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MAP Archaeological Practice

Land at Black Bull Farm
Burley in Wharfedale
West Yorkshire

16/07870/MAO
Conditions 9 & 10

Archaeological Evaluation by Trial Trenching

05.54.2021

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Land at Black Bull Farm
Burley in Wharfedale
West Yorkshire

16/07870/MAO Conditions 9 & 10

MAP 05.54.2021

Archaeological Evaluation by Trial Trenching

Non-technical Summary

An Archaeological Evaluation by Trial Trenching was carried out by MAP Archaeological Practice Ltd., on land at Black Bull Farm, Burley in Wharfedale, West Yorkshire between March and April 2022.

The evaluation, which followed a previous programme of trial trenching carried out in 2016 during which a potential Roman marching camp was identified, was undertaken to assess the potential of archaeological remains and to allow West Yorkshire Archaeology Advisory Service, archaeological advisors to Bradford Metropolitan District Council, to make a reasoned decision regarding further mitigation which may be required prior to the development of the site.

No features relating to possible Roman activity was identified although an undated enclosure was identified close to the southern boundary of the site.

1. Introduction

1.1 This report sets out the results of an Archaeological Evaluation by Trial Trenching that was carried out by MAP Archaeological Practice Ltd. on land at Black Bull Farm, Burley in Wharfedale, West Yorkshire (centred on SE15737 46846) between the 21st of March and the 1st of April 2022.

1.2 The work was undertaken in order to inform West Yorkshire Archaeology Advisory Service, archaeological advisors to Bradford Metropolitan District Council, of the archaeological potential of this site, prior to the commencement of a residential development with associated infrastructure (16/07870/MAO).

1.3 Condition 9 attached to the Outline Planning Permission (16/07870/MAO) states that:

Within the areas outside the area identified on the Parameters Plan (drawing number 31620-301-P) as an "Area to come forward in accordance with the Heritage Design Brief", no development of a Phase, including Advanced Infrastructure and Enabling Work pursuant to Condition 6, shall take place until a Written Scheme of Archaeological Investigation (WSI) has been submitted to and approved in writing by the local planning authority for that Phase. The WSI shall set out a staged programme of archaeological investigation and reporting across that Phase that is proportionate in scale to identified potential for the unrecorded archaeological remains (areas of highest potential being Areas 1, 5, 10 and 14 in Figure 4 of Appendix K3 of the Environmental Statement (ref 50335/JG/JCx), GSB Survey Report No. G1606, February 2016 where these fall outside the area identified on the Parameters.

- 1.4 Condition 10 states that:
- No development of Phase, including Advanced Infrastructure and Enabling Works pursuant to Condition 6, incorporating land within the area identified on the Parameters Plan (drawing number 31620-301-P) as an "Area to come forward in accordance with the Heritage Design Brief", shall take place until a Written Scheme of Archaeological Investigation (WSI) for this area has been submitted to and approved in writing by the local planning authority. The WSI shall set out a programme for detailed investigation of this area and its immediate surroundings, against a defined research strategy and will include provision for local community involvement.*
- 1.5 A scheme of archaeological investigation by trial trenching was recommended by West Yorkshire Archaeology Advisory Service.
- 1.6 The work was carried out in accordance with the recommendations of the National Planning Policy Framework (February 2021) on 'Archaeology and Planning' and according to the Written Scheme of Investigation that was prepared by MAP Archaeological Practice Ltd.
- 1.7 MAP adhered to the general principles of both the ClfA 'Code of Conduct' (2021) and 'Standard and Guidance for Archaeological Field Evaluation' (2020) throughout the project.
- 1.8 The site code for the project was MAP 05.54.2021.
- 1.9 All maps within this report have been produced with permission of the Controller of Her Majesty's Stationary Office (© Crown copyright. License
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AL50453A). With additional mapping data derived from OpenStreetMap.
(<https://www.openstreetmap.org/copyright>).

1.10 All work was funded by Barratt David Wilson Homes.

2. Site Description (centred on SE15737 46846)

2.1 The site is located west of Burley in Wharfedale. It is bounded to the north by the A65 Ilkley Road, to the east by Wellfield Lane and Sun Lane and to the south by Sun Lane and Sun Lane Nature Reserve (Fig 1).

2.2 The Proposed Development Area currently consists of thirteen fields with a range of topography and vegetation cover.

2.3 The site consists of a bedrock geology of Millstone Grit and a Till superficial deposits (British Geological Survey, 2022). The soils of the site are described as slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils (Soilscapes, 2022).

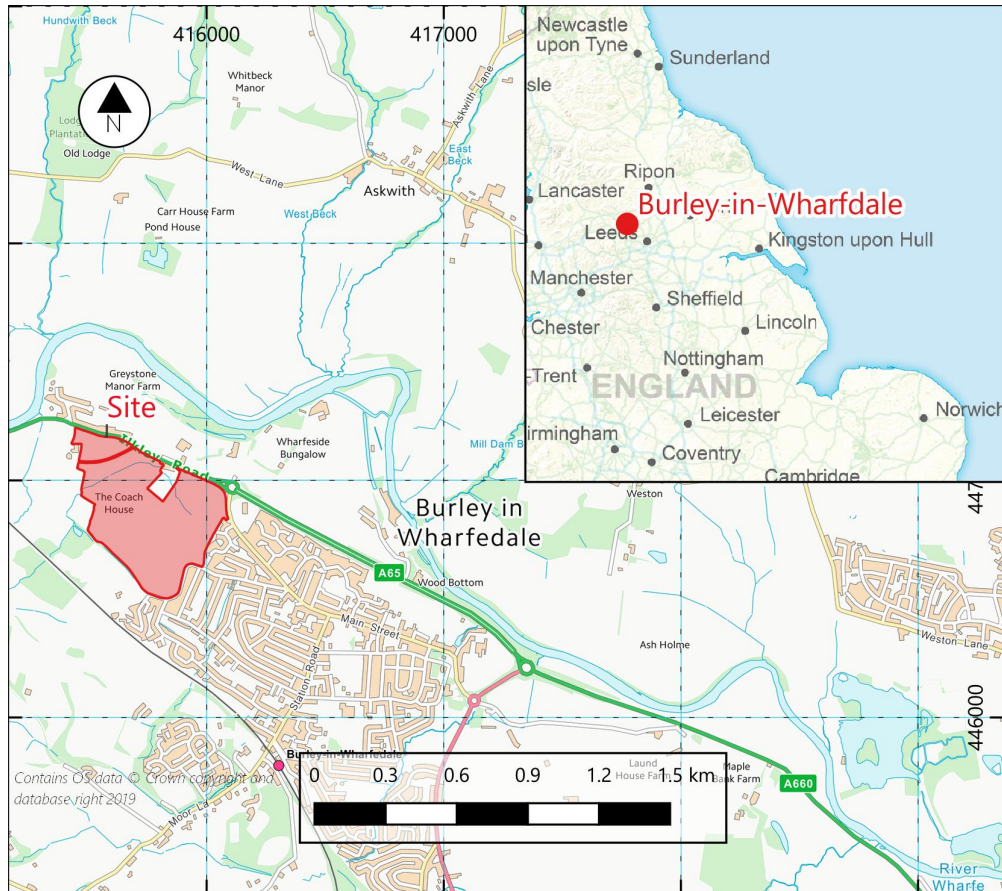


Figure 1. Site Location.

3. Archaeological and Historical Background

3.1 Although evidence of prehistoric activity in the immediate vicinity of the site is scant, extensive activity has been identified in the wider area, such as Rombalds Moor where enclosure complexes, carved stones, burial cairns, and stone circles have been recorded. Mesolithic activity has also been identified on river terraces near Otley, to the east of Burley in Wharfedale.

3.2 The site lies approximately 4km east of Ilkley Roman fort and approximately 600m north of the postulated route of a Roman road which connected Ilkley and Tadcaster.

- 3.3 Burley in Wharfedale is likely to have pre-conquest origins, with a reference being made to 'Burghley' being made in a Saxon charter dating to around 872 AD. Despite early references, archaeological evidence relating to Anglo-Saxon or early medieval activity is scant.
- 3.4 A Desk Based Assessment (NAA. 2016) was carried out in respect of the Outline Planning Permission in 2016. The assessment concluded that an evaluation was necessary in order to assess the potential of prehistoric or Roman archaeology being present on the site. Geophysical Survey and Trial Trenching was recommended.
- 3.5 A Geophysical Survey, carried out in 2016 (SUMO. 2016), identified a number of ditch like anomalies of potential archaeological origin, including three sides of a 'playing-card' shaped enclosure and a possible trackway. Service pipes and evidence of ploughing were also identified in the data.
- 3.6 Following the results of the DBA and Geophysical survey, NAA undertook a targeted scheme of trenching across the three visible sides and the central area of the 'Playing Card' enclosure. They encountered a diminished outer bank 0.2m high by 5m wide, flanked by a small ditch measuring 2.1m wide by 0.45m deep; with a singular prehistoric flint recovered from the excavations. In summary it was concluded that this earthwork's limited remains and stature were owing to an abrupt cessation of works. Perhaps never achieving its full inception and hence a lack of material culture. The evaluation showed that the enclosure had an outer bank approximately 0.2m high and up to 5m wide which had been formed with topsoil and redeposited clay. The bank flanked a small ditch which measured a
-

maximum of 2.1m wide and 0.45m deep, excavated into the natural clay, although seemingly abandoned prior to completion. No evidence of archaeological features was identified from the interior of the enclosure. The only archaeological artefact recovered was a prehistoric flint flake and as such no evidence to confirm a Roman date of construction of the enclosure was achieved.

- 3.7 Commenting on the results of the evaluation WYAAS (2016) stated that 'Nationally significant remains may be present in one location within the application site. This is the site of a possible Roman military marching camp. If proven this would be the only confirmed site of this type in West Yorkshire'.
- 3.8 Roman marching camps are common in northern England although rare in West Yorkshire (Welfare & Swan. 1995). The temporary camps were used as overnight accommodation by marching soldiers and also served as temporary work camps. Marching camps typically consist of a 'playing card' shaped enclosure defined by a single bank and external ditch, usually with the typically Roman 'V' shaped profile. Entrances were usually present on all four sides although as many as twelve have been recorded. The average marching camp measures between 1-1.5 ha although they can be as large as 23ha.
- 3.9 The 'playing card' shaped enclosure investigated during the aforementioned evaluation conformed to the normal typology for a marching camp for a number of reasons including its area of 1.2ha, its single bank and ditch which was identified on three sides, and the apparent lack of any internal features.
-

4. Aims and Objectives

4.1 The aim of the Archaeological Trial Trenching was to determine the presence/absence, nature, date, quality of survival and importance of archaeological deposits to enable an assessment of the potential and significance of the archaeology to be made.

4.2 The aim of the work was not to replicate the work carried out by NAA in 2016, more to assess areas of potential archaeological activity, which were not previously investigated.

4.3 In line with the Research Agenda for the Iron Age and Romano-British Periods in West Yorkshire (Chadwick, 2009) and the aims of previous evaluation (NAA, 2016) the work has the potential to inform the following research questions and priorities.

- To establish whether archaeological features are present within the 'playing card-shaped' enclosure
- To establish, if possible, the date of the enclosure and any associated features
- To assess the immediate environs of the 'playing card-shaped' enclosure and other potential archaeological anomalies highlighted in the results of the Geophysical Survey.

5. Methodology

5.1 Excavation

5.1.1 Ninety-seven trenches, ninety-one of them measuring 40m x 2m and six of them measuring 25m x 4m were located (Fig. 2) and latterly levelled using a Trimble R8s GPS rover. The trenches were positioned across the site to investigate geophysical anomalies but also areas which appear void of archaeology in the results of the survey.

5.1.2 Once positioned the trenches were excavated using a tracked excavator fitted with a 2m wide toothless bucket. In each trench topsoil was judiciously excavated down to the level of buried archaeological features or natural geology, operating under close archaeological supervision. The exposed surfaces were cleaned appropriately, and any subsequent excavation was carried out by hand.

5.1.3 Eight trenches, out of the originally proposed one-hundred and five, with consultation with West Yorkshire Archaeology Advisory Service, were not excavated. Trenches 1, 2, 3 and 66 were not excavated on health and safety grounds due to abundance of utility services within the area. Trenches 61, 63, 64 and 65 were not excavated due to the presence of protected orchids.

5.1.4 After consultation with West Yorkshire Archaeology Advisory Service trench 55 was extended south across the southern corner of the 'playing card-shaped' enclosure in order to better characterise the earthworks.

5.1.5 MAP adhered to the general principles of the ClfA Code of Conduct (2021) throughout the project and to the ClfA “Standards and Guidance for Archaeological Field Evaluations” (2020).

5.2 On-site Recording

5.2.1 All ninety-seven trenches were recorded on MAP’s pro forma trench sheets. The photographic record comprised of three-hundred and forty-seven digital photographs, taken in jpeg and RAW formats. The photographic record included film registers, shot number, location of shot, direction of shot and brief description (Appendix 2).

6. Results

6.1 Excavation of the ninety-seven trenches revealed a deposit of topsoil in all of the trenches along with a deposit of sub soil forty-one of the trenches. The total depths of excavation, depths of the topsoil and elevations of all ninety-seven trial trenches are displayed in the below table along with their orientation within the site.

| <i>Trench</i> | <i>Elevation</i> | <i>Depth of Excavation</i> | <i>Depth of Topsoil</i> | <i>Depth of Subsoil</i> |
|---------------|--|----------------------------|-------------------------|-------------------------|
| <i>Tr.4</i> | North – 68.84m AOD South –69.35 m AOD | 0.40- 0.50m | 0.30m | 0.10- 0.20m |
| <i>Tr.5</i> | North-West – 68.97m AOD South-East – 68.83m AOD | 0.35m | 0.20m | 0.15m |
| <i>Tr.6</i> | East – 68.67m AOD West – 68.22m AOD | 0.40- 0.50m | 0.30m | 0.10- 0.20m |
| <i>Tr.7</i> | East – 69.28m AOD West – 68.57m AOD | 0.30m | 0.25m | 0.05m |
| <i>Tr.8</i> | East – 69.64m AOD | 0.35- | 0.25- | 0.00- |

| | | | | |
|---------------|--------------------------|-------|-------|-------|
| | West – 70.26m AOD | 0.37m | 0.27m | 0.10m |
| Tr.9 | North – 69.97m AOD | 0.28- | 0.19- | 0.09- |
| | South – 69.73m AOD | 0.39m | 0.26m | 0.10m |
| Tr.10 | East – 80.11m AOD | 0.43- | 0.23- | 0.20- |
| | West – 79.74m AOD | 0.52m | 0.24m | 0.24m |
| Tr. 11 | North – 69.22m AOD | 0.37- | 0.12- | 0.15- |
| | South – 68.05m AOD | 0.54m | 0.24m | 0.20m |
| Tr. 12 | East – 69.37m AOD | 0.30- | 0.20- | 0.00- |
| | West – 68.71m AOD | 0.34m | 0.27m | 0.10m |
| Tr. 13 | North-East – 68.50m AOD | 0.26- | 0.19- | 0.06- |
| | South-West – 68.62m AOD | 0.31m | 0.20m | 0.12m |
| Tr.14 | North – 68.45m AOD | 0.25- | 0.19- | 0.06- |
| | South – 68.07m AOD | 0.39m | 0.24m | 0.15m |
| Tr.15 | East – 68.00m AOD | 0.30m | 0.16m | 0.12- |
| | West – 66.68m AOD | | | 0.14m |
| Tr.16 | East – 67.16m AOD | 0.40- | 0.22- | 0.18- |
| | West – 67.54m AOD | 0.59m | 0.28m | 0.31m |
| Tr.17 | North-West – 67.82m AOD | 0.45- | 0.25- | 0.20- |
| | South-East – 66.79m AOD | 0.57m | 0.33m | 0.24m |
| Tr.18 | North-East – 66.13m AOD | 0.33- | 0.26- | - |
| | South-West – 66.33m AOD | 0.35m | 0.33m | - |
| Tr.19 | North-West – 66.65m AOD | 0.32- | 0.27- | - |
| | South-East – 66.70m AOD | 0.39m | 0.32m | - |
| Tr.20 | North-East – 66.86m AOD | 0.30- | 0.23m | 0.00- |
| | South-West – 68.09m AOD | 0.32m | | 0.07m |
| Tr.21 | North-West – 67.42m AOD | 0.30- | 0.30m | - |
| | South-East – 68.54m AOD | 0.40m | | - |
| Tr.22 | North-East – 67.75m AOD | 0.33- | 0.30- | 0.00- |
| | South-West – 69.78m AOD | 0.43m | 0.34m | 0.09m |
| Tr.23 | North-West – 69.05m AOD | 0.30- | 0.25m | - |
| | South-East – 69.53m AOD | 0.31m | | - |
| Tr.24 | North-West – 69.47m AOD | 0.31- | 0.29- | - |
| | South-South – 70.18m AOD | 0.36m | 0.31m | - |
| Tr.25 | North-West – 70.68m AOD | 0.29- | 0.28- | 0.00- |
| | South-East – 71.27m AOD | 0.54m | 0.29m | 0.17m |
| Tr.26 | North-East – 71.63m AOD | 0.32- | 0.32- | 0.00- |
| | South-West – 69.95m AOD | 0.55m | 0.38m | 0.17m |

| | | | | |
|--------------|-------------------------|-------|-------|-------|
| Tr.27 | East – 66.37m AOD | 0.29- | 0.22- | - |
| | West – 66.02m AOD | 0.30m | 0.23m | - |
| Tr.28 | East – 68.23m AOD | 0.28- | 0.22- | - |
| | West – 67.05m AOD | 0.45m | 0.33m | - |
| Tr.29 | East – 68.74m AOD | 0.32- | 0.22- | 0.07- |
| | West – 67.72m AOD | 0.41m | 0.34m | 0.09m |
| Tr.30 | North – 66.37m AOD | 0.27- | 0.21- | - |
| | South – 67.43m AOD | 0.33m | 0.26m | - |
| Tr.31 | North – 68.84m AOD | 0.32- | 0.28m | - |
| | South – 69.48m AOD | 0.33m | | - |
| Tr.32 | East – 70.33m AOD | 0.40m | 0.30- | - |
| | West – 69.72m AOD | | 0.36m | - |
| Tr.33 | East – 70.10m AOD | 0.30- | 0.30m | - |
| | West – 69.58m AOD | 0.37m | | - |
| Tr.34 | North – 70.29m AOD | 0.33- | 0.23- | 0.06- |
| | South – 71.63m AOD | 0.40m | 0.34m | 0.10m |
| Tr.35 | North – 70.54m AOD | 0.37- | 0.28- | - |
| | South – 72.26m AOD | 0.40m | 0.30m | - |
| Tr.36 | North-East – 78.38m AOD | 0.26- | 0.26m | - |
| | South-West – 74.31m AOD | 0.35m | | - |
| Tr.37 | North-West – 75.06m AOD | 0.28- | 0.23- | 0.00- |
| | South-East – 74.81m AOD | 0.66m | 0.27m | 0.39m |
| Tr.38 | North-West – 77.97m AOD | 0.24- | 0.24m | - |
| | South-East – 80.00m AOD | 0.31m | | - |
| Tr.39 | North-West – 78.90m AOD | 0.25- | 0.25- | - |
| | South-East – 78.79m AOD | 0.28m | 0.28m | - |
| Tr.40 | North-East – 78.65m AOD | 0.22- | 0.22- | - |
| | South-West – 79.85m AOD | 0.26m | 0.26m | - |
| Tr.41 | North-West – 80.04m AOD | 0.30- | 0.30- | - |
| | South-East – 79.28m AOD | 0.31m | 0.31m | - |
| Tr.42 | North-East – 75.23m AOD | 0.25- | 0.24- | - |
| | South-West – 78.88m AOD | 0.28m | 0.25m | - |
| Tr.43 | North-West – 76.75m AOD | 0.30- | 0.30- | 0.00- |
| | South-East – 77.49m AOD | 0.41m | 0.31m | 0.10m |
| Tr.44 | North-East – 77.46m AOD | 0.28- | 0.24- | - |
| | South-West – 80.17m AOD | 0.31m | 0.26m | - |
| Tr.45 | North-West – 79.35m AOD | 0.20- | 0.20- | - |

