An Archaeological Evaluation

at

The former Vertex Site,

Duxbury Park, Chorley

Lancashire

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June 2011

Clients: Arley Homes Ltd.

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NON- TECHNICAL SUMMARY

The Planning Authority (Chorley borough Council) has granted outline planning permission (9/08/01044/OUTMAJ) for the demolition of existing buildings and the erection of a comprehensive mixed use development at the subject site and it is a condition (no. 21) of the planning approval that the applicants undertake a programme of archaeological work in accordance with a written scheme of investigation (WSI).

The 1st Edition OS map, published in1849, indicates the proposal site to be the location for a number of coal mines; Yarrow Bridge Colliery (Lancashire Historic Environment Record PRN 8046), Carr Colliery (PRN 8047) both probably only in use from 1835-43, & Duxbury Colliery (PRN 8048), in use from 1835-1889. A building possibly known as *Carr Houses* is also shown to lie behind the properties fronting Little Carr Lane.

Early 19th Century collieries, acknowledged to have received little attention in the past, despite their "considerable, and untapped, archaeological potential" (Brennand 2007:185) and therefore the Lancashire County Archaeology Service (LCAS) has recommended that an archaeological strip & record excavation to be undertaken to ensure that historical and archaeological interests are properly recorded and protected.

A strip and record programme followed by further evaluation located both demolition material and a number of features probably associated with the 19th century Yarrow Bridge Colliery. These comprised a handmade brick-lined well, some drains and handmade brick pillars (possibly machine footings) but no structures. However due to large scale landscaping and overburden these remains lay some 3-4 metres below the existing ground surface and the scattered nature of the deposits encountered, together with their poor state of preservation, suggested that they were of relatively low archaeological significance which did not justify further exploration.

ACKNOWLEDGEMENTS

We would like to thank Arley Homes Ltd for commissioning and funding the archaeological 'strip & record' evaluation, excavation and report. We are also grateful to Doug Moir at Lancashire County Council Archaeology Service for guidance in advance of, and during, the

project. Additional thanks to Jane Lloyd for digitising original plans and sections and for producing the AutoCAD drawings used to illustrate this report.

1. INTRODUCTION

1.1 Outline planning permission (9/08/01044/OUTMAJ) has been granted for the demolition of existing buildings and the erection of a comprehensive mixed use development comprising residential and B1 employment uses at Duxbury Park, Myles Standish Way, Chorley. It was a condition (no. 21) of the planning approval that the applicants undertake a programme of archaeological work in accordance with a written scheme of investigation. The condition follows the advice given by central government as set out in *Planning Policy Guidance on Archaeology and Planning* (PPG16) issued by the (then) DOE and the Standards and Guidance of the Institute of Field Archaeologists. PPG16 has now been replaced by Planning Policy Statement No. 5 which came into force on 23 March 2010

1.2 Lancashire County Archaeology Service (LCAS) prepared a specification for the required archaeological work. A copy of this is contained at Appendix 1 of this report. The specification required that :

1.2.1 '*Topsoil stripping in the 3 areas of archaeological interest (Carr Houses, Carr Colliery and Yarrow Colliery as shown on the 1st Edition OS, Lancashire Sheet 77 – see Figure 1) will be undertaken under close archaeological supervision, using an appropriate machine equipped with a toothless ditching blade, with the intention of leaving an archaeologically clean and even surface for subsequent assessment. Any datable or other diagnostic material exposed by this phase of work is to be recovered and assessed.*

1.2.2 *The surface so produced is to be recorded using appropriate archaeological techniques, which will include the production of a detailed plan of all archaeological features and the characterisation of the archaeological resource. Where deposits are encountered that cannot be characterised by rapid and simple works, then a scheme for further archaeological excavation and recording shall be designed and agreed with LCAS in order to establish in detail the extent, date, character and significance of the archaeological*

remains. This scheme is to be tailored to the remains encountered, and to be appropriate and proportional to the quantity, importance and complexity of the archaeology exposed.'

1.3 Arley Homes Ltd. commissioned *J.M.Trippier Archaeological and Surveying Consultancy* to carry out this programme and that company prepared a Written Scheme of Investigation (WSI) indicating their intention to comply with the requirements of the specification provided by LCAS. The strip and record programme and subsequent excavations were carried out between 31.03.2011 and 08.04.2011.

2. LOCATION, TOPOGRAPHY & GEOLOGY

2.1 The development site is situated immediately to the south of the built up area of the market and industrial town of Chorley and about 2 km from the town centre. It appears to have been open countryside until it became the site of a NORWEB (latterly Vertex) training centre some time between 1968 and 1974. Until recently it was accessed from Carr Lane to the north but the site now benefits from easy access on to the new Eaves Green Link Road otherwise known as Myles Standish Way. The site, which is shown edged magenta on Fig 1, amounts to some 7ha centred on NGR SD 5882 1590. However the current archaeological scheme is restricted to three areas marked A, B and C on Fig 1. Their exact locations and forms are shown in more detail in Fig 2. These amount to some 1750, 1200 & 600 sq m respectively and are described in more detail below.

Solid Geology

2.2 Chorley lies on a north- south line of faults, at the interface between the western-most limit of the Pennines and the lowland areas to their west. The faults are thought to have originated in the Carboniferous period (Johnson 1985: 3). The Westphalian A Coal Measures which dominate the geology of this area were also formed in this period (Johnson 1985:4). A number of seams within this measure have been identified, including the 'King, Ravine, Yard, Bone…Smith and Arley Mine(s)' (Redmayne & Neil 1996: 7). The Arley Mine is the deepest seam, and also the thickest, reported to be '5' 6" of steam, gas and cooking coal' (Redmayne & Neil 1996: 7). The Arley seam was mined by the Carr

Pitts colliery (Area B during excavations). Both Carr Colliery and Yarrow Bridge colliery were also located over the Bone seam (Fig 3).

Drift geology

2.3 A bore hole sunk near to the Duxbury Colliery (now under Myles Standish Way) has shown that the drift geology in this area measures around 19.35m in depth, above the Coal Measures (Price et. al. 1963: 83-86). Redmayne & Neil (1996:7) have described the predominant soils in the area as Flint Association and Newport 1 Association. The former comprises 'stagnogleyic argillic brown earths in thick reddish drift' with clayey soils overlain by loamy deposits. The latter, which dominate the soils on site, are formed from glaciofluvial deposits from the River Yarrow and consist mainly of 'well drained sandy and coarse loamy soils, sometimes affected by groundwater and prone to droughtiness and erosion'.

3. ARCHAEOLOGICAL & HISTORICAL BACKGROUND

3.1 The site of proposed development lies in an area known as Red Bank, within the township of Duxbury in Standish Parish (Redmayne & Neil 1996:8). There is no record of any activity predating the Medieval period on this site.

Medieval

3.2 Lands under the name of Duxbury were recorded in 1150, when they were passed from Warine Bussel to Randal de Marsay. Duxbury manor was first mentioned in the following century, in 1227, when two thirds of the manor were granted by Roger de Bolton to Siward de Duxbury, who already owned the other third, making him the owner of the entire manor. In 1300 Duxbury Manor passed to the de Standish family, from Henry, son of Henry de Duxbury, as a payment relating to his imprisonment due to his involvement in Adam Banastre's 1315 rising. The de Standish family retained the manor until 1890 (Farrer & Brownbill 1911: 208-213).

Post- medieval

3.3 A peel tower was recorded close to the site of development on Saxton's 1577 map of Lancashire. However there has been some debate as to the reliability and accuracy of this map, based on its inaccurate placement of other structures such as Burgh Hall (Redmayne & Neil 1996: 8). As a walkover survey in the area conducted prior to the construction of Myles Standish Way recorded no archaeological evidence of the peel tower in the location suggested by Saxton's map, it was concluded that the peel tower did not exist in this location (Redmayne & Neil 1996: 8).

3.4 A number of other post- medieval sites have been identified in the vicinity of the proposed development. These include a small settlement at Yarrow Bridge, Duxbury Corn Mill, Duxbury Mill Farm, and the terraced housing at Carr Houses and Lower Red Bank, discussed below. The former two were both recorded on a 1757 estate map (Redmayne & Neil 1996:9), whilst the latter date to the mid- nineteenth century. However Carr and Yarrow Bridge Collieries form the focus for the following research as they were located directly on the site of development, and thus are most likely to be affected by the proposed works.

3.5 Coal mining in Lancashire began during the late 16th to early 17th centuries (Heyes 1994: 107). The development of collieries in the Red Bank area has been dated to 1838, following the discovery of coal at Yarrow Bridge in 1835 (Redmayne & Neil 1996:9). The location of Chorley, situated on the edge of the Wigan coalfield, made it a popular place to mine (Heyes 1994: 109).

3.6 The 1st Edition OS (Lancashire Sheet 77), published in1849 but surveyed 1844- 47, shows the proposal site to be the location for a number of coal mines; Yarrow Bridge Colliery (Lancashire Historic Environment Record PRN 8046), Carr Colliery (PRN 8047) both probably only in use from 1835-43, & Duxbury Colliery (PRN 8048), in use from 1835-1889 when it was flooded (Redmayne & Neil 1996, 18-19; Heyes 1994: 111). A building possibly known as *Carr Houses* is also shown to lie behind the properties fronting Little Carr Lane.

