Worksop Bus Station Trial Trenching

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Trench 3 looking west

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SUMMARY

- Trent & Peak Archaeology was commissioned by Nottinghamshire County Council to carry out trial trenching, consisting of 5 trenches (between 8 x 1.7m and 28 x 1.7m), ahead of the Worksop Bus Station works.

- The work was carried out between the 24th and 31st March 2014 by staff from Trent & Peak Archaeology in accordance with the approved Written Scheme of Investigation (Davies 2013).

- The proposed Worksop Bus Station Scheme is located off Newcastle Street in Worksop.

- A total of 5 trenches were excavated to a maximum depth of 1.6 m below ground level (BGL). Three trenches were located within the existing car park and two more in an adjoining plot to the east.

- In three archaeological trenches in the western half of the site, a low density of archaeological features was identified. These consist of a stone lined drain which corresponds to a field boundary observed on an 1848 map of the area, as well as an undated pit and ditch.

- A small number of the trial trenches (Trenches 1, 2, 3 and 5) identified possible alluvial flood deposits and two palaeochannels at a depth of 1.3m BGL. The alluvial deposits may have geoarchaeological potential and could mask horizons of archaeological potential below a depth of at least 1.7m BGL.

- This trial trenching will enable the senior archaeological practitioner at Nottinghamshire County to advise on the extent of any further archaeological mitigation (strip, map and sample) required at the site.

Report on Trial Trenching at Worksop Bus Station

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1. INTRODUCTION

1.1 Trent & Peak Archaeology was commissioned by Nottinghamshire County Council to carry out trial trenching, consisting of archaeological monitoring and recording of 5 trenches ahead of the Worksop Bus Station works.

1.2 The development, hereafter referred to as 'the Site', is located just to the south of Newcastle Street, close to the centre of Worksop and within the historic core of the town at National Grid Reference SK 5860 7891. It is bordered to the north by Newcastle Street, to the east by Watson Road, and to the west by Queen Street. In total the site measures approximately 40m (north to south) by 75m (east to west) (roughly 0.31 hectares in size), and is at present occupied partly by a modern car park and partly by disused 20th century buildings.

1.3 The archaeological investigation was conducted as part of initial evaluation works in order to assess the potential survival of archaeological deposits within the development.

2. PROJECT BACKGROUND

2.1 The Major Projects and Improvements Team of Nottinghamshire County Council's Highways department wishes to redevelop land at Newcastle Street, Worksop, Nottinghamshire (Figure 1). Pre-planning consultation has suggested that the proposed development, comprising the demolition of existing modern buildings and the subsequent redevelopment of the land into a bus station, has the potential to impact upon cultural heritage assets and/or buried archaeological remains.

2.2 In line with the National Planning Policy Framework (NPPF) (see Section 3 below), where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, the developer was required to submit an appropriate desk-based assessment describing the significance of any heritage assets affected (including any contribution made by their setting) and a field evaluation.

2.3 A desk-based assessment was undertaken by Trent & Peak Archaeology (TPA) to ascertain the known archaeological potential of the proposed redevelopment site and the results are now summarised below:

2.4 *An assessment of the baseline data identified no archaeological events, designated or non-designated heritage assets within the proposed redevelopment area. Within the wider study area (500m radius) 9 archaeological events, 61 designated heritage assets (comprising 1 Scheduled Monument, 2 Parks and Gardens and 58 Listed Buildings) and 87 non-designated heritage assets were identified (although some of these heritage assets have no physical form). The baseline data testified to the importance of Worksop as a medieval, post medieval and modern centre with particular empathises on the extant medieval monuments, Worksop Castle (Scheduled Monument, HER 13395), Worksop Priory Gatehouse (Grade I Listed, NHER 1045028,) and the Church of St. Cuthbert and St. Mary (Grade I Listed, NHER 1156758) and post medieval buildings e.g. those fronting Bridge Street.*

2.5 *Little is known about past human settlement and land use within the proposed redevelopment site, however. The proposed redevelopment site does not lie within one of the Extensive Urban Survey medieval or post medieval land-use polygons, but by the 19th century, development along Watson road (just beyond the southeast extent of the site) is identified as a historic component. In addition, although a cartographic date range of 1763 to 1979 was obtained, with the exception of field boundaries, no activity is depicted within the proposed redevelopment area until the twentieth century. A site visit demonstrated that much of the proposed redevelopment area, with the exception of modern tarmac surfacing, appears to have suffered very little from deposit truncation. No features of archaeological interest were noted and there are no setting issues in relation to this proposed redevelopment.*

2.6 The DBA concluded that although the archaeological potential of the site remains largely unknown, the site is potentially important as it sits almost centrally between the medieval castle/market town part of Worksop in the west and the Priory area in the east. Very little is known about the nature of medieval activity here, but there is potential for extramural activities (e.g. informal industry or rubbish pits) relating to both areas to be present, as well as possible key (unmapped) boundary features.

2.7 Prior to the commencement of the evaluation, a Written Scheme of Investigation (WSI) relating to the archaeological works was prepared by Trent & Peak Archaeology (Davies 2013), and approved by the Senior Archaeological Officer at Nottinghamshire County Council (NCC).

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Site Topography and Geology

3.1 The site is located close to the centre of Worksop, within the historic core of the town. It is bordered to the north by Newcastle Street, to the east by Watson Road, and to the west by Queen Street. Further car parking along with several residential dwellings and commercial properties are located to the south.

3.2 The site is irregularly shaped with the main development area situated directly to the south of Newcastle Street. Extensions encompassing pavements run west along Newcastle Street and south down Watson Road. In total the site measures approximately 40m (north to south) by 75m (east to west) (roughly 0.31 hectares in size), and is presently occupied partly by a modern car park and partly by disused 20th century buildings (see section 5 for further description).

3.3 The 1:50,000 British Geological Survey Mapping shows that site is situated on the border between bedrock geology of Edlington Formation sandstone (a Sedimentary Bedrock formed approximately 251 to 271 million years ago in the Permian Period) and Lenton Formation sandstone (a Sedimentary Bedrock formed approximately 246 to 271 million years ago in the Triassic and Permian periods) (http://mapapps.bgs.ac.uk/geologyofbritain/home.html). No superficial deposits were recorded.

3.4 The site lies on the border between freely draining, slightly acid loamy soils to the north and freely draining, slightly acid sandy soils to the south (www.landis.org.uk/soilscapes).

3.5 Topographically the site is roughly flat, covered in tarmac and levelled around the building platforms, there are no cellared buildings within the site. The site is discussed in more detail in Section 5. The site is located at a height of c. 40m AOD.

Background

3.6 *Prehistoric and Roman*
Although very few Prehistoric or Roman artefacts have been found in Worksop, aerial archaeology has revealed extensive regular 'brickwork plan' field systems around the town, most likely dating from the late Iron-Age and Romano-British periods. Excavations were carried out at Menagerie Wood to the west of Worksop in 1985 and a cropmark enclosure of this period was excavated in 2003 north of Raymoth Lane, Worksop. This excavation uncovered faunal remains that suggested that "animal husbandry played a greater subsistence role than agriculture" in the area. The site also produced a Roman pottery kiln and evidence of metal working (Palmer-Brown and Munford 2004, 19).

3.7 *Medieval*
Prior to the Norman Conquest very little is known about Anglo-Saxon Worksop, wlthough it must be assumed that a settlement of some sort was present in this location (Stroud 2002).

3.8 The Domesday Book of 1086 records that the Manor of Werchesope had been owned by Elsi, son of Castbin, before the Norman invasion (Thoresby 1790, 385). The name of the town is partly derived from a personal name (Gover *et al.* 1940, 305), which is probably of Saxon origin. The manor was subsequently granted by William the Conqueror to Roger de Busli. The manor of Worksop eventually passed to William de Lovetot. He laid the foundations of the priory at Worksop and granted his charter to the canons, which endowed them with, among other things, 'the chapelry and tithes of his whole house' (Holland 1826, 14). The canons were of the order of St Austin, in the church of St Cuthbert of Wirkesop. Although an early church at Worksop is not mentioned in Domesday, a church may have still have existed since

Saxon times. On the death of the second William de Lovetot, his son Richard granted to the church 'the whole site of the town of Wirksop, near the church, as it was shut in by the great ditch unto the meadow of Bersebrigg. And without the ditch the seat of the mill, with one dwelling house, and the meadow of Buselin, which is between the (virgultum) holt of the church and the water' (Thoresby 1790, 386).

3.9 Worksop Castle was probably built in the late 11th or early 12th century by the first William de Lovetot to control the adjacent market town (Wright 2008, 72). It may well have been de Lovetot's major residence (caput) in the county. Today, despite having suffered from considerable landscaping it still retains a substantial mound. It was probably built as a ringwork, ditched all around and with counterscarp bank; there was possibly an outer bailey on the south side**.** Inside it had a central courtyard with timber buildings ranged around the perimeter. Today the site is a park.

