Pasture
4	SO 83405 72877	54.60mOD	Wildmoor Sandstone Formation	None recorded	Pasture
5	SO 94400 77406	151.61mOD	Kidderminster Formation - Sandstone and Conglomerate	None recorded	Pasture
6	SO 94479 77454	154.35mOD	Kidderminster Formation - Sandstone and Conglomerate	None recorded	Pasture
7	SO 94866 77522	172.38mOD	Kidderminster Formation - Sandstone and Conglomerate	None recorded	Pasture
8	SO 95922 78022	227.33mOD	Kidderminster Formation - Sandstone and Conglomerate	Till, Mid Pleistocene - Diamicton	Pasture
9	SO 96047 78208	250.78mOD	Kidderminster Formation - Sandstone and Conglomerate	Till, Mid Pleistocene - Diamicton	Pasture
10	SO 96613 78594	256.00mOD	Clent Formation - Argillaceous Rocks and Breccia	None recorded	Pasture
11	SO 96763 78763	c. 241mOD	Clent Formation - Argillaceous Rocks and Breccia	None recorded	Pasture
12	SO 97826 79016	227.37mOD	Alveley Member - Mudstone	Till, Mid Pleistocene - Diamicton	Arable
13	SO 98617 79356	c. 234mOD	Alveley Member - Mudstone	Till, Mid Pleistocene - Diamicton	Arable
14a	SO 99900 80257	192.90mOD	Alveley Member - Mudstone	None recorded	Arable
14b	SP 00006 80068	187.91mOD	Alveley Member - Mudstone	None recorded	Arable
14c	SP 00164 79908	182.13mOD	Alveley Member - Mudstone	None recorded	Arable

2 Archaeological and Historical Background

The archaeological background for the scheme is provided in Section 5 and Section 6 of the Archaeological Desk-based Assessment which is included as Appendix 11.1 of the Environmental Statement.

3 Aims and Objectives

The aim of the evaluation was to gather sufficient information to enable reasonable and informed decisions to be made as to the policy for the management of any archaeological resources present on the site.

Evidence was gathered to establish the presence/absence, nature, date, depth, quality of survival and importance of any archaeological deposits present and to allow for the determination of any appropriate strategies to mitigate the effect of the proposed development upon the archaeological resource.

4 Methodology

All work was carried out in accordance with accepted professional standards and guidelines, specifically Standards and Guidance for Archaeological Evaluation (Chartered Institute for Archaeologists 2014), Management of Archaeological Projects (English Heritage 1991) and Management of Research Projects in the Historic Environment PPN3 English Heritage: Archaeological Excavation (2008). ASWYAS's own recording manual and procedures (ASWYAS 2010) were also adhered to.

The 39 evaluation trenches were excavated by an excavator equipped with a 1.8m-wide toothless ditching bucket. An archaeologist was in attendance at all times. The trenches were positioned to sample each block, while targeting the anomalies identified in the geophysical survey which could prove to be of archaeological origin. The trenches and test pits were dug in spits of no more 100mm until natural deposits or the first archaeological horizon was encountered, thereafter, all investigations were undertaken by hand.

All test pits measured 1m² and were excavated by hand down to natural deposits, in spits not exceeding 50mm. All soil was sieved, in particular for the recovery of flint artefacts.

Detailed records sheets were completed for each trench and test pit and these are included as part of the site archive. All written records were produced on pro-forma recording sheets in accordance with ASWYAS site recording manual (ASWYAS 2010). An inventory of the archive is provided in Appendix 1, with a concordance of contexts detailed in Appendix 2.

5 Results

The results from the trial trenching are summarised in Table 2 and the results of the test pitting are given in Table 3. For each trench and test pit, dimensions and depths of overburden are shown along with comments on the presence or absence of any archaeological features uncovered or finds recovered. Relevant figure and plate references are also tabulated here.

Trial trenches

In total 39 trial trenches were excavated in ten blocks. Features were investigated in 13 trenches, of which seven contained field drains of modern (20th-century) origin. A single trench (Block 14b; Trench 198.12) contained the remnants of three lines of furrows corresponding to linear trends identified by the geophysical survey, while three trenches (Block 14b; Trench 198.11 and Block 14c; Trenches 198.13 and 198.15) contained small gullies corresponding to known field boundaries. The two remaining trenches containing features are discussed below.

Trench 51.1 (Block 4; Fig. 8) was located to target the southern corner of a potential enclosure identified during the geophysical survey (Sykes and Williams 2015), and four shallow concave gullies were identified. The approximate north-south orientated cut [5107]/[5109], 0.67m wide and 0.14m deep, corresponds to the southeast aspect of the enclosure. Parallel to this, *c.* 2m to the southeast, was cut 5110 of similar size and shape that was not identified by the geophysical survey. The northwest-southeast orientated cut [5105], represents the southwest aspect of the enclosure, and exhibited a concave profile and size similar to the previous features (Plate 4). Only two small fragments of undiagnostic fired clay were recovered from the fill (5111) of gully 5110, and these features remain undated.

Within Trench 181.1 (Block 12; Fig. 12) a single concave profile gully [18106] was recorded, 1.03m wide and 0.11m deep, and orientated northeast-southwest. It resembled a relict field boundary, but was not recorded as an anomaly by the geophysical survey. In the absence of any finds, this feature has not been dated.

Test pits

In total, 30 test pits were excavated in Blocks 2, 3, 5 and 6. No archaeological features were uncovered or finds encountered from fourteen test pits, while a further two test pits contained modern (20th-century) field drains. Of the test pits from which finds were recovered, thirteen contained fragments of post-medieval and modern pottery, along with fragments of glass, clay pipe, slate, tile, iron nails and slag.

Three test pits, all within Block 3, TP25.3, TP25.4 and TP25.5, yielded four pieces of worked and potentially worked flint. The flints were recovered from the topsoil/natural interface, and are of possible Late Mesolithic and Late Neolithic/Bronze Age date. This small assemblage is likely to be residual as none of the artefacts are from a secure context.

Table 2. Summary of results from the trial trenches

Block No.	Figure/ Plate ref.	Trench No.	Dimensions (m)	Height (ground level)	Total Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Comments
1	Fig. 5 Plate 1	1.1	'T' shaped trench NE-SW 50 x 2 NW-SE 25 x 2	21.37mOD	0.55	0.15	0.40	No archaeological remains observed.
4	Figs 7 and 8 Plate 4	51.1	'T' shaped trench NE-SW 25 x 2 NW-SE 10 x 2	56.17mOD	0.38	0.30	0.08	Trench located to target southern corner of potential enclosure. Four gullies identified. NW-SE running cut [5105], to SW of trench; N-S running cut [5107]/[5109] within the centre, and; cut [5110] running parallel to the southeast of cut [5107]/[5109]. No finds recovered.
4	Fig. 7	51.2	'T' shaped trench NE-SW 40 x 2 NW-SE 15 x 2	55.50mOD	0.30	0.25	0.05	No archaeological remains observed
4	Fig. 7	51.3	50 x 2	56.54mOD	0.40	0.25	0.15	Trench was moved 3m to SW due to hedgerow and tree roots .No archaeological remains observed
7	Fig. 10 Plate 7	149.1	25 x 2	170.65mOD	0.27	0.27	-	No archaeological remains observed
7	Fig. 10	149.2	30 x 2	170.89mOD	0.35	0.35	-	No archaeological remains observed
7	Fig. 10	149.3	30 x 2	169.90mOD	0.59	0.52	0.05	No archaeological remains observed
8	Fig. 11	160.1	25 x 2	220.00mOD	0.45	0.25	0.20	No archaeological remains observed

Block No.	Figure/ Plate ref.	Trench No.	Dimensions (m)	Height (ground level)	Total Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Comments
8	Fig. 11 Plate 8	160.2	25 x 2	224.10mOD	0.40	0.25	0.15	No archaeological remains observed
8	Fig. 11	160.3	25 x 2	232.50mOD	0.45	0.35	0.10	No archaeological remains observed
9	Fig. 11	161.1	25 x 2	245.30mOD	0.40	0.30	0.10	No archaeological remains observed
9	Fig. 11 Plate 9	161.2	'T' shaped trench NE-SW 25 x 2 NW-SE 25 x 2	255.08mOD	0.36	0.26	0.10	No archaeological remains observed
10	Fig. 12	166.1	30 x 2	253.50mOD	0.40	0.40	-	Trench re-orientated to avoid overhead power lines. No archaeological remains observed
10	Fig. 12	166.2	30 x 2	255.08mOD	0.50	0.35	0.15	No archaeological remains observed
10	Fig. 12 Plate 10	166.3	30 x 2	255.78mOD	0.40	0.35	0.05	No archaeological remains observed
10	Fig. 12	166.4	30 x 2	258.65mOD	0.30	0.30	-	No archaeological remains observed
10	Fig. 12	166.5	30 x 2	260.40mOD	0.40	0.40	-	No archaeological remains observed
10	Fig. 12	166.6	30 x 2	245.30mOD	0.33	0.33	-	No archaeological remains observed
10	Fig. 12	166.7	30 x 2	260.50mOD	0.40	0.40	-	No archaeological remains observed
12	Figs 13 and 14 Plate 11	181.1	90 x 2	226.00mOD	0.35	0.30	0.05	Single NE-SW gully [18106] located within centre of trench, runs parallel to furrow [18104], no finds recovered. Field drain also located to east of trench
14a	Fig. 15	198.1	40 x 2	193.70mOD	0.45	0.30	0.15	No archaeological remains observed
14a	Fig. 15	198.2	40 x 2	193.60mOD	0.40	0.30	0.10	No archaeological remains observed
14a	Fig. 15	198.3	34 x 2	190.40mOD	0.50	0.42	0.08	Trench was shortened at NW end due to tree roots and extended by 12m SE. No archaeological remains observed
14a	Fig. 15	198.4	40 x 2	194.60mOD	0.40	0.40	-	No archaeological remains observed
14a	Fig. 15	198.5	40 x 2	191.30mOD	0.40	0.35	0.05	Possible field drains observed within trench. No archaeological

Block No.	Figure/ Plate ref.	Trench No.	Dimensions (m)	Height (ground level)	Total Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Comments
								remains observed
14a	Fig. 15	198.6	40 x 2	192.50mOD	0.45	0.45	-	Field drains observed running along trench length, northeast-southwest. No archaeological remains observed
14b	Fig. 15	198.7	40 x 2	192.40mOD	0.55	0.40	0.15	No archaeological remains observed
14b	Fig. 15	198.8	40 x 2	192.70mOD	0.56	0.36	0.20	No archaeological remains observed
14b	Fig. 15	198.9	40 x 2	191.50mOD	0.60	0.20	0.40	No archaeological remains observed
14b	Fig. 15	198.10	32 x 2	190.20mOD	0.60	0.18	0.42	Trench was shortened by 8m at NE end due to tree roots. No archaeological remains observed
14b	Fig. 15	198.11	50 x 2	189.00mOD	0.60	0.20	0.40	Field boundary across trench width, 9m from east end. Field drains running east-west. No archaeological remains observed
14b	Fig. 15	198.12	40 x 2	184.70mOD	0.60	0.20	0.40	Three lines of ridge and furrow identified to the southeast of the trench running, running northeast-southwest. Field drains observed to the northwest of the trench. No archaeological remains observed
14c	Fig. 15	198.13	40 x 2	183.90mOD	0.45	0.27	0.18	Field boundary across trench width, 3m from north end, running east-west. Field drains running east-west. No archaeological remains observed. Pair of large modern iron pincers recovered from topsoil
14c	Fig. 15	198.14	40 x 2	181.90mOD	0.35	0.27	0.08	Field drains observed running along trench length, northwest-southeast. No archaeological remains observed
14c	Fig. 15	198.15	40 x 2	180.70mOD	0.30	0.18	0.12	Field boundary across trench width, 5m from north end, running northwest-southeast. No archaeological remains observed. Single modern iron file recovered from topsoil
14c	Fig. 15	198.16	40 x 2	182.70mOD	0.36	0.24	0.12	Field drains observed running east-west. No archaeological remains observed
14c	Fig. 15	198.17	40 x 2	185.60mOD	0.40	0.25	0.15	Field drains observed running east-west. No archaeological remains observed
14c	Fig. 15	198.18	40 x 2	184.30mOD	0.35	0.22	0.13	Field drains observed running northwest-southeast. No archaeological remains observed
14c	Fig. 15 Plate 12	198.19	40 x 2	184.20mOD	0.30	0.20	0.10	Field drains observed running northeast-southwest. No archaeological remains observed