3.7 Holden's Directory of 1811 records that by the early nineteenth century Chorley was 'abound in mines of coal, lead and aluminium' (Holden 1811). Following the discovery of coal in the area the mines at Red Bank (Carr, Yarrow and Duxbury) were leased for 21 years to Lightoller and Whittle in 1838 for £200 (Redmayne & Neil 1996: 9). Slater's Directory records that by 1851 Thomas Whaley owned the Carr and Yarrow Bridge Collieries, whilst John Whittle continued to own Duxbury Colliery (Slater 1851: 77). However by the time Slater's 1858 directory was produced there were no collieries mentioned on Red Bank. It is thought that by 1845 both the Carr and Yarrow Bridge Collieries had been fully mined, and by 1849 'the pit head buildings at Yarrow Bridge and Carr Collieries had been removed' (Redmayne & Neil 1996: 9). The map evidence suggests that Yarrow Bridge Colliery and Carr Colliery were only in use between 1835- 1843. The census records further support these dates, as it is recorded on the 1841 census that Eaves Green, near to Carr Colliery and Yarrow Colliery, was the home of a number of miners, such as James Green, aged 50, (HO 107/525/8/55). No mention was made of Yarrow Colliery or Carr Colliery, although it is likely that the miners from Eaves Green worked there. Lower Red Bank and Carr Houses terracing (mentioned above) also developed during the life span of Carr and Yarrow Bridge collieries indicating that these may too housed miners working on these sites (Redmayne & Neil 1996: 9).

3.8 According to a 'walk-over' survey which was carried out in 1996 (Redmayne & Neil) prior to the Eaves Green Link Road (Myles Standish Way) the area shown on the 1849 6" map as Yarrow Bridge Colliery **(Site A)** had been extensively landscaped and no traces of any structures or spoil tips were recorded. However 4 small buildings were shown on the 1849 map and apparently there were 6 on an estate map of 1843 (Redmayne & Neil 1996, 12). At the time of the 1996 'walk-over' survey Carr Colliery **(Site B)** lay within an area of overgrown land which had obviously been levelled and where there the remains of colliery waste. 2 larger and 3 smaller buildings were shown on both the 1849 6" map and the estate map of 1843 but it was not possible to establish if any further remains were extant due to the overgrown nature of the site (Redmayne & Neil 1996, 12). Duxbury Colliery which was shown on the 1849 map lay on the extreme southern boundary of the original NORWEB/ Vertex site and has now been subsumed by the Eaves Green Link Road. The

other building of interest shown on the 1849 map **(Site C)** lay immediately to the south of a terrace of cottages known as Carr Houses which were extant in 1996 (Redmayne & Neil 1996, 21) but have since been redeveloped. The terrace lay outside the subject site boundaries although the unidentified building was just inside but was not mentioned by Redmayne & Neil. This had gone by the time of the 1894 1st edition 25" scale Lancashire Sheet 77: 16 along with the colliery buildings mentioned above.

4. AIMS & OBJECTIVES

4.1 *An Archaeological Research Framework for North West England: Volume 1, Resource Assessment* (p. 185) states that "the coal industry of the region has received little attention", but confirms that "colliery sites have considerable, and untapped, archaeological potential." The aim of this archaeological programme was to gain information about the archaeological resource within the subject areas including its presence or absent, character and extent, integrity, state of preservation and relative quality.

4.2 Structural remains associated with the Yarrow Bridge and Carr Collieries as well as the possible *Carr Houses* site have the potential to survive below ground. Such remains are likely to be of only local or regional significance and as such therefore do not merit preservation in situ but do warrant preservation by record in accordance with Policy H.E. 12 of PPS5.

4.3 The objectives of the evaluation were:

- To record the presence of any archaeological features and deposits
- To establish, wherever possible, the depth of any archaeological remains and their state of preservation
- To recover artefactual material, especially any that can be used for dating purposes
- To attempt to interpret the function of any archaeological remains

The results may be used:

- To produce a record of the location, nature and date of any archaeological remains encountered on the site;

- To add to knowledge about previous history of activity on the current site and its surroundings.

5. PERSONNEL

5.1 The sitework was undertaken by Stephen Baldwin, assisted by Sally Evans who will also drafted the report. John Trippier BA (Hons) MRICS, PIFA managed the project.

6. METHODOLOGY

6.1 The proposed archaeological excavations concentrated on the three sites which are shown as A, B and C respectively on **Fig. 1**. Our clients have helpfully provided a composite map at a scale of 1:1250 showing the 1849 map underlying a modern map which shows the intended areas of excavation in blue outline. This has been appended to this report as **Fig 2**. and the subject areas were agreed with LCAS. They were pegged out prior to the start of the fieldwork with each peg being assigned a GPS OS coordinate (see **Fig 2**). Prior the excavations details were obtained from the public utility companies and the Coal Board of potential hazards. In the event it was not possible to excavate all of Areas A,B & C fully due to various obstructions and hazards and due to the depth of overburden. The extent of the excavated areas are shown edged yellow on the plan at **Fig 4**. In addition the 1849 map shows an obvious rectangle to the north-west of the area marked as Yarrow Bridge Colliery. This is not shown on any later maps and was not commented on in (Redmayne & Neil 1996). From a blow-up of the 1849 map it would appear to be a former (now filled –in) reservoir. It was intended run the machine across this for two bucket –widths to establish if there are any indicative below ground remains but in view of the depth of over-burden on the site in this area this was abandoned .

6.2 Sitework began on Monday 28th March 2011 and it was anticipated that the 'strip and record' part of the programme could be completed within one working week. In the event it was necessary to allow a further week in order that additional excavation could take place in order to reach the archaeological levels. The sitework therefore was concluded on Friday 8th.April 2011.

6.3. The topsoil was stripped in the 3 areas of archaeological interest, under close archaeological supervision, using a 13 ton caterpillared mechanical digger equipped with a toothless ditching blade, with the intention of leaving an archaeologically clean and even surface for subsequent assessment. Any datable or other diagnostic material exposed by this phase of work was recovered and assessed.

6.4. The surfaces so produced were recorded using appropriate archaeological techniques, which included the production of detailed plans of all archaeological features and the characterisation of the archaeological resource. In area B it was apparent that the deposits being encountered could not be characterised by rapid and simple works and it was agreed with LCAS and the clients that archaeological excavation should continue in order to establish in detail the extent, date, character and significance of the archaeological remains. This further work was tailored to the remains encountered, and was appropriate and proportional to the quantity, importance and complexity of the archaeology exposed as required by Policy H.E. 12.3 of PPS5.

6.5. An adequate written record of archaeological features and finds encountered was maintained. Archaeological contexts were recorded using the standard multiple context method and all contexts identified in face sections were given unique numbers. The context catalogue at **Fig. 14** refers to the sequential context numbers which formed a single sequence across all three trenches. Sections and plans of significant archaeological features were drawn at 1:50 or 1:20 scale as appropriate. Metric spot heights for trenches and archaeological features were recorded and related to the Ordnance datum.

6.6 An adequate photographic record was prepared. This includes 35mm monochrome prints and digital photography which illustrate in both detail and general context the principal

features and finds discovered. The photographic record also includes more general photographs that illustrate the nature of the works undertaken and their site context.

6.7 The archaeological work conformed to the current best practice and to the standards and guidance of the Institute of Field Archaeologists.

7. TRENCH STRATIGRAPHY

AREA C

7.1 Excavations began with Area C located toward the north end of the site (**Plate 1**). The intention was to investigate a structure recorded on the 19th century 1st edition OS map. Area C measured 14.8m x 14.0m x 12.2m x 16.2m (measurements clockwise from peg 1 at the northwest corner). However it was not possible to excavate a strip some 2.5m wide along the south end of the trench due to the presence of a live high voltage electricity cable. A plan of the excavation is shown at **Fig. 5**.

7.2 The topsoil of loose mid- grey sandy silt (context 01) was 300mm thick and 5 lenses of crushed coal observed in the west facing section. This was removed to reveal a layer of crushed coal and cinders 200mm thick (02). This layer also included occasional brick fragments (**Plate 2**). The removal of the topsoil (01) also exposed a yellow brown sandy clay subsoil deposit (03). This deposit contained 40% inclusions of sub- oval and angular bluish grey pebbles, and was observed in the north- east corner of the trench (Plate 17 – **Plate 1**).

7.3 The removal of the subsoil (03) in the north east corner exposed a 0.5m wide field drain (06) orientated northeast-southwest. The drain (06) had been placed in cut [07]. At its southwest end this field drain (06) intersected another field drain (04), orientated northwest- southeast and located beneath the layer of crushed coal and cinders (02). This drain was also 0.5m in width, and located in a cut [05]. Both cuts [05] and [07] had been made into the natural light brown clay (14) (**Plate 3**).

7.4 Two further cuts [09] and [11] had also been made into the natural (14). Cut [09] was a rectilinear trench located between field drains (04) and (06), filled with dark material (08) and observed as a well defined dark stain. Cut [11] was observed as a square pit between the field drains (04) and (06), to the east of (08), also filled by a dark deposit (10).

7.5 Along the south side of the site two areas of rubble (12), (13) were observed, located on top of the natural (14). An area of broken yellow sandstones, lumps of lime mortar and occasional broken roof slates (12) was observed at the west end of the trench. And an area of demolition debris (13), including broken half bricks and sandstones which measured between 300mm x 200mm and 20mm x 20mm, was observed just south of the juncture between the two drains (**Plate 4**).

AREA B

7.6 An L shaped trench at Area B was opened on 31-3-11 (**Plate 5**). The intention was to investigate the site of Carr Colliery recorded on the 19th century 1st edition OS map. The six sides of the trench measured 10.7 x 27.2 x 21.0 x 11.9 x 10.3 x 15.7 clockwise from peg 12 at the northwest corner. This was excavated in its entirety except for a square concrete capped mine shaft (26) located just east of centre along the south side of the trench. A strip some 3.7m wide along the east side of the trench comprised a modern tarmaced roadway. This was excavated through the road surface and subsurfaces which lay above the natural clay. The remainder of the trench was excavated through layers of made- up ground. A plan of the excavation is shown at **Fig. 6**.