3.10 De Lovetot also founded the Augustinian Priory at Radford to the east, and in the 12th century the two sites could see each other, with the medieval town of Worksop based around a market place close to the castle (Speight 1995, 66). The town, castle and the large park to the south-west of the town (the later Worksop Lodge or Manor) were all owned by the Lovetotes, then the Nevilles, then the Furnivaulx and by the 16th century the Talbots (Thoresby 1790, 395). Following the Dissolution of the Monasteries, in 1541 Francis, fifth Earl of Shrewsbury was granted the land of the Priory manor to add to land already owned at Worksop. In the 1580s the Earl of Shrewsbury built a magnificent house to the south-west of the town. Worksop Manor was designed by Robert Smythson and was described in 1636 as "a very stately house ... build of freestone, being very pleasantly situated upon a hill, with gardens corresponding to the same." Manor Lodge (which still survives), a possible hunting lodge associated with the house, was built at the same time.

3.11 *Post-Medieval*
In 1549 John Leland visited Worksop and observed that the castle was "clene down and scant knowen wher it was." He described the town as 'a praty market of 2 streates and metely well builded.' These two streets were probably the main north-south road (Park-gate and Bridge Street) and the east-west Potter Street, descending from the Market Place to the church. The majority of the 'ancient, lofty houses' were later said to have been situated on the west side of Market Street (Holland 1826, 144). This comment must refer to what was called Market Place, that part of Bridge Street that is due west of the study area.

3.12 The earliest surviving survey of Worksop is the 'Survey of the Manors of Workesoppe and the Priory' dated to 1636 by John Harrison; as yet no accompanying maps have been located. Of the castle, at this time, 'nothing remaining thereof, but only a hill where ye Castle stood.' The survey also shows that at the time arable land in vicinity of Worksop consisted of common fields to either side of River Ryton, separated by closes of pasture or riverside meadow (Scurfield 1986, 50).

3.13 At the time of the Hearth Tax of 1674 Worksop had 176 households and a population of about 750, making it the fourth largest town in the county. By 1743 the population had doubled, and then more than doubled again to 3391 by 1801. By this time the town, including the study area, could be described as being an eclectic mixture of old and new, with timber-framed buildings (possibly on stone foundations) and brick-built Georgian houses and business premises. Growth of the town was spurred on by the arrival of the Chesterfield Canal in 1777 and the railways in the 19th century. Industrial works were established that included textile and corn mills, coal mines, maltings and foundries. Some of these were within or close to the study area. With this came the growth of low class brick-built artisan housing on street frontages and the infilling former gardens and paddocks, and better class housing for the professional people. By the end of the 19th century the town had greatly expanded, with the central part densely packed and suburbs forming. The town continued to expand throughout the 20th century, with large parts of the town centre transformed with large-scale clearance of old slum properties from the 1960s onwards.

3.14 The 1775 map (see DBA) shows clearly the predominance of the north-south street axis for buildings of special importance. The west end of Potter Street can be seen as an off-shoot to this, with a series of listed buildings on the north side of the street. This also suggests that buildings replaced by the Queen's Buildings in 1981 might today have been included timber-framing. Former timber-framed buildings running up to Bridge Street on the north side of Potter Street, demolished in c.1961, would also have been protected.

4. METHODOLOGY

4.1. The objective of the archaeological investigation:

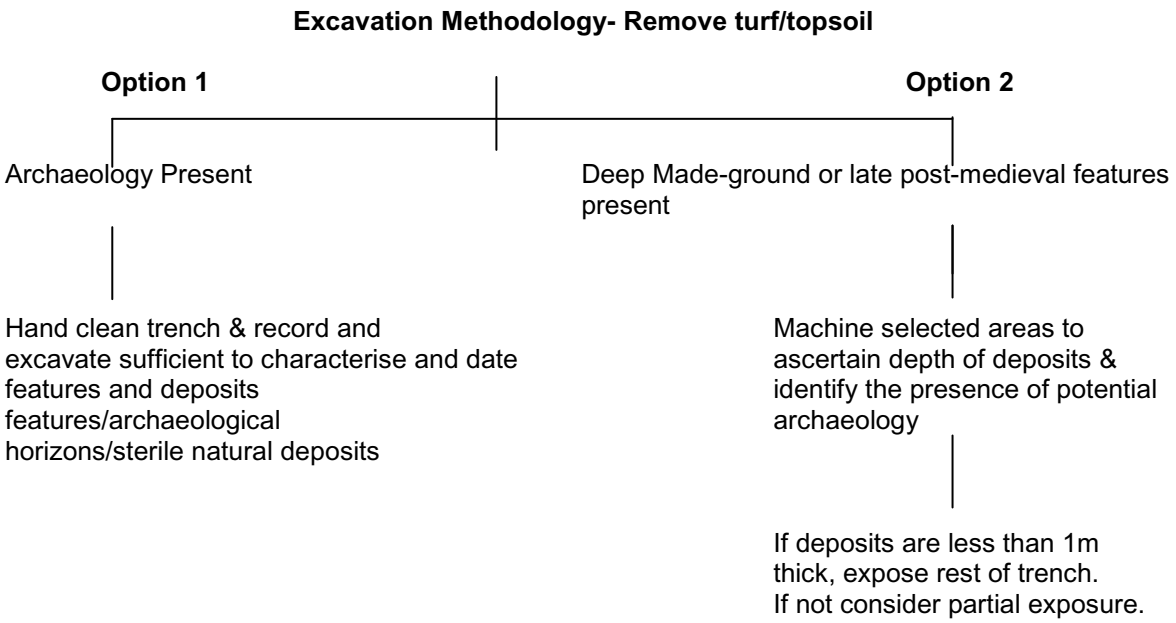
To determine the archaeological potential of the proposed development site, providing the basis for an assessment of the impact of the proposed development on the cultural heritage resource.

4.2. Trench Excavation

4.2.1 All machining was done with a toothless ditching bucket under archaeological supervision. Prior to excavation the area was scanned with a CAT scan to locate any services that were not shown on the services plan supplied by the client.

4.2.2 The trenches and any archaeological features were located by GPS, Leica CS15/GS15 RTK Differential GNSS prior to excavation.

4.2.3 Trenches were excavated to a level at which archaeological deposits were present, or if not present, to a maximum (unsecured) depth of 1.6m (see below), to comply with health and safety requirements. Subsoil was machined in spits no greater than 250mm. Excavation followed one of two potential sequences depending on the deposits present below topsoil.



4.2.4 If it was necessary within the aims of the evaluation to look at deposits deeper than 1m stepping/shoring of trenches was carried out as appropriate.

4.2.5 Topsoil and subsoil was stored on the sides of the trench.

4.2.6 The locations of any artefacts recovered in the topsoil/subsoil were recorded three-dimensionally or by context/spit.

4.2.7 Trenches were hand cleaned where appropriate and a minimum of one long section of each trench was photographed, and drawn at 1:50/1:20 (recording increased correspondingly with the presence of archaeological deposits). The position of each trench was located with reference to the OS grid.

4.2.8 Where appropriate the depth of potential geological deposits was determined by a combination of machine excavation and use of a 2m hand auger.

4.2.9 On completion of the fieldwork the trenches were backfilled by machine; this did not include full reinstatement.

4.3 Cleaning/Hand Excavation

4.3.1 All fieldwork was carried out in accordance with the code of conduct of The Institute for Archaeologists.

4.3.2 Features were hand-cleaned and planned. Following scanning by a metal detector, features were sample excavated sufficiently to determine their plan and form and to recover any datable artefacts.

4.3.3 Feature fills were removed by contextual change (the smallest usefully definable unit of stratification) and in spits no greater than 100mm. Substantial features were hand excavated to a maximum depth of 1.m, or a perceived safe depth if the sides were unstable.

4.3.4 All finds of medieval date or earlier were recorded three dimensionally. Post-medieval finds or abundant redeposited structural material were recorded by context/spit.

4.3.5 Spoil was searched for artefacts, including the use of a metal detector.

4.4 Recording and Sampling

4.4.1 Plans of all contexts including features were drawn on drafting film in pencil at a scale of 1:20/1:50, and showed at least:

- context numbers,
- all colour and textural changes,
- principal slopes represented as hachures,
- levels expressed as O.D. values, or levelled to permanent features if a benchmark is absent,
- sufficient details to locate the subject in relation to OS 1:2500 mapping.

4.4.2 Sections show the same information, but levelling information was given in the form of a datum line with O.D/arbitrary value; the locations of all sections were shown on plan.

4.4.3 Digital images and B&W photos of each context were taken (as per Brown 2007) together with general views illustrating the principal features of the excavations.

4.4.4 Written records were maintained as laid down in the TPA recording manual.

4.4.5 Where appropriate features were identified, soil samples were retrieved in order to undertake palaeo-environmental sampling. The sampling of features followed procedures set out within the English Heritage Centre of Archaeology Guidelines, *Environmental Archaeology* 2011. Samples were processed within the TPA Environmental Laboratory, under the supervision of TPA Environmental Manager Alison Wilson.

4.5 Post–excavation Processing

4.5.1 All finds were cleaned and stored as recommended in "First aid for finds" (by the Archaeology section of the United Kingdom Institute for Conservation, 2nd edition 1987), and marked with the site and find codes as well as the relevant accession number. These will be deposited with the appropriate museum on completion of the report, subject to the provisions of the brief and the agreement of the client.