| | | | | |
|--------------|-------------------------|-------|-------|-------|
| | South-East – 77.30m AOD | 0.36m | 0.29m | - |
| Tr.46 | North – 68.06m AOD | 0.40m | 0.30m | - |
| | South – 68.52m AOD | | | - |
| Tr.47 | East – 69.48m AOD | 0.37- | 0.28m | 0.09- |
| | West – 68.62m AOD | 0.40m | | 0.12m |
| Tr.48 | East – 69.00m AOD | 0.28- | 0.17- | 0.11- |
| | West – 68.15m AOD | 0.36m | 0.23m | 0.13m |
| Tr.49 | North – 68.91m AOD | 0.45- | 0.30m | - |
| | South – 69.92m AOD | 0.50m | | - |
| Tr.50 | North – 71.19m AOD | 0.42- | 0.18- | 0.24- |
| | South – 71.45m AOD | 0.74m | 0.20m | 0.54m |
| Tr.51 | East – 70.87m AOD | 0.36- | 0.30m | - |
| | West – 71.89m AOD | 0.45m | | - |
| Tr.52 | East – 74.78m AOD | 0.33- | 0.23- | 0.08- |
| | West – 72.95m AOD | 0.56m | 0.25m | 0.33m |
| Tr.53 | East – 74.63m AOD | 0.33- | 0.18- | 0.14- |
| | West – 74.57m AOD | 0.36m | 0.19m | 0.18m |
| Tr.54 | East – 75.13m AOD | 0.47- | 0.21- | 0.17- |
| | West – 74.10m AOD | 0.69m | 0.30m | 0.48m |
| Tr.55 | North – 74.85m AOD | 0.34- | 0.20- | 0.14- |
| | South – 74.72m AOD | 0.39m | 0.23m | 0.16m |
| Tr.56 | North-West – 76.17m AOD | 0.28- | 0.19- | 0.09- |
| | South-East – 76.87m AOD | 0.41m | 0.20m | 0.21m |
| Tr.57 | North – 76.55m AOD | 0.33- | 0.20- | 0.13- |
| | South – 76.30m AOD | 0.38m | 0.21m | 0.17m |
| Tr.58 | North-West – 76.12m AOD | 0.29- | 0.22m | 0.07- |
| | South-East – 77.22m AOD | 0.38m | | 0.09m |
| Tr.59 | North – 77.48m AOD | 0.31- | 0.23- | 0.06- |
| | South – 76.83m AOD | 0.38m | 0.25m | 0.15m |
| Tr.60 | North-West – 68.67m AOD | 0.43- | 0.31- | - |
| | South-East – 67.38m AOD | 0.50m | 0.36m | - |
| Tr.62 | North – 68.41m AOD | 0.36- | 0.29- | - |
| | South – 68.24m AOD | 0.38m | 0.36m | - |
| Tr.67 | North-West – 68.51m AOD | 0.31- | 0.23- | 0.00- |
| | South-East – 68.55m AOD | 0.49m | 0.25m | 0.20m |
| Tr.68 | East – 67.88m AOD | 0.30- | 0.27- | - |
| | West – 68.29m AOD | 0.35m | 0.30m | - |

| | | | | |
|--------------|--|----------------|----------------|----------------|
| Tr.69 | North-West – 68.55m AOD South-East – 68.82m AOD | 0.32- 0.38m | 0.24- 0.26m | 0.08- 0.12m |
| Tr.70 | North-West – 67.97m AOD South-East – 68.24m AOD | 0.29- 0.31m | 0.24- 0.31m | - - |
| Tr.71 | North – 68.45m AOD South – 68.45m AOD | 0.33- 0.44m | 0.24- 0.36m | - - |
| Tr.72 | North-West – 68.06m AOD South-East – 68.36m AOD | 0.36- 0.37m | 0.32m | - - |
| Tr.73 | North – 68.09m AOD South – 68.48m AOD | 0.30m | 0.30m | - - |
| Tr.74 | East – 68.53m AOD West – 67.85m AOD | 0.35m | 0.35m | - - |
| Tr.75 | North – 67.93m AOD South – 68.78m AOD | 0.35m | 0.35m | - - |
| Tr.76 | East – 69.60m AOD West – 68.66m AOD | 0.35- 0.40m | 0.35- 0.40m | - - |
| Tr.77 | East – 70.17m AOD West – 69.01m AOD | 0.35- 0.40m | 0.35- 0.40m | - - |
| Tr.78 | North – 69.42m AOD South – 70.47m AOD | 0.35- 0.40m | 0.35- 0.40m | - - |
| Tr.79 | North – 71.35m AOD South – 71.99m AOD | 0.35m | 0.35m | - - |
| Tr.80 | East – 71.21m AOD West – 70.54m AOD | 0.40m | 0.40m | - - |
| Tr.81 | North – 69.59m AOD South – 70.48m AOD | 0.25- 0.30m | 0.25- 0.30m | - - |
| Tr.82 | East – 72.26m AOD West – 71.37m AOD | 0.35m | 0.35m | - - |
| Tr.83 | East – 70.46m AOD West – 69.81m AOD | 0.29- 0.32m | 0.23- 0.25m | - - |
| Tr.84 | North – 68.90m AOD South – 69.56m AOD | 0.32- 0.34m | 0.25- 0.29m | - - |
| Tr.85 | North – 68.96m AOD South – 69.71m AOD | 0.24- 0.26m | 0.20- 0.26m | - - |
| Tr.86 | North – 71.08m AOD South – 71.78m AOD | 0.25- 0.32m | 0.19- 0.28m | 0.00- 0.06m |
| Tr.87 | East – 70.98m AOD | 0.30- 0.30- | 0.30- | - |

| | | | | |
|---------------|-------------------------|-------|-------|-------|
| | West – 70.09m AOD | 0.37m | 0.34m | - |
| Tr.88 | North – 70.50m AOD | 0.28- | 0.22- | 0.00- |
| | South – 71.21m AOD | 0.50m | 0.28m | 0.14m |
| Tr.89 | East – 70.97m AOD | 0.28- | 0.21- | 0.00- |
| | West – 70.30m AOD | 0.41m | 0.24m | 0.17m |
| Tr.90 | North-West – 69.97m AOD | 0.36m | 0.28- | - |
| | South-East – 75.64m AOD | | 0.36m | - |
| Tr.91 | North – 73.22m AOD | 0.25- | 0.25- | - |
| | South – 75.56m AOD | 0.28m | 0.28m | - |
| Tr.92 | East – 75.44m AOD | 0.32- | 0.28- | - |
| | West – 73.18m AOD | 0.34m | 0.34m | - |
| Tr.93 | East – 76.75m AOD | 0.30- | 0.30- | - |
| | West – 76.17m AOD | 0.33m | 0.33m | - |
| Tr.94 | North-West – 76.59m AOD | 0.24- | 0.24- | 0.00- |
| | South-East – 77.39m AOD | 0.43m | 0.25m | 0.18m |
| Tr.95 | North – 74.32m AOD | 0.27- | 0.27- | - |
| | South – 77.07m AOD | 0.40m | 0.32m | - |
| Tr.96 | North-West – 73.25m AOD | 0.26- | 0.26- | - |
| | South-East – 73.34m AOD | 0.38m | 0.30m | - |
| Tr.97 | North-East – 77.90m AOD | 0.27- | 0.27- | - |
| | South-West – 74.98m AOD | 0.32m | 0.32m | - |
| Tr.98 | East – 77.97m AOD | 0.27- | 0.26- | 0.00- |
| | West – 77.88m AOD | 0.38m | 0.27m | 0.12m |
| Tr.99 | North – 79.77m AOD | 0.33- | 0.26- | 0.00- |
| | South – 77.58m AOD | 0.35m | 0.28m | 0.07m |
| Tr.100 | North – 79.91m AOD | 0.28- | 0.28- | - |
| | South – 80.87m AOD | 0.29m | 0.29m | - |
| Tr.101 | East – 79.74m AOD | 0.28- | 0.28- | - |
| | West – 80.89m AOD | 0.30m | 0.30m | - |
| Tr.102 | North – 81.11m AOD | 0.20- | 0.20- | - |
| | South – 81.53m AOD | 0.32m | 0.32m | - |
| Tr.103 | North – 79.09m AOD | 0.26- | 0.26- | 0.00- |
| | South – 80.91m AOD | 0.36m | 0.32m | 0.04m |
| Tr.104 | East – 80.16m AOD | 0.28- | 0.28- | - |
| | West – 77.59m AOD | 0.39m | 0.32m | - |
| Tr.105 | North-East – 77.78m AOD | 0.26- | 0.26- | - |
| | South-West – 75.51m AOD | 0.33m | 0.33m | - |

- 6.2 Features which were considered to be of potential archaeological origin were identified within trenches 10, 57, 59, 90-92 and 97. All other trenches were devoid of features, other than agricultural furrows, land drains, and a trackway in Trench 48 which was considered to be of Post-Medieval or modern construction. A topsoil consisting of a mid-grey-brown sandy silt was identified across the site, with a mid-yellow-brown silty clay subsoil identified across much of the site. Natural deposits consisted primarily of sandy clays.
- 6.3 Trench 10, located close to the north-western corner of the site, contained a north-east to south-west aligned gully [1004], located at the eastern end of the trench. The gully had a wide flat based 'U' shaped profile, measuring 0.90m wide by 0.26m deep, which contained a single fill of pale-grey-brown mottled with mid-yellow-brown fine silty clay. An environmental sample taken from the feature contained a small amount of abraded oak charcoal. No datable material was identified within the feature. This feature was not identified elsewhere.
- 6.4 Trench 55 was positioned close to the south-eastern corner of the aforementioned earthworks and later extended to further characterise the earthworks. The profile of the trench however did not identify any conclusive bank material, nor were cut features which may have represented a former ditch, identified.
- 6.5 Trenches 57 and 59 were located close to the southern boundary of the site, to the south of earthworks identified in the 2016 evaluation. The
-

trenches were positioned in order to assess a slightly curved north-east to south-west aligned linear anomaly, identified in the results of the Geophysical Survey. The ditch, which measured between 1.54 and 2.24m wide and 0.48m and 0.25m deep, had an almost flat based 'U' shaped profile. The single fill of the ditch, a mid-orange-brown sandy clay contained no archaeological material, a small amount of degraded oak charcoal, which was mixed with clinker, was recovered from an environmental sample.

- 6.6 Trenches 90 and 91 were located to the east of 57 and 57, positioned in order to assess a geophysical anomaly which is likely to be a continuation of that identified within trenches 57 and 59. The feature identified within the trenches measured between 1.13m and 1.35m wide and 0.27m and 0.49m deep. The fill of the feature, a mid-grey-brown sandy clay, contained no archaeological material. Environmental samples taken during excavation contained only a trace amount of charred detritus, with coal and clinker identified.
- 6.7 Trenches 92, 97 and 105 were located to the south-east of 90 and 91, positioned in order to assess a north-west to south-east aligned geophysical anomaly. The feature, which was identified in all three trenches, measured between 1.16m and 1.7m wide and between 0.28 and 0.5m deep. the feature contained two main fills, a mid-grey-brown sandy clay primary fill, and an upper fill consisting of a light red-brown silty clay. A small amount of well-preserved alder charcoal was identified within an environmental sample taken from the feature although no further archaeological material was identified.

7. Conclusions

- 7.1 The archaeological evaluation has illustrated an absence of significant archaeological features across the majority of the site. It is likely that the site has been historically utilised for agricultural purposes with furrows of potential medieval or post-medieval date, being identified in a large proportion of the trenches.
- 7.2 Evaluation within the interior of the potential 'marching camp' failed to identify any archaeological finds, features or deposits. The extension of trench 55, across the earthworks, did not identify any features comparable to those identified within the 2016 evaluation. No material of Roman date was recovered anywhere on the site, nor has an entrance into the enclosure been identified. Non the less, the potential Roman origin of the feature should not be dismissed. The feature does conform to a number of characteristics typical of Roman period marching camp including its 'playing card' shape, area and apparent bank and ditch. The lack of internal features and material culture may be a reflection of the temporary, or potentially unused, nature of such a site.
- 7.3 The trackway identified in Trench 48 is visible on the Yorkshire County Series map of 1851 (fig. 13). The map depicts three trackways running on a north to south, east to west and north-east to south-west orientation. The north to south trackway almost exclusively follows the eastern boundary of the potential 'marching camp'. It is interesting to note that the metallised surface identified in Trench 48, was not present elsewhere along the length of the trackway, nor was it present in previous evaluation trenches.
-

7.4 The feature identified in trenches 57, 59, 90-92 and 97 contained no immediately datable archaeological material although a fragment of alder charcoal, which was recovered from a bulk sample, would be suitable for radiocarbon dating. The orientation of the feature, which is likely to represent an agricultural enclosure, differs to the earthwork features and also the present field system, all of which roughly align to the A65 Ilkley Road, which bounds the site to the north, and also the Roman Road which is located some 600m to the south. It is therefore possible that the enclosure may represent the earliest feature on the site, although at time of writing this is inconclusive.

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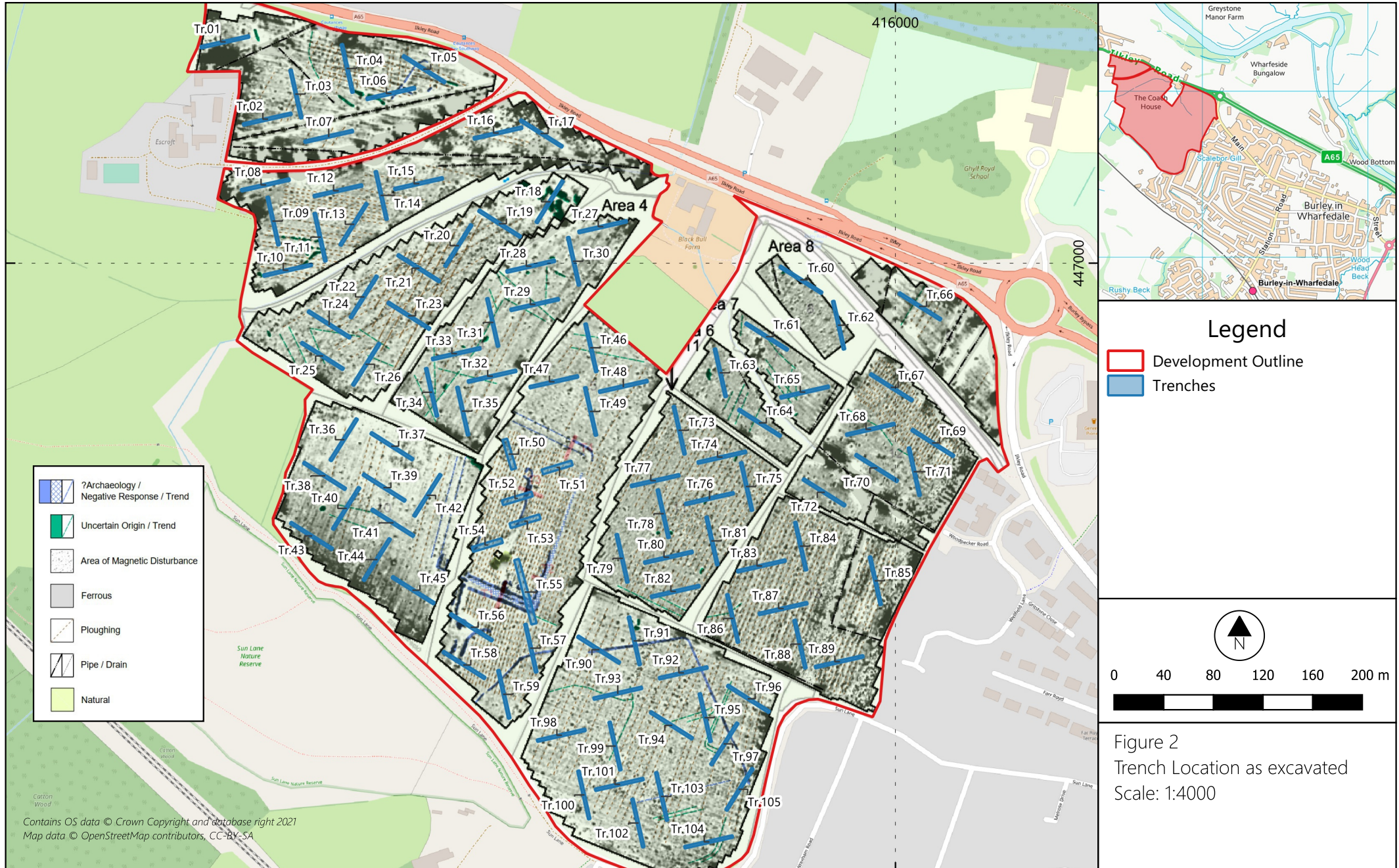


Figure 2
Trench Location as excavated
Scale: 1:4000

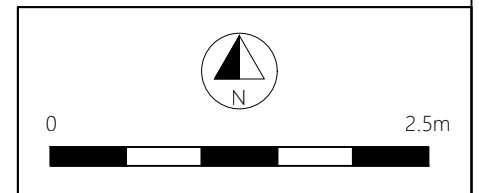
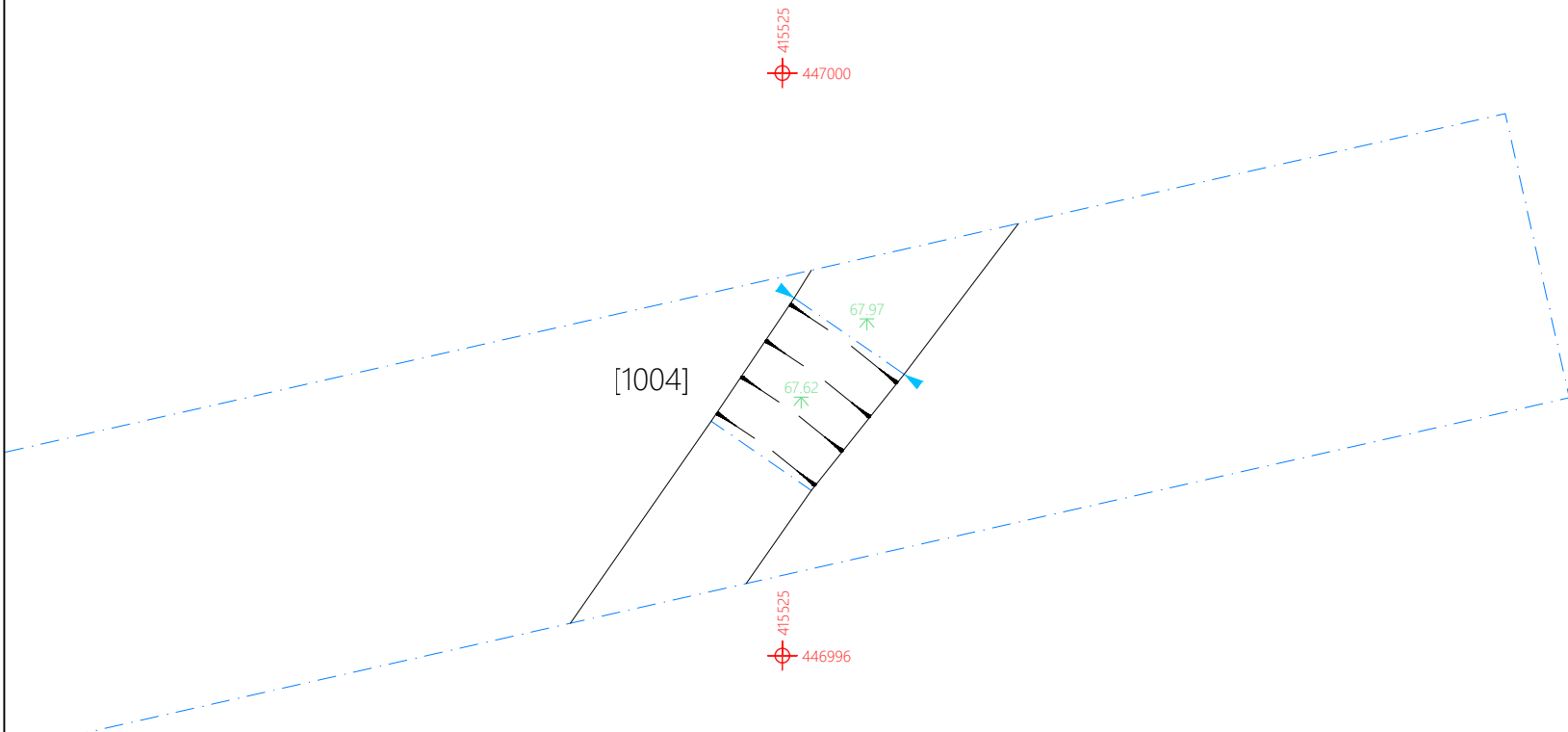
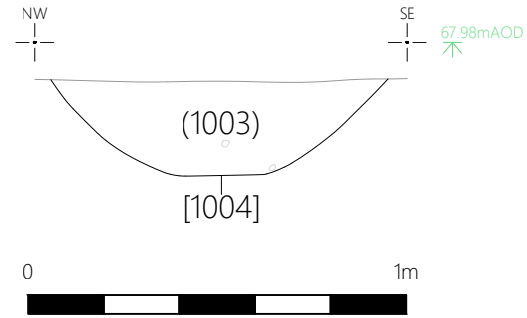
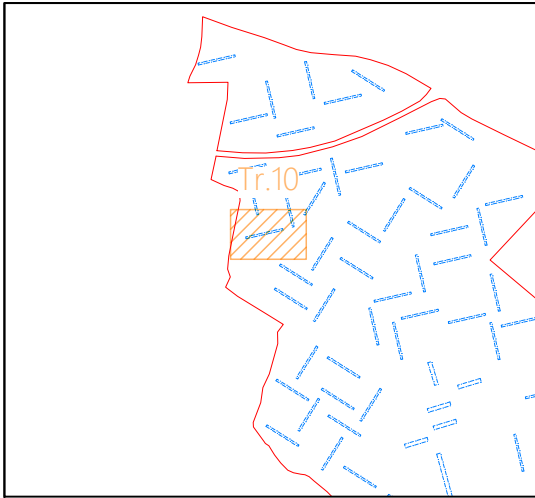