7.7 Three main groups of contexts were recorded in Area B; those relating to the road on the east side of the trench (20), (21), (22), (22a), (23), (24), (28), (29) and (35); those relating to the concrete mine shaft cap at the south end of the trench (25), (26), [27], (33), (34), [37] and (38); and those relating to a drain (30), (31), [32], (39) and (40), to the north of the concrete mine cap.

Road

7.8 After the removal of the 0.18m of tarmac (20) from the road (**Plate 5**), the crush and run subsurface was exposed (21). This subsurface was 0.18m in depth, and visible along the

27.2m east section of the trench. Below the crush and run layer was a pinkish brown crushed sandstone deposit (23) comprising c.20% rounded stone inclusions measuring between 40mm x 40mm x 5mm and 120mm x 120mm x 110mm (**Plate 6**). Beneath this deposit was a layer of very dark grey black crushed coal (24). The largest coal pieces measured 50mm x 40mm x 17mm. To the west of the tarmac (20) was a concrete base (22) for the road kerbstones (22a), and the concrete kerb (28) for the west side of road, which measured 0.43m x 0.11m (length unknown). This lay on top of a yellow brown sandy silt deposit (35) located stratigraphically above the pinkish brown crushed sandstone deposit (23). A street light base (29) 1.0m in diameter, associated with the road was also exposed during the excavations.

Mine Shaft

7.9 To the west of the road was a deposit of made up ground (25) below which was the pinkish brown crushed sandstone deposit (23) which also lay beneath the road (**Plate 7**). The crushed sandstone deposit had been cut [37] by the edge of a capped mine shaft (**Plate 8**) which was defined on the east side by a dark fill (38) of grey-blue clay with inclusions of degraded coal and rubble. It measured 5.0m in length and was 1.5m wide (depth unexcavated). A similar cut [27] and fill (34) were observed on its west side. The square concrete cap (26) measured 6.0m x 6.2m. West of the concrete cap the trench was filled with made up ground (25) below which were deep deposits of mixed blue-grey and orange clays (33) (**Plate 9**) which were interpreted as natural.

Drain

7.10 To the north of the concrete cap and to the west of the road was a deposit of dark clayey silty soil (30) (**Plate 10**). This contained bricks, sandstone slabs and stone setts. However these were not *in situ* and must have been dumped there. A cut for a drain [32] intruded into the deposit and measured 6.5m x 0.5m x 0.3m. The section of drain which remained (31) was stone capped with handmade brick walls (**Plate 11**). The handmade bricks measured a maximum of 230mm x 80mm x 120mm. The drain was filled by orange brown fine sandy silt with small lenses of lime mortar and occasional inclusions of coal flecks and rubble (40). A corroded iron bolt was recovered from the fill (small finds

no.1). The base (39) comprised small rounded cobbles which measured between 60mm x 50mm x 20mm and 80mm x 70mm x 100mm bonded with a compacted orange brown sandy silt matrix. The fully excavated area is shown at **Plate 12**.

AREA A

7.11 Area A was opened on 31 -3-11 in order to investigate the site of the former Yarrow Bridge Colliery (c.1830 -1880) which lay directly north-west of the recently demolished Vertex Building. Historic mapping consulted prior to the fieldwork showed 3 buildings within the 2011 trenching areas (**Fig. 2**). The northern-most building was in a wooded landscaped area which was unavailable due to a tree protection order. Therefore the excavation focused on the site of the middle building on the 1840s 6in 1st edition OS mapping in the central portion of the agreed trenching area. The area of trenching initially opened up measured approx.15m from southwest to northeast along a line some 2m southeast of pegs 10 and 11 and extended for 12 m in a southeasterly direction. The location of the excavated area is shown at **Fig. 4** and a plan of the excavated area is shown at **Fig. 7**.

Area A1

7.12 Turf and a thin layer of topsoil (0.3m), (50), was removed to reveal a sloping surface of mixed clays (51) which lay above a deposit of demolition material (52) (**Plate 13**). Hand cleaning of this deposit revealed machine made and 'frogged' bricks, moulded bricks (possibly from a large industrial chimney stack), 3 courses of a section of dumped wall and broken sandstone window and door detail. Initially this appeared to be *in situ* (**Plate 14**) but was subsequently revealed to be lying on top of other demolition material (53). (**Plate 15**) Most of this material (52 &53) appeared to be confined to the western half of the trench whilst further mixed clays filled the eastern half.

7.13 In order to investigate the depth of the demolition and locate the natural ground a 2 x 3m test pit [55] was dug out by machine along the northeast side of the excavated area (**Plates 16 &17** and **Fig. 8**). Below the clays (51) and demolition deposit (53) a thick

deposit of redeposited blue clay (56) was observed. Below this was a buried soil surface with turf surviving (54a) and below that was another (earlier) demolition deposit (59). The natural clay base (60) was located beneath the latter at a depth of 3 – 4m below the present surface. Within the test pit were the remains of a northeast –southwest orientated drain filed by yellow clay and handmade bricks (57) & [58]. This was removed during the excavation. After discussions with the client and LCAS it was agreed that excavations should proceed in order to uncover these buried deposits. The following 2 days involved extensive groundworks to considerable depths and involved sloping the trench sides in order to safely reach the demolition layer (59) which it was thought might contain or conceal in situ archaeological features.

7.14 When this layer was revealed it was found to contain some artefacts and faunal material including hand- made bricks, C19 pottery, blue roof slates, fragments of a Hartley's Jam Jar (s.f. No. 03), and a number of articulated bones from a young male sheep (s.f. No. 03) (**Plate 18**). The skeleton was fairly complete and did not exhibit signs of butchery, indicating that the animal died of natural causes and remained in situ. It is likely that the hand- made bricks, C19 pottery and roof slates represent the remains of one the nineteenth century colliery buildings.

7.15 As deposit (59) was removed a lower layer (67) was discovered which contained a series of *in situ* archaeological features which appeared to relate to the former colliery (**Plate 19**). One of these comprised an elliptical handmade- brick lined shaft (62) 1.32m in diameter, filled with broken sandstones (61) (**Plates 20 &21**). The bricks measured 2 ¼ x 4 ½ x 9 ¼ ins. The sandstones measured between 380mm x 570mm x 0.200mm and 120mm x 90mm x 60mm and may relate to the demolition of the colliery. The shaft contained water 0.43m below the surface and was interpreted to be a well. It was located within a rounded cut which measured 290mm from the edge of the cut to shaft edge and was 1.90m in diameter. A deposit of mixed blue/ grey/ brown clays (66), (possible redeposited natural) filled the area between the edges of the cut and shaft. A ceramic field drain (64), located within a construction cut [64] 3.64m in length and 0.31m in width ran north-west to south-east on the east side of the well (62) (**Plate 20**). The cut had been filled by a deposit of dark brown clayey sand with stone inclusions which measured

90mm x 40mm x45mm (68). A further sondage (**Plate 22 & Fig 9**) was dug along the northwest side of the trench which revealed the natural clay (60) below deposit (59) thus establishing that there were no further archaeological layers in this area.

Area A2

7.16 Apparently *in situ* brickwork (71) seen in the north-east section of the trench pointed to survival of further colliery features to the east (**Plate 23**). In order to investigate these remains a further day and a half of extensive groundworks was required to make a safe working area. As a result the trench was extended by a further 10 x 10 metres.

7.17 The stratigraphy observed in this area comprised 0.30m of topsoil (72) which lay above a deposit of brown clay 0.90m thick (73). Beneath this deposit was a 1.5m thick layer of crushed sandstones and broken bricks (74) which overlay a compact surface of 19th century bricks and sandstone (75), 0.30m in depth. Below this was a layer of dark blue clay and shale with occasional bricks (76) which was interpreted as being the same as (54) in area A (**Plate 24** and **Fig. 11**).

7.18 Within deposit (76/54) was a series of 3 brick piers (71), (77), (78) on sandstone footings running SW –NE (**Plate 25**). The projected line of these columns was truncated by a very large and deep modern test-pit in the NE corner of the extended trench. The piers comprised handmade brickwork on sandstone bases. A modern water pipe which ran under the road to the south and west of the trench had most probably removed several of the C19 external walls. The fully excavated Area A is shown at **Plate 26** and on the **Front Cover** of this report.

8. INTERPRETATION

8.1 The 1st Edition OS map, published in1849, indicated the location for a number of collieries on the subject site. Trenching area A was in the location shown as being occupied by buildings associated with Yarrow Bridge Colliery and trenching Area B with Carr Colliery. A building possibly known as *Carr Houses* was also shown to lie behind the properties fronting Little Carr Lane and was covered by Trenching Area C.

8.2 A number of features were identified in area C including two drainage channels and two small areas of rubble, containing of broken sandstones, lime mortar and occasional broken roof slates (12) and brick and sandstone fragments (13) which were interpreted as demolition debris. It is possible that these deposits are all that remain of the structure recorded on the 19th century 1st edition OS map. However this cannot be stated with any certainty.

8.3 The excavations in Area B revealed a series of different phases of activity. The latest phase is represented by the tarmac road and the associated groundworks along the east side of the trench which was excavated down to an underlying pinkish brown crushed sandstone deposit. To the south-west of the road was a capped mine shaft which must have been associated with the early 19th century colliery. To the north of this and west of the road was a deposit of dark silty clay containing bricks, sandstones and setts although these did not appear to be *in situ*. This deposit had been cut by the remnants of a brick drain some 6.5m in length. To the south and west of the mine shaft the trench was filled with mixed blue-grey and orange clays which were interpreted as natural. No other potential archaeological features were visible.