5. RESULTS

5.1 Introduction

An outline narrative of the results of the archaeological trenching during the evaluation is presented below. The locations of the 5 trenches are shown on Figure 2 and listed in full in Appendix 1.

5.2 Trench 1

5.2.1 Trench 1 was located at the northern limit of the existing car park. It measured 8m x 1.7m and was aligned east-west.

5.2.2 After the removal of the existing tarmac car park surface (0001) and underlying creamy-yellow, type one hardcore (made up of angular, stones up to 30mm across) (0002) to a depth of 0.4 BGL beneath ground level (BGL), a 19th /20th century demolition deposit (0004) was revealed, which consisted of brick rubble, light red mortar and frequent inclusions of crushed ceramic building material and clinker patches up to a depth of up 0.66m BGL. This demolition material sealed a brick wall (0003), which was aligned north-south and ran beyond the extent of the trench. Wall (0003) was probably late 19th/early20th century in date. A clinker deposit (0005) extended from the western edge of the wall (0003) across the whole western part of the trench, this material was probably a rough surface associated with the wall (0003), which was observed at a depth of 0.60m BGL and extended to a depth of 0.88m BGL.

5.2.3 A concrete cased drain (0018)/[0016] observed at the base of the trench was cut from a depth of 0.4m BGL and was sealed by the type one hardcore (0002) discussed above.

5.2.4 Deposit (0005) sealed a buried soil deposit (0006), consisting of a firm, black, slightly clayey-silt, with largely washed out organic content. This material was observed in other trenches and due to the features cutting it, is most likely post-medieval or earlier in date. This material extended to a depth of 1.10m BGL.

5.2.5 In this trench, deposit (0005) sealed a natural deposit (0012), consisting of firm, mid-brown to light grey and pale blue, mottled silty sand with frequent inclusions of rounded and sub-rounded stones. This material was interpreted as probable alluvial material deposited by the nearby River Ryton. This was more evident in Trench 2 and is discussed below, it extended to a depth of at least 1.2m BGL, which is the maximum depth reached in this trench.

5.3 Trench 2

5.3.1 Trench 2 was located within the existing car park. It measured 18m x 1.7m and was aligned north-south; the trench was shortened slightly due to the presence of a BT Open Reach cable just to the south of the trench.

5.3.2 After the removal of the existing tarmac car park surface (0001) and underlying creamy-yellow, type one hardcore (0002) to a depth of 0.3 BGL beneath ground level (BGL), a 19th /20th century demolition deposit (0004) was revealed, which consisted of brick rubble, light red mortar and frequent inclusions of crushed brick and tile and clinker patches. This extended to a depth of up 0.76m BGL. A modern construction feature [0023] was also observed cutting into this 19th/20th century demolition material.

5.3.3 This material sealed a buried soil deposit (0006), consisting of firm, black, slightly clayey-silt, with largely washed out organic content, and extended to a depth of 0.98m BGL. Cutting this material, at a depth of 0.78m BGL, was a post-medieval stone-lined drain [0009], which was 1.08m in depth, extending to a depth of 1.8m BGL. It was filled by two distinct deposits, a primary fill of black-brown silty-clay with a high density of waterlogged organic material (0011) and a secondary fill (probably relating to the infilling of the feature after it went out of use) of

mid to dark brown silty-clay (0010). This drain could be related to a field boundary visible in the 1848 map of the area, as seen in Figure 3. Material recovered from the fill material also indicates a 17th to 19th century date.

5.3.4 In this trench the buried soil material (0006) sealed a deposit (0012), consisting of firm, mid-brown light grey and pale blue mottled silty sand with frequent inclusions of rounded and sub-rounded stones. This material was interpreted as probable alluvial material deposited by the nearby River Ryton during flooding. The depth of this material could not be established. Part of it was hand dug but once a depth of 1.7m BGL was reached safety concerns prevented further work. So far only one flood event was identified, in the form of hydrologically suspended large stones, deposited at the southern limit of the deposit, indicating the maximum reach of the flood. A targeted auger survey would allow further analysis of the deposit and establish the depth of the material.

5.3.5 The alluvial deposit (0012) extended 9m along the trench, at which point the outer edge of this material was observed. From here the natural clay (0020), consisting of firm mottled light brown, pale blue and mid grey sandy clay, extended to the southern limit of the trench.

5.3.6 A concrete cased drain (0018) was observed cutting [0016] across the trench in an east-west alignment at the southern end of the trench.

5.4 Trench 3

5.4.1 Trench 3 was located at the southern limit of the site within the car park. It measured 28m x 1.7m and was aligned east-west.

5.4.2 After the removal of the existing tarmac car park surface (0001) and underlying creamy-yellow, type one hardcore (0002) to a depth of 0.3 BGL beneath ground level (BGL), a 19th /20th century demolition deposit (0004) was revealed, which consisted of brick rubble, light red mortar and frequent inclusions of crushed brick and tile and clinker patches. This extended to a depth of up to 0.48m BGL.

5.4.3 This material sealed a buried soil deposit (0006) which consisted of firm, black, slightly clayey-silt, with largely washed out organic content. The same material was observed in other trenches and given the features cutting it is most likely medieval or earlier in date, worked throughout the post-medieval period, until it was sealed by the 19th/20th century building activity. This material extended to a depth of 0.64m BGL.

5.4.4 Two features were sealed by the soil layer (0006). The first was a small pit [0007], 1.46m across, 0.5m deep and oval in plan. It was filled by a soft, light gray, silty clay with inclusions of occasional sub-rounded stones (0025). The second feature was curvilinear [0008], 0.64m across and 0.20m deep, and was probably a narrow ditch. It was filled by soft, mid-grey, silty clay with inclusions of occasional sub-angular and sub-rounded stones (0026). No finds were recovered from either feature.

5.4.5 These features cut into two other separate features. The first and smaller of these [0032], was located at the western end of the trench, was 6.60m across and had two distinct fills. The upper fill was a compact, mottled light-brown to pale-blue, sandy loam with inclusions of occasional angular, sub-angular and sub-rounded, poorly sorted stones of varying sizes (0031). The lower fill was mottled mid-brown to light-grey and pale-blue, alluvial silt with frequent patches of sand and frequent inclusions of rounded, sub rounded, sub angular poorly sorted stones of varying sizes (0030).

5.4.6 The second feature [0029] was located in the eastern half of the trench. It was 18.30m across and at least 0.70m deep and had four distinct fills. The uppermost fill (0033) was a soft, mid to light grey, silty clay, with occasional inclusions of rounded and sub-rounded cobbles at the bedding horizon. This material sealed a mottled brown and dark to medium gray, clayey loam with frequent inclusions of rounded, sub-rounded, and sub-angular and angular poorly sorted

stones of varying sizes (0028), which in turn sealed mottled mid-brown to light-grey and pale-blue alluvial silt with frequent patches of sand and frequent inclusions of rounded, sub-rounded, sub-angular poorly sorted stones of varying sizes (0039). Finally this material sealed mottled light brown, grey, black and pale blue gritty silty moderately sorted sand (0027).

5.4.7 The above two features have been interpreted as palaeochannels, mainly due to the homogenized silts with suspended stones in their matrix and the alluvial sands making up the fills, as well as the lack of any finds. The base of the two features could not be reached by excavation due to health and safety concerns. However, their depth was established by a targeted auger survey. Deposit (0039) in the larger of the two palaeochannels [0029] has been interpreted as a possible unstable terrace, which was formed when a deeper run of this channel developed.

5.5 Trench 4

5.5.1 Trench 4 was located at the eastern limit of the former florist's plot adjacent to the car park. It measured 18.5m x 1.7m and was aligned north-south.

5.5.2 After the removal of the existing gravel car park surface (0035), to a depth of 0.10m BGL, a thick layer of brick rubble, with inclusions of old tires, metal sheets and pipes (0036) was revealed. This had a maximum depth of 1.2m, though in some places it only extended to 0.70m BGL.

5.5.3 This material sealed a buried topsoil (0037), which consisted of dark-grey-brown sandy silt which in turn sealed a dark brown, sandy silt buried subsoil (0038). These extended to a combined depth of 1.3m BGL.

5.5.4 At this level, the natural geology of firm, mottled brown, pale blue and mid grey, sandy clay (0020) was observed to a maximum depth of 1.6m BGL.

5.5.5 There were no archaeological features in this trench and the topsoil/subsoil appears to be relatively modern, and is unlikely to predate the rubble levelling by much. Furthermore, no alluvial material was observed in this trench, a possible interpretation being that prior to the deposition of the soils (0037 and 0038), alluvial material was truncated away.

5.6 Trench 5

5.6.1 Trench 5 was located at the northern limit of the former florist's plot. It measured 20m x 1.7m and was aligned east-west.

5.6.2 After the removal of the existing gravel car park surface (0035) to a depth of 0.10m BGL, a thick layer of brick rubble with inclusions of old tires, metal sheets and pipes (0036) was revealed. This had a maximum depth of 0.95m BGL.