Figure 3
Trench 10
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

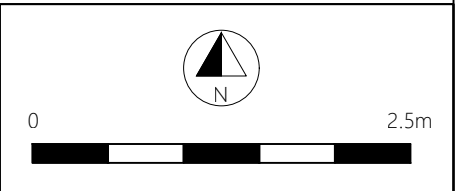
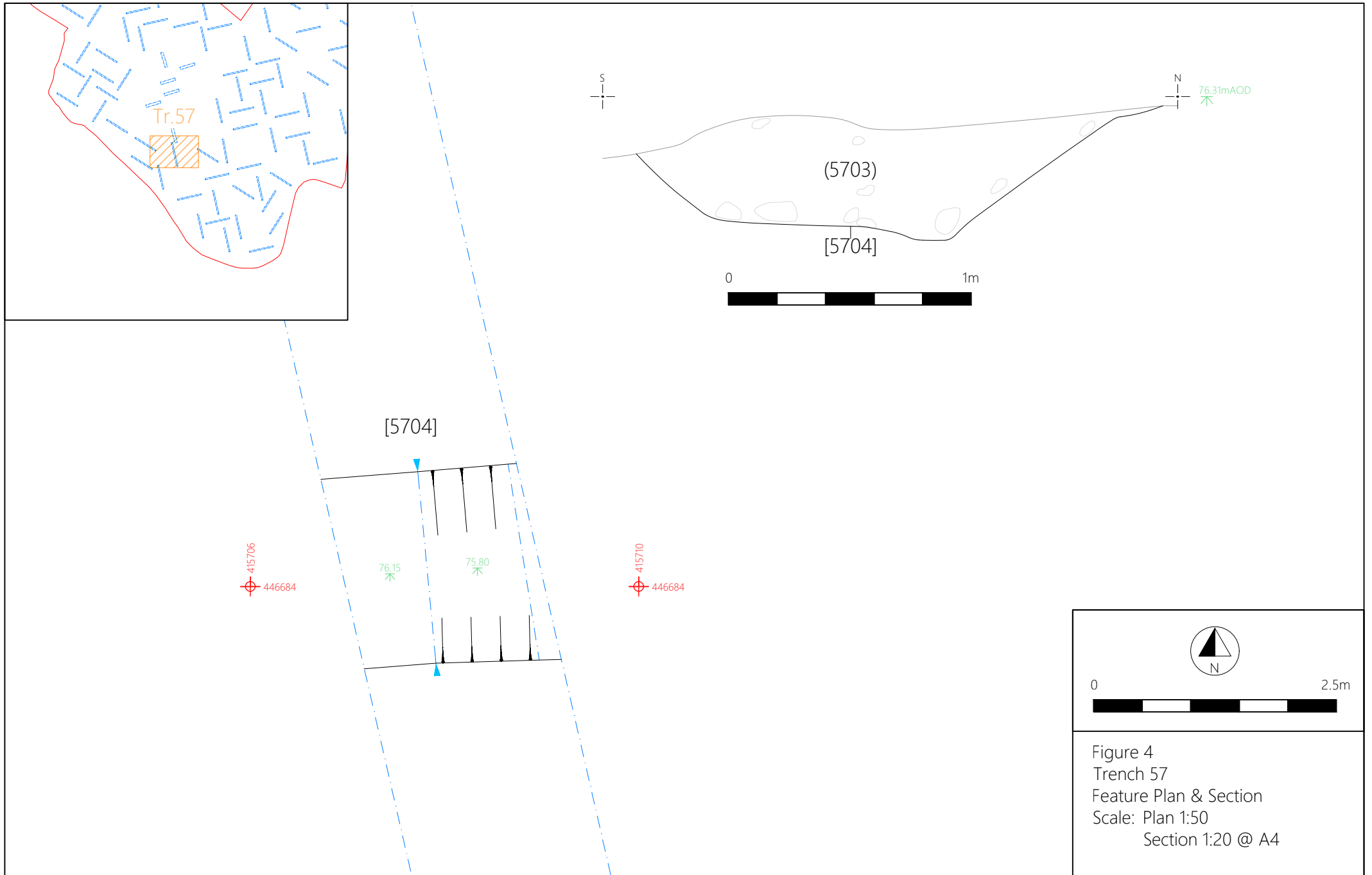


Figure 4
Trench 57
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

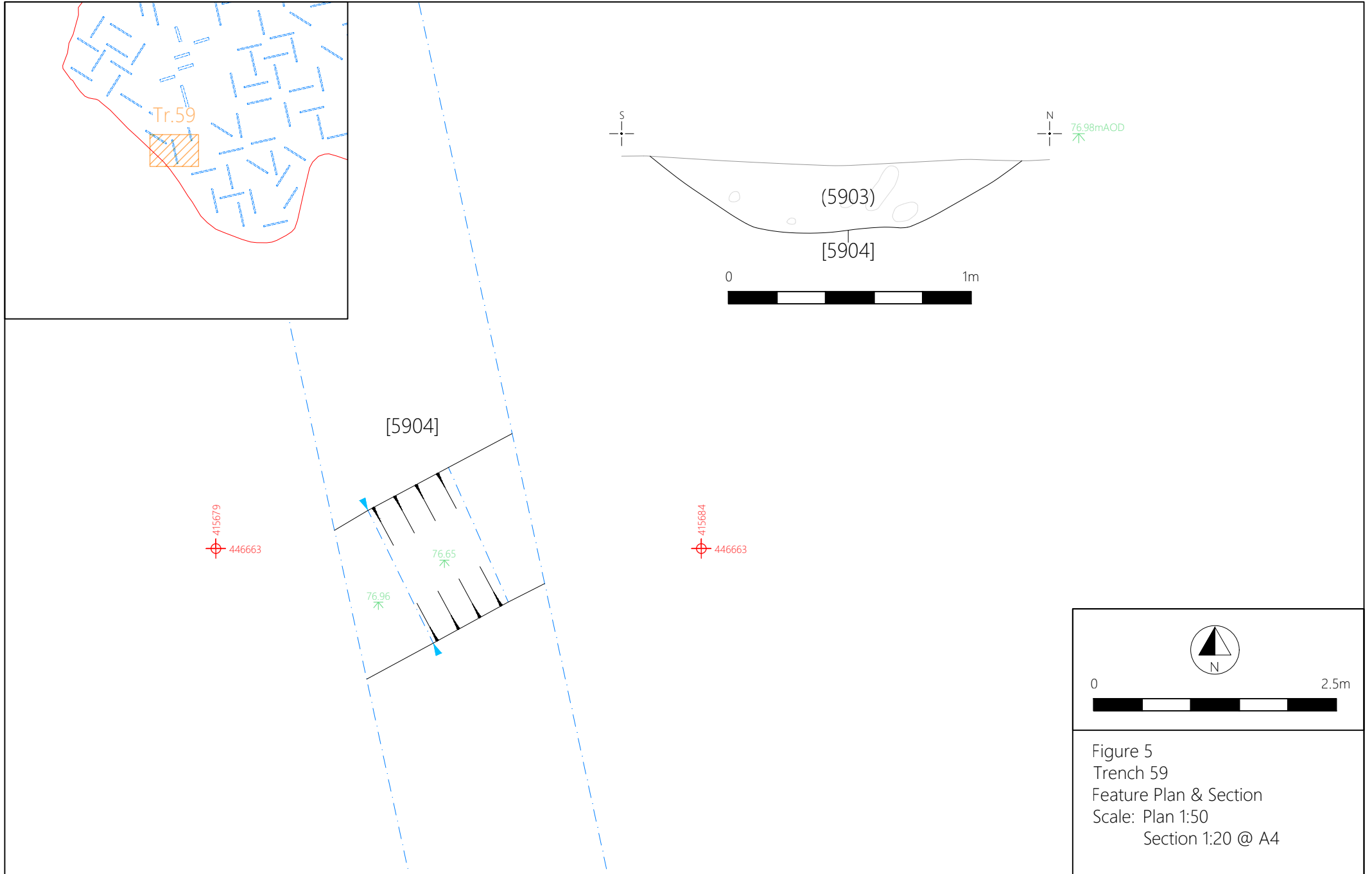


Figure 5
Trench 59
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

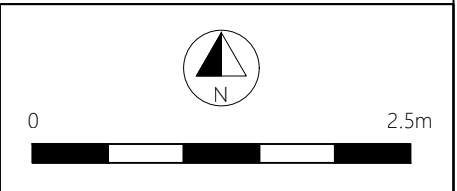
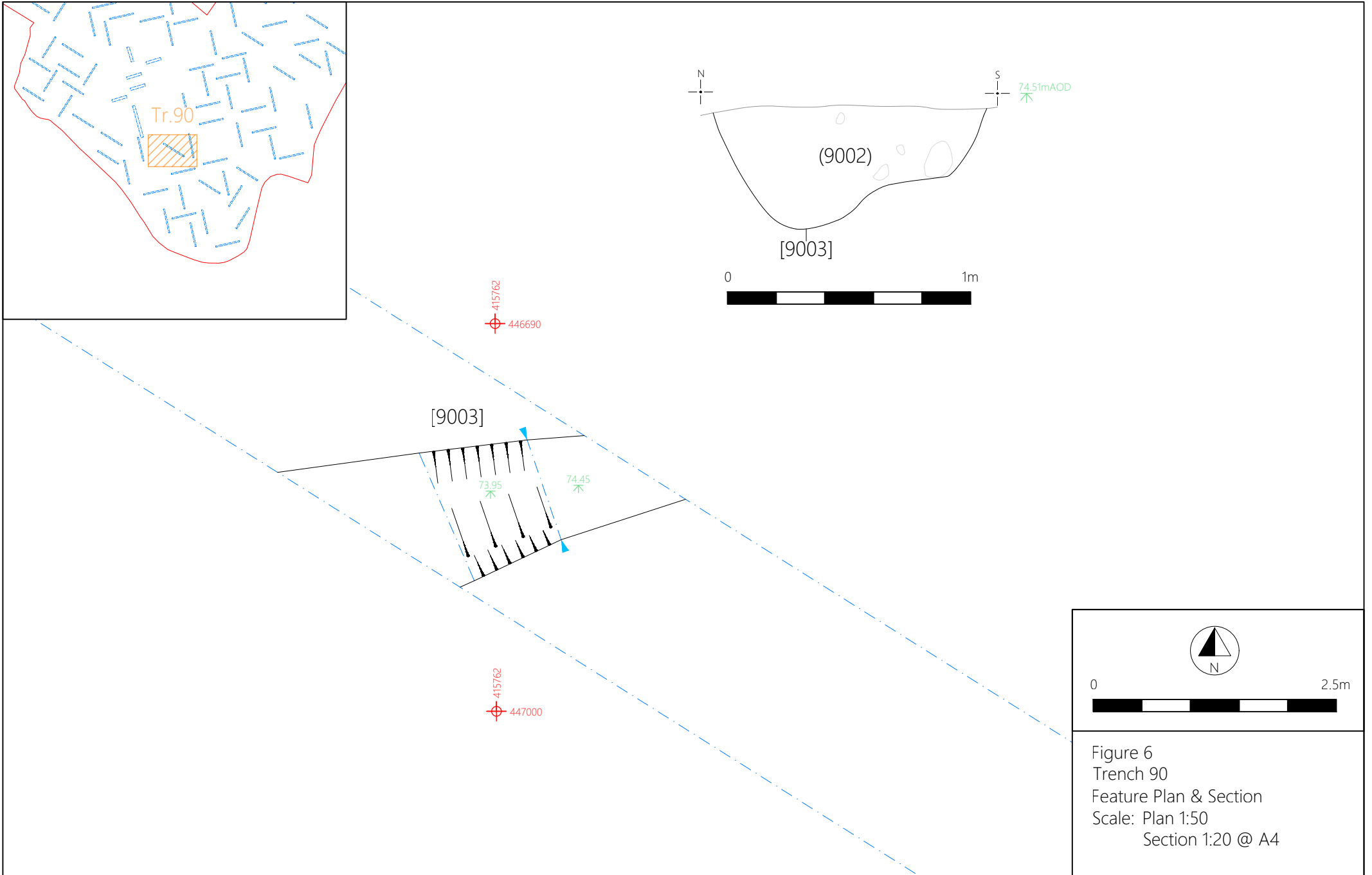


Figure 6
Trench 90
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

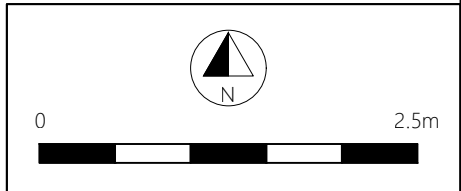
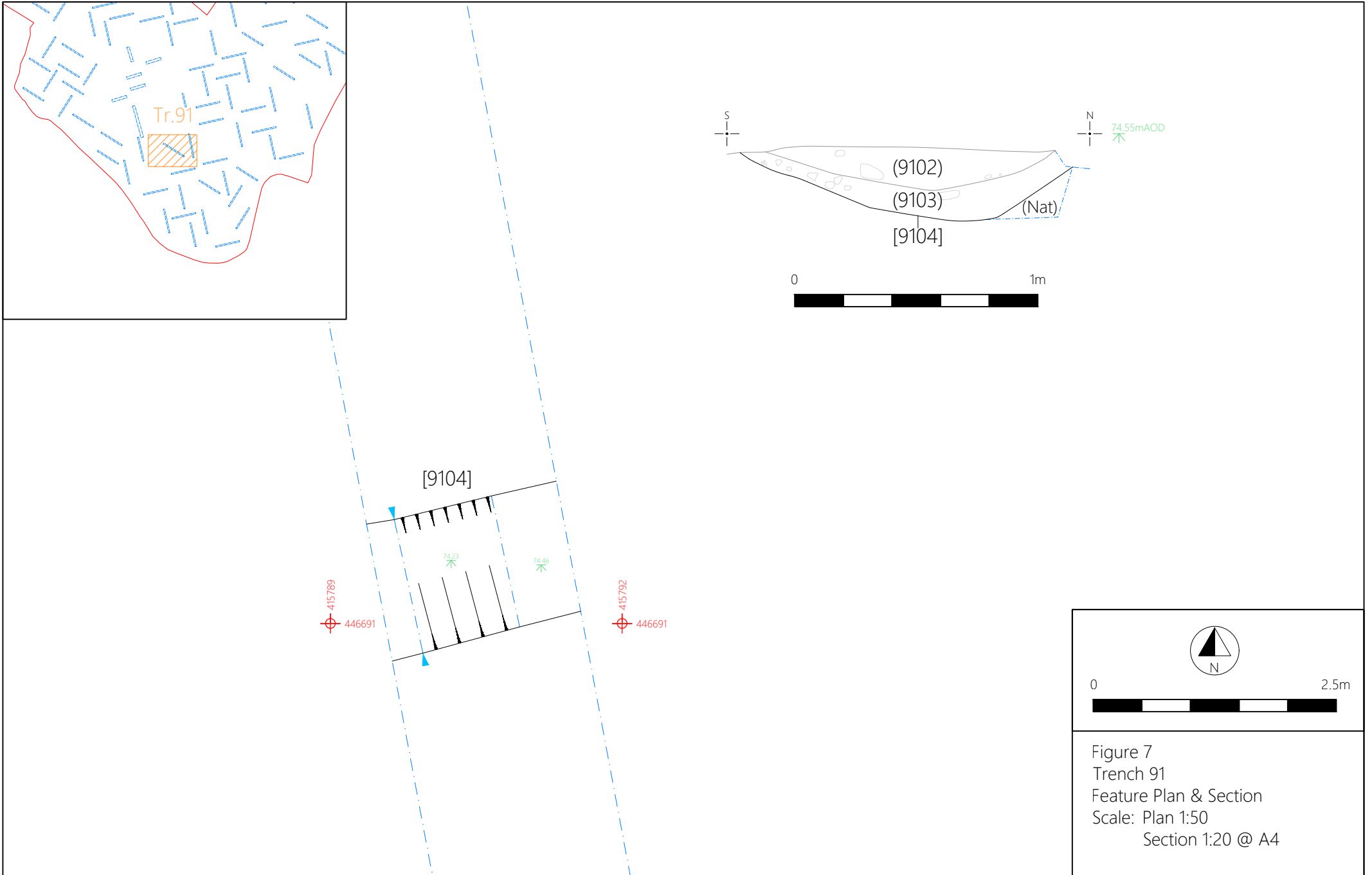