8.4 A number of different phases of activity were also distinguished in Area A. Below the topsoil and a sloping surface of mixed clays (51) was a deposit of demolition material of machine made and 'frogged' bricks, moulded bricks, 3 courses of a section of dumped wall and broken sandstone window and door fragments. Whilst it was clear from the stratigraphy that these must have post-dated demolition and backfilling of the 19th century colliery buildings there was there was no structural context or cartographic evidence to indicate that it was the remnants of an earlier in situ building and so it seems likely that it was brought from elsewhere.

8.5 Below the demolition deposit and a thick layer of redeposited blue clay was a buried turf and soil with a layer below which was earlier demolition deposit. As this was directly above the natural clay base it seemed likely that it represented the archaeological level. When excavated deposits of hand- made bricks, C19 pottery and roof slates were found which may have represented the remains of the early nineteenth century Yarrow Bridge Colliery buildings. Further removal of the buried soil (54a) revealed an in situ elliptical brick lined shaft filled with broken stones and interpreted as a well. A ceramic field drain ran south to north to the east of the well. These features appeared to be within the area of the central building at the Yarrow Bridge Colliery as shown on the 1849 map. However there were no *in situ* features that could be interpreted as representing the actual buildings

themselves. This level appeared to be contemporary with a line of 3 brick piers 1m apart and running SW–NE in the southeasterly extension to the trench. Each base was approx 1m square and was made of handmade brick set on sandstone slabs. These appeared to have been too close together to form part of a building may have been bases for plant or machinery.

9. CONCLUSIONS

9.1 The aim of the evaluation programme was to shed light on the nature of early 19th century colliery sites of local or regional by identifying and recording any surviving structural remains associated with the Yarrow Bridge, Carr Collieries and *Carr Houses* site which are all shown on the 1849 OS map but which had gone out of use by the turn of the century. In the event a small number of in situ features - a well head, drains and 3 brick pier bases together with demolition material - were discovered at levels that suggest that they may have been associated with the central Yarrow Bridge Colliery building.

9.2 It was not possible to examine the site of the north building at the Yarrow Bridge Colliery site due to the need for tree preservation and any evaluation of the remaining south-west corner of the trench would have been at even greater depths below the existing ground surface due to the currently sloping nature of the site which rises from east to west. Any further archaeology in that direction is also likely to have been truncated by the modern water pipe which runs to the south and west of the trench.

9.3 Whilst the archaeological programme has confirmed that poorly preserved archaeological remains associated with the former collieries on the site have survived they are at some depth and upto and in excess of 4m in some areas. Significant earthmoving operations would have been required to continue the evaluation and given the poor state of preservation, and relative low level of archaeological significance of those remains which may survive, it was concluded and agreed with the clients and LCAS that the further large scale groundworks necessary to reach them would be appear to be unreasonable, both on grounds of cost and the amount of useful archaeological information that might be gained.

9.4 The piling solution required to enable development is understood to have some potential to cause some disturbance outside the area of the pile and does require a large number of piles. However due to the scattered nature of the deposits so far encountered, their poor state of preservation and relatively low archaeological significance, this solution was considered to be acceptable. It was understood that all further ground disturbance on the site would be kept to a depth of less than 1.5m which would ensure that any other archaeological remains would be preserved in situ. Accordingly no further archaeological investigation of the site was considered to be necessary.

10. ARCHIVE & RECORD

10.1 The archive resulting from the strip and record project carried out at Duxbury Park will be deposited with the Lancashire Museums and Archives Service of, Stanley Street, Preston, PR1 4YP; telephone 01772 534075, fax: 01772 534079. The format of this archive will be agreed between the Archives Officer, and within a timescale to be agreed with the Specialist Archaeological Advisor or the Planning Officer (Archaeology). It is understood that it is the policy of the Museum of Lancashire to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the County, which it serves. The museums officer, Stephen Bull, was notified in writing of the commencement of fieldwork.

10.2 A fully indexed field archive will be compiled consisting of all primary written documents, plans, sections, and fully labelled photographs. Labelling will be in indelible ink on the *back* of the print and should include film and frame number; date recorded and photographer's name; name and address of site; national grid reference. Photographic prints will be mounted in appropriate archivally-stable sleeves. A quantified index to the field archive forms part of the appendices to this report. 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.

10.3 The Archaeological contractor will complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Once a report has become a public document by submission to or incorporation into the HER, Lancashire HER may place the information on a web-site. The contractors will ensure that their client agrees to this procedure in writing as part of the process of submitting the report to the case officer (Ken Davies) at Lancashire HER.

11. BIBLIOGRAPHY

Abbreviations

CLS Chorley Local Studies Library

LRO Lancashire Record Office

Maps

Ordnance Survey, 1849, Lancashire, Sheet 77, Scale: 1:10560, Southampton

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(PPG15)

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APPENDIX 1

Specification for a programme of Archaeological Work (Strip and Record) at Vertex Training Centre, Duxbury Park, Myles Standish Way, Chorley (9/08/01044/OUTMAJ) SD 5882 1590

1. Introduction

1.1 Outline planning permission (9/08/01044/OUTMAJ) has been granted for the demolition of existing buildings and the erection of a comprehensive mixed use development comprising residential and B1 employment uses at Duxbury Park, Myles Standish Way, Chorley. It is a condition (no. 21) of the planning approval that the applicants undertake a programme of archaeological work in accordance with a written scheme of investigation.

1.2 This specification has been prepared by Lancashire County Archaeology Service (LCAS). All works undertaken in answer to this document should comply with the standards and guidance of the Institute for Archaeologists.

2. Archaeological Interest

2.1 The 1st Edition OS (Lancashire Sheet 77), surveyed 1844-47 shows the proposal site to be the location for a number of coal mines; Yarrow Bridge Colliery (Lancashire Historic Environment Record PRN 8046), Carr Colliery (PRN 8047) both probably only in use from 1835-43, & Duxbury Colliery (PRN 8048), in use from 1835-1889 when it was flooded (Redmayne & Neil, 18-19). A building possible known as *Carr Houses* is also shown to lie behind the properties fronting Little Carr Lane. This building had been demolished by the time of the 1st Edition 1:2500 survey of the early 1890s. *An Archaeological Research Framework for North West England: Volume 1, Resource Assessment* (p. 185) states that "the coal industry of the region has received little attention", but confirms that "colliery sites have considerable, and untapped, archaeological potential."

2.2 Structural remains associated with the Yarrow Bridge and Carr Collieries as well as the possible site of *Carr Houses* have a potential to survive within previously undeveloped parts of the site, which will now be developed. Such remains are likely to be of only local or regional

significance and as such therefore do not merit preservation in situ. Any surviving remains should however be preserved by record.

3. General Considerations

3.1 Prior to the commencement of **any work,** the archaeological contractor should confirm in writing adherence to this specification, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of LCAS to any variations is required prior to work commencing. The archaeologist carrying out the work should be appropriately qualified and experienced. Any technical queries arising from the specification detailed below should be addressed to LCAS **without delay**.

4. Fieldwork Aims

4.1 Topsoil stripping in the 3 areas of archaeological interest (Carr Houses, Carr Colliery and Yarrow Colliery as shown on the 1st Edition OS, Lancashire Sheet 77 – see Figure 1) will be undertaken under close archaeological supervision, using an appropriate machine equipped with a toothless ditching blade, with the intention of leaving an archaeologically clean and even surface for subsequent assessment. Any datable or other diagnostic material exposed by this phase of work is to be recovered and assessed.

4.2 The surface so produced is to be recorded using appropriate archaeological techniques, which will include the production of a detailed plan of all archaeological features and the characterisation of the archaeological resource. Where deposits are encountered that cannot be characterised by rapid and simple works, then a scheme for further archaeological excavation and recording shall be designed and agreed with LCAS in order to establish in detail the extent, date, character and significance of the archaeological remains. This scheme is to be tailored to the remains encountered, and to be appropriate and proportional to the quantity, importance and complexity of the archaeology exposed.

4.3 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. In this case, where archaeological work is carried out at the same time as the work of other contractors, regard should also be taken of any reasonable additional constraints that these contractors may impose. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations. **LCAS and its officers**

cannot be held responsible for any accidents that may occur to outside contractors engaged to undertake this survey while attempting to conform to this specification.

5. Unexpectedly Significant or Complex Discoveries

5.1 Should there be, in the professional judgement of the archaeologist on site, unexpectedly significant or complex discoveries made that warrant more detailed recording than possible within the terms of this specification, then the archaeological contractor is to urgently contact LCAS with the relevant information to enable the matter to be resolved with the developer. An appropriate contingency statement should therefore be included in any project design.

5.2 Any human remains that are discovered must initially be left in-situ, covered and protected. If removal is necessary, this must comply with the relevant legislation, any Home Office and local environmental health regulations and English Heritage's and The Church of England's *Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England* (2005) where relevant.

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

6. Monitoring

6.1 The recording exercise will be monitored as necessary and practicable by LCAS in its role as 'curator' of the county's archaeology. LCAS should receive **as much notice as possible in writing** (and certainly not less than one week) of the intention to start the watching brief. **A copy of the archaeological contractor's risk assessment of the site should accompany the notification.**

7. Post-Excavation/Post-Recording Work and Report Preparation

7.1 On completion of the fieldwork, any samples shall be processed and all 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. A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, and fully labelled photographs. Labelling should be in indelible ink on the *back* of the print and should include film and frame number; date recorded and photographer's name; name and address of site; national grid reference. Photographic prints should be mounted in appropriate archivally-stable sleeves. **A quantified index to the field archive should form an appendix to the report**. The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see Section 8.1 below).