5.6.3 At this level the subsoil (0038) observed in Trench 4 was encountered and in this trench it extended to a depth of 1.2m BGL.

5.6.4 The alluvium (0012) observed in Trench one was encountered at the eastern limit of the trench, sealing the natural geology of firm, mottled light brown, pale blue and mid grey, sandy clay (0020). The alluvium (0012) only extended 5.2m west into the trench, at which point it was apparently truncated away. The maximum depth of this trench was 1.2m BGL.

5.6.5 No archaeological features were observed in this trench.

6. DISCUSSION

6.1 Modern Surfaces:
Car park (Trenches 1, 2 and 3): tarmac (0001) covered all 3 trenches, sealing the type one stone layer (0002).
Florist's plot (Trenches 4 and 5): a gravel layer instead of tarmac.

6.2 Made Ground:
Car park: the made ground deposit consisted of a 20th century demolition horizon (0004). This probably relates to the demolition of the 19th century structures (0003) in this area.
Florist area: there was a thick layer of brick rubble and 20th century rubbish (0036). This has been interpreted as a modern infill event, levelling up the plot.

6.3 Buried Soils:
Car park: the buried soil (0006) was interpreted as being post-medieval or earlier in date. This was due to the relatively undisturbed nature of the material and the finds from the post-medieval drain [0016] cutting the buried topsoil.
Florist area: the buried topsoil (0037) and subsoil (0038) have been interpreted as post-medieval or early modern in date, due to the inclusion of very occasional CBM fragments within the material. It appears to have truncated any possible surviving archaeological horizons.

6.4 Archaeological Features: Four pre 20th-century archaeological features were observed across the site, all of them located in the car park area. The most recent feature observed was the north-south aligned 19th-century brick wall (0003) in Trench 1. What this feature relates to is unclear as only part of it is visible, however the clinker deposit (0005), just to the west of the wall could be a related rough yard surface.

The second feature observed was a stone-lined post-medieval drain [0009]. The pottery sherds recovered from both the primary (0011) and secondary (0010) fills suggest that it is 17th to 19th century in date. Both fills were sampled to allow further analysis of the fill materials. Furthermore, when overlying the trench layout on an 1848 map, it could be seen that drain relates to a marked field boundary (see Figure 3).

The final two features, a pit [0007] and small ditch [0008] were revealed at the western end of Trench 3. Both of these features cut into palaeochannels and produced no finds. They were sealed by the buried soil (0006) observed in all 3 trenches within the car park, which could indicate that the features are post-medieval or earlier in date. The fill of the pit [0007] was sampled and further analysis could help in determining the date, as could further excavation of this area.

6.5 Palaeogeographical Features: Two palaeochannels were observed within Trench 3, [0029] and [0032]. The lowest deposits (0030) and (0027), as well as the deposit over the possible step within [0029], (0039) were sampled.. The fact that two palaeochannels were observed in such close proximity to each other could indicate a dynamic alluvial landscape and possible brading.

6.6 Alluvial Deposit: An alluvial deposit (0012) sealing the natural geology (0020), was observed within Trenches 1, 2 and 5. While excavation made it possible to observe the maximum flood extent, it was not possible to determine the depth or the flood history . It is possible that there was limited medieval and earlier activity in the area as it could have been a flood meadow, to the south of the River Ryton, the focus of activity being to the east and west on slightly higher ground around the priory and castle.

Soil samples were retained from:

(0010), the secondary fill the drain [0009]
(0011), the primary fill of the drain [0009]
(0030), the lowest, uncovered, deposit within the palaeochannel [0032]
(0039), the deposit forming the terrace within palaeochannel [0029]

(0027), the lowest, uncovered, deposit within palaeochannel [0029]
(0025), the fill of pit [0007]

An assessment of their potential for further analysis is provided as Appendix 5. Overall the potential was low, but the true extent of palaeenvironmental material present on the site remains unknown.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Although there were no securely dated features identified during the trenching, the depositional environment (deep later layers covering potential medieval horizons) indicates that medieval or earlier features if present, might be well preserved, particularly within the western half of the site (Trenches 1-3)

7.2 The undated ditch/pit may possibly represent some medieval activity peripheral to the main settlement cores. Given the topographic and palaeoenvironmental observations it could be speculated that some activity, potentially industrial, was occuring in this part of Worksop in a wet fringing zone. In contrast to the potential truncation in the eastern half of the site, the areas of Trenches 1-3 could provide a good opportunity for observing such features, which would best be recorded by a limited strip, map and sample of the area.

7.3 To fully determine the nature of the observed palaeogeographical features, a further, targeted auger survey is recommended. This would give an opportunity to determine the morphology as well as the characteristics of the deposits. The auger survey might also target the alluvial deposits, which would enable determination of the extent, depth and depositional history of this material.

7.4 Full archive photographs have been made of all trenches (see Appendix 3) and can be made available for consultation if necessary.

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www.landis.org.uk/soilscapes

Appendix 1: Index of Archive and Arrangements for Deposition

Field Records	***Description***	***Number***
Context Sheet	Record of each intervention	40
Registers	Registers	5
A3 Drafting Film	Scale plans and sections	5
Digital Photographs	All views	105
Documents	*Description*	*Number*
Written scheme of investigation	Statement of the aims, objectives and methodology for the project.	1
Health & Safety	Safe working statement & risk assessment	1
Report to client	Report of findings of the watching brief.	1

The archive is currently held in the offices of Trent & Peak Archaeology, Unit 1, Holly Lane, Chilwell, Nottingham, NG9 4AB. It will be deposited at an appropriate museum on the completion of the investigations.

Appendix 2: Plates

Plate 1: Trench 1 north-facing section

Plate 2: Trench 2 looking south, post-medieval drain in foreground

Plate 3: Trench 3 looking east, ditch [0008] and palaeochannel [0021] in foreground