Figure 7
Trench 91
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

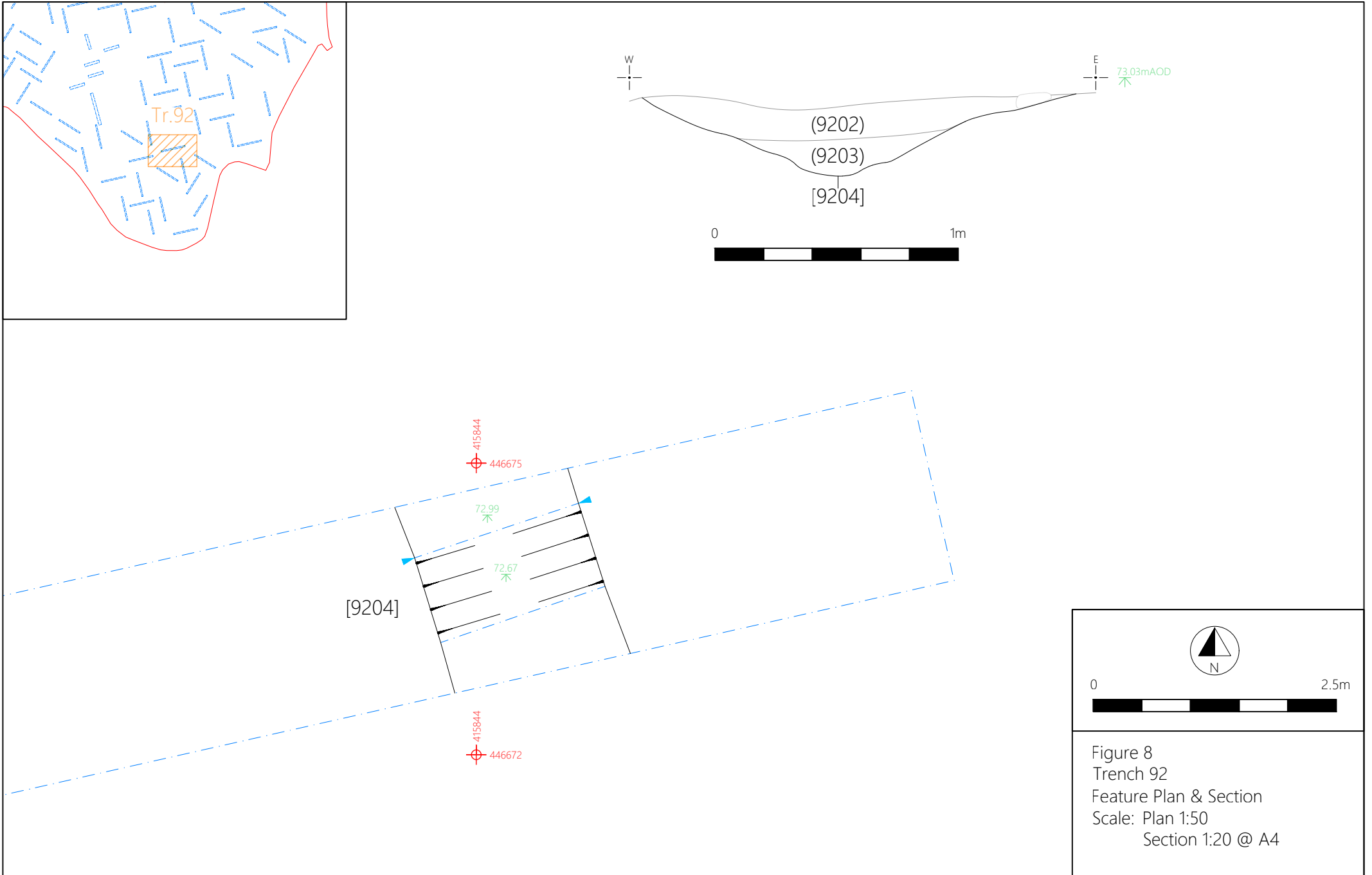


Figure 8
Trench 92
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

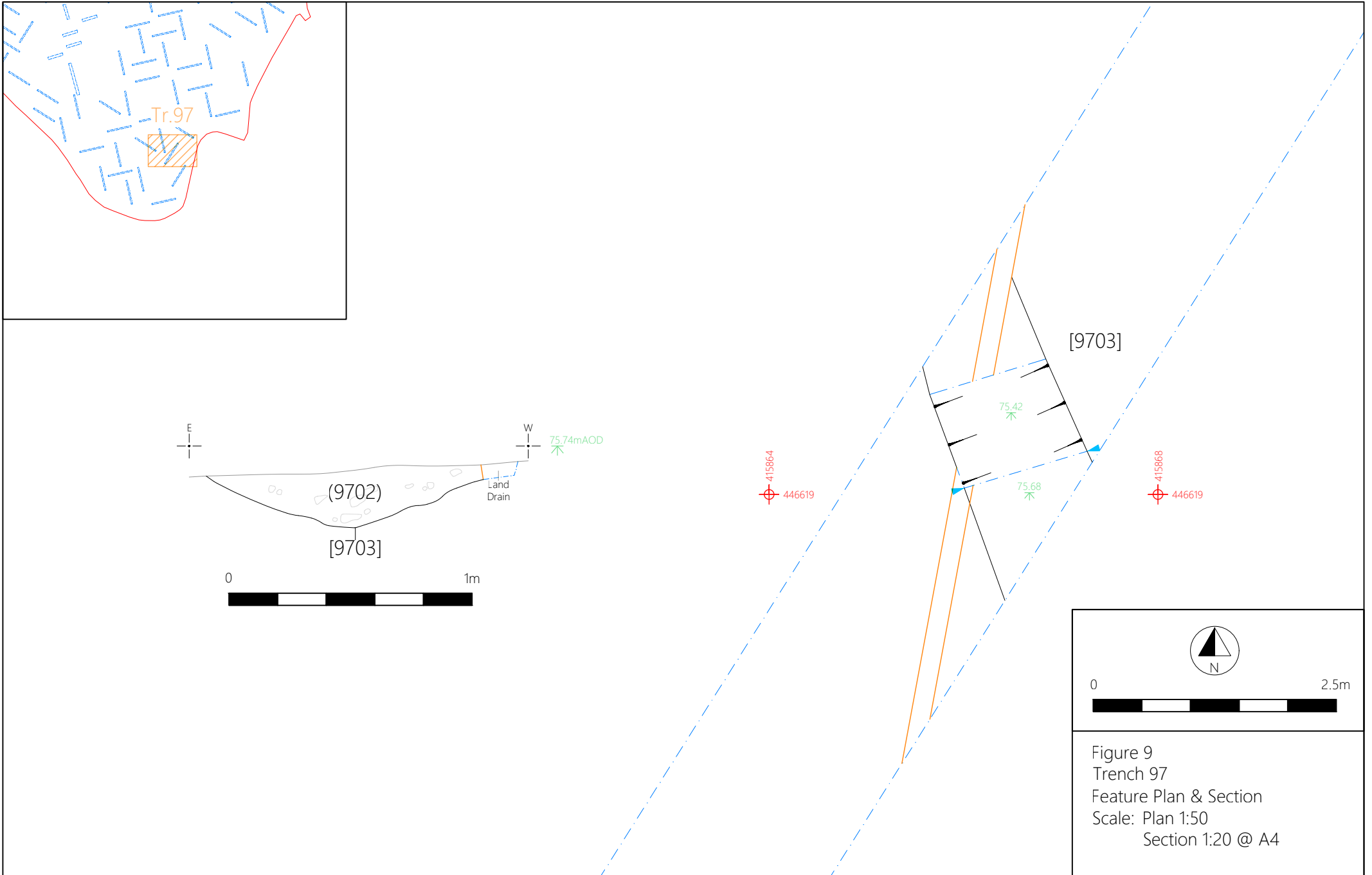


Figure 9
Trench 97
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

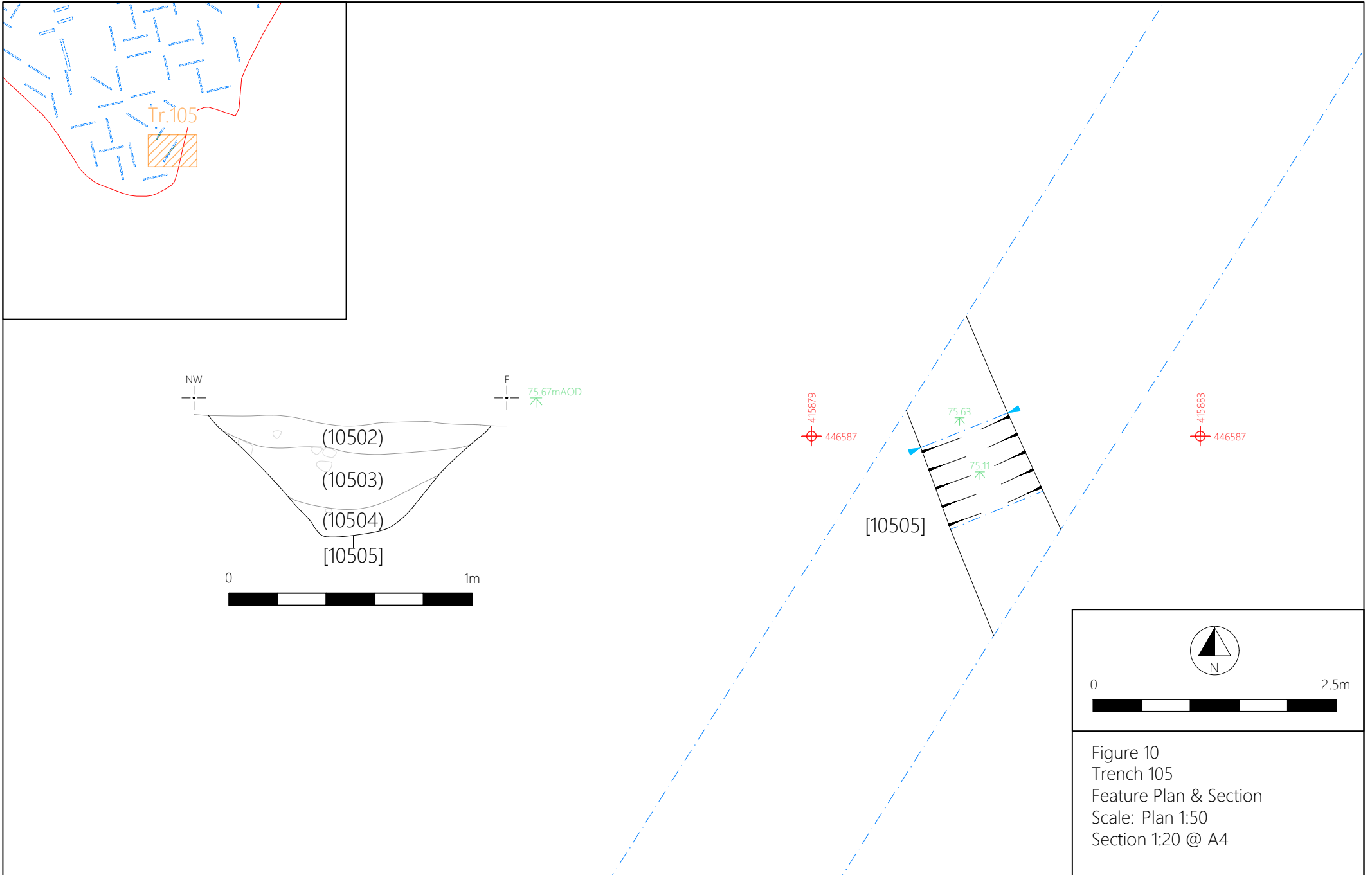
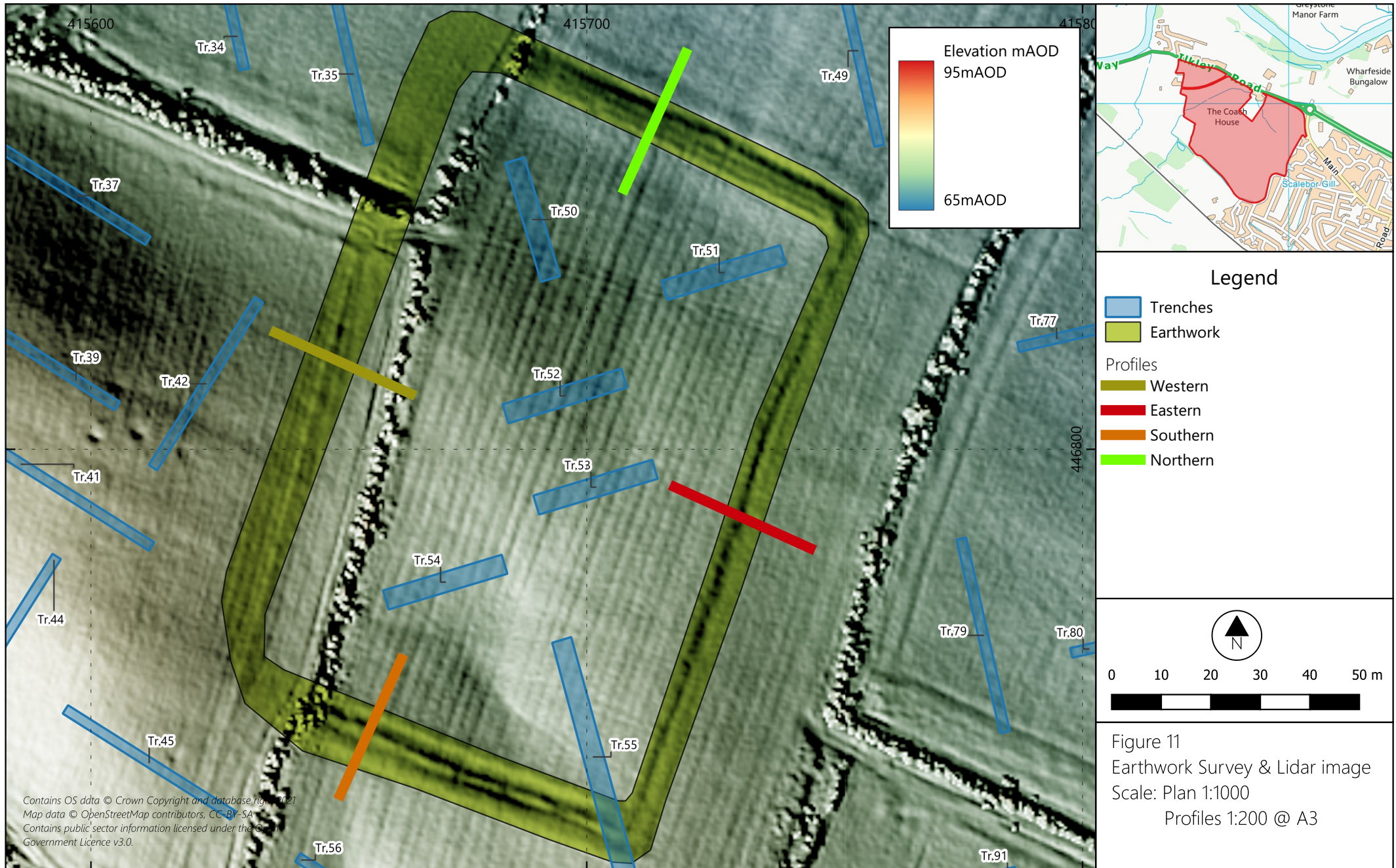


Figure 10
Trench 105
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4



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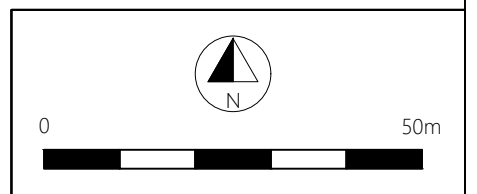
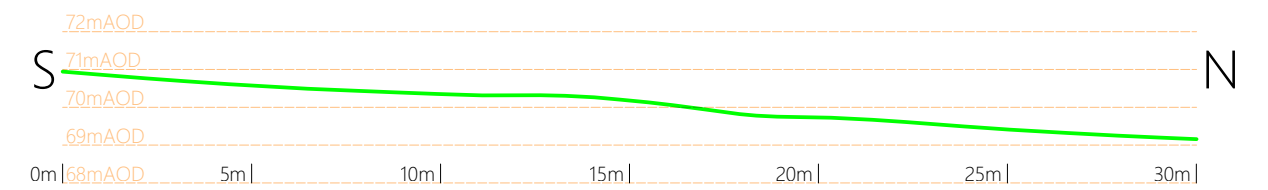
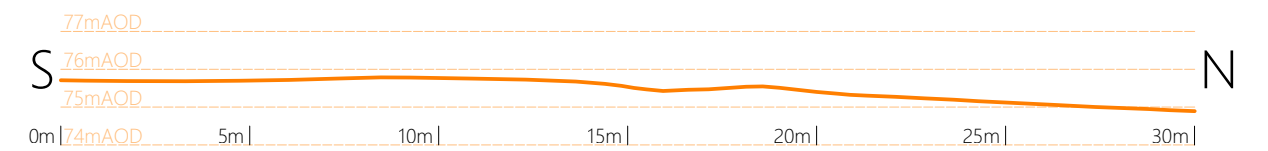
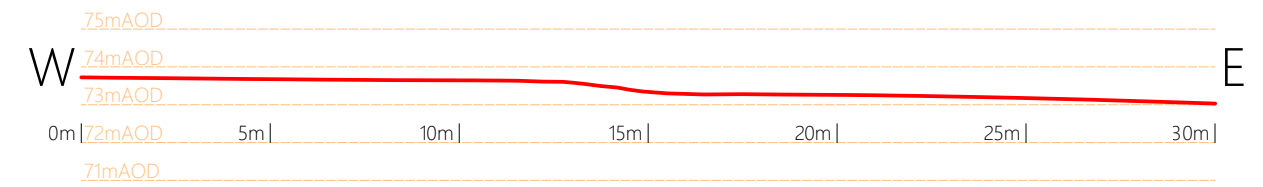
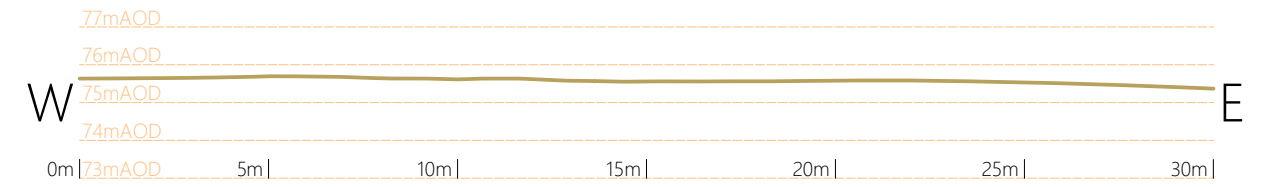
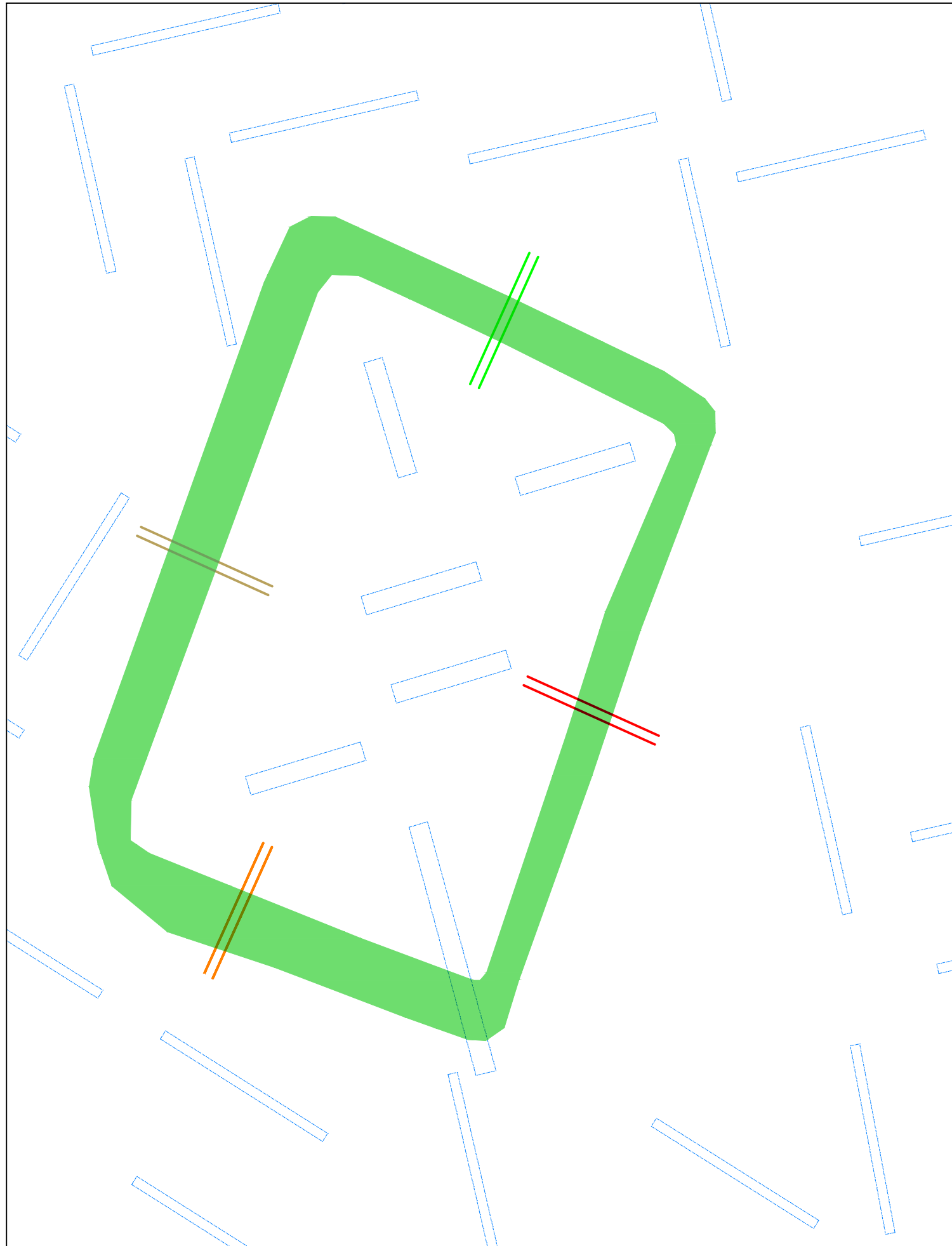
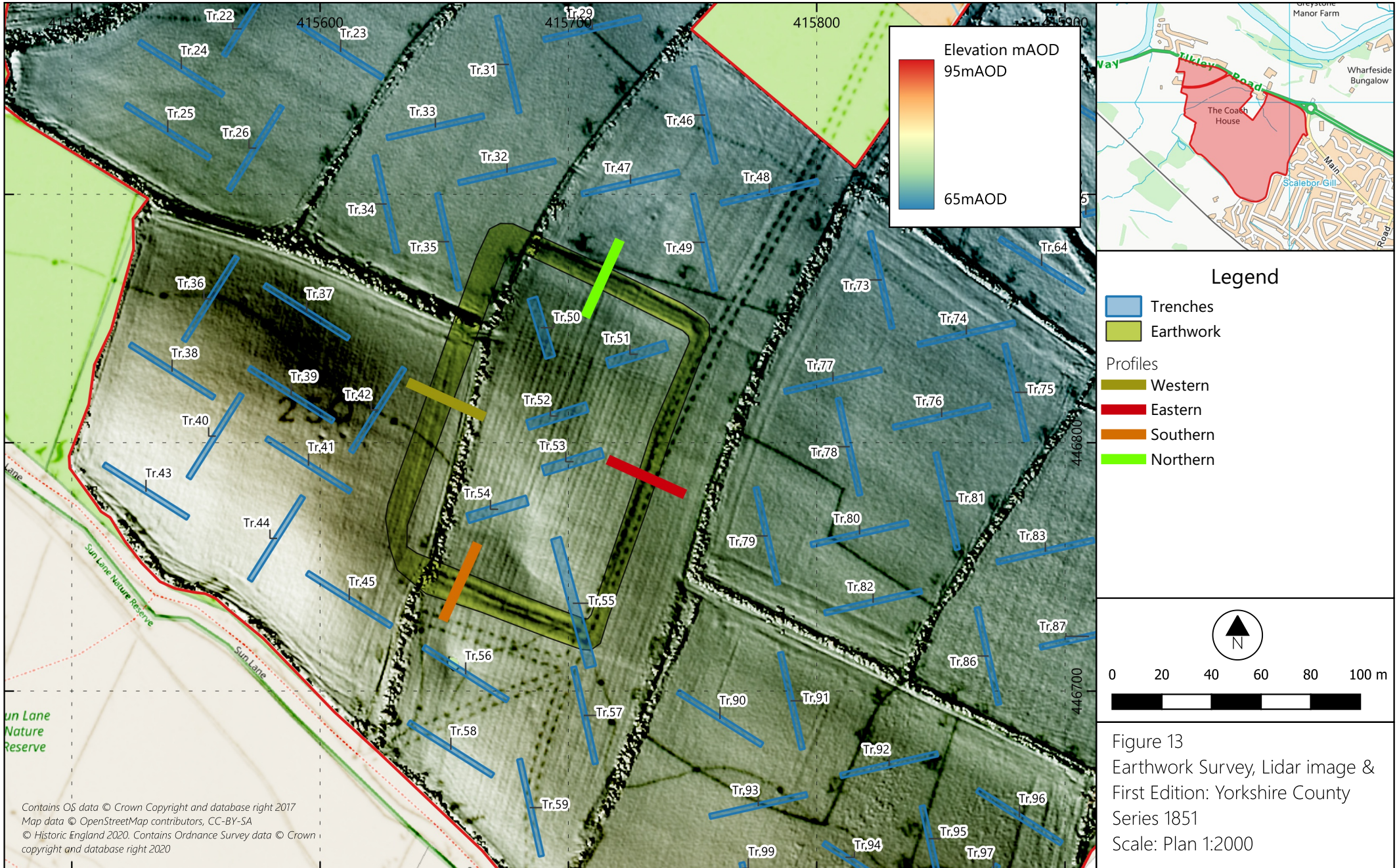