7.2 A report should be produced to provide background information, a summary of the works carried out, a description and separate interpretation of any features and finds identified. Details of the report's style and format are to be determined by the archaeological contractor, but it should include a full bibliography, a quantified index to the site archive and as an appendix, a copy of this specification. The report illustrations should include, as a minimum, a location map at a reasonable scale plus any drawings and photographs.

7.3 If nothing of archaeological interest is identified during the course of the watching brief, then a summary report will be adequate, as long as sufficient details are supplied for Historic Environment Record (HER) purposes. Illustrations would not be required, although it would be anticipated that black and white prints would form part of the archival record. A summary record should include: (1) details of the commissioning body; (2) the nature of the development and resultant ground disturbance; (3) the approximate position of any ground disturbance viewed with relation to adjacent existing fixed points; (4) the date(s) of fieldwork; (5) name(s) of fieldworker(s); (6) written observations on the nature and depth of deposits observed (this may include annotated sketch sections); (7) the conditions under which they were observed (for example, details of weather conditions, ease of access and views, attitude of other organisations *etc.);* (8) a quantified index to the field archive; (9) details of the archives present location and intended deposition and (10) a copy of this specification.

7.4 The report should be produced within six weeks of completion of the fieldwork, unless otherwise agreed with LCAS. Copies of the report should be supplied to the client and the Lancashire HER. The report will become publicly accessible once deposited with the Lancashire HER. The report for the HER should be supplied in digital format, preferably as a single PDF file, but with any accompanying gazetteers, images, plans, etc. in their original formats, to allow it to be easily incorporated into the digital HER.

7.5 Archaeological contractors must complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Contractors are advised to contact Lancashire HER prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, Lancashire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer (Ken Davies) at Lancashire HER.

8. Deposition of Archive

8.1 Before commencing any fieldwork, the archaeological contractor must contact the relevant District museum archaeological curator in writing (copied to LCAS) to determine the museum's requirements for the deposition of an excavation archive. In this case the contact is Edmund Southworth, Curator, Museum of Lancashire, Stanley Street, Preston, PR1 4YP; telephone 01772 534075, fax: 01772 534079.

8.2 It is the policy of the Museum of Lancashire to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the County, which it serves.

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

8.4 It is the responsibility of the archaeological contractor to meet the Museum of Lancashire's requirements with regard to the preparation of fieldwork archives for deposition.

8.5 The museums officer named in 8.1 above should be notified in writing of the commencement of fieldwork at the same time as the Lancashire Historic Environment Record.

9. Further Details

9.1 Any queries about the contents of the specification should be addressed to Lancashire County Archaeology Service, Lancashire County Council, Highways & Environmental Management, PO Box 9, Guild House, Cross Street, Preston PR1 8RD Tel 01772 531550, fax 01772 533423

10. Valid period of specification

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

Bibliography

Brennand, M. (ed), 2007, *Research and Archaeology in North West England: An Archaeological Research Framework for North West England; Volume 2, Research Agenda*, Council for British Archaeology, Loughborough.

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Lancashire County Archaeology Service January 2009

Douglas Moir

Planning Officer (Archaeology)

E-mail: **douglas.moir@lancashire.gov.uk**

APPENDIX 2: FIGURES

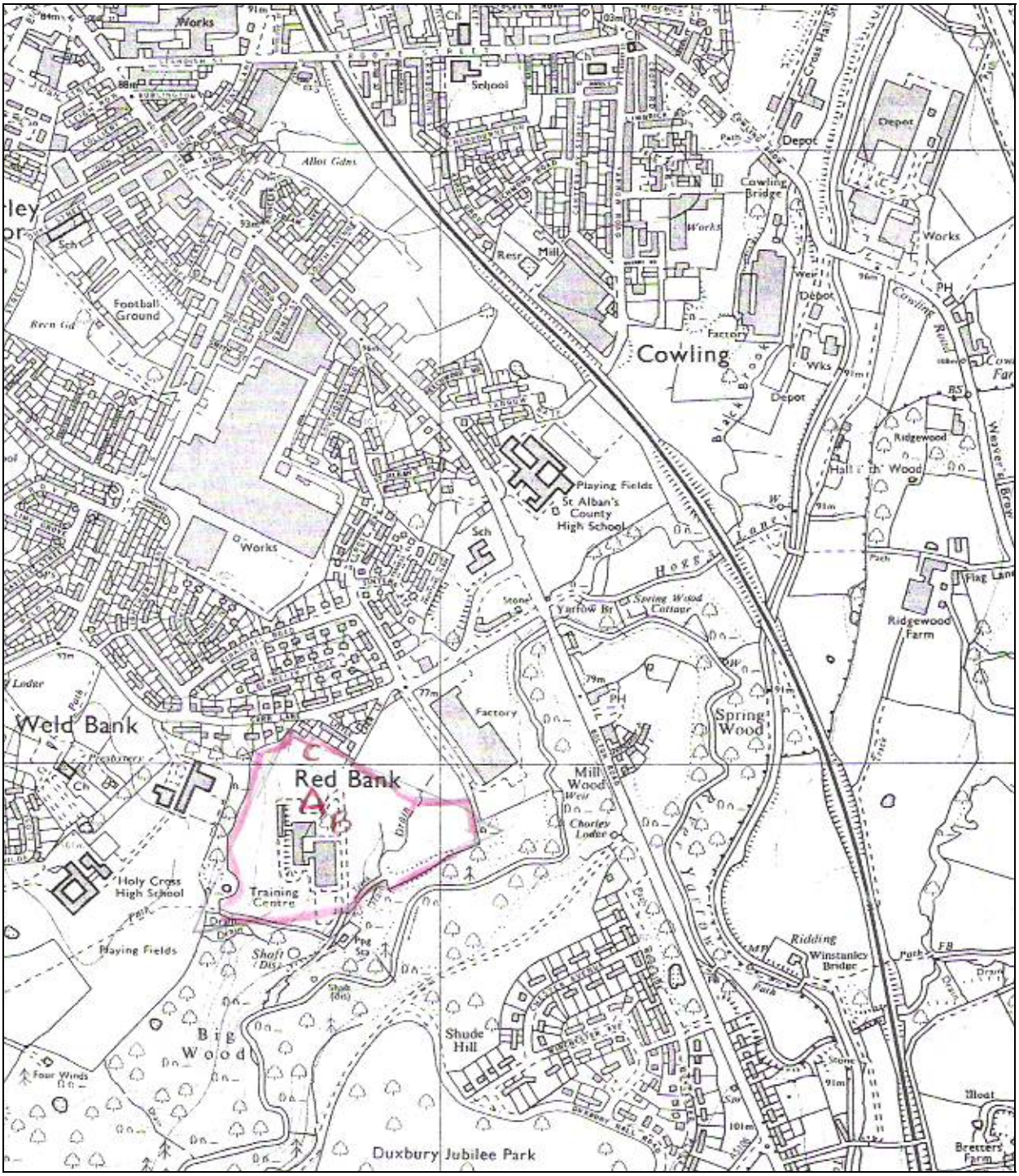

Figure 1: Location plan

Reproduced from OS *Explorer Map OL21, 1:25000 Scale,* 2002, by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationary Office.