Plate 4: Trench 3 looking west, palaeochannel [0029] in foreground

Plate 5: Trench 4 looking north

Plate 6: Trench 5 looking west

Plate 7: Stone-lined drain [0009] within Trench 2

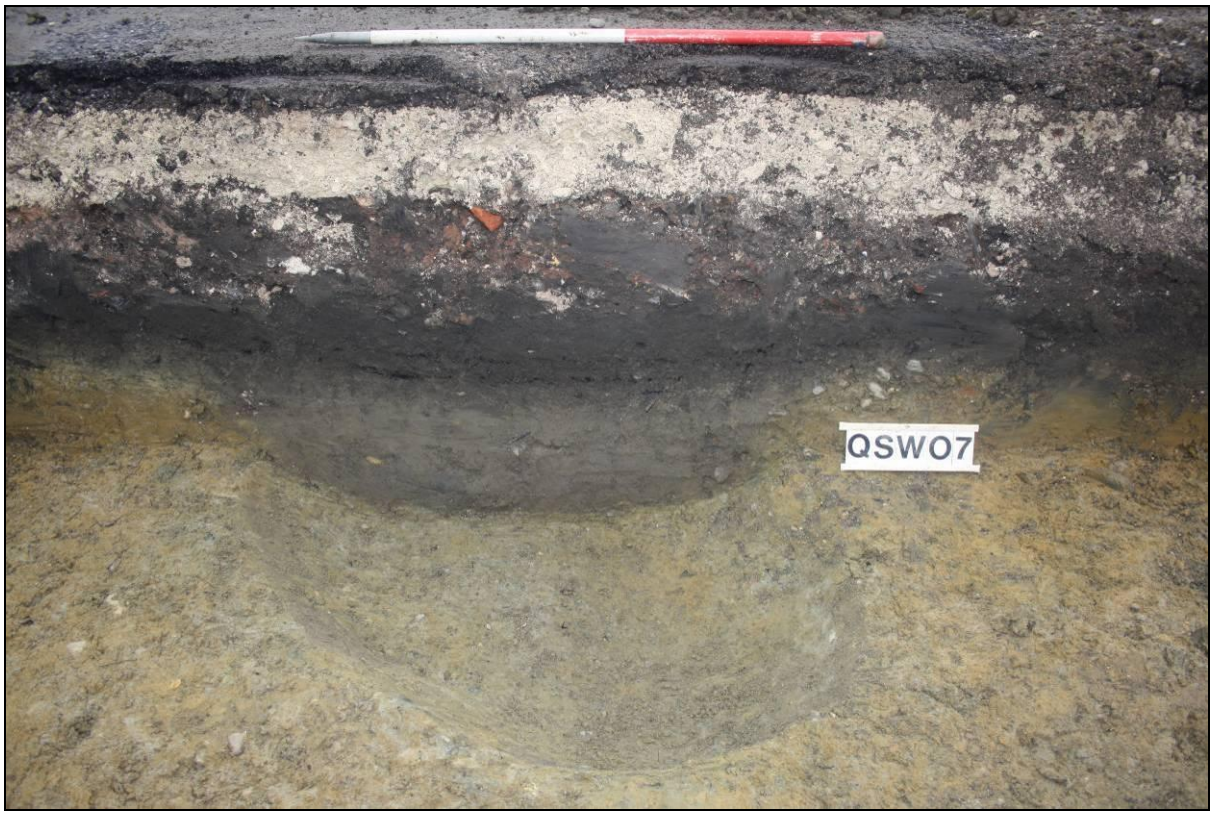

Plate 8: North facing section of pit [0007] within Trench 3

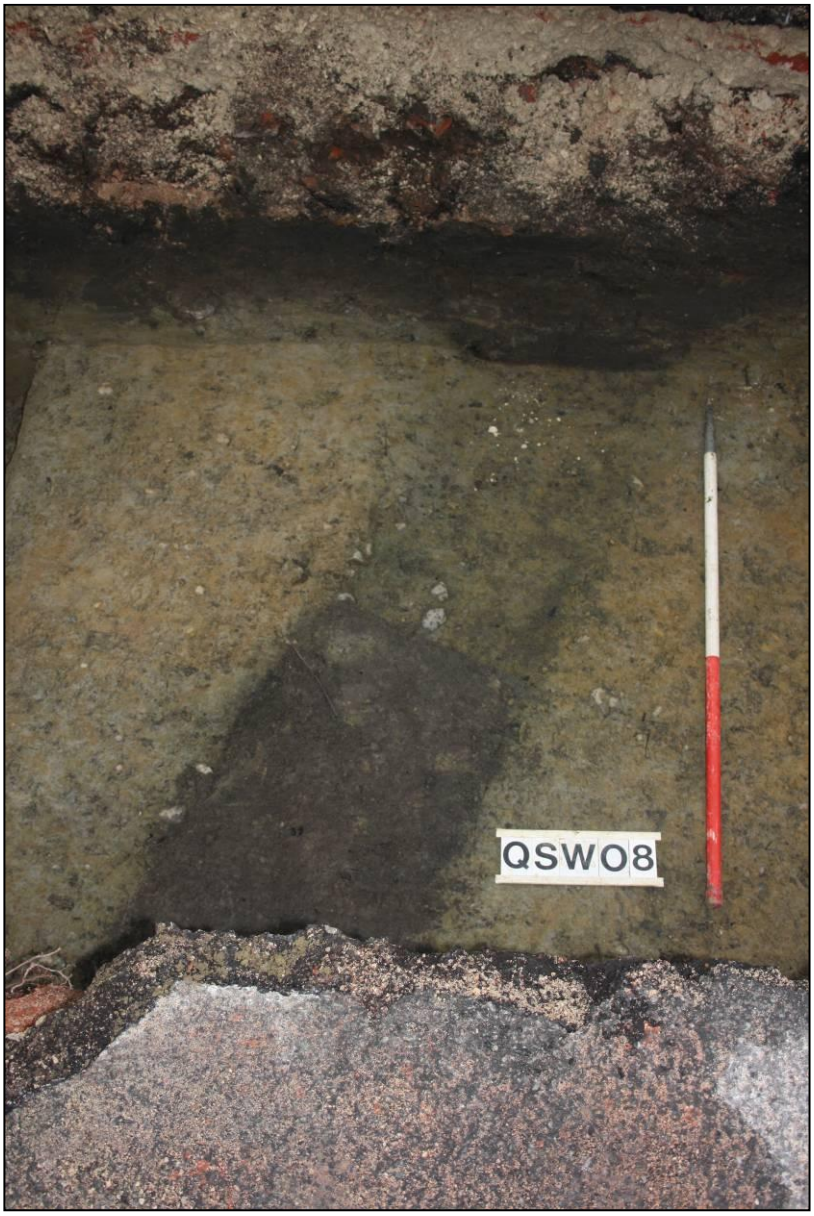

Plate 9: Plan shot of ditch [0008] within Trench 3

Plate 10: North-facing section of Trench 3, showing palaeochannel [0032] and ditch [0008]

Plate 11: North facing section of Trench 3, showing palaeochannel [0029]