Table 3. Summary of results from the test pits

Block No.	Figure/ plate ref.	Test Pit No.	Height (ground level)	Total Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Comments
2	Fig. 6	23.1	24.06mOD	0.28	0.2	0.08	No archaeological remains observed. Post-medieval and 20th-century pottery, glass, clay pipe and slag recovered from topsoil
2	Fig. 6	23.2	24.05mOD	0.30	0.30	-	Field drains recorded. Post-medieval and 20th-century pottery, ceramic building material (CBM), glass, clay pipe and clinker recovered from topsoil. No archaeological remains observed
2	Fig. 6	23.3	24.19mOD	0.27	0.27	-	Field drains recorded. Post-medieval and 20th-century pottery, glass, clay pipe and CBM recovered from topsoil. No archaeological remains observed
2	Fig. 6	23.4	24.43mOD	0.30	0.20	0.10	No archaeological remains observed. Post-medieval and 20th-century pottery and glass recovered
2	Fig. 6	23.5	24.42mOD	0.30	0.30	-	No archaeological remains observed. Post-medieval and 20th-century pottery, glass and CBM recovered
2	Fig. 6	23.6	24.24mOD	0.32	0.20	0.12	No archaeological remains observed
2	Fig. 6	23.7	24.55mOD	0.30	0.22	0.08	No archaeological remains observed. Post-medieval and 20th-century pottery and slag recovered
2	Fig. 6	23.8	24.60mOD	0.28	0.28	-	No archaeological remains observed. Post-medieval and 20th-century pottery, glass, clay pipe, slate and tile recovered
2	Fig. 6	23.9	24.67mOD	0.30	0.30	-	No archaeological remains observed
2	Fig. 6 Plate 2	23.10	24.76mOD	0.45	0.30	0.15	No archaeological remains observed. Post-medieval and 20th-century pottery, glass and slag recovered

Block No.	Figure/ plate ref.	Test Pit No.	Height (ground level)	Total Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Comments
3	Fig. 6 Plate 3	25.1	25.89mOD	0.45	0.45	-	No archaeological remains observed. Post-medieval and 20th-century pottery, slag and CBM recovered
3	Fig. 6	25.2	25.74mOD	0.33	0.25	0.08	No archaeological remains observed. Post-medieval and 20th-century pottery, metal object and CBM recovered
3	Fig. 6	25.3	25.50mOD	0.35	0.35	-	No archaeological remains observed. Flint recovered from topsoil/natural interface. Also post-medieval and 20th-century pottery, glass, clay pipe, slag, clinker and iron nail recovered from topsoil
3	Fig. 6	25.4	25.18mOD	0.45	0.29	-	No archaeological remains observed. Flint recovered from topsoil/natural interface. Also post-medieval and 20th-century pottery, glass, slag, clinker and CBM recovered from topsoil
3	Fig. 6	25.5	24.48mOD	0.30	0.22	0.08	No archaeological remains observed. Flint recovered from topsoil/natural interface. Also 20th-century glass and iron nail recovered from topsoil
5	Fig. 9	144.1	157.50mOD	0.35	0.30	0.05	No archaeological remains observed
5	Fig. 9	144.2	157.45mOD	0.26	0.26	-	No archaeological remains observed
5	Fig. 9	144.3	157.62mOD	0.30	0.30	-	No archaeological remains observed
5	Fig. 9	144.4	157.55mOD	0.35	0.35	-	No archaeological remains observed
5	Fig. 9	144.5	157.15mOD	0.31	0.31	-	No archaeological remains observed
5	Fig. 9	144.6	158.25mOD	0.35	0.25	0.10	No archaeological remains observed
5	Fig. 9	144.7	158.15mOD	0.30	0.25	0.05	No archaeological remains observed

Block No.	Figure/ plate ref.	Test Pit No.	Height (ground level)	Total Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Comments
5	Fig. 9 Plate 5	144.8	158.28mOD	0.45	0.35	0.05	No archaeological remains observed
6	Fig. 9	145.1	158.35mOD	0.3	0.3	-	No archaeological remains observed. 19th-century pottery recovered
6	Fig. 9	145.2	158.42mOD	0.29	0.28	0.01	No archaeological remains observed
6	Fig. 9	145.3	158.48mOD	0.35	0.25	0.10	No archaeological remains observed
6	Fig. 9	145.4	158.56mOD	0.40	0.30	0.10	No archaeological remains observed. Modern pottery and clay pipe recovered
6	Fig. 9	145.5	158.42mOD	0.30	0.29	0.01	No archaeological remains observed. Modern pottery and CBM recovered
6	Fig. 9 Plate 6	145.6	158.55mOD	0.35	0.25	0.10	No archaeological remains observed
6	Fig. 9	145.7	158.52mOD	0.30	0.25	0.05	No archaeological remains observed

6 Artefact Record

Flint artefacts by I.P. Brooks

Four flint artefacts were recovered during test pitting in Block 3, but none of the artefacts are from a secure context and this small collection is regarded as residual. Two of the artefacts are heavily patinated, whilst the other two are unaltered.

The patinated artefacts are both fragments of small blades; that from T.25.3 is the proximal end of a tertiary blade, only 11.0 mm wide, with a carefully prepared platform. The blade fragment has subsequently been subjected to a level of heating leading to some damage. The blade section from T25.5 is the distal end of a blade 12.4 mm wide which retains a small patch of cortex on the distal surface. This is heavily worn suggesting the raw material was collected from a derived deposit such as a gravel or till. Although heavily patinated, the broken surface of this artefact reveals the original flint to be an opaque and pale grey (N7, Goddard *et al* 1948) in colour. It also suggests that the damage is post-depositional in character. Whilst neither of these artefacts are diagnostic, their small sizes in comparison to other periods would suggest a Late Mesolithic date.

The two unpatinated artefacts consist of a tertiary flake from T25.4 and the distal end of another tertiary flake from T25.5. The complete flake is on a semi-translucent dusky yellowish brown (10 YR 2/2) flint and is 20.8 x 18.2 x 5.4mm in size. The broken flake is on a slightly less translucent flint which is greyish brown (5YR 3/2) in colour and is 29.5 x 14.0 x 8.2mm in size. Whilst superficially this artefact appears to be a blade segment, both sides have post-depositional damage making the original size of the flake undeterminable.

The level of patination would suggest that there are artefacts from at least two periods represented in the group. Both of the highly patinated artefacts are blade segments of possible Late Mesolithic date, whilst the unpatinated artefacts are assumed to be from a more recent period. It is most likely that they are associated with Late Neolithic or Bronze Age activity within the landscape, but this distinction between the age of the artefacts based upon the patination remains highly speculative. There are no primary (chalk) deposits within Worcestershire, indeed the nearest chalk deposits are those in Wessex over 100km to the south and east (Rawson *et al* 1978). There are, however, a series of derived deposits which contain some flint resources within the local area. These are all derived from the flints incorporated into the Irish Sea Till (Brooks 1989; Mackintosh 1879) which then get re-worked into gravel deposits, particularly those associated with the rivers of the region. Probably the most important of these are the river gravels of the River Severn from which it is assumed that the raw materials were probably collected.

Fired clay by Z. Horn

Two fragments of fired clay were recovered from fill 5111 of gully 5010 (Trench 51.1). No diagnostic features, and no inclusions, are present. No function or date can be proposed for these fragments and it is recommended that the items can be discarded.

Post-medieval finds by Z. Horn

Post-medieval and modern finds were recovered from the majority of the test pits in Blocks 2 and 3 and two trenches in Block 14c. These all came from topsoil deposits and are tabulated below (Table 4). Given their provenance and late date, they are recommended for discard.

Table 4. Post-medieval and modern finds from topsoil deposits

Block	Trench	Finds summary	Comments
2	23.1	6 x pot, 3 x slag, 3 x glass, 2 x clay pipe	6 x creamware possibly from one teacup, 3 x metalworking slag, 2 x clay pipe stem dated post 1850, 1 x green vessel glass, 1 x slightly opaque glass, 1 x clear glass with frosted decoration
2	23.2	4 x pot, 4 x glass, 1 x clinker, 1 x clay pipe, 2 x CBM	Pot: 3 x brown glazed stoneware, 1 x creamware with green glaze and embossed leaf decoration, 2 x clear vessel glass, 1 x brown bottle glass, 1 x yellow moulded glass, 1 x clinker, 1 x clay pipe stem dated post 1850
2	23.3	2 x pot, 1 x clay pipe, 1 x glass, 1 x CBM	2 x pot buff fabric with a yellow-orange glaze with dark brown decoration, 1 x clay pipe stem fragment dated post 1850, 1 x green bottle glass, 1 x possible drain fragment
2	23.4	3 x pot, 1 x glass	Modern green bottle glass, pot x 1 stoneware with brown glaze, 1 x pink pyrex, 1 x stoneware with blue and white decoration
2	23.5	4 x pot, 2 x glass, 1 x CBM	1 x stoneware with light brown glaze, 2 x creamware sherds with white glaze, 1 x stoneware sherd with dark brown glaze, 1 x blue glass, 1 x green tinged vessel glass, 1 x brick fragment
2	23.7	1 x slag, 4 x pottery	Small piece of non-metallic metalworking slag, 1 x pot, terracotta fabric, brown glazed on interior surface, 1 x pot stone ware, blue and white glaze, 2 x china fabric with white glaze from same vessel, All pot is modern
2	23.8	5 x pot, 1 x clay pipe, 1 x glass, 1 x slate, 1 x tile	1 x creamware with embossed and painted decoration, 3 x pot creamware with blue decoration, 1 x creamware with yellow glaze, 1 x clay pipe stem dated post 1850, 1 x clear vessel glass, 1 x roof slate fragment, 1 x modern mosaic tile
2	23.10	2 x pot, 1 x glass, 2 x slag	2 x creamware, 1 with yellow glaze, 1 x green vessel glass, 2 x non magnetic metalworking slag
3	25.1	6 x pot, 2 x CBM, 3 x slag	Pot: 2 x white glazed sherds, 2 x creamware sherds, 1 x stoneware sherd with blue and white decoration, 1 x stoneware sherd with grey glaze, 2 x CBM/tile, 3 x non-metallic metalworking slag
3	25.2	4 x pot, 2 x CBM, 1 x metal alloy	3 x creamware, one with blue decoration, 1 x pyrex, 2 fragments of tile, 1 x possible metal vessel
3	25.3	4 x glass, 1 x clay pipe stem, 4 x pot, 1 x slag, 1 x clinker 1 x Iron (Fe),	Modern glass from 4 vessels, 1 fragment of clay pipe stem dated post 1850, pot: 3 x stoneware with cream glaze, 1 terracotta with brown glaze, 1 x slag slightly magnetic and shiny, 1 x clinker non magnetic, 1 x Fe nail
3	25.4	4 x slag, 2 x CBM, 2 x glass, 4 x pot	3 x metal working slag, 1 x glass slag, 2 x CBM/tile fragments, 2 x modern glass fragments from same vessel, Pot: 1 x jug handle fragment, 3 x creamware
3	25.5	2 x bottle glass, 1 x Fe	Modern green bottle glass and corroded nail
14c	198.13	1 x Fe	1x modern large metal file, surface just visible through corrosion, no handle present
14c	198.15	1 x Fe	1x modern pair of large pincers heavily corroded

7 Environmental Record

Environmental samples by Jane Richardson

Bulk environmental samples were processed by ASWYAS using a Siraf-style water flotation system (French 1971), a 1mm mesh and a 300 micron sieve. The flots were dried before examination under a low power binocular microscope typically at x10 magnification. The retents were sorted by eye for ecofacts and artefacts, and were scanned with a magnet for the recovery of industrial debris, such as hammercale. No finds were recovered, and the retents were subsequently discarded.