Figure 12
Earthwork Profiles
Feature Plan & Sections
Scale: Plan 1:1000
Profiles 1:200 @ A3



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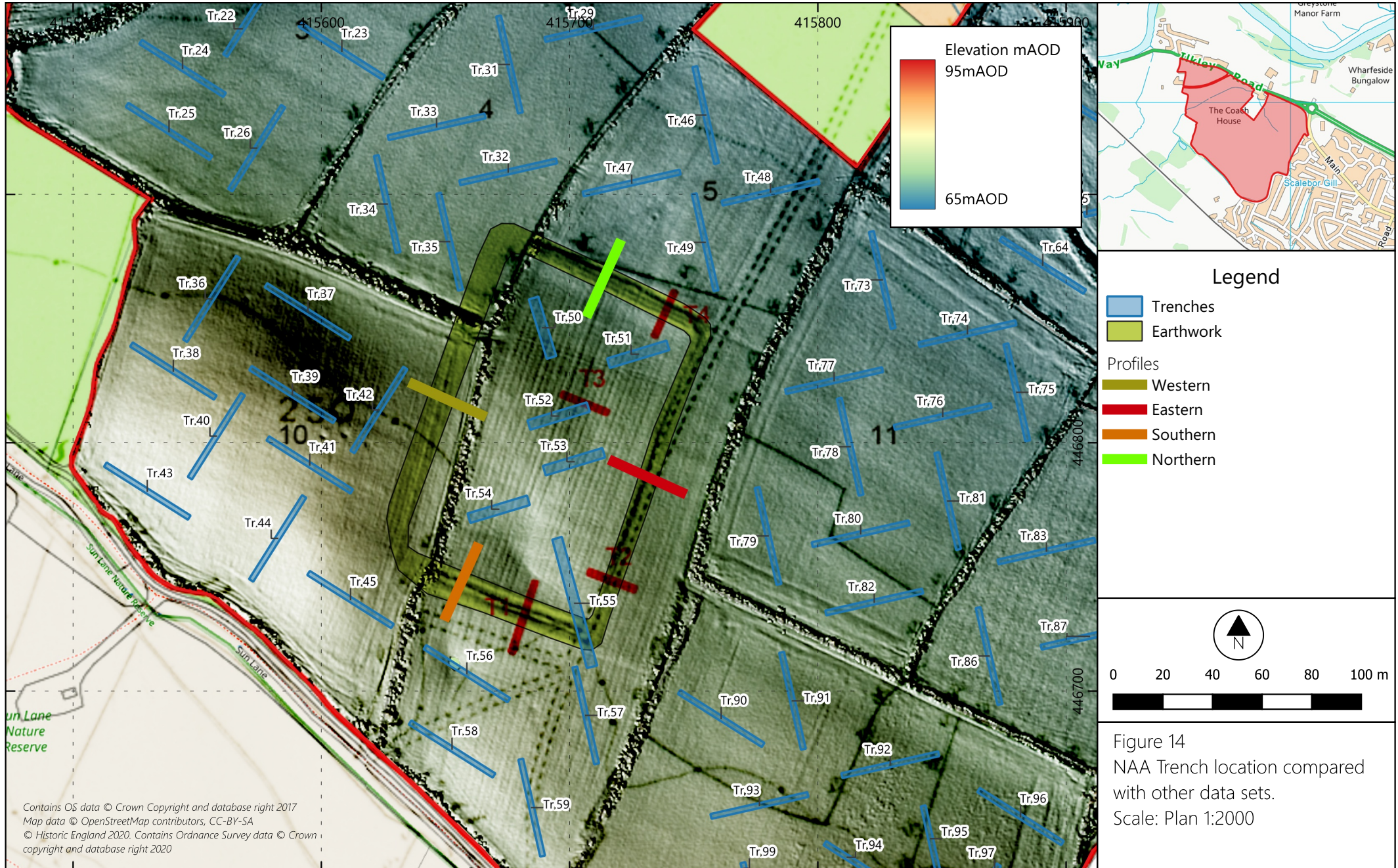


Figure 14
NAA Trench location compared
with other data sets.
Scale: Plan 1:2000

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Plate 1: General View from Northwest Area, Facing East



Plate 2: Trench 6 Facing East, 1m Scale



Plate 3: Trench 7 Facing West, 1m Scale



Plate 4: North Facing Section of Ditch [1004], 1m Scale



Plate 5: General View of Northwest Area, Facing North, Facing West



Plate 6: Trench 10 Facing West, 1m Scale



Plate 7: Trench 14 Facing North, 1m Scale



Plate 8: General View of Central Area, Facing Southwest



Plate 9: Trench 19 Facing Northwest, 1m Scale



Plate 10: Trench 22 Facing Northeast, 1m Scale



Plate 11: General View of Central Area, Facing Northeast



Plate 12: Trench 33 Facing East, 1m Scale



Plate 13: Trench 30 Facing South, 1m Scale



Plate 14: General View of Southwest Area Facing Northeast



Plate 15: Trench 38 Facing Southeast, 1m Scale



Plate 16: Trench 37 Facing Northwest, 1m Scale



Plate 17: General View of Earthwork, Facing Southwest



Plate 18: View, of Earthwork Feature, Facing East



Plate 19: Trackway in Trench 48, Facing South, 1m Scale



Plate 20: Trench 55 Facing South, 2x1m Scale



Plate 21: West Facing Section of Trench 55, 2m Scale



Plate 22: East Facing Section of Trench 55, 2m Scale



Plate 23: East Facing Section of Trench 55, 2m Scale



Plate 24: East Facing Section of Ditch [5704], 1m Scale



Plate 25: West Facing Section of Ditch [5904], 1m Scale



Plate 26: Trench 56 Facing Southeast, 1m Scale



Plate 27: General View of Field 10, Facing North



Plate 28: Trench 68 Facing West, 1m Scale



Plate 29: Trench 70 Facing Northwest, 1m Scale



Plate 30: General View of Eastern Area, Facing Northeast



Plate 31: Trench 79 Facing South, 1m Scale



Plate 32: Trench 76 Facing West, 1m Scale



Plate 33: General View of Eastern Area, Facing Northeast



Plate 34: Trench 87 Facing East, 1m Scale



Plate 35: Trench 89 Facing East, 1m Scale



Plate 36: General View of Southeastern Area, Facing Northwest



Plate 37: Trench 98 Facing West, 1m Scale



Plate 38: Trench 102 Facing North. 1m Scale



Plate 39: West Facing Section of Ditch [9003], 1m Scale



Plate 40: East Facing Section of Ditch [9104], 1m Scale



Plate 41: South Facing Section of Ditch [9204], 1m Scale



Plate 42: North Facing Section of Ditch [9703], 1m Scale



Plate 43: South Facing Section of Ditch [10505], 1m Scale

APPENDIX 1

Context Listing

| Context | Context Type | Fill of | Description |
|---------|--------------|---------|--|
| 1001 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 1002 | Deposit | - | Sub soil: mid-grey brown, silty clay. |
| 1003 | Fill | [1004] | Pale-grey brown mottled with mid-yellow brown, fine silty clay. Single fill of Gully [1004]. |
| 1004 | Cut | - | Cut of Gully. |
| 5701 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 5702 | Deposit | - | Sub soil: mid-grey brown, silty clay. |
| 5703 | Fill | [5704] | Mid-red brown mottled with grey, fine sandy clay. Single fill of Ditch [5704]. |
| 5704 | Cut | - | Cut of ditch. |
| 5901 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 5902 | Deposit | - | Sub soil: mid-grey brown, silty clay. |
| 5903 | Fill | [5904] | Mid-red brown, fine sandy clay. Single fill of Ditch [5904]. |
| 5904 | Cut | - | Cut of ditch. |
| 9001 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 9002 | Fill | [9003] | Mid-grey brown with mottled yellow brown, fine silty clay. Single fill of Ditch [9003]. |
| 9003 | Cut | - | Cut of ditch. |
| 9101 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 9102 | Fill | [9104] | Mid-grey brown, fine sandy clay. Secondary fill of Ditch [9104]. |
| 9103 | Fill | [9104] | Pale-grey, fine sandy clay. Primary fill of Ditch [9104]. |
| 9104 | Cut | - | Cut of ditch. |
| 9201 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 9202 | Fill | [9204] | Mid-grey brown, fine sandy clay. Secondary fill of Ditch [9204]. |
| 9203 | Fill | [9204] | Mid-red brown mottle with mid-grey brown, fine sandy clay. Primary fill of Ditch [9204]. |
| 9204 | Cut | - | Cut of ditch |
| 9701 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 9702 | Fill | [9703] | Pale-grey brown, very fine silty clay. Single fill of Ditch [9703]. |
| 9703 | Cut | - | Cut of ditch. |
| 10501 | Deposit | - | Topsoil: dark-brown grey, sandy silt. |
| 10502 | Fill | [10505] | Pale-red brown, very fine silty clay. Tertiary fill of Ditch [10505]. |
| 10503 | Fill | [10505] | Pale-blue grey, very fine silty clay. Secondary fill of Ditch [10505]. |
| 10504 | Fill | [10505] | Pale-brown grey, very fine silty clay. Primary fill of Ditch [10505]. |
| 10505 | Cut | - | Cut of ditch. |

APPENDIX 2

Digital Photographic Archive Listing

| Frame | Context | Scale | Facing | Description |
|-------|---------|-------|------------|-------------------------------|
| 0001 | - | - | South-west | General Site Shot of Field 12 |
| 0002 | - | - | North-east | General Site Shot of Field 12 |
| 0003 | - | - | North-east | General Site Shot of Field 12 |
| 0004 | - | - | East | General Site Shot of Field 12 |
| 0005 | - | - | South-west | General Site Shot of Field 12 |
| 0006 | - | - | South | General Site Shot of Field 12 |
| 0007 | - | - | North | General Site Shot of Field 10 |
| 0008 | - | - | North-east | General Site Shot of Field 10 |
| 0009 | - | - | East | General Site Shot of Field 10 |
| 0010 | - | - | East | General Site Shot of Field 10 |
| 0011 | - | - | South | General Site Shot of Field 10 |
| 0012 | - | - | North-west | General Site Shot of Field 7 |
| 0013 | - | - | West | General Site Shot of Field 2 |
| 0014 | - | - | North-west | General Site Shot of Field 2 |
| 0015 | - | - | East | General Site Shot of Field 2 |
| 0016 | - | - | North-east | General Site Shot of Field 2 |
| 0017 | - | - | East | General Site Shot of Field 2 |
| 0018 | - | - | West | General Site Shot of Field 2 |
| 0019 | - | - | South-west | General Site Shot of Field 3 |
| 0020 | - | - | North | General Site Shot of Field 3 |
| 0021 | - | - | North-east | General Site Shot of Field 3 |
| 0022 | - | - | South-east | General Site Shot of Field 7 |
| 0023 | - | - | North-west | General Site Shot of Field 7 |
| 0024 | - | - | East | General Site Shot of Field 9 |
| 0025 | - | - | South-east | General Site Shot of Field 9 |
| 0026 | - | - | North-west | General Site Shot of Field 9 |
| 0027 | - | - | North | General Site Shot of Field 9 |
| 0028 | - | - | South-east | General Site Shot of Field 13 |
| 0029 | - | - | South | General Site Shot of Field 13 |
| 0030 | - | - | South-west | General Site Shot of Field 13 |
| 0031 | - | - | West | General Site Shot of Field 13 |
| 0032 | - | - | North-west | General Site Shot of Field 13 |
| 0033 | - | - | North-east | General Site Shot of Field 13 |
| 0034 | - | - | North-east | General Site Shot of Field 13 |
| 0035 | - | - | North-west | General Site Shot of Field 13 |
| 0036 | - | - | North-west | General Site Shot of Field 13 |
| 0037 | - | - | North-east | General Site Shot of Field 11 |
| 0038 | - | - | North-east | General Site Shot of Field 11 |
| 0039 | - | - | South-east | General Site Shot of Field 11 |
| 0040 | - | - | South | General Site Shot of Field 11 |
| 0041 | - | - | South-west | General Site Shot of Field 11 |
| 0042 | - | - | North-west | General Site Shot of Field 11 |
| 0043 | - | - | South-west | General Site Shot of Field 6 |
| 0044 | - | - | South-west | General Site Shot of Field 6 |
| 0045 | - | - | South | General Site Shot of Field 6 |
| 0046 | - | - | East | General Site Shot of Field 6 |
| 0047 | - | - | West | General Site Shot of Field 6 |

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|------|---|----|------------|--------------------------------|
| 0048 | - | - | North-west | General Site Shot of Field 6 |
| 0049 | - | - | South-west | General Site Shot of Field 6 |
| 0050 | - | - | South | General Site Shot of Field 6 |
| 0051 | - | - | North-east | General Site Shot of Field 6 |
| 0052 | - | - | North | General Site Shot of Field 6 |
| 0053 | - | - | West | General Site Shot of Field 6 |
| 0054 | - | - | South | General Site Shot of Field 5 |
| 0055 | - | - | West | General Site Shot of Field 5 |
| 0056 | - | - | North-east | General Site Shot of Field 5 |
| 0057 | - | - | South-east | General Site Shot of Field 5 |
| 0058 | - | - | North | General Site Shot of Field 5 |
| 0059 | - | - | North | General Site Shot of Field 5 |
| 0060 | - | - | North-east | General Site Shot of Field 4 |
| 0061 | - | - | South-west | General Site Shot of Field 4 |
| 0062 | - | - | North | General Site Shot of Field 4 |
| 0063 | - | - | South-west | General Site Shot of Field 4 |
| 0064 | - | 1m | South-east | General Shot of Trench 60 |
| 0065 | - | 1m | South-east | General Shot of Trench 60 |
| 0066 | - | 1m | North-west | General Shot of Trench 60 |
| 0067 | - | 1m | North-west | General Shot of Trench 60 |
| 0068 | - | 1m | North | Plough Furrow within Trench 60 |
| 0069 | - | 1m | North | Plough Furrow within Trench 60 |
| 0070 | - | 1m | South | General Shot of Trench 62 |
| 0071 | - | 1m | South | General Shot of Trench 62 |
| 0072 | - | 1m | South | General Shot of Trench 62 |
| 0073 | - | 1m | North | General Shot of Trench 62 |
| 0074 | - | 1m | North-west | General Shot of Trench 67 |
| 0075 | - | 1m | North-west | General Shot of Trench 67 |
| 0076 | - | 1m | South-east | General Shot of Trench 67 |
| 0077 | - | 1m | South-east | General Shot of Trench 67 |
| 0078 | - | 1m | East | General Shot of Trench 68 |
| 0079 | - | 1m | West | General Shot of Trench 68 |
| 0080 | - | 1m | West | General Shot of Trench 68 |
| 0081 | - | 1m | North-west | General Shot of Trench 69 |
| 0082 | - | 1m | North-west | General Shot of Trench 69 |
| 0083 | - | 1m | South-east | General Shot of Trench 69 |
| 0084 | - | 1m | South | General Shot of Trench 71 |
| 0085 | - | 1m | North | General Shot of Trench 71 |
| 0086 | - | 1m | North-west | General Shot of Trench 70 |
| 0087 | - | 1m | North-west | General Shot of Trench 70 |
| 0088 | - | 1m | South-east | General Shot of Trench 70 |
| 0089 | - | 1m | North-west | General Shot of Trench 72 |
| 0090 | - | 1m | North-west | General Shot of Trench 72 |
| 0091 | - | 1m | South-east | General Shot of Trench 72 |
| 0092 | - | 1m | South-east | General Shot of Trench 72 |
| 0093 | - | 1m | South | General Shot of Trench 84 |
| 0094 | - | 1m | North | General Shot of Trench 84 |
| 0095 | - | 1m | North | General Shot of Trench 84 |
| 0096 | - | 1m | West | General Shot of Trench 83 |
| 0097 | - | 1m | West | General Shot of Trench 83 |
| 0098 | - | 1m | East | General Shot of Trench 83 |
| 0099 | - | 1m | East | General Shot of Trench 83 |
| 0100 | - | 1m | South | General Shot of Trench 86 |