Appendix 3: Figures

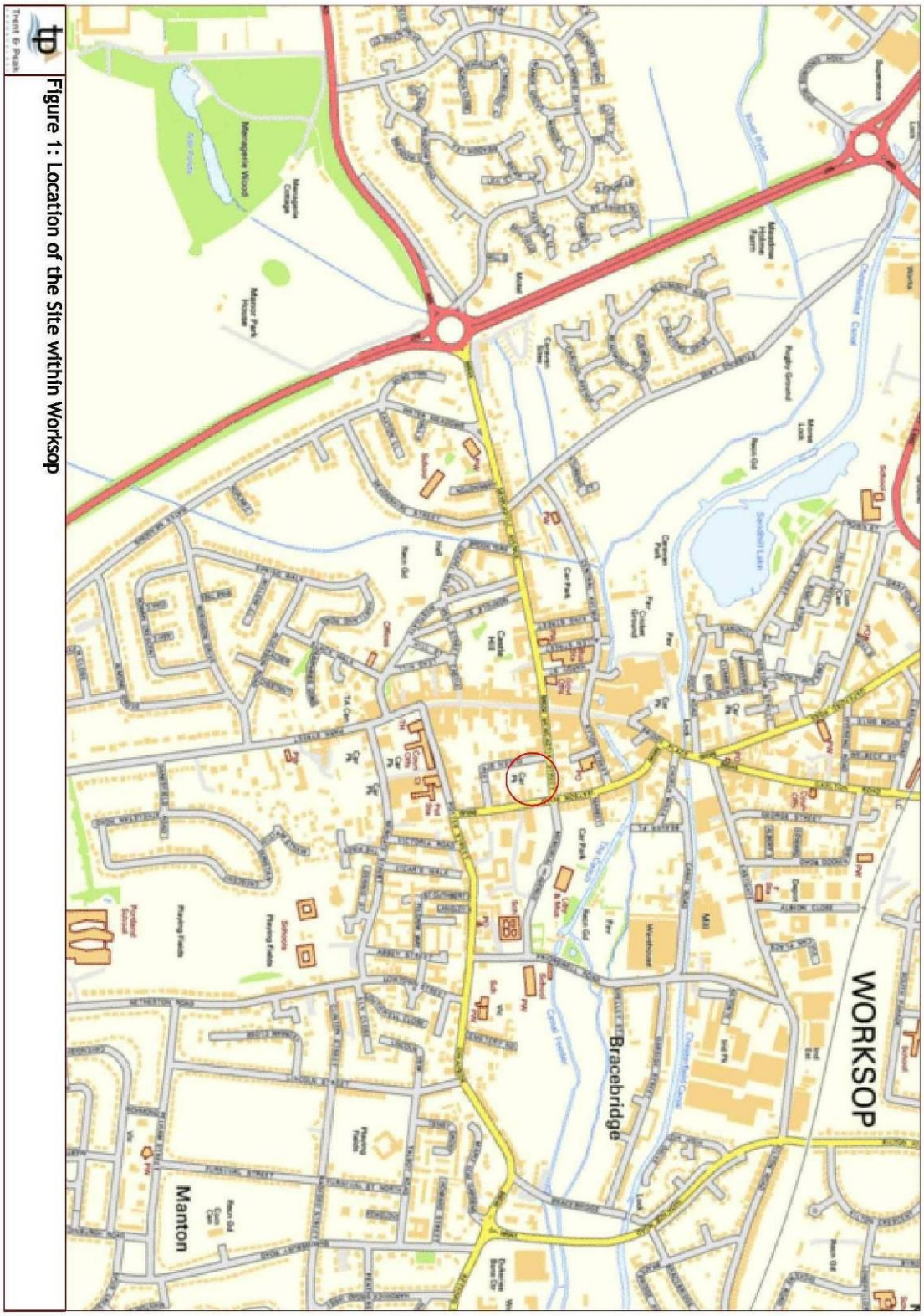

Figure 1: Location of the Site within Worksop

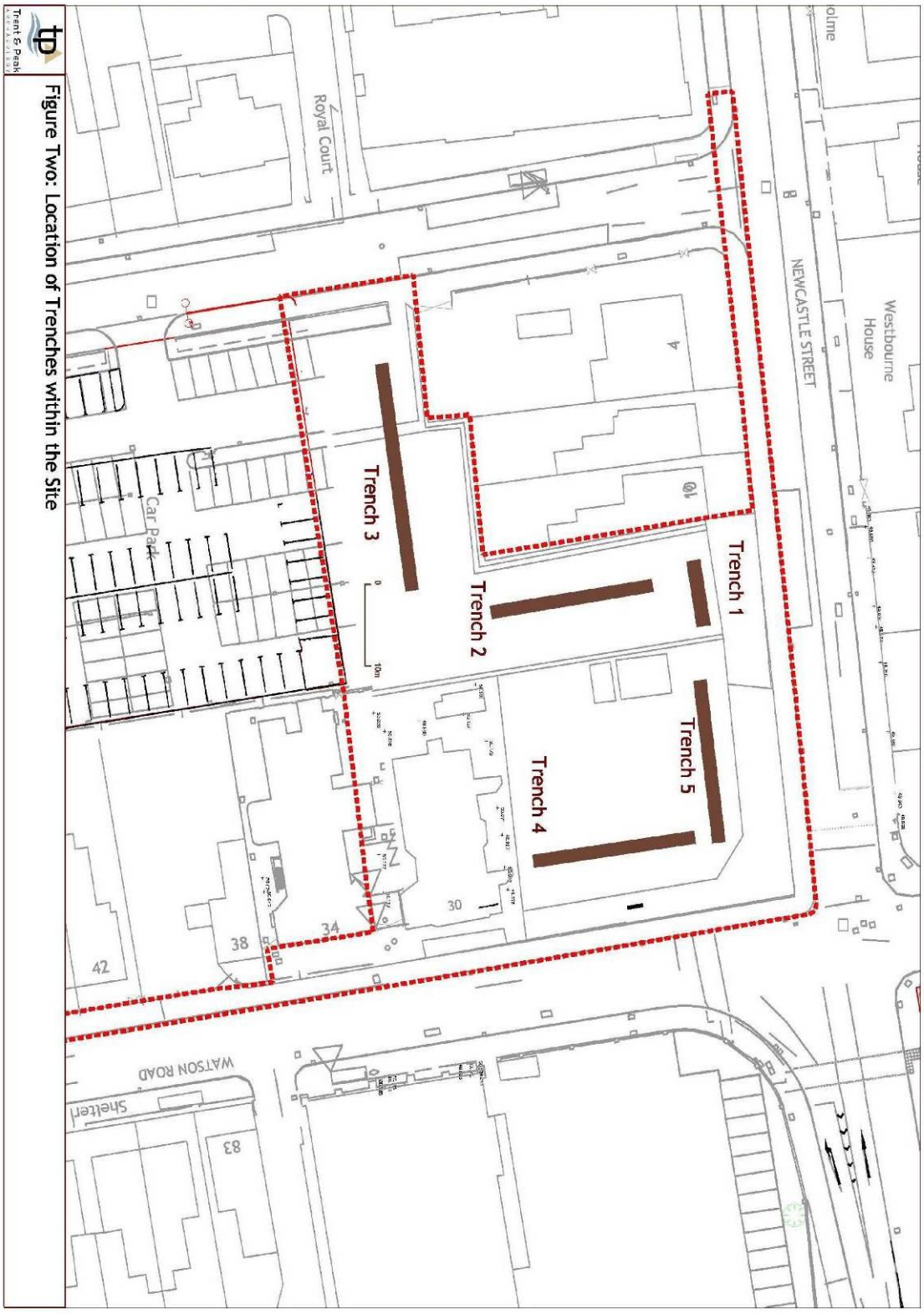

Figure Two: Location of Trenches within the Site

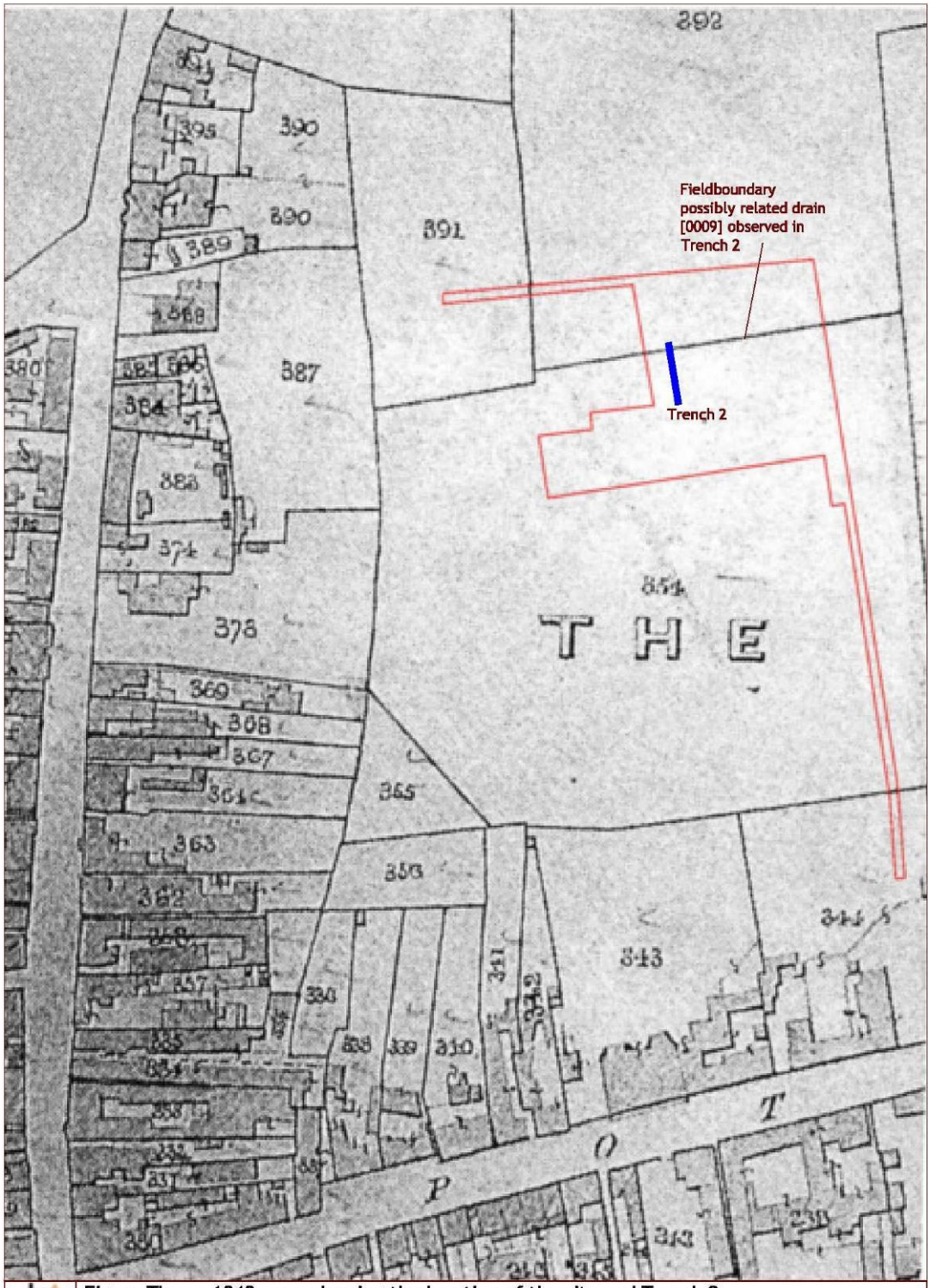

Figure Three: 1848 map, showing the location of the site and Trench 2

Appendix 4: Written Scheme of Investigation

Appendix 5: Interim Environmental Assessment (A. Wilson)

Introduction:
This report provides a brief interim assessment of the environmental samples retrieved during archaeological trial trenching carried out by Trent & Peak Archaeology, between 24/03/14 and 31/03/14, on behalf of Nottinghamshire County Council.

As part of the overall environmental sampling strategy samples were taken from all contexts. However, for the purposes of this interim assessment a representative selection of samples were taken from selected contexts, based on spatial, chronological and archaeological factors, with particular emphasis on the palaeochannels. The samples are listed in table form below, with a brief description of the deposit from which the samples were taken and any environmental material found.

Method:
The soil samples were processed in the following manner;

Sample weight and volume was measured prior to processing and a sub-sample was removed in case any further analysis should be required. The non-waterlogged samples were then processed using a 'Siraf' flotation tank (Williams 1973), using a sieve with a 250µ mesh and an internal 1mm mesh for the residue.

Both the residues and flots were dried and retained. A total of 66 litres of soil was processed in this way.
The weight and volume of the residue was recorded, before it was sorted by eye for any environmental and archaeological finds. These were picked out, noted on the assessment sheet and bagged. A magnet was run through the residue in order to recover any magnetised material such as hammerscale. The residue was then discarded.

The flot of each sample was studied using 10x magnification and the presence of environmental finds noted and their abundance and species recorded on the assessment sheet. The flots were then bagged and along with the finds from the residue constitute the material archive of the samples.

Table 1: Environmental sample number: 01
Context: 0010, secondary fill of drain (0009)
Sample volume before processing: 6 litres.
100% of flot examined.

Material	Quantity
Plant remains:	Waterlogged - Juncaceae Degraded plant remains
Insect remains:	Caddis fly larva case
Charcoal/coal	Unidentified fragments <2mm abundance 1-10

Table 2: Environmental sample number: 02
Context: 0011, primary fill of drain (0009)
Sample volume before processing: 5 litres.
100% of flot examined.

Material	Quantity
Plant remains:	Waterlogged - Juncaceae Degraded plant remains

Table 3: Environmental sample number: 03
Context: 0030, lower fill of palaeochannel (0032)
Sample volume before processing: 18 litres.
100% of flot examined.

Material	Quantity
Plant remains:	Waterlogged - Juncaceae Degraded plant remains

Table 4: Environmental sample number: 04
Context: 0039, deposit forming terrace within palaeochannel (0029)
Sample volume before processing: 13 litres.
100% of flot examined.