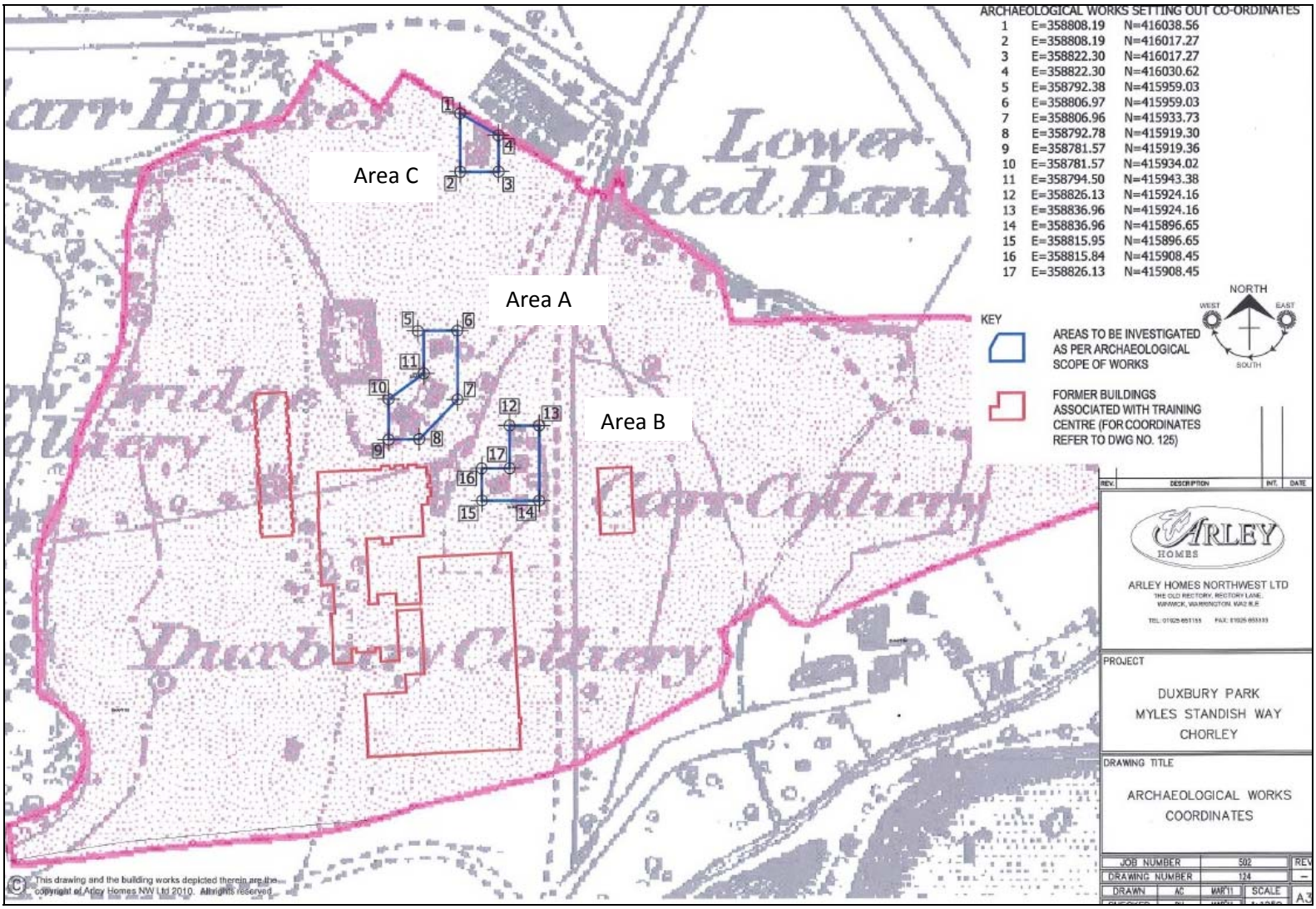

Figure 2: Location map showing trenching areas edged blue with pegs relating to GPS co-ordinates. The northernmost area is Area C, the central trench is Area A, and the south eastern trench is Area B within the text. The areas edged red are the sites of the recently demolished modern Vertex training centre buildings. Not to scale. Original provided by Arley Homes NW Ltd 2010 and subject to their copyright at 1:1250 scale A3 paper size

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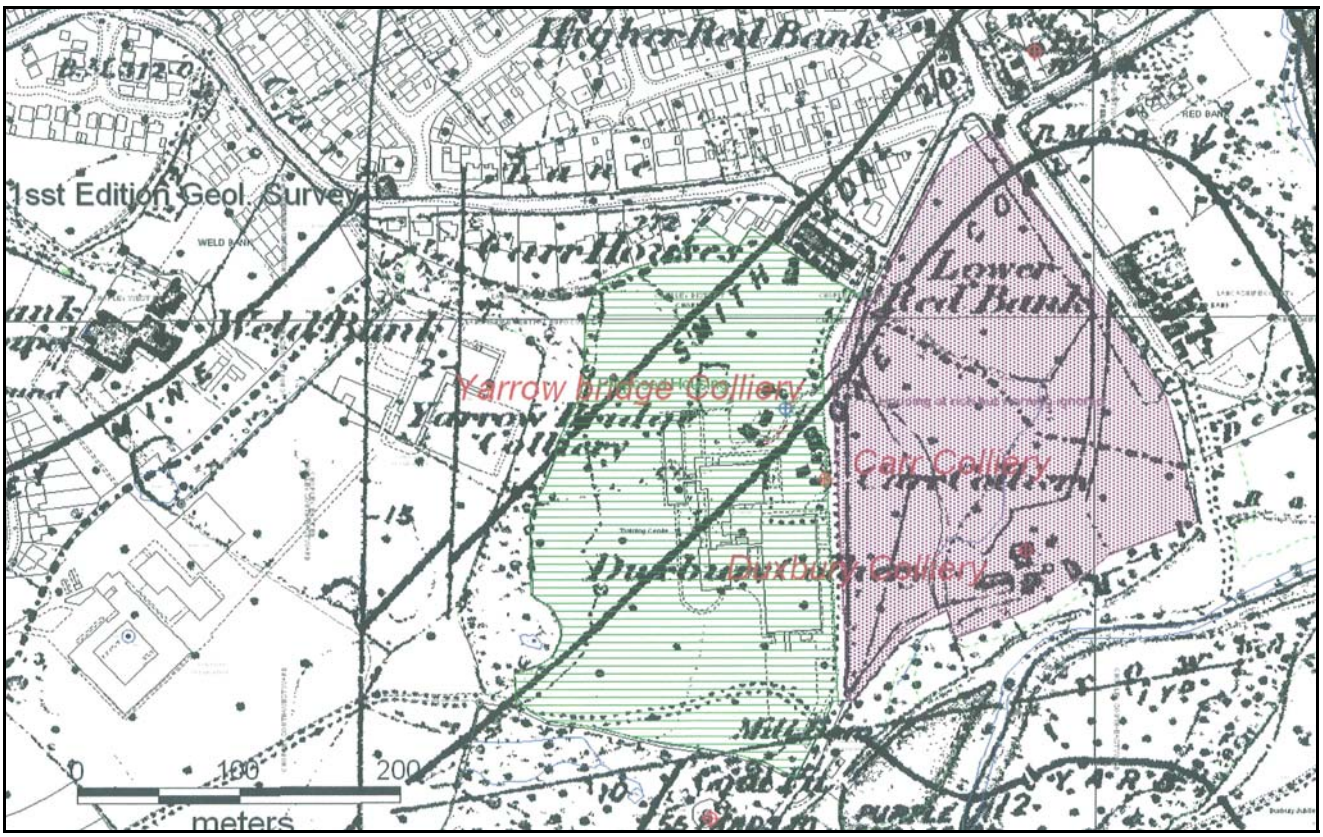


Figure 3: Geology of the site, including coal seams. 1st Edition Geological Survey. Provided by Arley Homes Ltd.

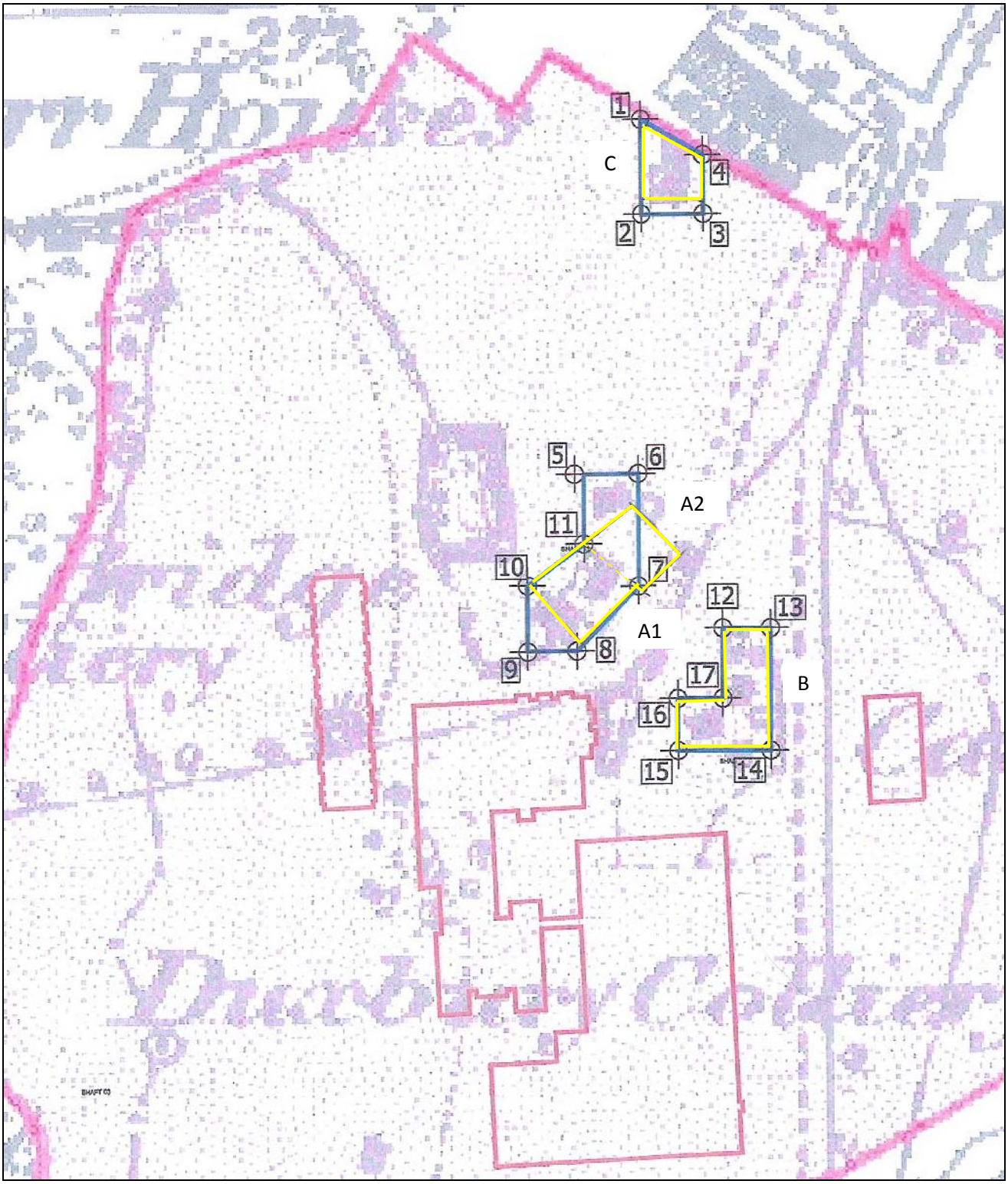


Figure 4: Plan at 1:1250 scale showing areas excavated edged yellow. Based on drawing provided by Arley Homes NW Ltd 2010 and subject to their copyright