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|------|---|----|------------|------------------------------|
| 0101 | - | 1m | South | General Shot of Trench 86 |
| 0102 | - | 1m | North | General Shot of Trench 86 |
| 0103 | - | 1m | North | General Shot of Trench 86 |
| 0104 | - | 1m | East | General Shot of Trench 87 |
| 0105 | - | 1m | East | General Shot of Trench 87 |
| 0106 | - | 1m | West | General Shot of Trench 87 |
| 0107 | - | 1m | West | General Shot of Trench 87 |
| 0108 | - | 1m | South | General Shot of Trench 88 |
| 0109 | - | 1m | North | General Shot of Trench 88 |
| 0110 | - | 1m | East | General Shot of Trench 89 |
| 0111 | - | 1m | West | General Shot of Trench 89 |
| 0112 | - | 1m | North | General Shot of Trench 85 |
| 0113 | - | 1m | North | General Shot of Trench 85 |
| 0114 | - | 1m | South | General Shot of Trench 85 |
| 0115 | - | 1m | South | General Shot of Trench 85 |
| 0116 | - | - | West | General Site Shot of Field 1 |
| 0117 | - | - | South-west | General Site Shot of Field 1 |
| 0118 | - | - | East | General Site Shot of Field 1 |
| 0119 | - | - | North-east | General Site Shot of Field 1 |
| 0120 | - | - | North-west | General Site Shot of Field 1 |
| 0121 | - | 1m | South-east | General Shot of Trench 96 |
| 0122 | - | 1m | South-east | General Shot of Trench 96 |
| 0123 | - | 1m | North-west | General Shot of Trench 96 |
| 0124 | - | 1m | North-west | General Shot of Trench 96 |
| 0125 | - | 1m | South | General Shot of Trench 4 |
| 0126 | - | 1m | North | General Shot of Trench 4 |
| 0127 | - | 1m | East | General Shot of Trench 6 |
| 0128 | - | 1m | West | General Shot of Trench 6 |
| 0129 | - | 1m | West | General Shot of Trench 6 |
| 0130 | - | 1m | North-west | General Shot of Trench 5 |
| 0131 | - | 1m | South-east | General Shot of Trench 5 |
| 0132 | - | 1m | West | General Shot of Trench 7 |
| 0133 | - | 1m | East | General Shot of Trench 7 |
| 0134 | - | 1m | South | General Shot of Trench 79 |
| 0135 | - | 1m | North | General Shot of Trench 79 |
| 0136 | - | 1m | East | General Shot of Trench 80 |
| 0137 | - | 1m | West | General Shot of Trench 80 |
| 0138 | - | 1m | North | General Shot of Trench 81 |
| 0139 | - | 1m | South | General Shot of Trench 81 |
| 0140 | - | 1m | East | General Shot of Trench 76 |
| 0141 | - | 1m | West | General Shot of Trench 76 |
| 0142 | - | 1m | North | General Shot of Trench 75 |
| 0143 | - | 1m | South | General Shot of Trench 75 |
| 0144 | - | 1m | West | General Shot of Trench 74 |
| 0145 | - | 1m | East | General Shot of Trench 74 |
| 0146 | - | 1m | North | General Shot of Trench 73 |
| 0147 | - | 1m | South | General Shot of Trench 73 |
| 0148 | - | 1m | West | General Shot of Trench 77 |
| 0149 | - | 1m | East | General Shot of Trench 77 |
| 0150 | - | 1m | South | General Shot of Trench 78 |
| 0151 | - | 1m | North | General Shot of Trench 78 |
| 0152 | - | 1m | West | General Shot of Trench 82 |
| 0153 | - | 1m | East | General Shot of Trench 82 |

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|------|---|----|------------|-------------------------------|
| 0154 | - | 1m | East | General Shot of Trench 82 |
| 0155 | - | 1m | North-west | General Shot of Trench 17 |
| 0156 | - | 1m | South-east | General Shot of Trench 17 |
| 0157 | - | 1m | West | General Shot of Trench 16 |
| 0158 | - | 1m | East | General Shot of Trench 16 |
| 0159 | - | 1m | West | General Shot of Trench 15 |
| 0160 | - | 1m | East | General Shot of Trench 15 |
| 0161 | - | 1m | West | General Shot of Trench 8 |
| 0162 | - | 1m | East | General Shot of Trench 8 |
| 0163 | - | 1m | South | General Shot of Trench 9 |
| 0164 | - | 1m | North | General Shot of Trench 9 |
| 0165 | - | 1m | East | General Shot of Trench 10 |
| 0166 | - | 1m | West | General Shot of Trench 10 |
| 0167 | - | 1m | North | General Shot of Trench 11 |
| 0168 | - | 1m | South | General Shot of Trench 11 |
| 0169 | - | 1m | East | General Shot of Trench 12 |
| 0170 | - | 1m | West | General Shot of Trench 12 |
| 0171 | - | 1m | South-west | General Shot of Trench 13 |
| 0172 | - | 1m | North-east | General Shot of Trench 13 |
| 0173 | - | 1m | North | General Shot of Trench 14 |
| 0174 | - | 1m | South | General Shot of Trench 14 |
| 0175 | - | 1m | North-east | General Shot of Trench 18 |
| 0176 | - | 1m | South-west | General Shot of Trench 18 |
| 0177 | - | 1m | North-west | General Shot of Trench 19 |
| 0178 | - | 1m | South-east | General Shot of Trench 19 |
| 0179 | - | 1m | South-west | General Shot of Trench 20 |
| 0180 | - | 1m | North-east | General Shot of Trench 20 |
| 0181 | - | 1m | North-west | General Shot of Trench 21 |
| 0182 | - | 1m | South-east | General Shot of Trench 21 |
| 0183 | - | 1m | South | Dutch Dtrain within Trench 22 |
| 0184 | - | 1m | South-west | General Shot of Trench 22 |
| 0185 | - | 1m | South | Dutch Dtrain within Trench 22 |
| 0186 | - | 1m | North-east | General Shot of Trench 22 |
| 0187 | - | 1m | North-west | General Shot of Trench 24 |
| 0188 | - | 1m | South-east | General Shot of Trench 24 |
| 0189 | - | 1m | South-east | General Shot of Trench 25 |
| 0190 | - | 1m | North-west | General Shot of Trench 25 |
| 0191 | - | 1m | North-east | General Shot of Trench 26 |
| 0192 | - | 1m | South-west | General Shot of Trench 26 |
| 0193 | - | 1m | South-east | General Shot of Trench 23 |
| 0194 | - | 1m | North-west | General Shot of Trench 23 |
| 0195 | - | 1m | North-west | General Shot of Trench 41 |
| 0196 | - | 1m | South-east | General Shot of Trench 41 |
| 0197 | - | 1m | North-west | General Shot of Trench 39 |
| 0198 | - | 1m | South-east | General Shot of Trench 39 |
| 0199 | - | 1m | North-east | General Shot of Trench 36 |
| 0200 | - | 1m | South-west | General Shot of Trench 36 |
| 0201 | - | 1m | North-west | General Shot of Trench 38 |
| 0202 | - | 1m | South-east | General Shot of Trench 38 |
| 0203 | - | 1m | South-west | General Shot of Trench 40 |
| 0204 | - | 1m | North-east | General Shot of Trench 40 |
| 0205 | - | 1m | North-west | General Shot of Trench 43 |
| 0206 | - | 1m | South-east | General Shot of Trench 43 |

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|------|---|------|------------|---------------------------|
| 0207 | - | 1m | North-east | General Shot of Trench 44 |
| 0208 | - | 1m | South-west | General Shot of Trench 44 |
| 0209 | - | 1m | South-east | General Shot of Trench 45 |
| 0210 | - | 1m | North-west | General Shot of Trench 45 |
| 0211 | - | 1m | North-east | General Shot of Trench 42 |
| 0212 | - | 1m | South-west | General Shot of Trench 42 |
| 0213 | - | 1m | North-west | General Shot of Trench 37 |
| 0214 | - | 1m | South-east | General Shot of Trench 37 |
| 0215 | - | 1m | North | General Shot of Trench 34 |
| 0216 | - | 1m | South | General Shot of Trench 34 |
| 0217 | - | 1m | East | General Shot of Trench 33 |
| 0218 | - | 1m | West | General Shot of Trench 33 |
| 0219 | - | 1m | East | General Shot of Trench 32 |
| 0220 | - | 1m | West | General Shot of Trench 32 |
| 0221 | - | 1m | South | General Shot of Trench 35 |
| 0222 | - | 1m | North | General Shot of Trench 35 |
| 0223 | - | 1m | North | General Shot of Trench 31 |
| 0224 | - | 1m | South | General Shot of Trench 31 |
| 0225 | - | 1m | East | General Shot of Trench 28 |
| 0226 | - | 1m | West | General Shot of Trench 28 |
| 0227 | - | 1m | South | General Shot of Trench 30 |
| 0228 | - | 1m | North | General Shot of Trench 30 |
| 0229 | - | 1m | East | General Shot of Trench 27 |
| 0230 | - | 1m | West | General Shot of Trench 27 |
| 0231 | - | 1m | East | General Shot of Trench 47 |
| 0232 | - | 1m | West | General Shot of Trench 47 |
| 0233 | - | 1m | North | General Shot of Trench 46 |
| 0234 | - | 1m | South | General Shot of Trench 46 |
| 0235 | - | 1m | South | General Shot of Trench 49 |
| 0236 | - | 1m | North | General Shot of Trench 49 |
| 0237 | - | 1m | West | General Shot of Trench 51 |
| 0238 | - | 1m | East | General Shot of Trench 51 |
| 0239 | - | 2x1m | East | General Shot of Trench 51 |
| 0240 | - | 2x1m | East | General Shot of Trench 51 |
| 0241 | - | 2x1m | West | General Shot of Trench 51 |
| 0242 | - | 2x1m | West | General Shot of Trench 51 |
| 0243 | - | 2x1m | North | General Shot of Trench 50 |
| 0244 | - | 2x1m | South | General Shot of Trench 50 |
| 0245 | - | 2x1m | West | General Shot of Trench 52 |
| 0246 | - | 2x1m | East | General Shot of Trench 52 |
| 0247 | - | 2x1m | West | General Shot of Trench 53 |
| 0248 | - | 2x1m | East | General Shot of Trench 53 |
| 0249 | - | 2x1m | West | General Shot of Trench 54 |
| 0250 | - | 2x1m | East | General Shot of Trench 54 |
| 0251 | - | 1m | South-east | General Shot of Trench 56 |
| 0252 | - | 1m | South-east | General Shot of Trench 56 |
| 0253 | - | 1m | North-west | General Shot of Trench 56 |
| 0254 | - | 1m | North-west | General Shot of Trench 58 |
| 0255 | - | 1m | South-east | General Shot of Trench 58 |
| 0256 | - | 2m | North-east | Dew Pond within Trench 56 |
| 0257 | - | 2m | North-east | Dew Pond within Trench 56 |
| 0258 | - | 1m | North-east | Dew Pond within Trench 56 |
| 0259 | - | 1m | East | General Shot of Trench 98 |

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|------|-----------------|----|------------|---------------------------------------|
| 0260 | - | 1m | West | General Shot of Trench 98 |
| 0261 | - | 1m | South | General Shot of Trench 99 |
| 0262 | - | 1m | North | General Shot of Trench 99 |
| 0263 | - | 1m | East | General Shot of Trench 93 |
| 0264 | - | 1m | West | General Shot of Trench 93 |
| 0265 | - | 1m | South-east | General Shot of Trench 94 |
| 0266 | - | 1m | North-west | General Shot of Trench 94 |
| 0267 | - | 1m | North-west | General Shot of Trench 94 |
| 0268 | - | 1m | South | General Shot of Trench 95 |
| 0269 | - | 1m | North | General Shot of Trench 95 |
| 0270 | - | 1m | West | General Shot of Trench 104 |
| 0271 | - | 1m | East | General Shot of Trench 104 |
| 0272 | - | 1m | South | General Shot of Trench 102 |
| 0273 | - | 1m | North | General Shot of Trench 102 |
| 0274 | - | 1m | North | General Shot of Trench 100 |
| 0275 | - | 1m | South | General Shot of Trench 100 |
| 0276 | - | 1m | East | General Shot of Trench 101 |
| 0277 | - | 1m | West | General Shot of Trench 101 |
| 0278 | - | 1m | South | General Shot of Trench 103 |
| 0279 | - | 1m | North | General Shot of Trench 103 |
| 0280 | - | 1m | North-east | General Shot of Trench 105 |
| 0281 | - | 1m | South-west | General Shot of Trench 105 |
| 0282 | - | 1m | North-east | General Shot of Trench 97 |
| 0283 | - | 1m | South-west | General Shot of Trench 97 |
| 0284 | - | 1m | West | General Shot of Trench 92 |
| 0285 | - | 1m | East | General Shot of Trench 92 |
| 0286 | - | 1m | North | General Shot of Trench 91 |
| 0287 | - | 1m | South | General Shot of Trench 91 |
| 0288 | - | 1m | North-west | General Shot of Trench 90 |
| 0289 | - | 1m | South-east | General Shot of Trench 90 |
| 0290 | (9702)-[9703] | 1m | South | North Facing Section of Ditch [9703] |
| 0291 | (9702)-[9703] | 1m | South | North Facing Section of Ditch [9703] |
| 0292 | (9702)-[9703] | 1m | South | North Facing Section of Ditch [9703] |
| 0293 | (9202)-[9204] | 1m | North | South Facing Section of Ditch [9204] |
| 0294 | (9202)-[9204] | 1m | North | South Facing Section of Ditch [9204] |
| 0295 | (10502)-[10505] | 1m | North | South Facing Section of Ditch [10505] |
| 0296 | (10502)-[10505] | 1m | North | South Facing Section of Ditch [10505] |
| 0297 | (9102)-[9104] | 1m | West | East Facing Section of Ditch [9104] |
| 0298 | (9102)-[9104] | 1m | West | East Facing Section of Ditch [9104] |
| 0299 | - | 1m | West | General Shot of Trench 29 |
| 0300 | - | 1m | East | General Shot of Trench 29 |
| 0301 | (1003)-[1004] | 1m | North | South Facing Section of Ditch [1004] |
| 0302 | (1003)-[1004] | 1m | North | South Facing Section of Ditch [1004] |
| 0303 | (5703)-[5704] | 1m | West | East Facing Section of Ditch [5704] |
| 0304 | (5703)-[5704] | 1m | West | East Facing Section of Ditch [5704] |
| 0305 | (5903)-[5904] | 1m | East | West Facing Section of Ditch [5904] |
| 0306 | (5903)-[5904] | 1m | East | West Facing Section of Ditch [5904] |
| 0307 | - | 1m | North | General Shot of Trench 55 |
| 0308 | - | 1m | South | General Shot of Trench 55 |
| 0309 | - | 2m | East | West Facing Section of Trench 55 |
| 0310 | - | 2m | East | West Facing Section of Trench 55 |
| 0311 | - | 2m | East | West Facing Section of Trench 55 |
| 0312 | - | 2m | East | West Facing Section of Trench 55 |

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|------|---------------|------|------------|-------------------------------------|
| 0313 | - | 2m | East | West Facing Section of Trench 55 |
| 0314 | | 2m | East | West Facing Section of Trench 55 |
| 0315 | - | 2m | East | West Facing Section of Trench 55 |
| 0316 | - | 2m | West | East Facing Section of Trench 55 |
| 0317 | - | 2m | West | East Facing Section of Trench 55 |
| 0318 | - | 2m | West | East Facing Section of Trench 55 |
| 0319 | - | 2m | West | East Facing Section of Trench 55 |
| 0320 | - | 2m | West | East Facing Section of Trench 55 |
| 0321 | - | 2m | West | East Facing Section of Trench 55 |
| 0322 | - | 2m | West | East Facing Section of Trench 55 |
| 0323 | - | 2m | West | East Facing Section of Trench 55 |
| 0324 | (9002)-[9003] | 1m | East | West Facing Section of Ditch [9003] |
| 0325 | (9002)-[9003] | 1m | East | West Facing Section of Ditch [9003] |
| 0326 | - | 2x1m | West | General Shot of Trench 48 |
| 0327 | - | 2x1m | East | General Shot of Trench 48 |
| 0328 | - | - | South-west | Farm Track within Trench 48 |
| 0329 | - | 2m | South | Farm Track within Trench 48 |
| 0330 | - | 2m | North-east | Farm Track within Trench 48 |
| 0331 | - | 2x1m | South | General Shot of Trench 57 |
| 0332 | - | 1m | North | General Shot of Trench 57 |
| 0333 | - | 1m | South | General Shot of Trench 57 |
| 0334 | - | 1m | South | General Shot of Trench 59 |
| 0335 | - | 1m | North | General Shot of Trench 59 |
| 0336 | - | - | West | General Site Shot of Field 2 |
| 0337 | - | - | South-west | General Site Shot of Field 3 |
| 0338 | - | - | South-west | General Site Shot of Field 4 |
| 0339 | - | - | North-west | General Site Shot of Field 5 |
| 0340 | - | - | North | General Site Shot of Field 6 |
| 0341 | - | - | North-east | General Site Shot of Field 6 |
| 0342 | - | - | North-west | General Site Shot of Field 13 |
| 0343 | - | - | North | General Site Shot of Field 13 |
| 0344 | - | - | North-west | General Site Shot of Field 11 |
| 0345 | - | - | North-east | General Site Shot of Field 12 |
| 0346 | - | - | North-east | General Site Shot of Field 10 |
| 0347 | - | - | North-west | General Site Shot of Field 7 |



IMG_0001



IMG_0002



IMG_0003



IMG_0004



IMG_0005



IMG_0006



IMG_0007



IMG_0008



IMG_0009



IMG_0010



IMG_0011



IMG_0012



IMG_0013



IMG_0014



IMG_0015



IMG_0016



IMG_0017



IMG_0018



IMG_0019



IMG_0020



IMG_0021



IMG_0022



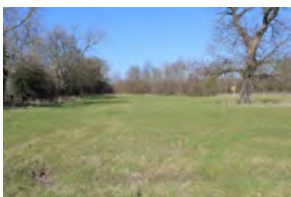
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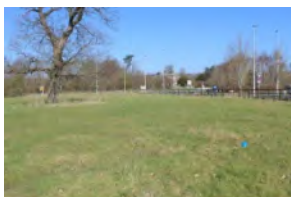
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IMG_0025



IMG_0026



IMG_0027



IMG_0028



IMG_0029



IMG_0030



IMG_0031



IMG_0032



IMG_0033



IMG_0034



IMG_0035



IMG_0036



IMG_0037



IMG_0038



IMG_0039



IMG_0040



IMG_0041



IMG_0042



IMG_0043



IMG_0044



IMG_0045



IMG_0046



IMG_0047



IMG_0048



IMG_0049



IMG_0050



IMG_0051



IMG_0052



IMG_0053



IMG_0054



IMG_0055



IMG_0056



IMG_0057



IMG_0058



IMG_0059



IMG_0060



IMG_0061



IMG_0062



IMG_0063



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IMG_0069



IMG_0070



IMG_0071



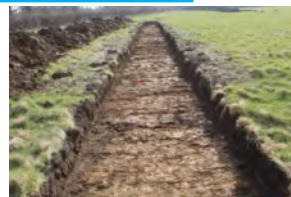
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IMG_0079



IMG_0080



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IMG_0114



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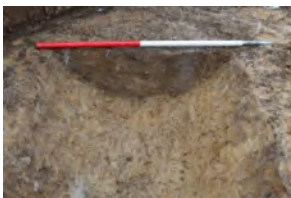
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APPENDIX 3