Material	Quantity
Plant remains:	Waterlogged - Juncaceae Degraded plant remains

Table 5: Environmental sample number: 05
Context: 0027, lowest fill of palaeochannel (0029)
Sample volume before processing: 24 litres.
100% of flot examined.

Material	Quantity
Plant remains:	Waterlogged - Juncaceae Degraded plant remains

Results:

Residues: The samples washed down to produce residues of varying proportions of sub-rounded and sub-angular gravel and some mineralised sediment concretions, mostly between 1mm and 2cm in size. The residues yielded little in the way of archaeological finds, with the exception of sample number 01, context 0010, which contained fragments of brick weighing 7g, along with small fragments of coal/charcoal and sample number 02, context 0011, which similarly contained fragments of brick/tile weighing 4g and small fragments of coal/charcoal. There was no trace of hammerscale present.

Flots: All the flots contained waterlogged plant material, but mostly unidentified degraded fragments. Juncaceae *sp* (reed) seeds were present, and in the case of sample number 01, a Caddis Fly larva case.

Conclusion:
The samples were all waterlogged, however the plant remains were degraded and unidentifiable with the exception of the Juncaceae *sp* seeds. There is nothing present that would be useful for radio-carbon dating.
At this stage given the apparent low archaeobotanical potential, further analysis of these samples or others from similar deposits is not recommended.

Alison Wilson 2014

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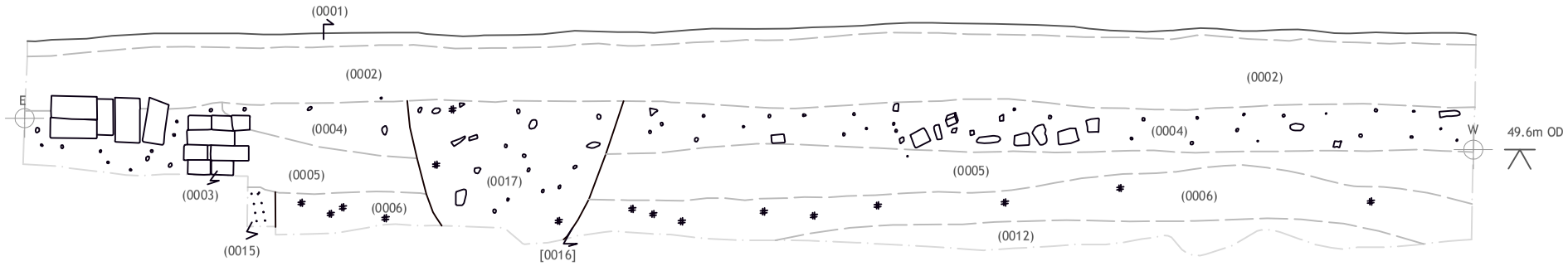
Drawing 02: North Facing Section of Trench 01

Scale

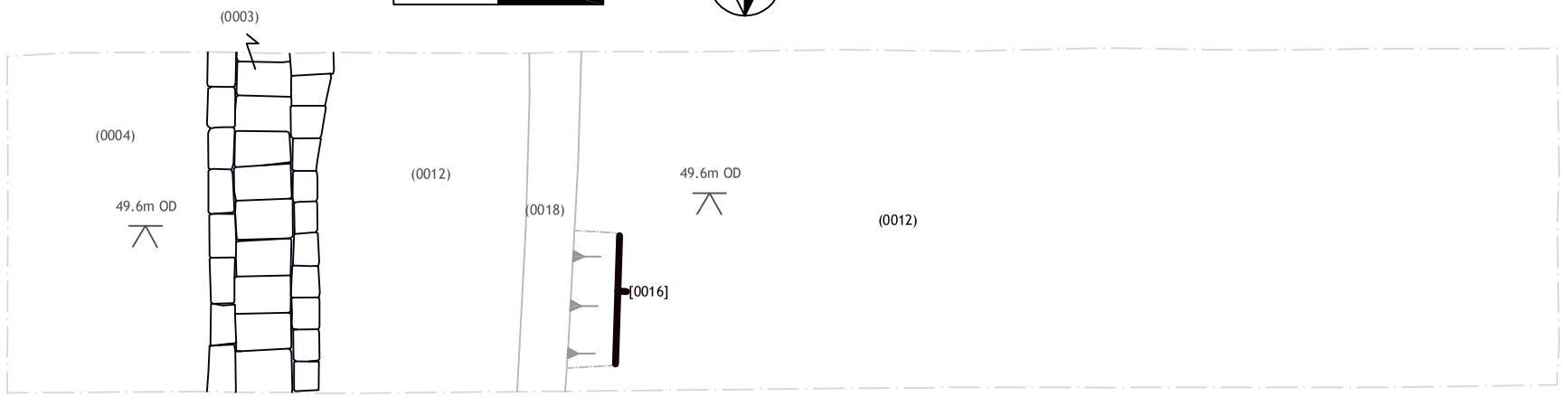
0m 1m



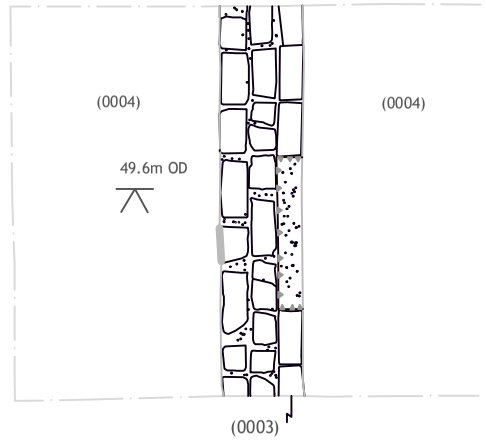
Drawing 03: Plan of Trench 01

Scale

0m 1m



Drawing 01: Plan of 19th/Early 20th Century Brick Wall (0003) within Trench 1

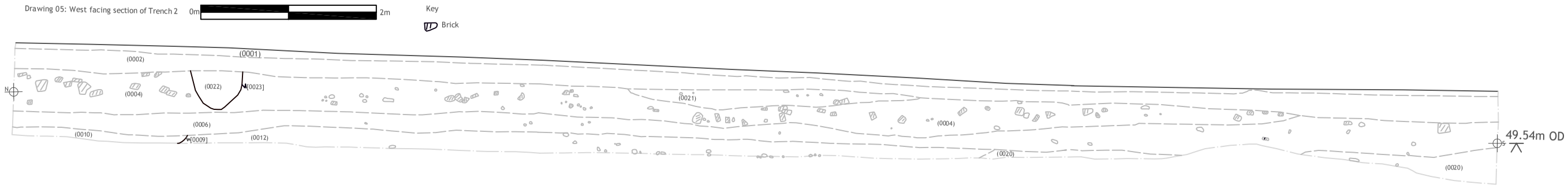


Scale

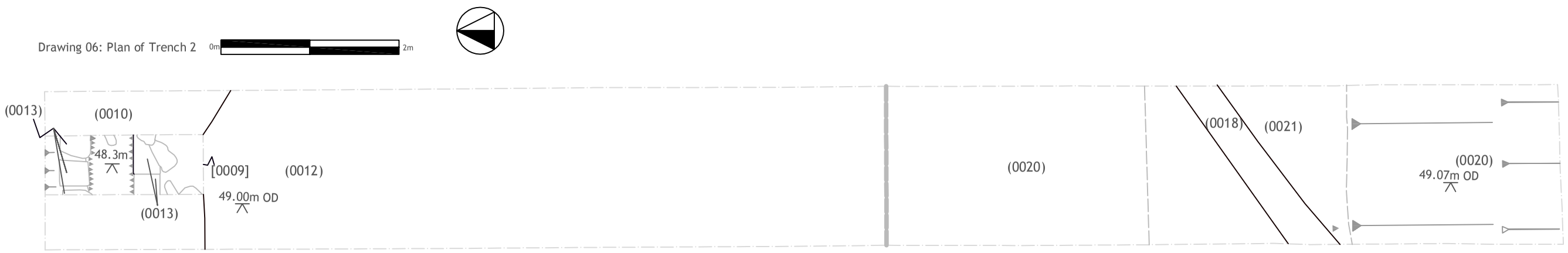
0m 1m

Figure 4: Plans and sections of Trench 1

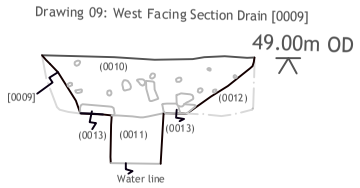
Drawing 05: West facing section of Trench 2



Drawing 06: Plan of Trench 2



Drawing 09: West Facing Section Drain [0009]