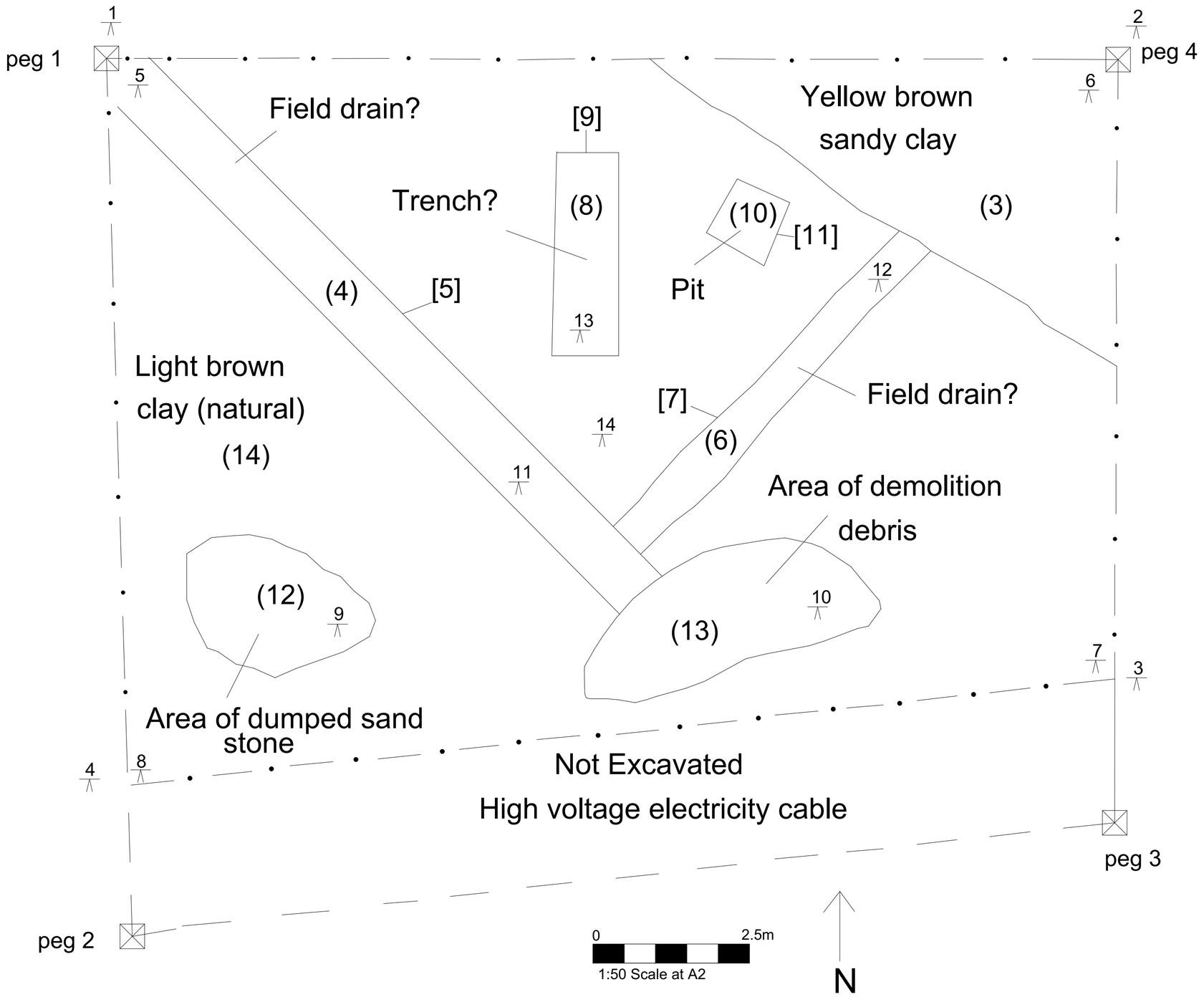


Figure 5: Trench Plan Area C

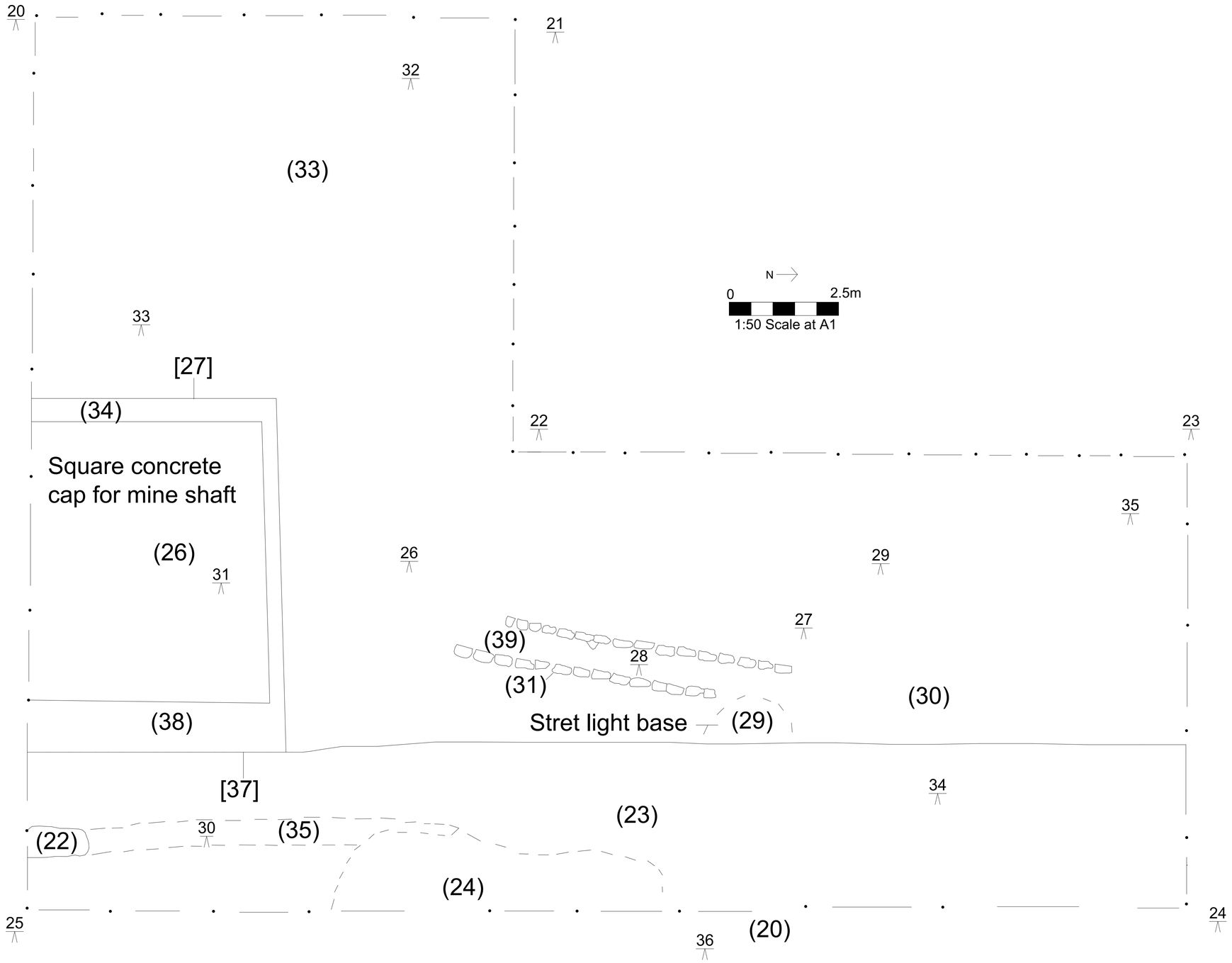


Figure 6: Trench Plan Area B

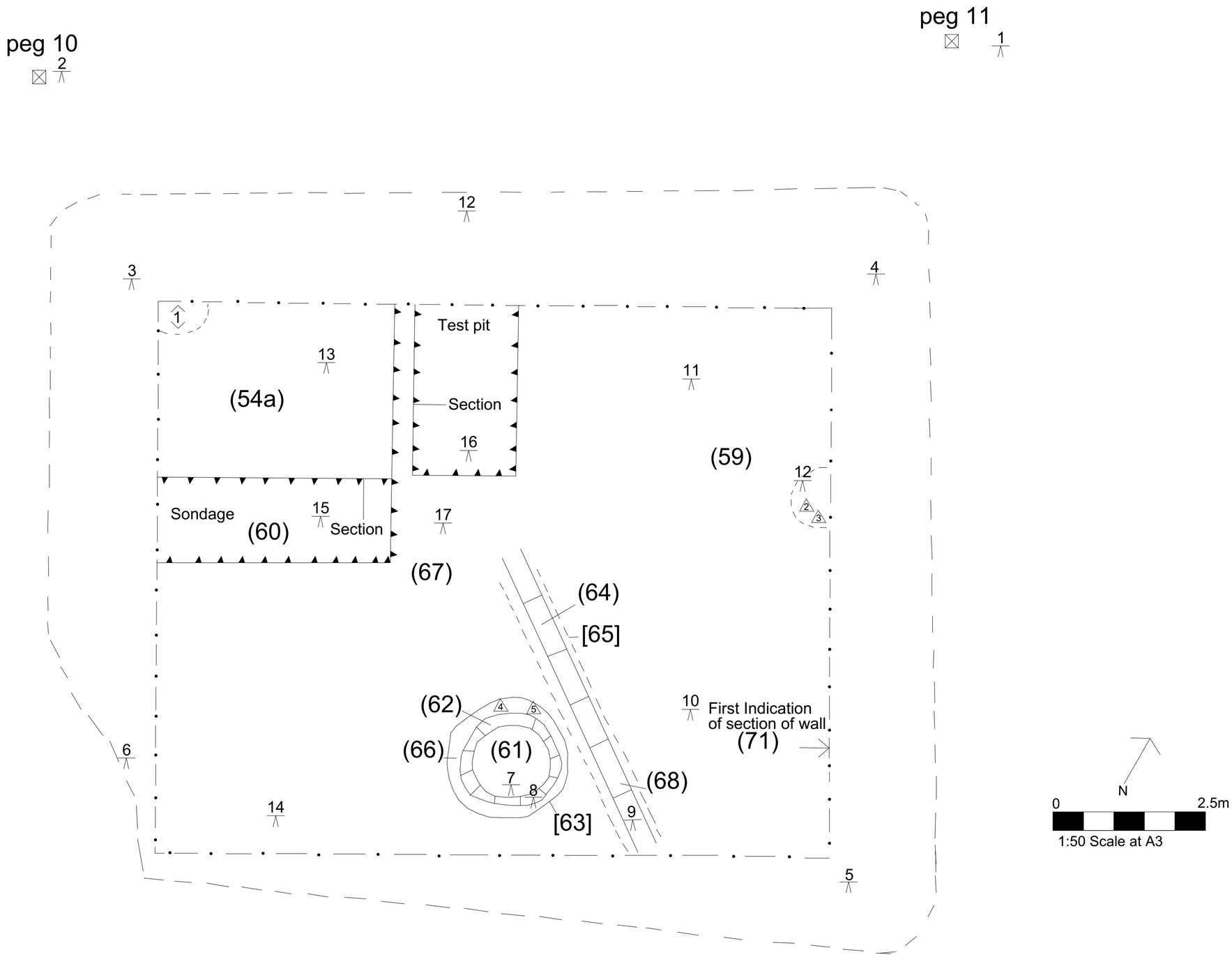


Figure 7: Trench Plan Area A1