The two flots from fills 5106 and 5111 (Trench 51.1) contain significant quantities of modern rootlets, reflecting the shallow nature of the features. No cereals, chaff or weed seeds are present, but both include charcoal fragments. Only the sample from the fill (5106) of gully 5107 contains fragments of sufficient size to be identified to genus. Identification would be required prior to submitting this material for radiocarbon dating, but given the degree of modern bioturbation (as indicated by the modern rootlets), this is not recommended. The flots should be retained as part of the site archive.

8 Discussion and Conclusions

The archaeological trial trenching confirmed the findings of the geophysical survey, in that no significant archaeological remains were observed within the trenches. The only exception to this was the possible prehistoric enclosure partially exposed in Trench 51.1. Here two gullies defining the enclosure were investigated, as well as a third gully parallel, and external, to the enclosure gully. Unfortunately no finds were recovered to date this activity.

The trenching has also helped confirm that in areas where no anomalies were detected, no archaeological remains were encountered, although again the exception to this was the external gully, mentioned above, which had not been detected by the geophysical survey. Also investigated was a gully encountered in Trench 181.1, which may represent a relict field boundary or even a plough furrow, but again the feature remains undated.

The four flints from test pits in Block 3 may indicate Late Mesolithic and Late Neolithic/Bronze Age activity in the vicinity, although the finds are likely to be residual. The flints clustered around Block 3 fit into the wider Mesolithic landscape of Worcestershire with the remains of an arrow factory recorded at Lightmarsh Farm, Trimpley 4.5km to the north-west (Jackson *et al* 2002). The flint also fits into the general pattern of recovery along the Worcestershire and Staffordshire border and to the south of Stourbridge and Halesowen. (Myers 2007).

The enclosure identified in Trench 51.1 did not provide any definitive dating although a lack of later pottery may indicate an Iron Age date. The majority of finds and sites relating to Iron Age settlement in the region tend to be located towards the central and southern part of Worcestershire, with only limited remains recorded in the northern part of Worcestershire.

What is known about the Iron Age of Worcestershire is dominated by numerous hillforts lowland settlement such as the rectilinear enclosure identified in Trench 51.1 is typically more elusive. Known Iron Age remains have been recorded mainly during linear infrastructure schemes and developer-funded evaluations, including isolated pits at Madeley Heath (Hurst 2002) and the remains of the Iron Age enclosure at Blackstone overlooking the River Severn (Hurst *et al* 2008), 3.8km to the west of Trench 51.1. The possible prehistoric enclosure in Trench 51.1 adds to the limited picture of lowland settlement in north Worcestershire, suggesting the site may be of regional significance.

Appendix 1: Inventory of primary archive

Phase	File/Box No	Description	Quantity
Evaluation	File no.1	Daily site recording form	12
		Trench record sheets	68
		Context register	1
		Context sheets	12
		Drawing register	1
		Sample register	1
		Permatrace sheets	2
		Photograph record sheet	5
		Digital photograph record sheet	6

Appendix 2: Concordance of contexts yielding artefacts or environmental remains

Context	Trench	Description	Artefacts and environmental samples
5104	51.1	Fill of gully 5105	-
5105	51.1	Cut of gully	-
5106	51.1	Fill of gully 5107	GBA1
5107	51.1	Cut of gully	-
5108	51.1	Fill of gully 5109	-
5109	51.1	Cut of gully	-
5110	51.1	Cut of gully	-
5111	51.1	Fill of gully 5109	Fired clay x 2, GBA2
18104	181.1	Cut of plough furrow	-
18105	181.1	Fill of plough furrow 18104	-
18106	181.1	Cut of gully	-
18107	181.1	Fill of gully 18106	-

Finds from topsoil deposits are not included here, but are reported in Section 6

Bibliography

- ASWYAS, 2010, Archaeological Recording Manual, ASWYAS (Unpubl.)
- BGS, 2015, <http://www.bgs.ac.uk/opengeoscience/home.html?Accordion2=1#maps> (Website accessed 21st September 2015)
- Brooks, I.P., 1989, The viability of micropalaeontology to the sourcing of flint. Unpublished PhD Thesis, University of Sheffield
- Chartered Institute for Archaeologists, 2014, *Standard and Guidance for Archaeological Evaluation*
- English Heritage, 1991, *Management of Archaeological Projects*
- English Heritage, 2008, *Management of Research Projects in the Historic Environment, (MoRPHE), PPN3: Archaeological Excavation*
- French, D.H., 1971, 'An Experiment in Water Sieving', *Anatolian Studies* 21 59-64
- Goddard, E.N., Trask, P.D., De Ford, R.K., Rove, O.N., Singewald, J.T. And Overbeck, R.M., 1948, *Rock-color Chart*. Geological Society of America, Boulder, Colorado
- Hurst, D 2002 Middle Bronze Age to late Iron Age Worcestershire. West Midlands Regional Research Framework for Archaeology, Seminar 2
- Hurst, D., Hunt, A. and Davenport, P., 2008, Iron Age Settlement at Blackstone, Worcestershire: Excavations 1972, 1973 and 1977, Internet Archaeology Issue 28, <http://intarch.ac.uk/journal/issue28/3/index.html> (Website accessed November 2015)
- Jackson, R., Bevam, L., Hurst, D. and de Rouffignac, C., 2002, *Salvage Recording on the Trimpey to Blackstone Aquaduct, Kidderminster*. County Archaeological Service Report No. 200
- Mackintosh, D., 1879, 'Results of a systematic survey in 1878, of the directions and limits of dispersion, mode of occurrence, and relation to drift-deposits of the erratic blocks or boulders of the west of England and east of Wales, including a revision of many years' previous observations', *The Quarterly Journal of the Geological Society of London* 53, 425-455
- Myers, A., 2007, 'The upper Palaeolithic and Mesolithic Archaeology of the West Midlands' in Garwood, P., 2007, *The Undiscovered Country: The Earlier Prehistory of the West Midlands*
- Rawson, P.F., Curry, D., Dilley, F.C., Hancock, J.M., Kennedy, W.J., Neale, J.W., Wood, C.J. and Worssam, B.C., 1978, *A Correlation of Cretaceous rocks in the British Isles*. Geological Society of London Special Report no. 9
- Sykes, C. and Williams, D., 2015, Birmingham Resilience Project, Stourport to Frankley, Geophysical Survey. ASWYAS report

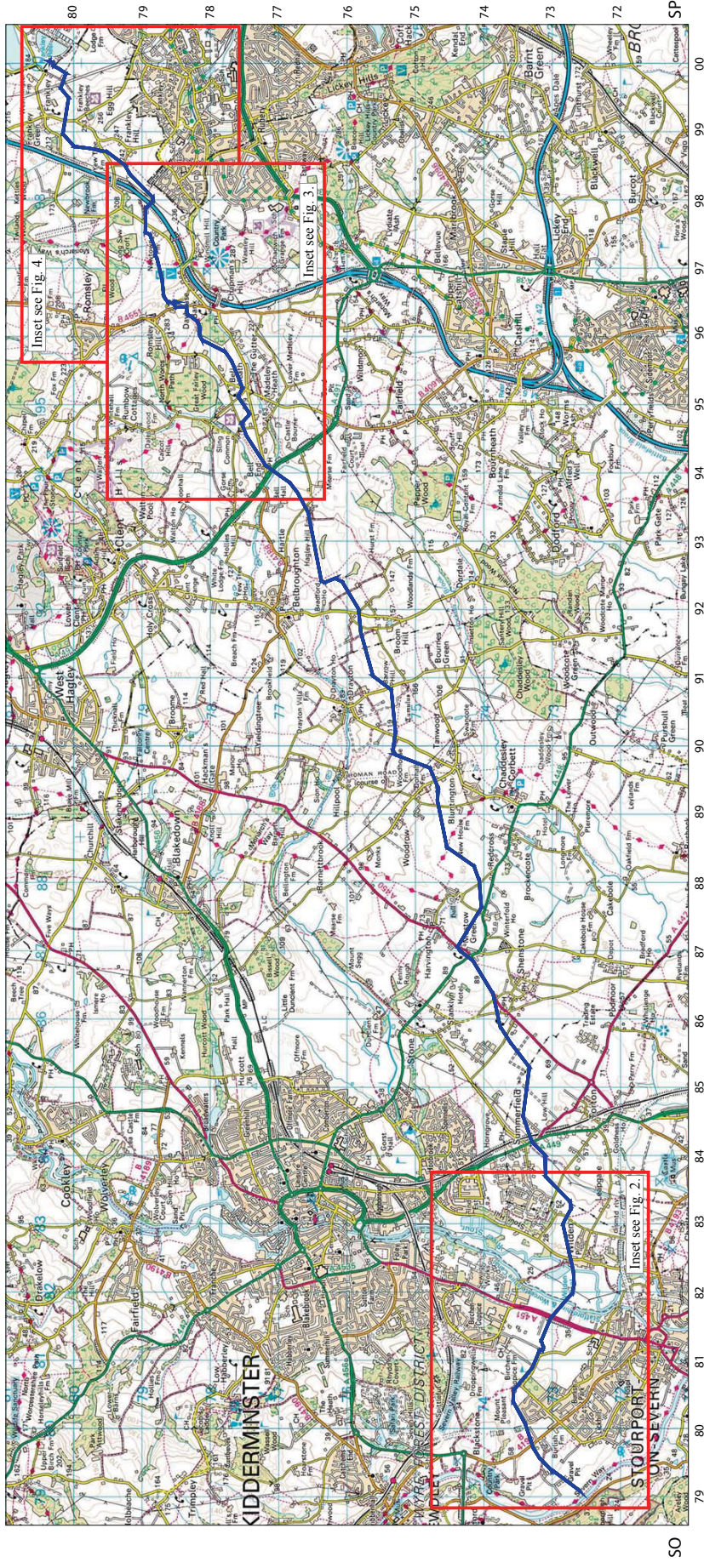
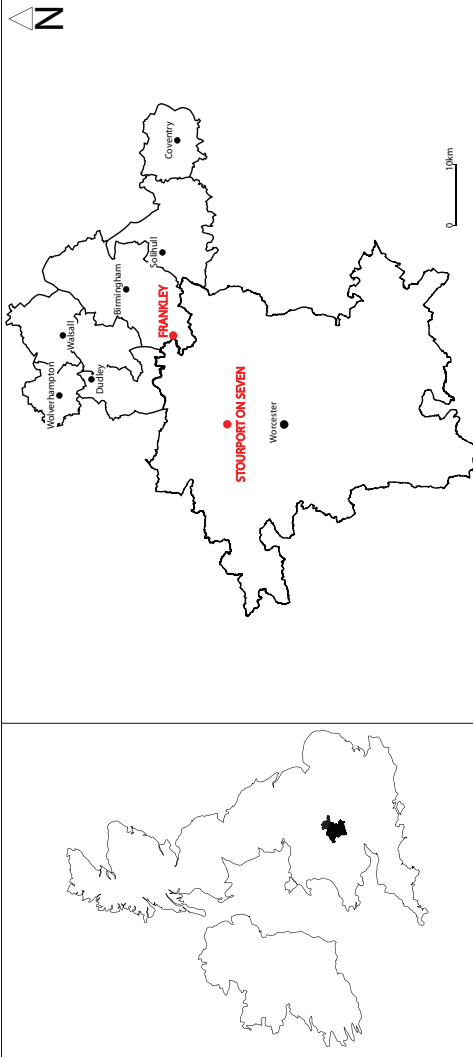