Drawing Listing

| Drawing | Scale | Context | Description |
|---------|-------|-----------------|---|
| 001 | - | - | Voided |
| 002 | - | - | Voided |
| 003 | - | - | Voided |
| 004 | - | - | Voided |
| 005 | 1:10 | (9102)-[9104] | East Facing Section of Ditch [9104] |
| 006 | 1:20 | (9102)-[9104] | Plan of Ditch [9104] |
| 007 | 1:10 | (9202)-[9204] | South Facing Section of Ditch [9204] |
| 008 | 1:20 | (9202)-[9204] | Plan of Ditch [9204] |
| 009 | 1:10 | (9702)-[9703] | North Facing Section of Ditch [9703] |
| 010 | 1:20 | (9702)-[9703] | Plan of Ditch [9703] |
| 011 | 1:10 | (10502)-[10505] | South Facing Section of Ditch [10505] |
| 012 | 1:20 | (10502)-[10505] | Plan of Ditch [10505] |
| 013 | 1:10 | (1003)-[1004] | South-West Facing Section of Gully [1004] |
| 014 | 1:20 | (1003)-[1004] | Plan of Gully [1004] |
| 015 | 1:10 | (5703)-[5704] | East Facing Section of Ditch [5704] |
| 016 | 1:20 | (5703)-[5704] | Plan of Ditch [5704] |
| 017 | 1:10 | (5903)-[5904] | West Facing Section of Ditch [5904] |
| 018 | 1:20 | (5903)-[5904] | Plan of Ditch [5904] |
| 019 | 1:10 | (9002)-[9003] | West Facing Section of Ditch [9003] |
| 020 | 1:20 | (9002)-[9003] | Plan of Ditch [9003] |
| 021 | 1:20 | (5501)-(5502) | East Facing Section of Trench 55 |
| 022 | 1:20 | (5501)-(5502) | East Facing Section of Trench 55 |
| 023 | 1:20 | (5501)-(5502) | East Facing Section of Trench 55 |
| 024 | 1:20 | (5501)-(5502) | East Facing Section of Trench 55 |
| 025 | 1:20 | (5501)-(5502) | East Facing Section of Trench 55 |
| 026 | 1:20 | (5501)-(5502) | East Facing Section of Trench 55 |
| 027 | 1:20 | (5501)-(5502) | West Facing Section of Trench 55 |
| 028 | 1:20 | (5501)-(5502) | West Facing Section of Trench 55 |
| 029 | 1:20 | (5501)-(5502) | West Facing Section of Trench 55 |
| 030 | 1:20 | (5501)-(5502) | West Facing Section of Trench 55 |
| 031 | 1:20 | (5501)-(5502) | West Facing Section of Trench 55 |
| 032 | 1:20 | (5501)-(5502) | West Facing Section of Trench 55 |

APPENDIX 4

Sample Listing

| Sample | Context | Cut | Type | Volume (L) | Description | Finds | Flot |
|--------|---------|---------|------|------------|---|-------|------|
| 001 | (1003) | [1004] | GBA | 40 | Mid-yellow brown mottled with pale grey, fine sandy clay. Single fill of Gully [1004]. | No | Yes |
| 002 | (9002) | [9003] | GBA | 40 | Mid-grey brown mottled with mid-yellow brown, fine silty clay. Single fill of ditch [9003]. | No | Yes |
| 003 | (9102) | [9104] | GBA | 40 | Mid-grey brown mottled, fine sandy clay. Secondary fill of ditch [9104]. | No | Yes |
| 004 | (9203) | [9204] | GBA | 20 | Mid-red brown mottled with grey brown, fine sandy clay. Primary fill of ditch [9204]. | No | Yes |
| 005 | (9702) | [9703] | GBA | 40 | Pale-grey brown, fine clay. Single fill of ditch [9703]. | No | Yes |
| 006 | (10503) | [10505] | GBA | 40 | Pale-blue grey, very fine silty clay. Secondary fill of Ditch [10505] | No | Yes |
| 007 | (5703) | [5704] | GBA | 40 | Mid-red brown mottled with grey, fine sandy clay. Single fill of ditch [5704]. | No | Yes |
| 008 | (5903) | [5904] | GBA | 40 | Mid-red brown. Fine sandy clay. Single fill of ditch [5904]. | No | Yes |

APPENDIX 5

Burley in Wharfedale MAP 05-54-21

Carbonised Plant Macrofossils and Charcoal

Diane Alldritt

1: Introduction

Eight environmental sample flots taken during archaeological evaluation work on land in Burley in Wharfedale (MAP 05-54-21) were examined for carbonised plant macrofossils and charcoal. Small amounts of charcoal fragments were recovered from the ditch and gully features, together with crushed coal and clinker.

2: Methodology

The bulk environmental samples were processed by MAP Archaeological Practice Ltd. using a Siraf style water flotation system (French 1971). The samples were 20litres to 40litres in volume. The flots were dried before examination under a low power binocular microscope typically at x10 magnification. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

3: Results

The environmental samples produced small quantities of carbonised remains <2.5ml up to 5ml in volume consisting of occasional finds of charcoal fragments 0.5cm to 1.0cm in size amongst crushed charred detritus below the level of identification. Modern remains were recorded at <2.5ml in volume mostly consisting of modern roots with scarce finds of earthworm egg capsules indicating low levels of bioturbation were taking place. Crushed clinker and coal fragments suggested probable Post Medieval mixing and disturbance throughout the deposits.

Results are given in table 1 and discussed below.

4: Discussion

Gully [1004] (1003) contained a small deposit of abraded charcoal fragments consisting of *Quercus* (oak) possibly fuel waste sweepings from nearby burning activity.

Ditch [5704] (5703) had a few crushed fragments of charred remains, probably degraded charcoal, mixed with clinker, likely to be residual, bioturbated and trampled material.

Ditch [5904] (5903) produced a single fragment of oak charcoal, possibly fuel waste, that was mixed with coal.

Ditch [9003] (9002) was sterile with only clinker fragments recovered. This was possibly a field boundary, perhaps of fairly recent origin.

Ditch [9104] (9102) contained trace crushed charred detritus probably residual remains, mixed with coal and clinker.

Ditch [9204] (9203) produced a small amount of charcoal with one well-preserved fragment of *Alnus* (alder) identified. This was probably fuel waste from nearby burning and would be suitable for radiocarbon dating if required.

Ditch [9703] (9702) had crushed charred remains with nothing identifiable, likely to be residual mixed material.

Ditch [10505] (10503) was sterile with only coal and clinker recovered.

5: Conclusion

The environmental samples produced small amounts of charcoal with oak recorded from gully [1004] and ditch [5904], whilst alder was present in ditch [9204] indicating low levels of burning activity taking place. The remains were possibly fuel waste originating from nearby settlement or may have been burnt during woodland and scrub clearance work for agriculture. The ditches probably formed field boundaries or other agricultural divisions and some of them may be Post Medieval in origin.

Further excavation work at the site has a low potential to produce any significant finds of carbonised plant remains.

References

French, D. H. 1971 An Experiment in Water Sieving. *Anatolian Studies* 21 59-64.

Schweingruber, F. H. 1990 *Anatomy of European Woods*. Paul Haupt Publishers Berne and Stuttgart.

Stace, C. 1997 *New Flora of the British Isles*. 2nd Edition Cambridge University Press.

Zohary, D. and Hopf, M. 2000 *Domestication of Plants in the Old World*. 3rd Edition Oxford University Press.

APPENDIX 5.1

Table 1: Burley in Wharfedale MAP 05-54-21: Charcoal and Other Remains:

| | Context | 1003 | 5703 | 5903 | 9002 | 9102 | 9203 | 9702 | 10503 |
|------------------------|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| | Sample | 1 | 7 | 8 | 2 | 3 | 4 | 5 | 6 |
| | Feature | gully [1004] | ditch [5704] | ditch [5904] | ditch [9003] | ditch [9104] | ditch [9204] | ditch [9703] | ditch [10505] |
| | Radiocarbon Y/N | N | N | N | N | N | Y ch | N | N |
| | Sample Volume (litres) | 40 | 40 | 40 | 40 | 40 | 20 | 40 | 40 |
| | Total CV | 5ml | <2.5ml | 2.5ml | 0 | <2.5ml | <2.5ml | <2.5ml | 0 |
| | Modern | <2.5ml | <2.5ml | <2.5ml | <2.5ml | <2.5ml | <2.5ml | <2.5ml | <2.5ml |
| Charcoal | Common Name | | | | | | | | |
| <i>Quercus</i> | oak | 1 (0.10g) | | | | | | | |
| <i>Alnus</i> | alder | | | | | | 1 (0.23g) | | |
| Other Remains | | | | | | | | | |
| Clinker | | | 5+ | | 5+ | 5+ | | | 5+ |
| Coal | | 1 | | | | 5+ | 5+ | 5+ | 5+ |
| Earthworm egg capsules | | | | | | | | 1 | |



maparch

MAP Archaeological Practice

Land at Black Bull Farm
Burley in Wharfedale
West Yorkshire

16/07870/MAO Conditions 9 & 10

Written Scheme of Investigation

Archaeological Evaluation by Trial Trenching

MAP Archaeological Practice Ltd ©

Land at Black Bull Farm
Burley in Wharfedale
West Yorkshire

WRITTEN SCHEME OF INVESTIGATION:
Archaeological Trial Trenching
16/07870/MAO Conditions 9 & 10

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Land at Black Bull Farm
Burley in Wharfedale
West Yorkshire

Written Scheme of Investigation
Archaeological Trial Trenching
16/07870/MAO Conditions 9 & 10

1 Summary

- 1.1 This document sets out the details for the archaeological work required on land at Black Bull Farm, Burley in Wharfedale, West Yorkshire, in order to inform West Yorkshire Archaeology Advisory Service, archaeological advisors to Bradford Metropolitan District Council, of the archaeological potential of the site and to establish if further archaeological work is necessary to preserve archaeological remains, prior to the commencement of a residential development with associated infrastructure (16/07870/MAO).
- 1.2 In accordance with the recommendations of the National Planning Policy Framework (2021) on 'Archaeology and Planning' a staged scheme of archaeological work is proposed. The results of the Trial Trenching, which follows a Desk Based Assessment, Geophysical Survey, and previous Trial Trenching, will be summarised in a report and an appropriate mitigation strategy will be formulated if necessary.
- 1.3 This Written Scheme of Investigation has been funded by Barratt David Wilson Homes.

- 1.4 The Written Scheme of Evaluation is valid for 1 year from the date of issue. After that time revision may be needed to take into account new working practices or changes in policy.

2 Site Description and Planning Background

- 2.1 The site located to the west of Burley in Wharfedale and is bounded to the north by the A65 Ilkley Road and to the south by Sun Lane (Fig 1).

- 2.2 The site lies on deposits of the Millstone Grit Group, overlain by Till deposits.

- 2.3 Condition 9 attached to the Outline Planning Permission (16/07870/MAO). States that;

Within areas outside the area identified on the Parameters Plan (drawing number 31620-301-P -P) as an "Area to come forward in accordance with the Heritage Design Brief", no development of a Phase, including Advanced Infrastructure and Enabling Works pursuant to Condition 6, shall take place until a Written Scheme of Archaeological Investigation (WSI) has been submitted to and approved in writing by the local planning authority for that Phase. The WSI shall set out a staged programme of archaeological investigation and reporting across that Phase that is proportionate in scale to the identified potential for unrecorded archaeological remains (areas of highest potential being Areas 1, 5, 10 and 14 in Figure 4 of Appendix K3 of the Environmental Statement (ref 50335/JG/JCx), GSB Survey Report No. G1606, February 2016 where these fall outside the area identified on the Parameters.

Condition 10 states that;

No development of a Phase, including Advanced Infrastructure and Enabling Works pursuant to Condition 6, incorporating land within the area identified on the Parameters Plan (drawing number 31620-301-P) as an "Area to come forward in accordance with the Heritage Design Brief", shall take place until a Written Scheme of Archaeological Investigation (WSI) for this area has been submitted to and approved in writing by the local planning authority. The WSI shall set out a programme for detailed investigation of this area and its immediate surroundings, against a defined research strategy and will include provision for local community involvement.

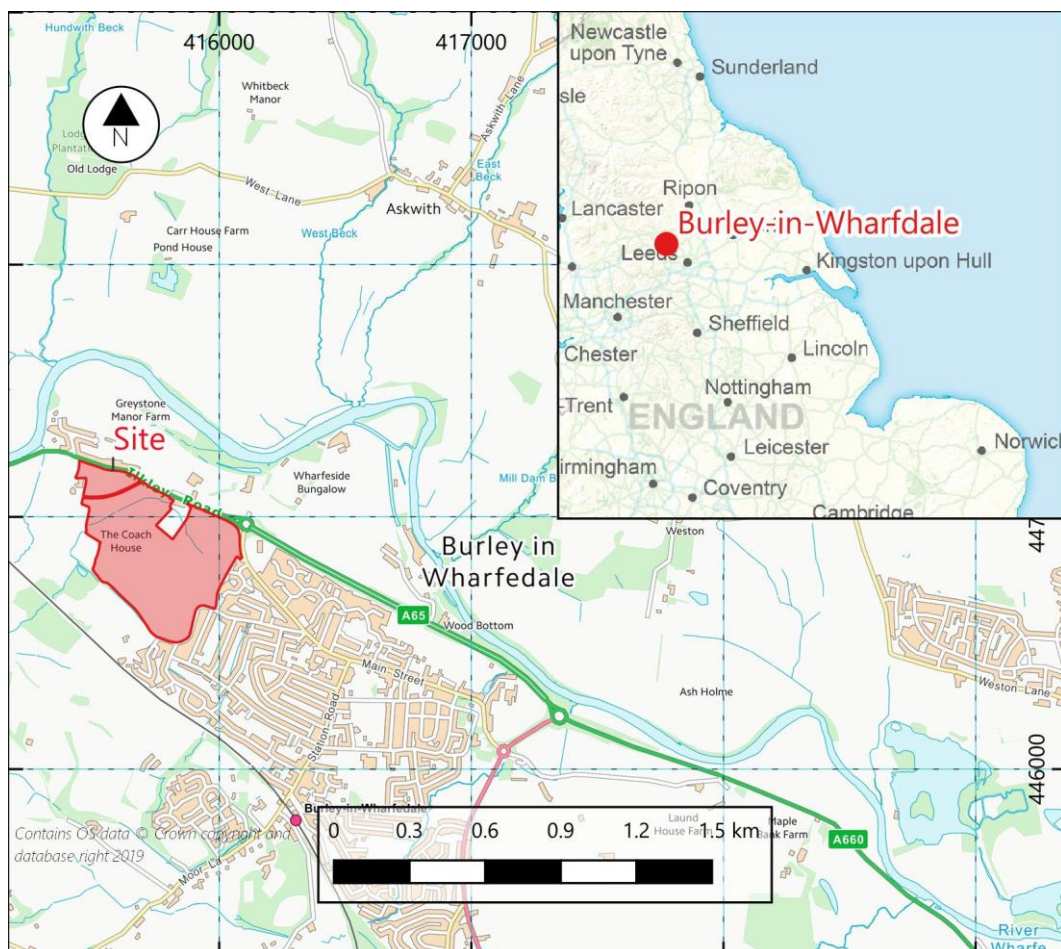


Figure 1. Site Location.

3. Archaeological and Historical Background

- 3.1 Although evidence of prehistoric activity in the immediate vicinity of the site is scant, extensive activity has been identified in the wider area in areas such as Rombalds Moor where complexes of enclosures, carved stones, burial cairns, and stone circles have been recorded. Mesolithic activity has also been identified on river terraces near Otley, to the east of Burley in Wharfedale.
- 3.2 The site lies approximately 4km east of Ilkley Roman fort and approximately 600m north of the postulated route of a Roman road which connected Ilkley and Tadcaster.
- 3.3 Burley in Wharfedale is likely to have pre-conquest origins, with a reference being made to '*Burghley*' being made in a Saxon charter dating to around 872 AD. Despite early references, archaeological evidence relating to Anglo-Saxon or early medieval activity is scant.
- 3.4 A Desk Based Assessment (NAA. 2016) was carried out in respect of the Outline Planning Permission in 2016. The assessment concluded that an evaluation was necessary in order to assess the potential of prehistoric or Roman archaeology being present on the site. Geophysical Survey and Trial Trenching was recommended.
- 3.5 A geophysical Survey, carried out in 2016 (SUMO. 2016). The survey identified a number of ditch like anomalies of potential archaeological origin including three sides of a 'playing-card' shaped enclosure and a possible trackway. Service pipes and evidence of ploughing were also identified in the data.
-

- 3.6 Following the results of the DBA and Geophysical survey, NAA undertook a targeted scheme of trenching across the three visible sides and the central area of the 'Playing Card' enclosure. They encountered a diminished outer bank 0.2m high by 5m wide, flanked by a small ditch measuring 2.1m wide by 0.45m deep; with a singular prehistoric flint recovered from the excavations. In summary it was concluded that this earthwork's limited remains and stature were owing to an abrupt cessation of works. Perhaps never achieving its full inception and hence a lack of material culture. The evaluation showed that the enclosure had an outer bank approximately 0.2m high and up to 5m wide which had been formed with topsoil and redeposited clay. The bank flanked a small ditch which measured a maximum of 2.1m wide and 0.45m deep, excavated into the natural clay, although seemingly abandoned prior to completion. No evidence of archaeological features was identified from the interior of the enclosure. The only archaeological artefact recovered was a prehistoric flint flake and as such no evidence to confirm a Roman date of construction of the enclosure was achieved.
- 3.7 Commenting on the results of the evaluation WYAAS (2016) stated that 'nationally significant remains may be present in one location within the application site. This is the site of a possible Roman military marching camp. If proven this would be the only confirmed site of this type in West Yorkshire'.
- 3.8 Roman marching camps are common in northern England although rare in West Yorkshire (Welfare & Swan. 1995). The temporary camps were used as overnight accommodation by marching soldiers and also served as

temporary work camps. Marching camps typically consist of a 'playing card' shaped enclosure defined by a single bank and external ditch, usually with the typically Roman 'V' shaped profile. Entrances were usually present on all four sides although as many as twelve have been recorded. The average marching camp measures between 1-1.5 ha although they can be as large as 23ha.

3.9 The 'playing card' shaped enclosure investigated during the aforementioned evaluation conformed to the normal typology for a marching camp for a number of reasons including its area of 1.2ha, its single bank and ditch which was identified on three sides, and the apparent lack of any internal features.

4. Aims and Objectives

4.1 The aim of the Archaeological Trial Trenching is to determine the presence/absence, nature, date, quality of survival and importance of archaeological deposits to enable an assessment of the potential and significance of the archaeology to be made.

4.2 In line with the Research Agenda for the Iron Age and Romano-British Periods in West Yorkshire (Chadwick. 2009) and the aims of previous evaluation (NAA. 2016) the work has the potential to inform the following research questions and priorities

- To establish whether archaeological features are present within the 'playing card-shaped' enclosure
- To establish, if possible, the date of the enclosure and any associated features

- To assess the immediate environs of the 'playing card-shaped' enclosure and other potential archaeological anomalies highlighted in the results of the Geophysical Survey
- 4.3 Following the completion of archaeological work and subsequent post excavation assessment the aim is to place the results in the public domain by depositing all results with the West Yorkshire Historic Environment Record.
- 4.4 It is conceivable that further work may be necessary, dependant on the results of the evaluation. Any further work will be agreed by West Yorkshire Archaeology Advisory Service who will agree the scale of works and an appropriate Written Scheme of Investigation.

5 Compliance

- 5.1 MAP will adhere to the general principles of the ClfA Code of Conduct (ClfA 2019) throughout the project and to the ClfA 'Standards and Guidance for Archaeological Field Evaluations' (CIFA 2020).
- 5.2 All work will be carried out in accordance with chapter 16 of the National Planning Policy Framework (2021) on 'Archaeology and Planning'.
- 5.3 The work will be monitored under the auspices of West Yorkshire Archaeological Advisory Service, archaeological advisors to Bradford Metropolitan District Council, who will be consulted before the commencement of site works.