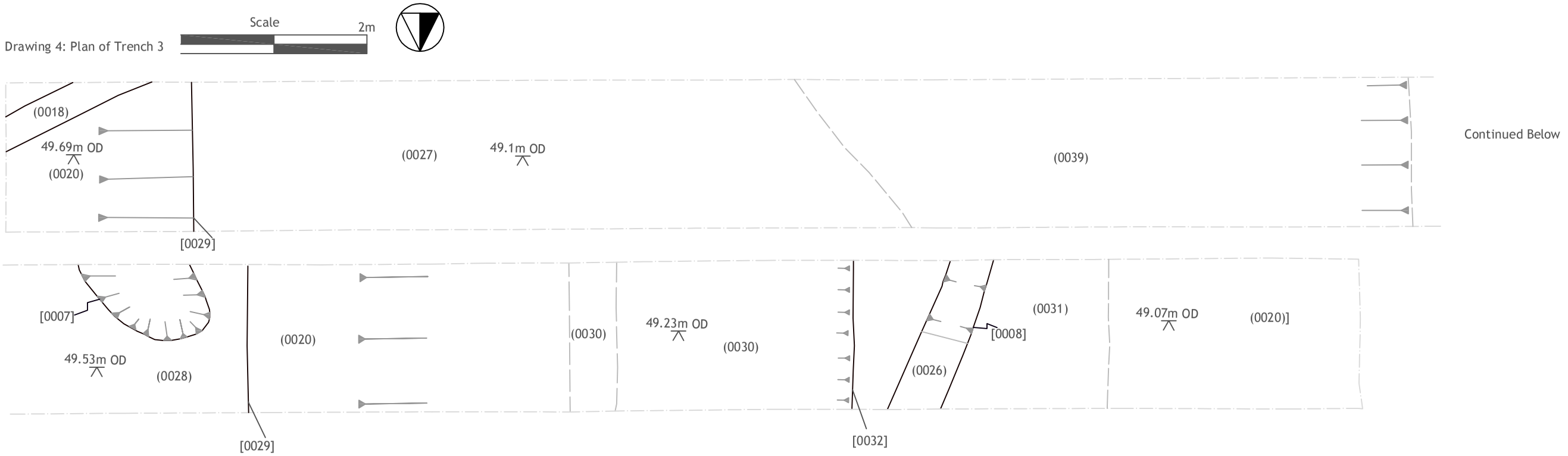
Scale

0m 1m

Figure 5: Plans and sections of Trench 2

Drawing 4: Plan of Trench 3

Scale 2m



Drawings 7 & 8: North facing section of Trench 3

Scale 2m

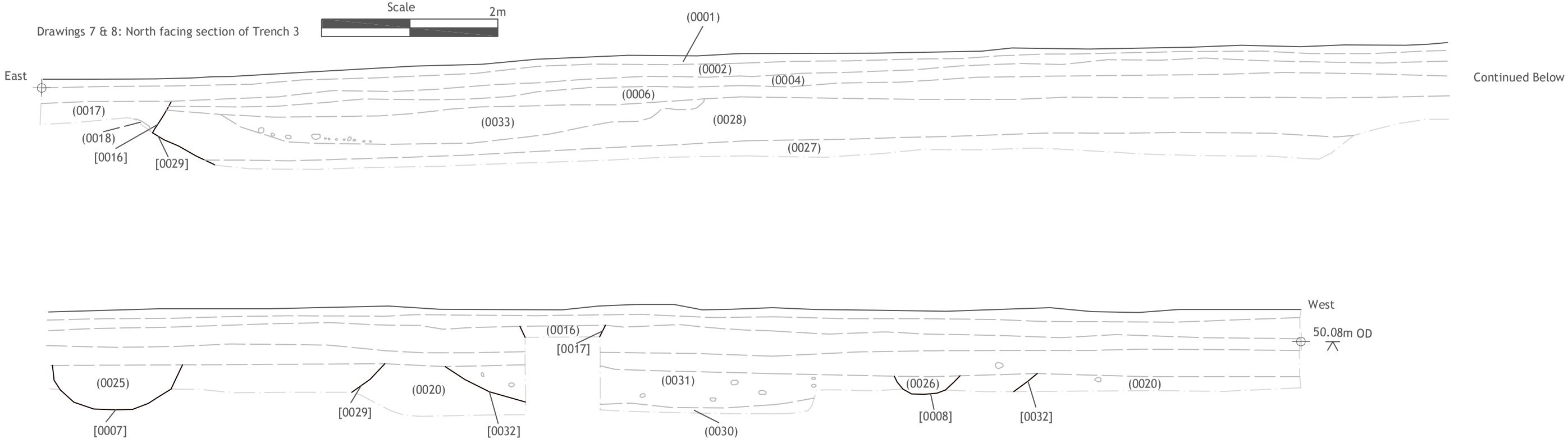
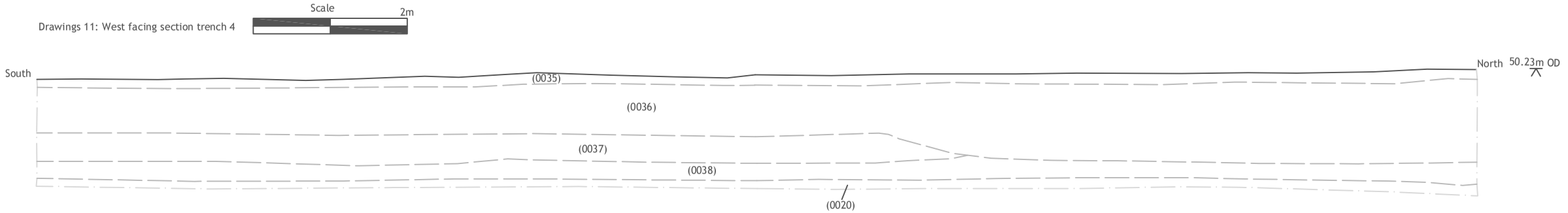
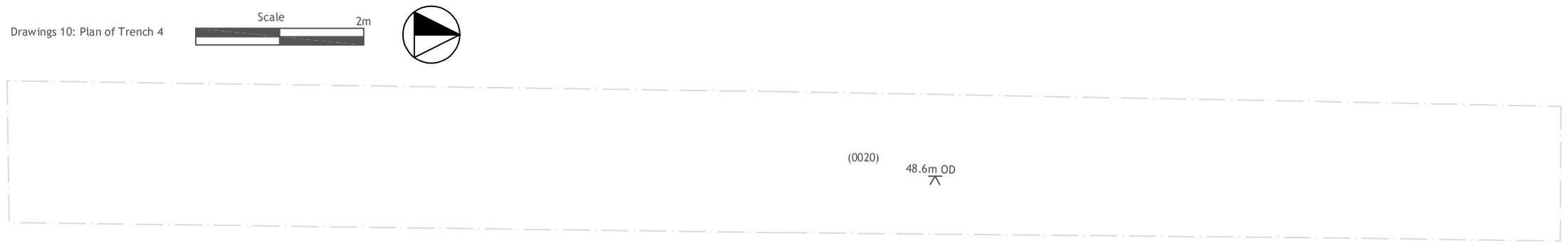


Figure 6: Plans and sections of Trench 3

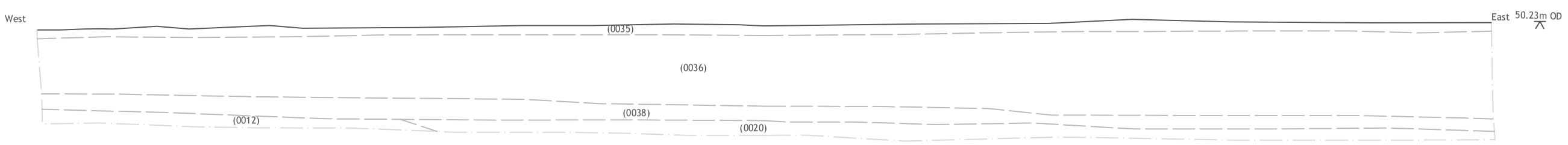
Drawings 11: West facing section trench 4



Drawings 10: Plan of Trench 4



Drawings 12: South facing section trench 5



Drawings 13: Plan of Trench 5

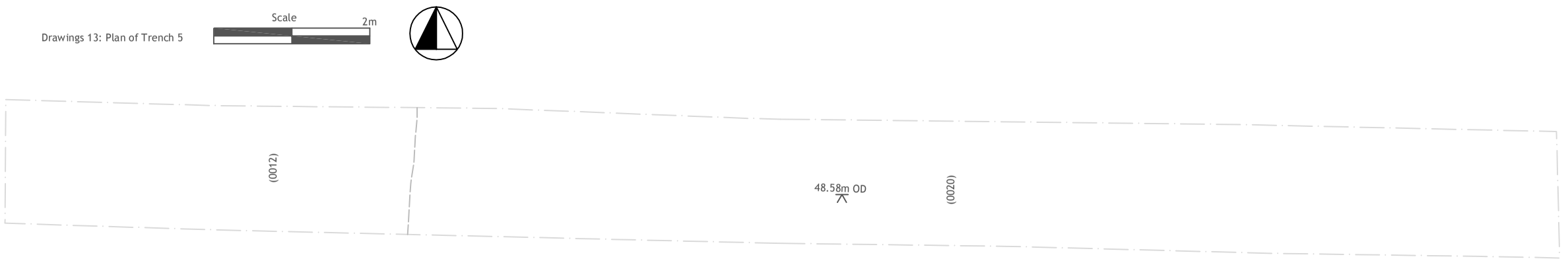


Figure 7: Plans and sections of Trenches 4 and 5