Fig. 1. Site location

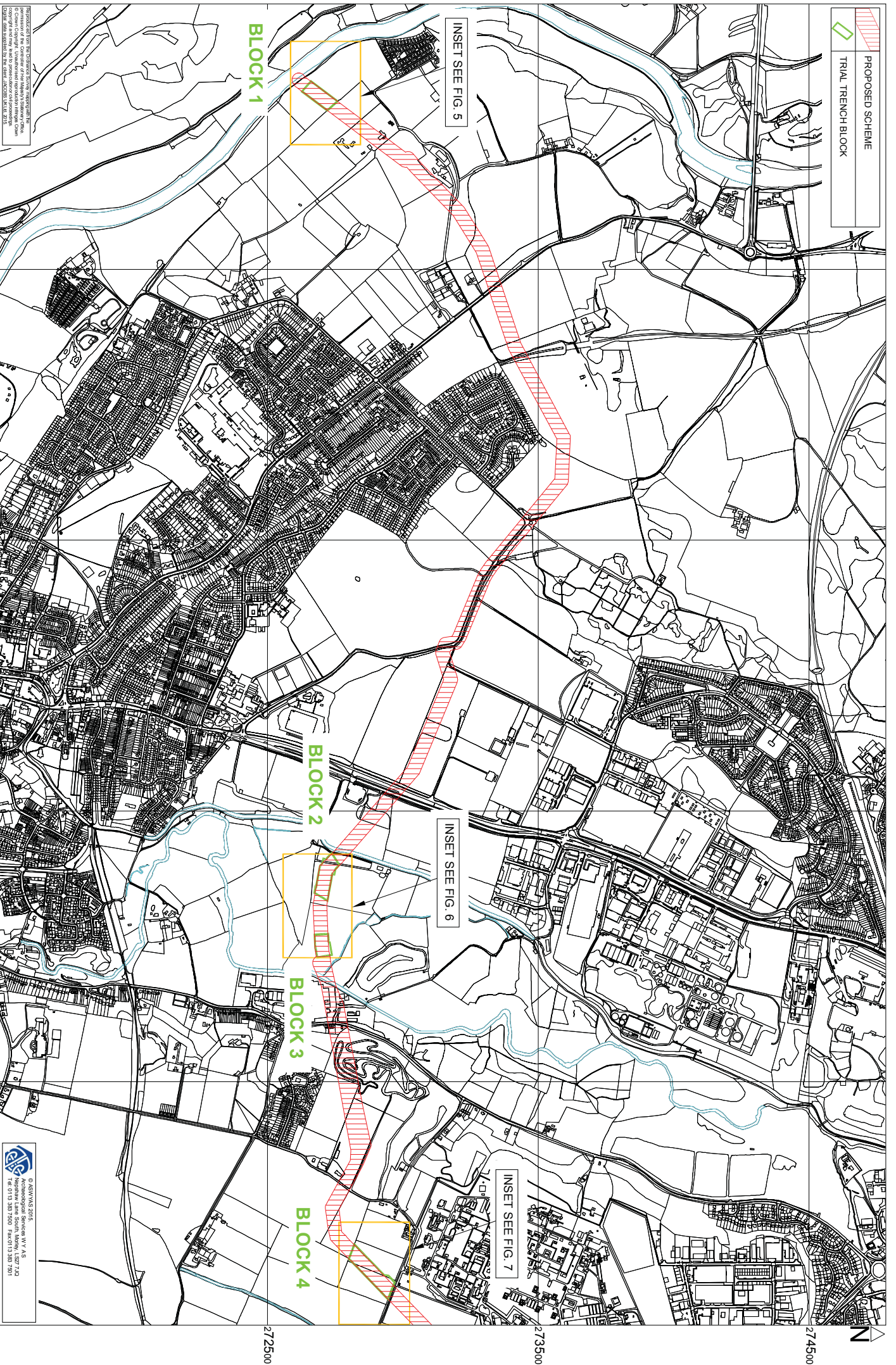


Fig. 2. Route overview showing location of trial trench blocks 1-4 (1:12,500 @ A3)

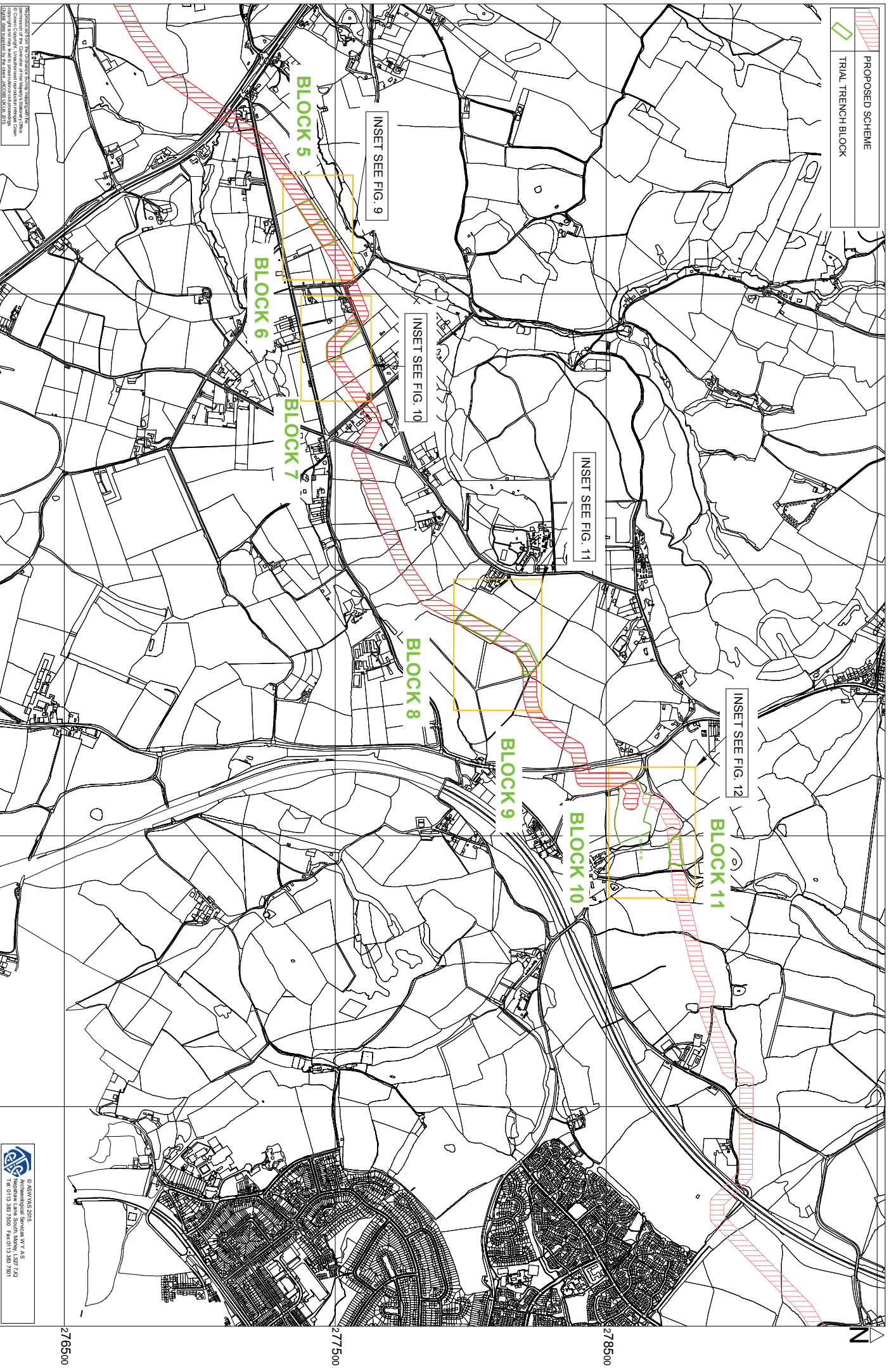




Fig. 3. Route overview showing location of trial trench blocks 5-12 (1:12,500 @ A3)

	PROPOSED SCHEME
	TRIAL TRENCH BLOCK

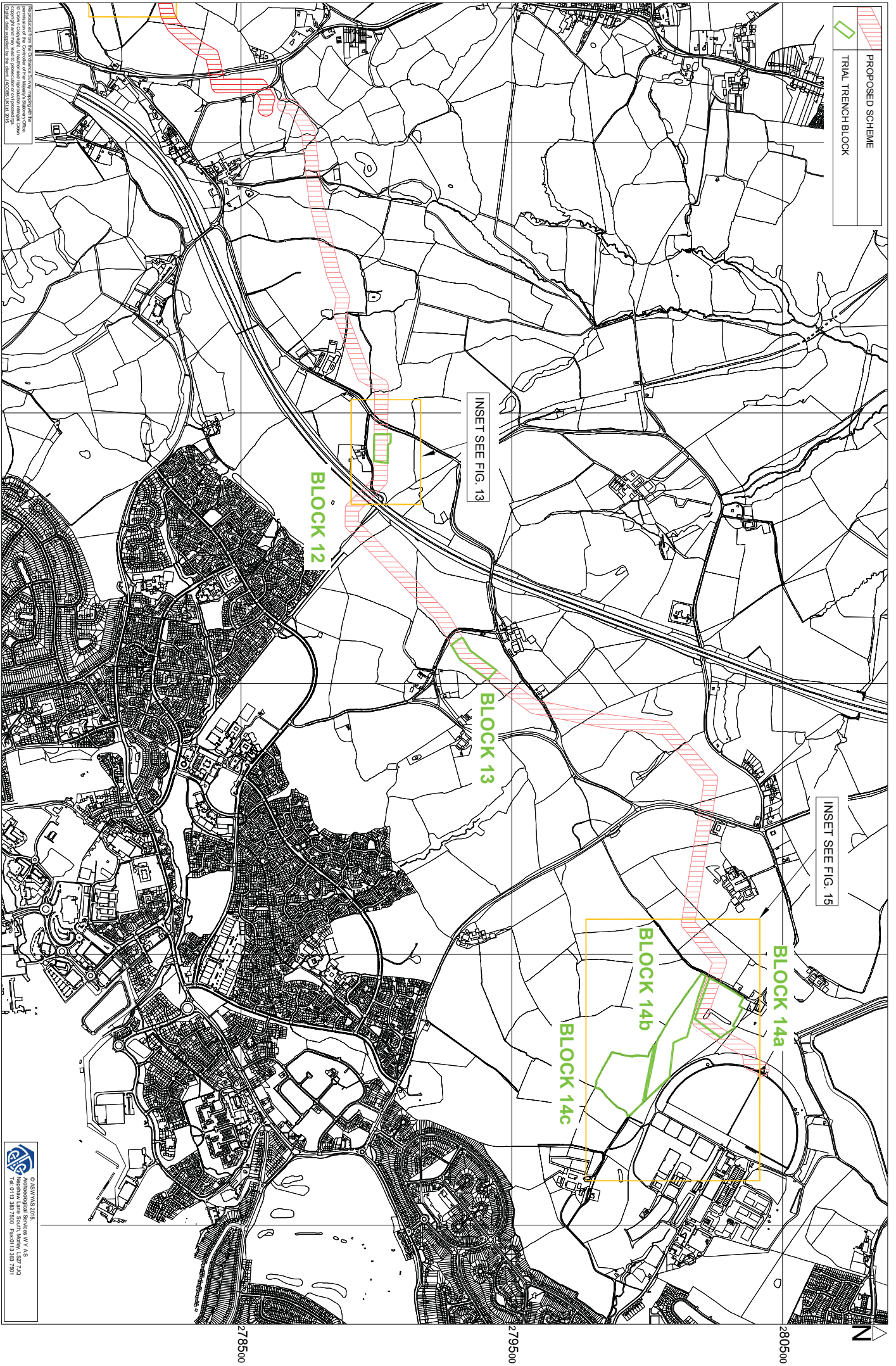






Fig. 4. Route overview showing location of trial trench blocks 10-14 (1:12,500 @ A3)