- 5.4 The representative of the West Yorkshire Archaeology Advisory Service will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance at a time that the site's archaeological potential has been investigated and is available to inspect. A site tour will be given by the supervising archaeologist and all trenches and finds which are still of site will be available for inspection.
- 5.5 All work will be carried out in respect of this Written Scheme of Investigation which will be approved by West Yorkshire Archaeological Advisory Service prior to submission. Any variations of the scheme of work must be discussed with and approved by West Yorkshire Archaeological Advisory Service.
- 5.6 The supervising archaeologist will be supplied with and allowed time to study all documents relating to previous archaeological investigation of the site.
- 5.7 All maps within this report have been produced from the Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright. License No. AL 50453A and also data derived from Open Street Map (<https://www.openstreetmap.org/copyright>).
- 5.8 If human remains are encountered during the course of this evaluation, it is considered best practice to not remove the remains at this stage, however, this should be considered at a site-specific level. If it is deemed necessary to remove human remains, this will be carried out under the conditions of licences for the removal of human remains (issued by the Ministry of Justice) and in accordance with the Burial Act (1857) and 'Guidelines to the

Standards for Recording Human Remains' (Brickley & McKinley. 2004) to ensure that they are treated with due dignity.

- 5.9 MAP Archaeological Practice is an ISO 9001 accredited organisation (certificate number GB2005425). The award of the ISO 9001 certificate, independently audited by the British Standards Institution (BSI), demonstrates MAP's commitment to providing a quality service to our clients. ISO (the International Organisation for Standardisation) is the most recognised standards body in the world, helping to drive excellence and continuous improvement within businesses.

6 Fieldwork Methodology

6.1 Excavation and Recording

- 6.1.1 One hundred and three Trial Trenches are proposed, positioned across the site to investigate geophysical anomalies but also areas which appear void of archaeology in the results of the survey (Fig. 2). Ninety-seven trenches measure 40m x 2m and six measure 25m x 4m. A 10% contingency should be allowed for. Use of the contingency, up to 2090m² will be dependent upon the results of the afore mentioned Trial trenching and at the discretion of West Yorkshire Archaeological Advisory Service whose decision will be issued in writing. Use of the contingency may entail the excavation or further Trail Trenches or full excavation of a feature which may reduce the need for further work to be carried out at a later date.

Gross site area: c. 209000m²

Area of proposed trenching: 8360m²

Contingency trenching: 2090m²

- 6.1.2 All overburden, topsoil and any subsequent subsoils will be carefully removed by mechanical excavator using a wide toothless blade, under archaeological supervision, to the top of archaeological features or layers. Excavated topsoil will be redeposited in bunds around the edge of the trenches, or at an alternative location, to be determined in agreement with the client. Topsoil and subsoils will be stored separately, and all spoil will be stored and managed in line with the standards of the Construction Code of Practice for Sustainable Use of Soils on Construction Sites (DEFRA 2009).
- 6.1.3 Spoil heaps and trench bases will be scanned with a metal detector by an experienced archaeologist. All pre-19th century material will be retained and accounted for, whilst later material will be noted but not retained.
- 6.1.4 All excavation of archaeological features and deposits carried out will be by hand. Areas of intensive modern disturbance will be given a low priority in excavation. Where practicable, the fills of these features will be removed by mechanical excavator. The metal detector, the make and model of which will be noted in the final report, will be capable of discriminating between ferrous and non-ferrous metal artefacts. The make and model of the metal detector will be discussed in the report, as will an analysis of any finds.
- 6.1.5 Single context recording methodologies and systems will be used. All archaeological deposits will be recorded according to principles of stratigraphic excavation on MAP's *pro forma* sheets, which are compatible with the MoLAS recording system. The MoLAS recording manual will be used on site where necessary. The stratigraphy of trenches will be recorded even if no archaeology is found.
- 6.1.6 The excavation sampling policy is :
-

- a. A 100% sample of stakeholes
- b. An initial 50% sample should be taken of all postholes, but where they are part of a building these should be 100% excavated
- c. A 50% sample of pits with a diameter up to 1.5m (where justified, these should be 100% excavated,
- d. A minimum 25% sample of all pits over 1.5m in diameter, but this should include a complete section across the pit to record a full profile (where justified, these should be 100% excavated)
- e. linear features will be sampled a minimum of 20% along their length (each sample section to be not less than 1m), or a minimum of a 1m sample section, if the feature is less than 5m long.
- f. All junctions/intersections and corners of linear features will be investigated, and their stratigraphic relationships determined – if necessary, using box sections and all ditch terminals will be examined,
- g. Funerary contexts, buildings and industrial features will be subject to sufficient excavation to establish the objectives of the evaluation, but no archaeological deposit will be entirely removed unless this is unavoidable to meet the aims of the fieldwork.

6.1.7 In certain cases, the use of mechanical excavation equipment may also be appropriate for removing deep intrusions (e.g., modern brick and concrete floors or footings), or for putting sections through major features after partial excavation (e.g., ditches), or through deposits to check that they are of natural origin

6.1.8 A full written, drawn, and photographic record will be made of all material revealed during the course of the Trial Trenching. Plans and section drawings will be drawn to a scale appropriate to the excavated feature. All

drawings will include heights A.O.D. Where subsoils or other deposits are encountered, at least one representative section of each trench will be drawn, representative of the complete sequence of deposits from modern ground surface to natural geology. Black and white photography will form the basis of the photographic archive and supplemented by high quality digital photographs, which will be supplied in TIFF and JPEG format.

6.1.9 A sampling strategy for the recovery for environmental remains has been formulated in accordance with an Environmental Strategy written by an Environmental Consultant (Diane Aldritt, appendix 1) and also follows the guidance of the Association for Environmental Archaeology (1995) and Historic England (2011).

6.1.10 Soil 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. Positive features will also be sampled; retention of structural material such as bricks will be implemented where necessary. Sampling will also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Animal bones will be hand collected, and bulk samples collected from contexts containing a high density of bones. Spot finds of other material will be recovered where applicable. Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of the fieldwork wherever possible, partly to permit variation of sampling strategies, if necessary, but also because processing at a later stage could cause delays.

- 6.1.11 If human remains are encountered during the course of this evaluation and it is deemed necessary to remove the remains, this will take place under the conditions of licences for the removal of human remains (issued by the Ministry of Justice, to ensure that they are treated with due dignity). The preferred option would be for them to be adequately recorded before lifting, and then carefully removed for scientific study, and long-term storage with an appropriate museum; however, the burial licence may specify reburial or cremation as a requirement.
- 6.1.12 All artefacts are to be retained for processing and analysis except for unstratified 20th-century material, which may be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in *First Aid for Finds* (3rd edition).
- 6.1.13 All finds (artefacts and ecofacts) visible during excavation will be collected and processed unless variations in this principle are agreed with West Yorkshire Archaeology Advisory Service and an appropriate sampling and discard strategy developed with all stakeholders. Finds will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication *First Aid for Finds*. In accordance with the procedures outlined in MoRPHE, all iron objects, a selection of non-ferrous artefacts (including all coins), and a sample of any industrial debris relating to metallurgy will be X-radiographed before assessment.
- 6.1.14 We will make provision within our excavation strategies, where necessary, for use of shoring, pumps, or artificial lighting. Such strategies will also follow for sampling for radiocarbon, archaeomagnetic and/or

dendrochronological determinations, as appropriate: where in situ timbers are found to survive in good condition, samples will be taken for dendrochronological assay.

6.1.15 Arrangements for site access and reinstatement are to be agreed with the commissioning body.

6.1.16 Health and safety will take priority over archaeological matters. All archaeologists undertaking fieldwork must comply with all Health and Safety Legislation, this includes the preparation of a Risk Assessment.

6.1.17 All archaeological staff and visitors to the site will comply with current government guidance regarding COVID-19. All precautions, including those concerning social distancing will be outlined in MAP's Risk Assessment and Method Statement.

6.1.18 Necessary precautions will be taken over underground services and overhead lines. Further information and guidance will be available in the Risk Assessment and Method Statement which will be compiled prior to commencement of site work. Appropriate standoff distances will be agreed prior to the commencement of the evaluation.

6.1.19 All on site staff hold valid CSCS cards. All Project Officers and Project Managers hold a valid First Aid at Work Certificate and Site Supervisor Safety Training qualifications.

6.1.20 MAP will provide evidence of all necessary insurances, including Employer's Liability, Professional Liability and Public Liability Cover.

7. Post Excavation Analysis and reporting

- 7.1 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.
- 7.2 Upon completion of the evaluation, the artefacts, soil samples and stratigraphic information will be assessed as to their potential and significance for further analysis.
- 7.3 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.
- 7.4 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.
- 7.5 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 ($\delta^{13}\text{C}$) and nitrogen isotope analysis carried out by the radiocarbon laboratory.

- 7.6 All finds and biological material must be analysed by a qualified and experienced specialist.
- 7.7 Following identification, finds of 20th-century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19th century or earlier date should be retained and archived.
- 7.8 Any samples taken shall be processed and any finds shall be cleaned, identified, assessed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines and reporting on ceramic artefacts and pottery should follow the guidance given in 'A Standard for Pottery Studies in Archaeology' (2016) and endorsed by the Prehistoric Ceramics Research Group; the Study Group for Roman Pottery & the Medieval Pottery Research Group. 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. An index to the field archive is to be deposited with the WYAAS (preferably as an appendix in the report).
- 7.9 A report will be prepared to include the following:
- a) A non-technical summary of the results of the work, Introduction and aims and objectives.
 - b) An introduction which should include
 - the site code/project number
 - planning reference number and HER Casework number
 - dates when fieldwork took place

- grid reference
- c) An account of the methods and results of the evaluation, describing structural data and associated finds and/or environmental data recovered.
- d) Interpretation, including phasing of the site sequence and spot-dating of ceramics (Descriptive material should be clearly separated from interpretive statements). This shall be supported by the use of photographs and drawings, to include an overall plan of the site accurately identifying the location of trenches; individual trench plans as excavated indicating the location of archaeological features, with at least one section detailing the stratigraphic sequence of deposits within each trench.
- e) A specialist assessment of the artefacts recovered with a view to their potential for further study. Allowance should be made for preliminary conservation and stabilisation of all objects and an assessment of long-term conservation and storage needs.

Assessment of artefacts must include inspection of X-radiographs of all iron objects, a selection of non-ferrous artefacts (including coins), and a sample of any industrial debris relating to metallurgy. A rapid scan of all excavated material should be undertaken by conservators and finds researchers in collaboration. Material considered vulnerable will be selected for stabilisation after specialist recording. Where intervention is necessary, consideration will be given to possible investigative procedures (e.g., glass composition studies, residues in or on pottery, and mineral preserved organic material). Once assessed, all material will be packed and stored in optimum conditions, as described in *First Aid for Finds*. Waterlogged organic materials should be dealt with, following Historic England documents, *Guidelines for the care of waterlogged archaeological leather*, and *guidelines on the recording, sampling, conservation, and curation of waterlogged wood*.

- f) A specialist assessment of environmental samples taken, with a view to their potential for subsequent study.

Processing of all samples collected for biological assessment, or sub-samples of them, will be completed. Bulk and site-riddled samples from dry deposits should have been processed during excavation, where possible. The preservation state, density and significance of material retrieved must be assessed, following methods presented in Environmental Archaeology and archaeological evaluations, or existing local guidelines, until national guidelines are available. Unprocessed sub-samples must be stored in conditions specified by the appropriate specialists.

Assessments for any technological residues will be undertaken. Samples for dating must be submitted to laboratories promptly, so as to ensure that results are available to aid development of specifications for subsequent mitigation strategies.

- g) The results from investigations in archaeological sciences will be included in the Site Archive and presented in the Evaluation Report. Reports must include sufficient detail to permit assessment of potential analysis. They will include tabulation of data in relation to site phasing and contexts and must include non-technical summaries. The objective presentation of data must be clearly separated from interpretation. Recommendation for further investigation (both on samples already collected, and at future excavations) must be clearly separated from the results and interpretation.
- h) An assessment of the archaeological significance of the deposits identified, in relation to other sites in the region.
- i) A conclusion with recommendations for further post-excavation work, if required.
- j) Detailed archive location and destination.
-

- k) Appendices and figures, as appropriate, including a copy of the specification and/or project design.
 - l) References and bibliography of all sources used
- 7.10 Copies of the report will be submitted to the commissioning body, the Local Planning Authority, and the West Yorkshire Historic Environment Record within an agreed timetable and subject to any contractual requirements on confidentiality (see 8.1 below).
- 7.11 We will provide a physical and digital copy of the report in PDF format to the West Yorkshire Historic Environment Record.
- 7.12 A Brief, interim report may be prepared shortly after the completion of fieldwork. WYAAS reserve the right to delay making any further recommendations until any necessary specialist assessment has been carried out.
- 7.13 The following Specialists have been contacted as are available to work on the project:
- Pottery - T G Manby (Prehistoric),
 - M R Stephens (medieval and post-medieval)
 - P A Ware (Roman)
 - Flint - P Makey
 - Animal Bone – Jane Richardson
 - Environmental Sampling – Diane Alldritt
 - Conservation – York Archaeological Trust
 - Human Remains – York Osteology
 - Ceramic Building Material – Dr Phil Mills
-

Clay Tobacco Pipe - M R Stephens

8. Copyright, Confidentiality and Publicity

8.1 Unless the individual/organisation commissioning the project wishes to state otherwise, the copyright of any written, graphic, or photographic records and reports rests with MAP.

8.2 By depositing the report with WYAAS, the contractor gives permission for the material presented 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 commercial use by third parties, with the copyright owner suitably acknowledged.

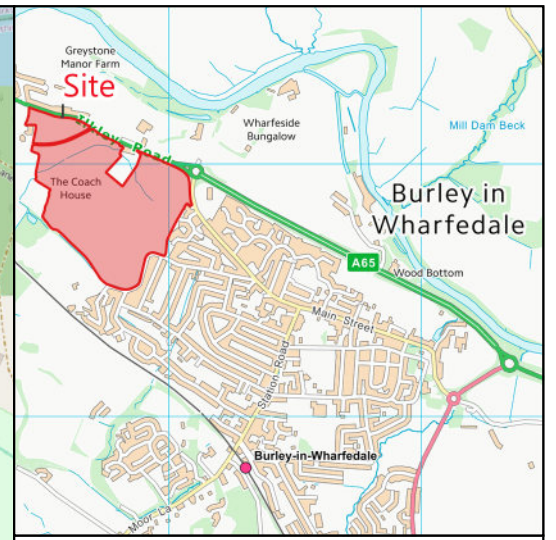
9. Archive Preparation and Dissemination

9.1 The requirements for archive preparation and deposition must be addressed and undertaken in a manner agreed with the recipient museum: in this instance, Bradford Museum Services is recommended. Bradford's Museum Service's collections manager will be notified in writing (copied to WYAAS) to determine the museum's requirements for the deposition of an excavation archive.

9.2 A site archive should be prepared in accordance with the specification outlined in *Management of Archaeological Projects* (MoRPHE (Lee, E, 2006)). See also *Towards an Accessible Archaeological Archive, the Transfer of Archaeological Archives to Museums: Guidelines for use in England*,

Northern Ireland, Scotland, and Wales Society of Museum Archaeologists
1995.


- 9.3 The site archive, including finds and environmental material, subject to the permission of the relevant landowners, will be labelled, conserved and stored according to the United Kingdom Institute for Conservation (UKIC)'s. Provision will be made for the stable storage of paper records and their long term storage on a suitable medium, such as microfilm. An index to the contents of the archive together with details of its date and place of deposition should be lodged with the SMR.
- 9.4 Archive deposition must be arranged in consultation with the recipient museum and the West Yorkshire Archaeology Advisory Service and must take account of the requirements of the recipient museum and the relevant guidelines (see above) relating to the preparation and transfer of archives. The timetable for deposition shall be agreed on completion of the site archive and narrative.
- 9.5 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. In the absence of this agreement the field archive (less finds) is to be deposited with the West Yorkshire Archaeology Advisory Service




Legend

- Development Outline
- Trenches

- ?Archaeology / Negative Response / Trend
- Uncertain Origin / Trend
- Area of Magnetic Disturbance
- Ferrous
- Ploughing
- Pipe / Drain
- Natural



0 30 60 90 120 150 m



Proposed Trenching Plan
Scale: 1:3000 @ A3
Version: A-141021
Client: Barratt/David Wilson Homes (Yorkshire West)

With the permission of the controller of Her Majesty's Stationary Office, Crown Copyright, license-AL50453A
Map data © OpenStreetMap contributors, CC-BY-SA
Contains Geophysical Survey Data © GSB Prospection Ltd. 2016

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APPENDIX 1

Conservation Strategy by Ian Panter of York Archaeological Trust

Artefacts from all categories and all periods will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with **First Aid for Finds**. Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

If waterlogged conditions are encountered a wide range of organic materials may be recovered, including wood, leather, and textiles. Advice will be sought from a conservator to discuss optimum storage requirements before any attempt is made to retrieve organic finds and structural timbers from the ground.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with **First Aid for Finds** and **Guidelines for the Preparation of Excavation Archives for Long-Term Storage** (Walker, 1990).

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, **Waterlogged wood: sampling, conservation, and**

curation of structural wood (Brunning 1996). The assessment will include species identification, technological examination, and potential for dating.

The conservation assessment report will include statements on condition, stability, and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

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APPENDIX 2

Environmental Strategy by Diane Alldrit

The on-site environmental sampling strategy will systematically seek to recover a representative sample of botanical, molluscan (both terrestrial and aquatic), avian and mammalian evidence from the full range of contexts encountered during the excavation. This will enable, at the assessment stage, the possibility for radiocarbon dating material to be obtained, and for an initial analysis of the economic and environmental potential of the site. In order to achieve this, a bulk sample (BS, Dobney *et al* 1992) comprising an optimum size of 40litre of sediment (where possible) should be taken from **every stratigraphically secure and archaeologically significant context**. In practice it may not always be possible to obtain 28l of sediment from certain features during the assessment stage, for instance from partially excavated pits or post-holes, in which case a single bucket sample, c.10 to 14litre should be taken at the site supervisors' discretion. Deposits of mixed origin, for instance topsoil, wall fills and obvious areas of modern contamination, should be avoided where possible, as these will contain intrusive material and not provide secure radiocarbon dates.

All buckets and other sampling equipment must be clean and free of adherent soil in order to prevent cross-contamination between samples. If dry soil is to be stored for any length of time it should be kept in cool, dry conditions, and away from strong light sources. However, it is preferable to process samples as soon as possible after excavation.

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The

flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in addition to the heavier fragments of charcoal which do not float). The 'flot' portion of the sample, which may include carbonised seeds, cereal grain, charcoal and sometimes mollusc shell, should be captured using a nest of >1mm and >300micron Endicot sieves. Flotation equipment, including sieves, meshes, brushes and so forth must be meticulously cleaned between samples in order to prevent contamination of potential radiocarbon dating material. All material resulting from flotation will be dried prior to microscopic examination. Flotation is not suitable for the recovery of pollen or for processing waterlogged samples, which shall be discussed below.

Where there is potential for waterlogged preservation, shown for instance by the presence of wood and other organic or wet material, then a 5 to 10litre size sample should be taken (GBA sample, Dobney *et al* 1992). This material is to be retained for later processing using laboratory methods to enable the recovery of waterlogged plant material and insects. For assessment purposes a 1litre sub-sample of the organic sediment from each potential waterlogged sample shall be processed using laboratory wash-over methods, and once processed **kept wet**. All waterlogged samples awaiting processing should be kept damp, preferably stored in plastic sealable tubs, and in cool conditions. Where large waterlogged timbers are recovered these should be stored under refrigerated conditions and an appropriate conservator consulted.

There is the possibility that the waterlogged deposits may require parasite egg analysis. It is proposed that the 'squash' technique is adapted, this would require small lumps of raw sediment approximately 3mm in diameter taken from three separate points from within the sample and homogenised in a little water by

shaking. After allowing coarse particles to settle for a few moments, a drop of the supernatant was removed. This work would be undertaken by either John Carrott or Harry Kenwood if necessary.

If sediment suitable for pollen analysis is encountered, for instance rich organic peaty deposits, or deep ditch sections with organic preservation, the archaeobotanical specialist is to be consulted prior to any sampling taking place. These deposits would require sampling with large kubiena tins and require the specialist to be on-site. Pollen analysis, even at assessment level, would subsequently impose a considerable cost implication should it be carried out.

The specialist is available to provide consultation and advice on the environmental sampling strategy throughout the course of the excavation and during post-excavation processing if required.

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