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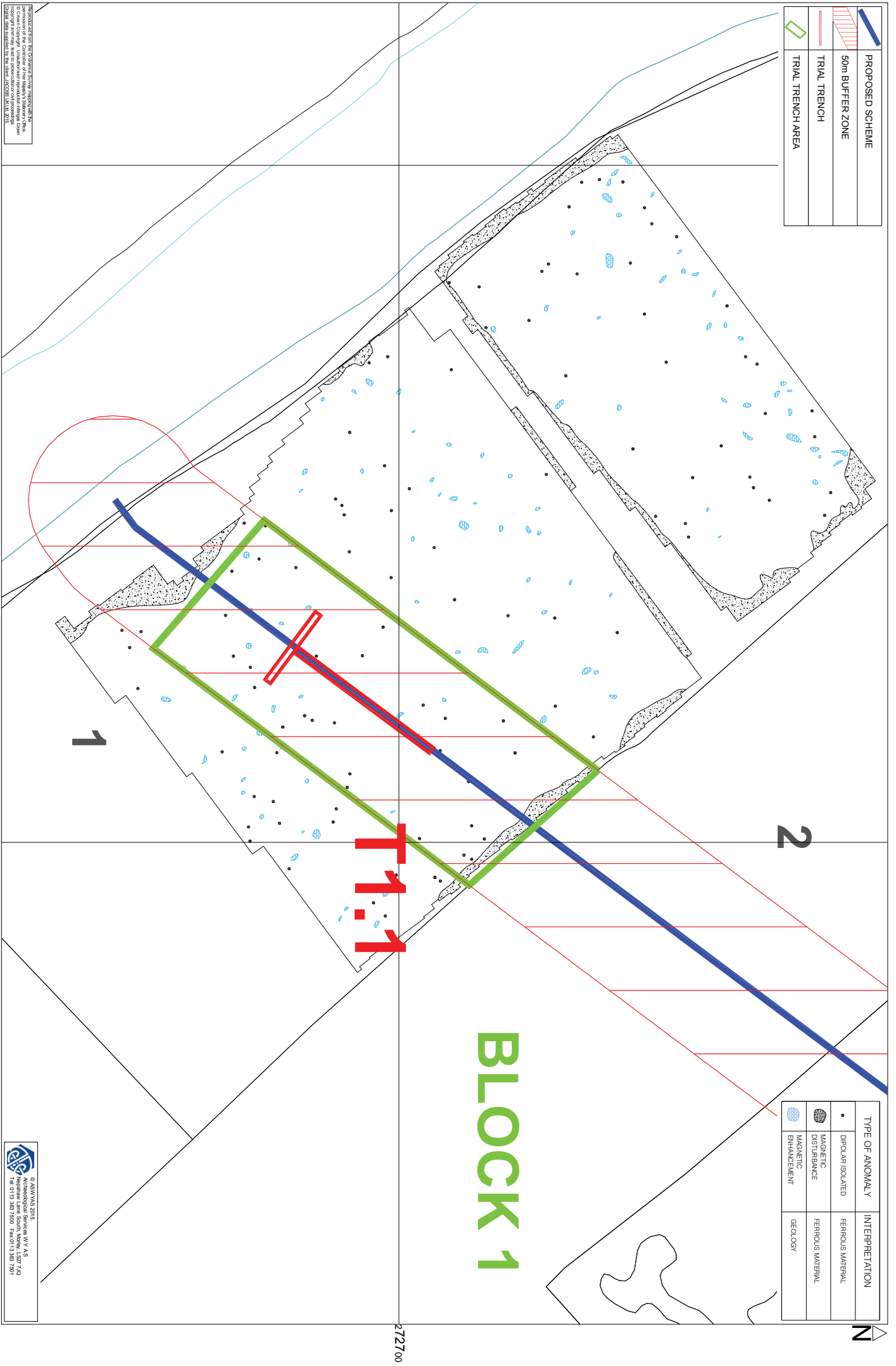
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0 250m

	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA





TYPE OF ANOMALY	INTERPRETATION
 DIPOLAR ISOLATED	FERROUS MATERIAL
 MAGNETIC DISTURBANCE	FERROUS MATERIAL
 MAGNETIC ENVIRONMENT	GEOLOGY



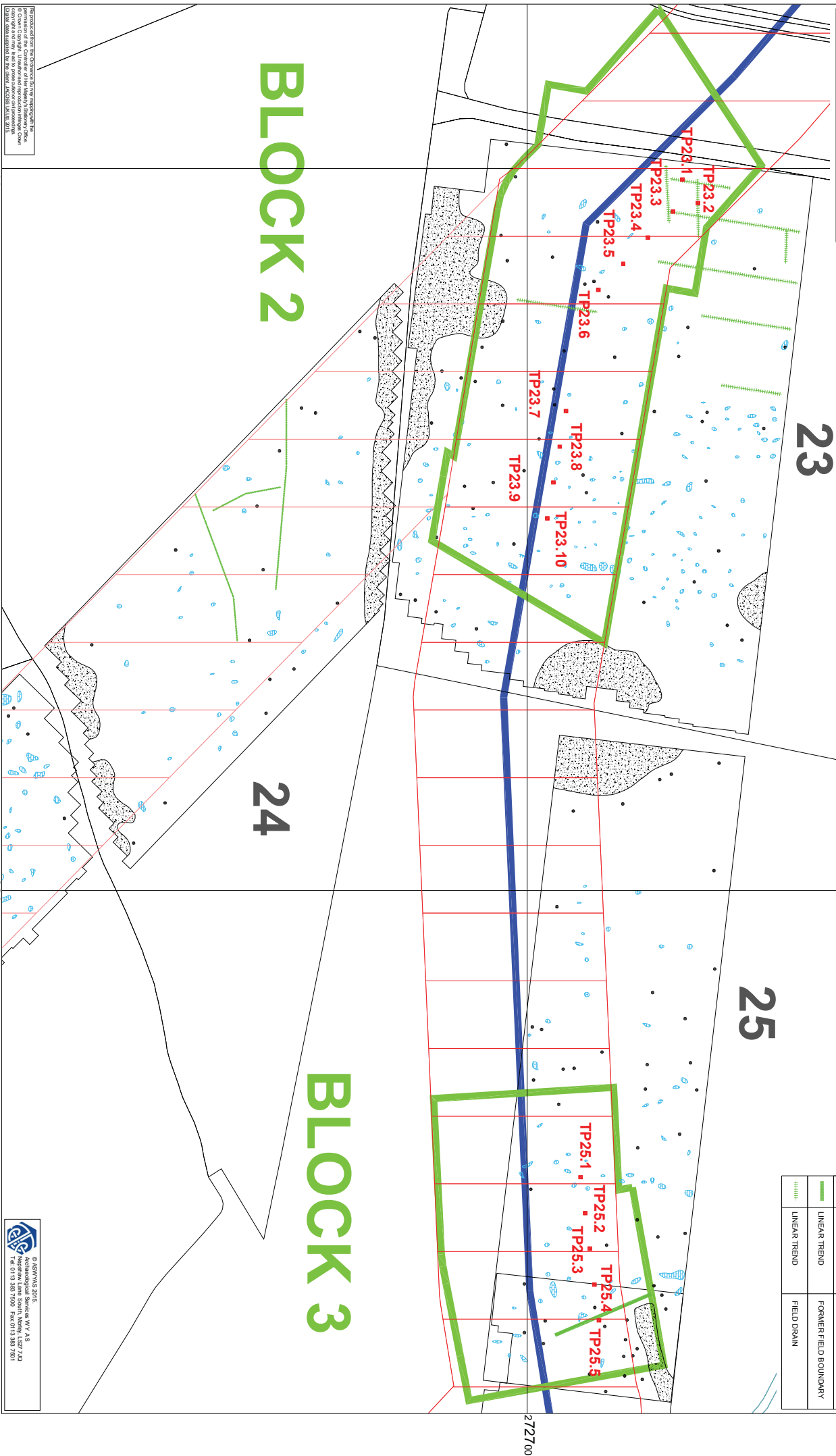
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Fig. 5. Trial trench location Block 1 (1:1000 @ A3)

	PROPOSED SCHEME
	50m BUFFER ZONE
	TEST PIT
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION	
•	DIPOLAR ISOLATED	FERROUS MATERIAL
•	MAGNETIC DISTURBANCE	FERROUS MATERIAL
•	MAGNETIC ENHANCEMENT	GEOLOGY
—	LINEAR TREND	FORMER FIELD BOUNDARY
—	LINEAR TREND	FIELD DRAIN



BLOCK 2

24

BLOCK 3

25

23

Fig. 6. Trial trench location Blocks 2 and 3 (1:1000 @ A3)

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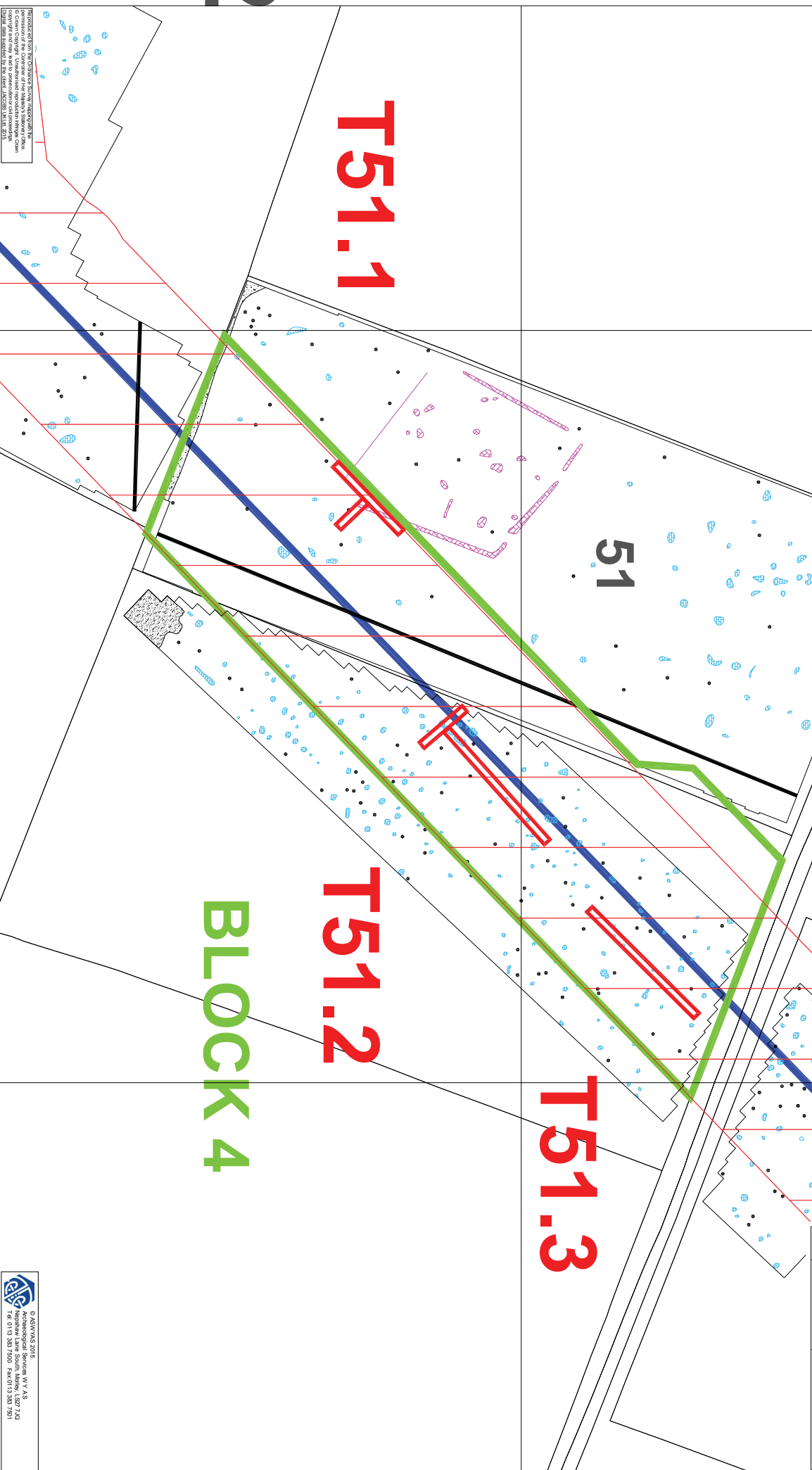
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0 30m

	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION	
	DIPOLAR ISOLATED	FERROUS MATERIAL
	MAGNETIC DISTURBANCE	FERROUS MATERIAL
	DIPOLAR LINEAR	SERVICE PIPE
	MAGNETIC ENHANCEMENT	GEOLOGY
	MAGNETIC ENHANCEMENT	ARCHAEOLOGY?



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Fig. 7. Trial trench location Block 4 (1:1000 @ A3)

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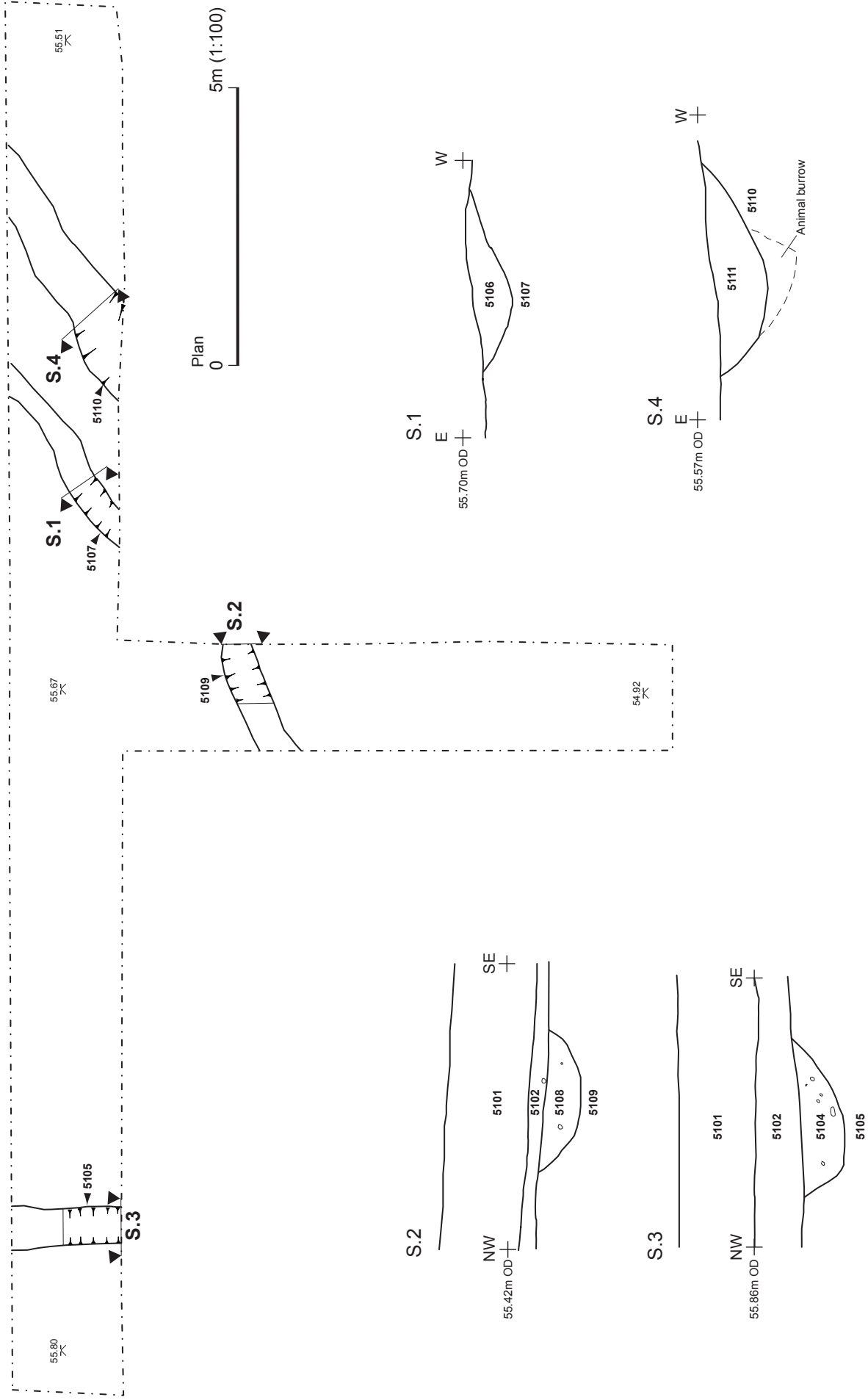








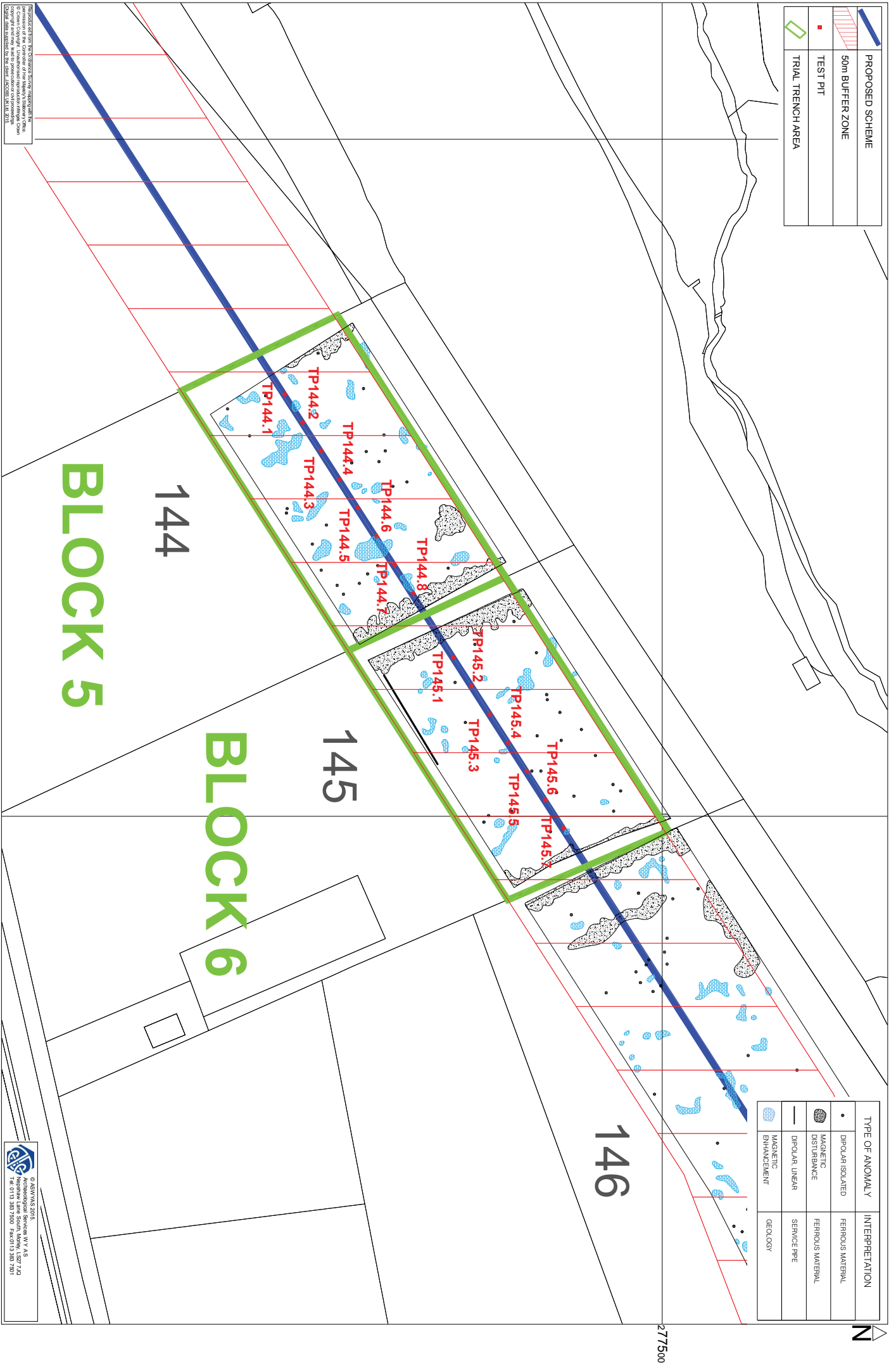


Fig. 8. Block 4; Trench 51.1. Plan and sections

	PROPOSED SCHEME
	50m BUFFER ZONE
	TEST PIT
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION
	DIPOLAR ISOLATED FERROUS MATERIAL
	MAGNETIC DISTURBANCE FERROUS MATERIAL
	DIPOLAR LINEAR SERVICE PIPE
	MAGNETIC ENHANCEMENT GEOLOGY



BLOCK 5

BLOCK 6

144

145

146

Fig. 9. Test pit locations Blocks 5 and 6 (1:1000 @ A3)

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



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0 30m

	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION
	DIPOLAR ISOLATED FERROUS MATERIAL
	MAGNETIC DISTURBANCE FERROUS MATERIAL
	DIPOLAR LINEAR SERVICE PIPE
	MAGNETIC ENHANCEMENT GEOLOGY

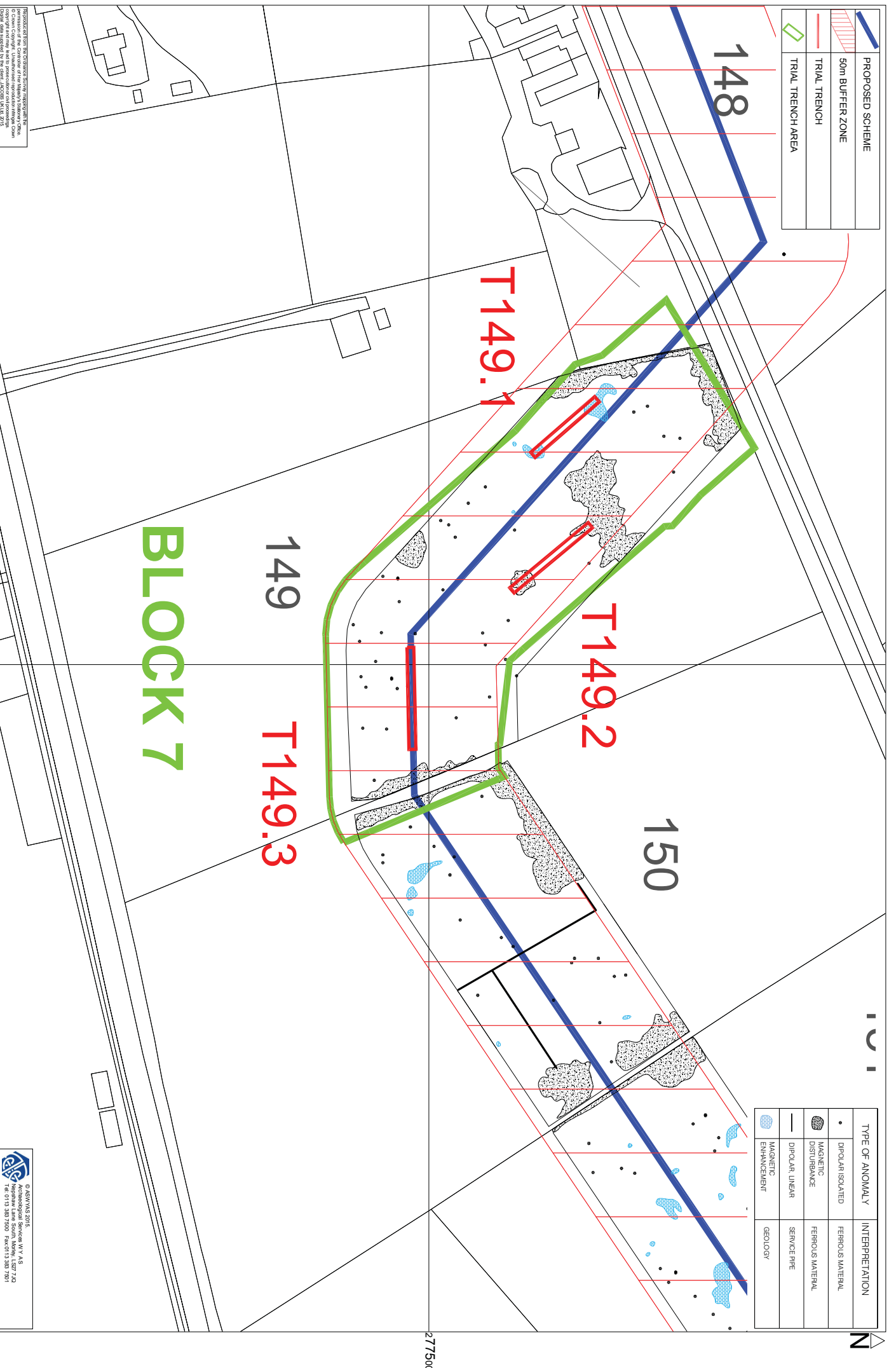










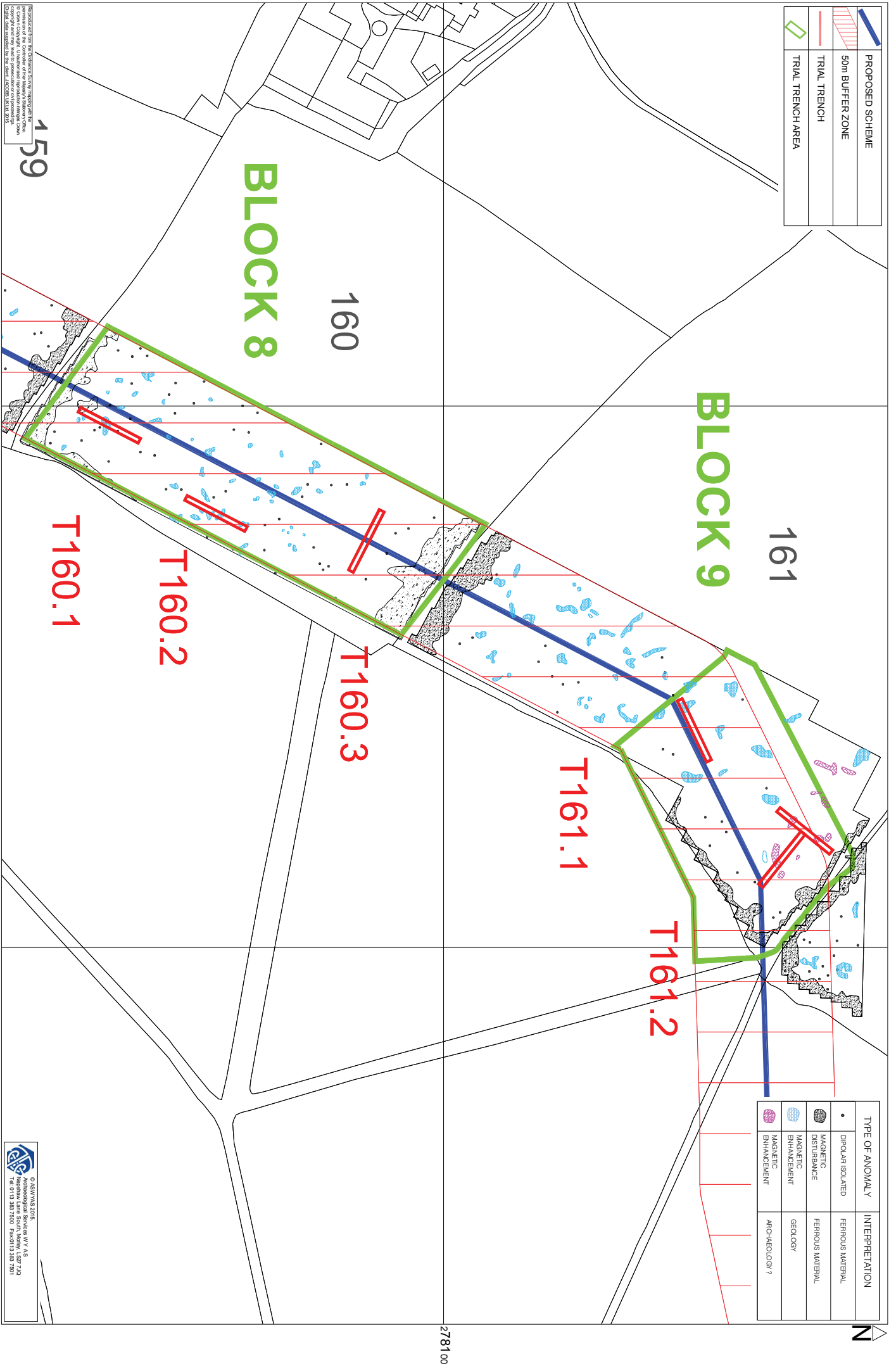
Fig. 10. Trial trench locations Block 7 (1:1000 @ A3)

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	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION
	DIPOLAR ISOLATED FERROUS MATERIAL
	MAGNETIC DISTURBANCE FERROUS MATERIAL
	MAGNETIC ENHANCEMENT GEOLOGY
	MAGNETIC ENHANCEMENT ARCHAEOLOGY?



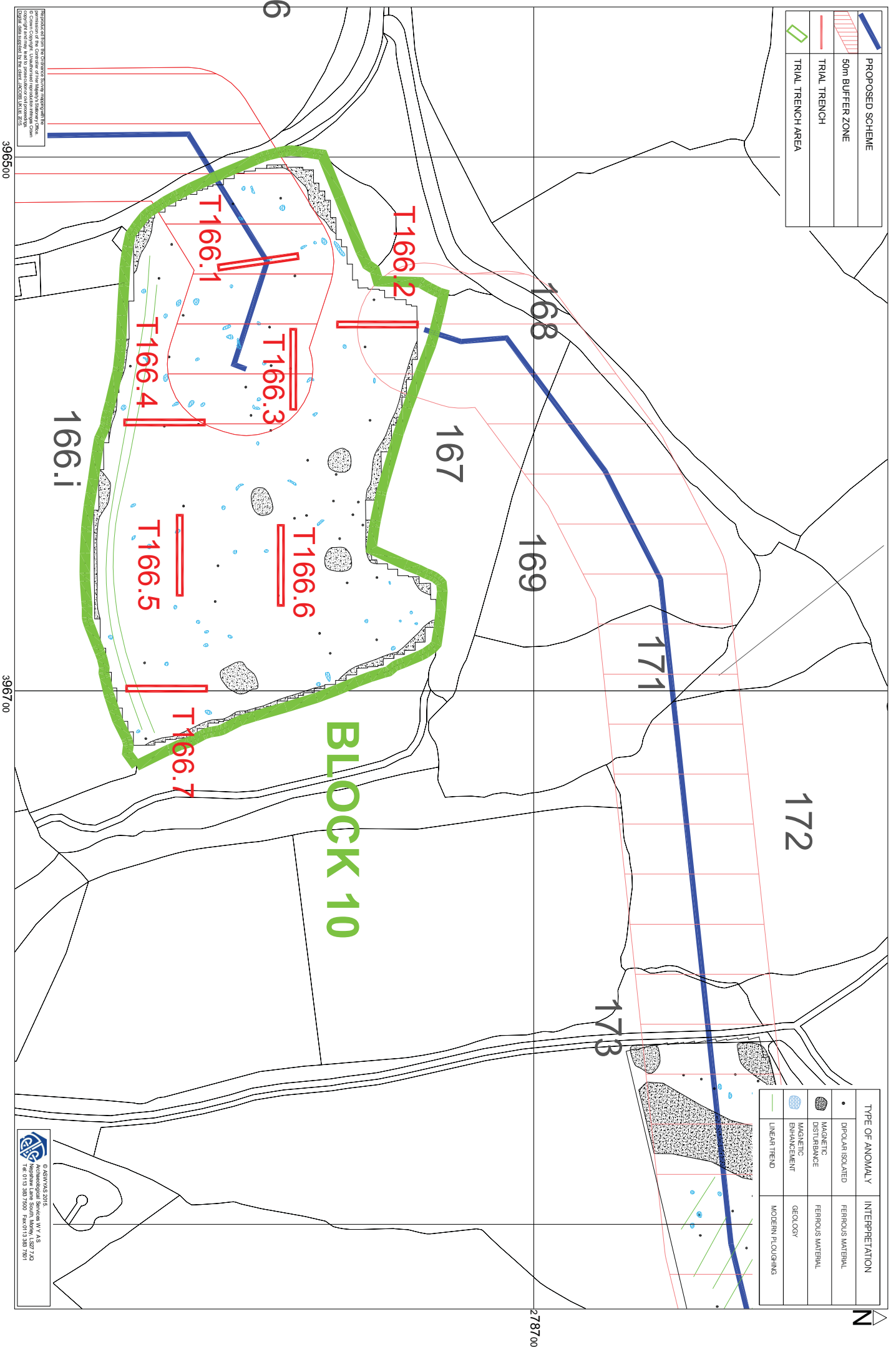
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Fig. 11. Trial trench locations Blocks 8 and 9 (1:1250 @ A3)





	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA






TYPE OF ANOMALY	INTERPRETATION
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	MAGNETIC DISTURBANCE FERROUS MATERIAL
	MAGNETIC BIVARIANCENT GEOLOGY
	LINEAR TREND MODERN PLOUGHING

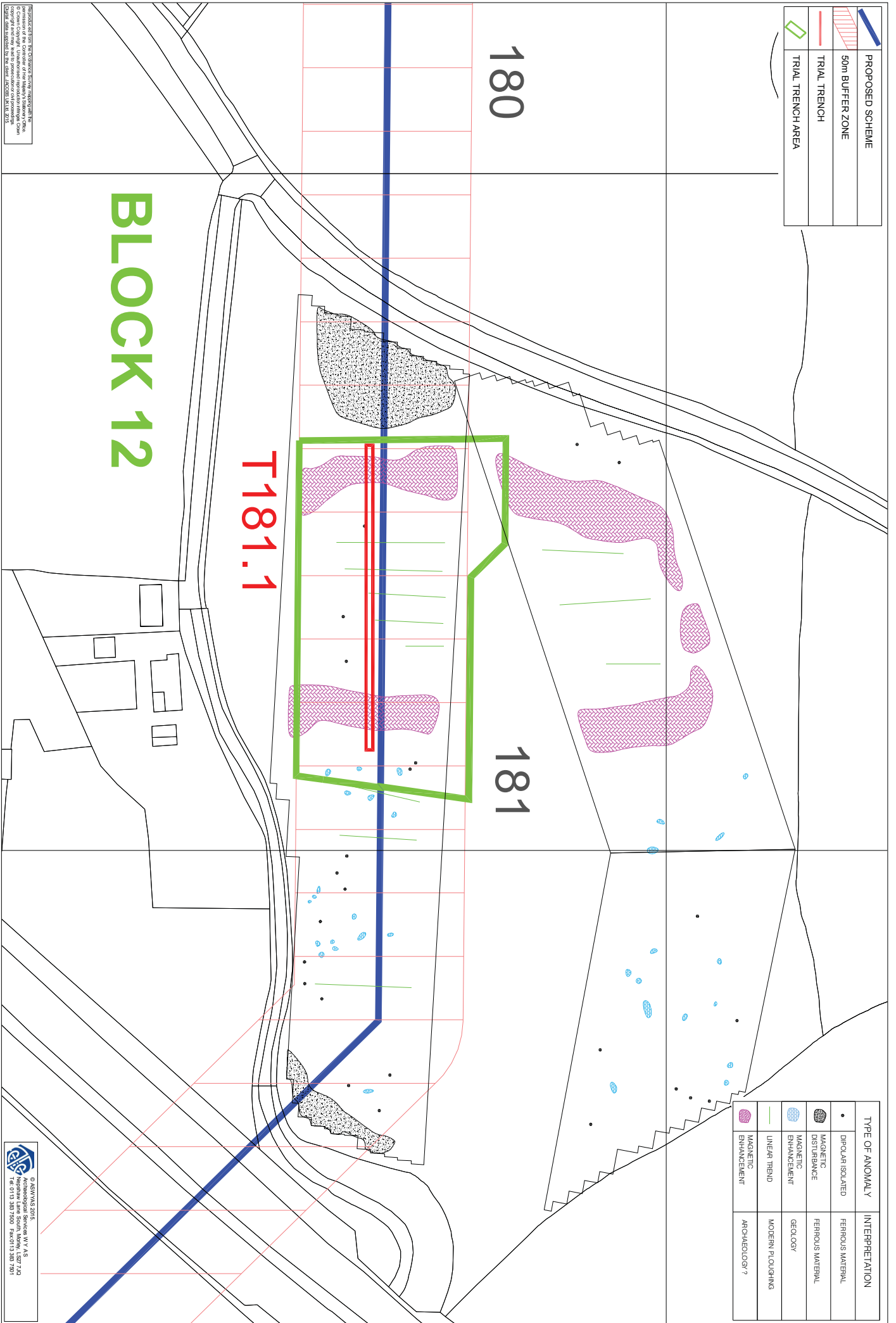


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Fig. 12. Trial trench locations Block 10 (1:1250 @ A3)

	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION
	DIPOLAR ISOLATED FERROUS MATERIAL
	MAGNETIC DISTURBANCE FERROUS MATERIAL
	MAGNETIC ENHANCEMENT GEOLOGY
	LINEAR TREND MODERN PLOUGHING
	MAGNETIC ENHANCEMENT ARCHAEOLOGY ?



BLOCK 12

T181.1

180

181

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Fig. 13. Trial trench locations Block 12 (1:1000 @ A3)

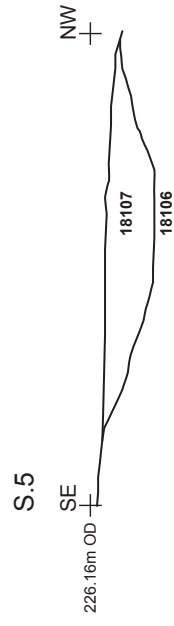
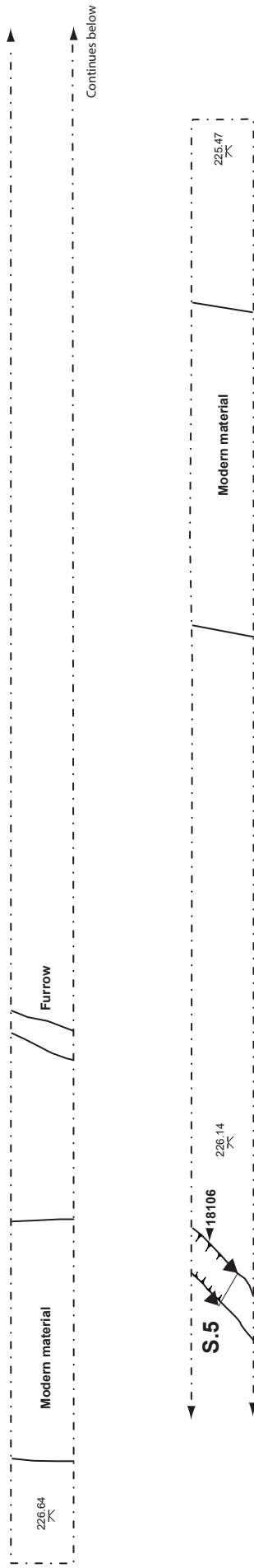











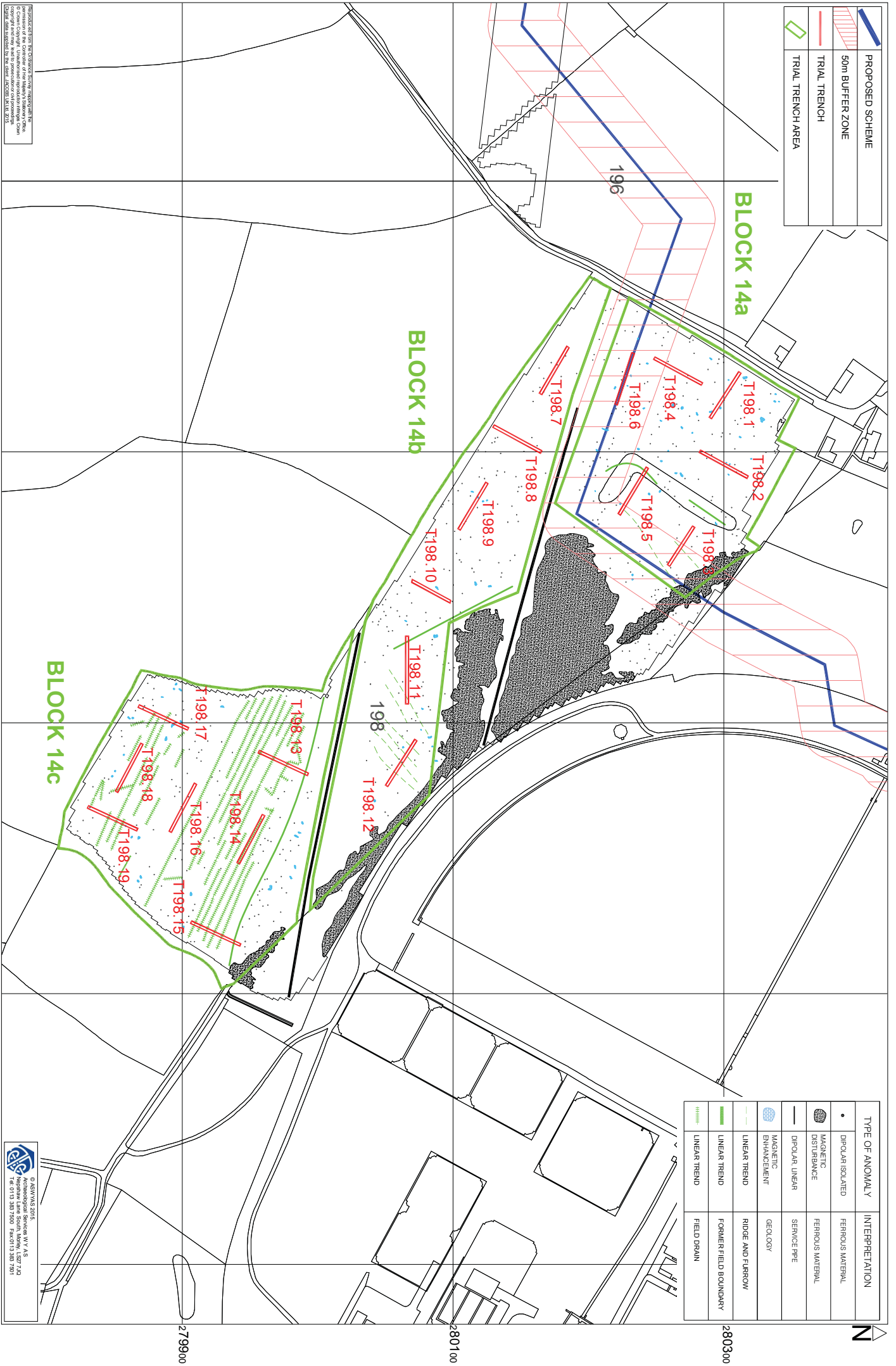


Fig. 14. Block 12; Trench 181.1. Plan and section

	PROPOSED SCHEME
	50m BUFFER ZONE
	TRIAL TRENCH
	TRIAL TRENCH AREA

TYPE OF ANOMALY	INTERPRETATION
	DIPOLAR ISOLATED FERROUS MATERIAL
	MAGNETIC DISTURBANCE FERROUS MATERIAL
	DIPOLAR LINEAR SERVICE PIPE
	MAGNETIC ENHANCEMENT GEOLOGY
	LINEAR TREND RIDGE AND FURROW
	LINEAR TREND FORMER FIELD BOUNDARY
	LINEAR TREND FIELD DRAIN



PROPOSED FOR THE OFFSHORE OIL AND GAS DEVELOPMENT IN THE
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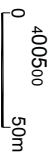


Fig. 15. Trial trench locations Blocks 14a, 14b and 14c (1:2500 @ A3)



Plate 1. General view of T1.1, looking south-west



Plate 2. General view of TP23.10, looking west



Plate 3. General view of T25.1, looking north



Plate 4. Ditch 5105 in T51.1, looking south-west



Plate 5. General view of TPI44.8, looking west



Plate 6. General view of TPI45.6, looking east



Plate 7. General view of T149.1, looking south-east



Plate 8. General view of T160.2, looking south



Plate 9. General view of T161.2, looking west



Plate 10. Sample section of T166.3, looking west



Plate 11. General view of T181.1, looking east



Plate 12. General view of T198.19, looking south-west