North Facing Section of Test Pit (53) in Northwest Section of Area A1

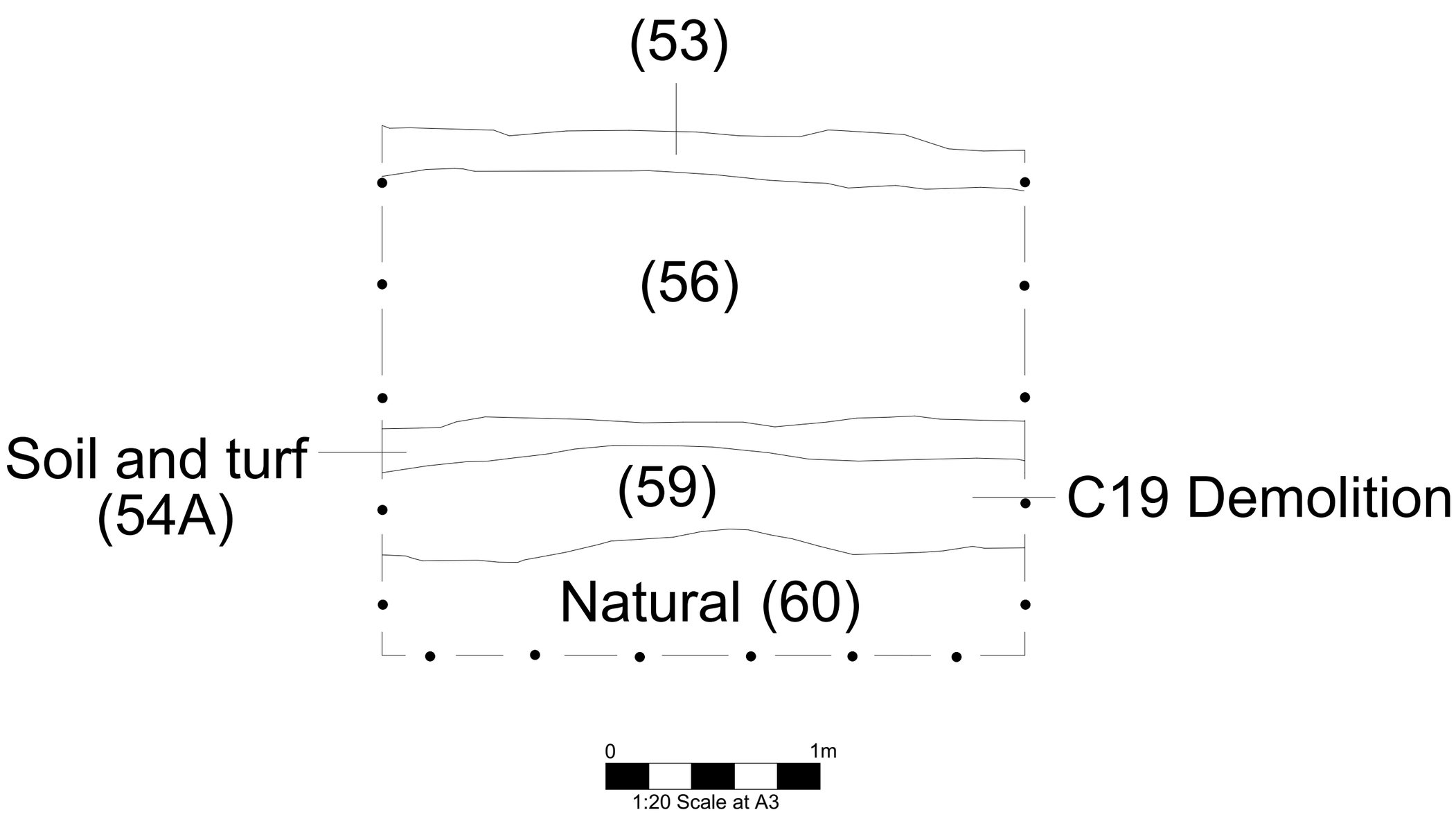


Figure 8: Section in Test Pit in Area A1

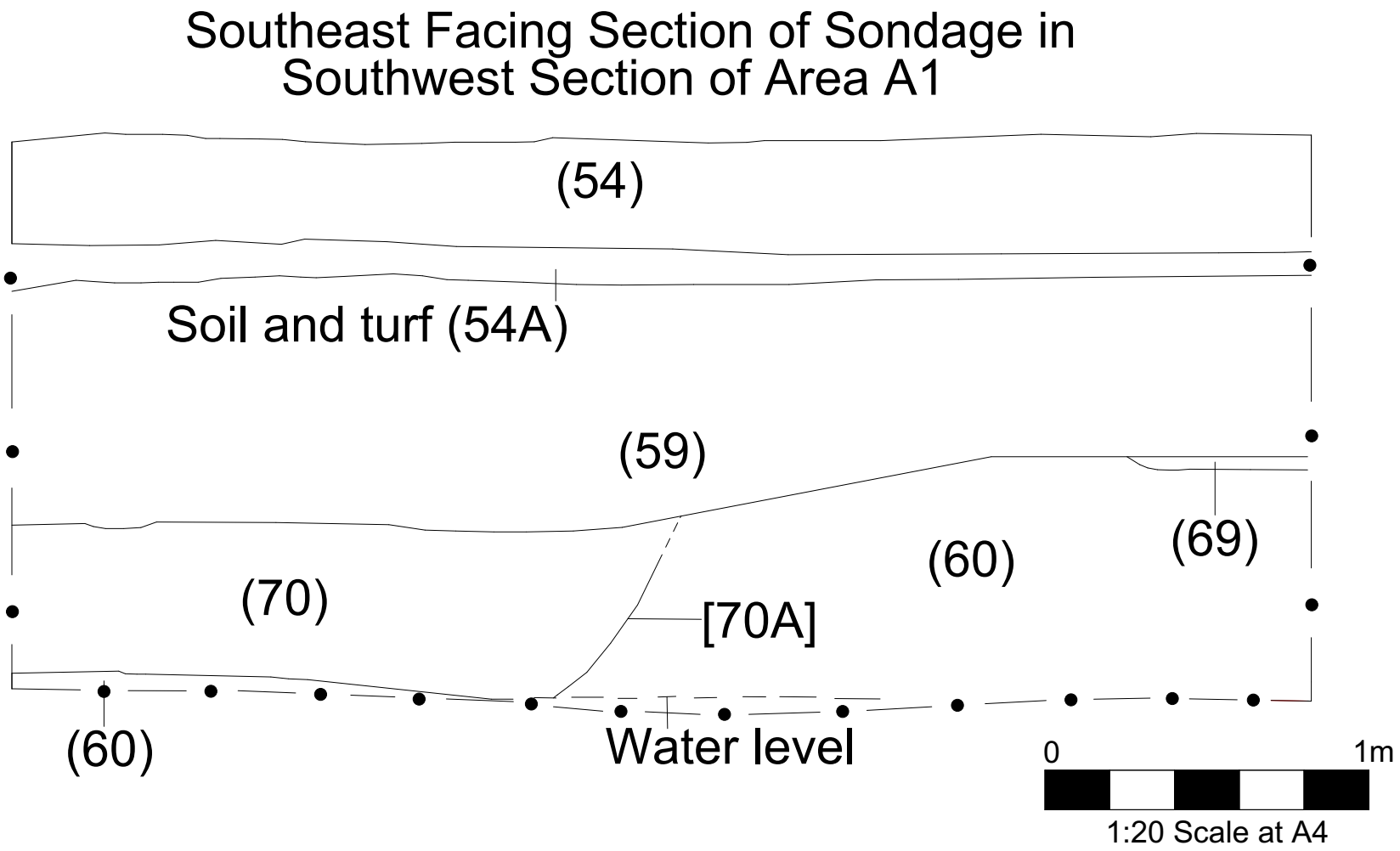


Figure 9: Section in Sondage in Area A1

peg 11

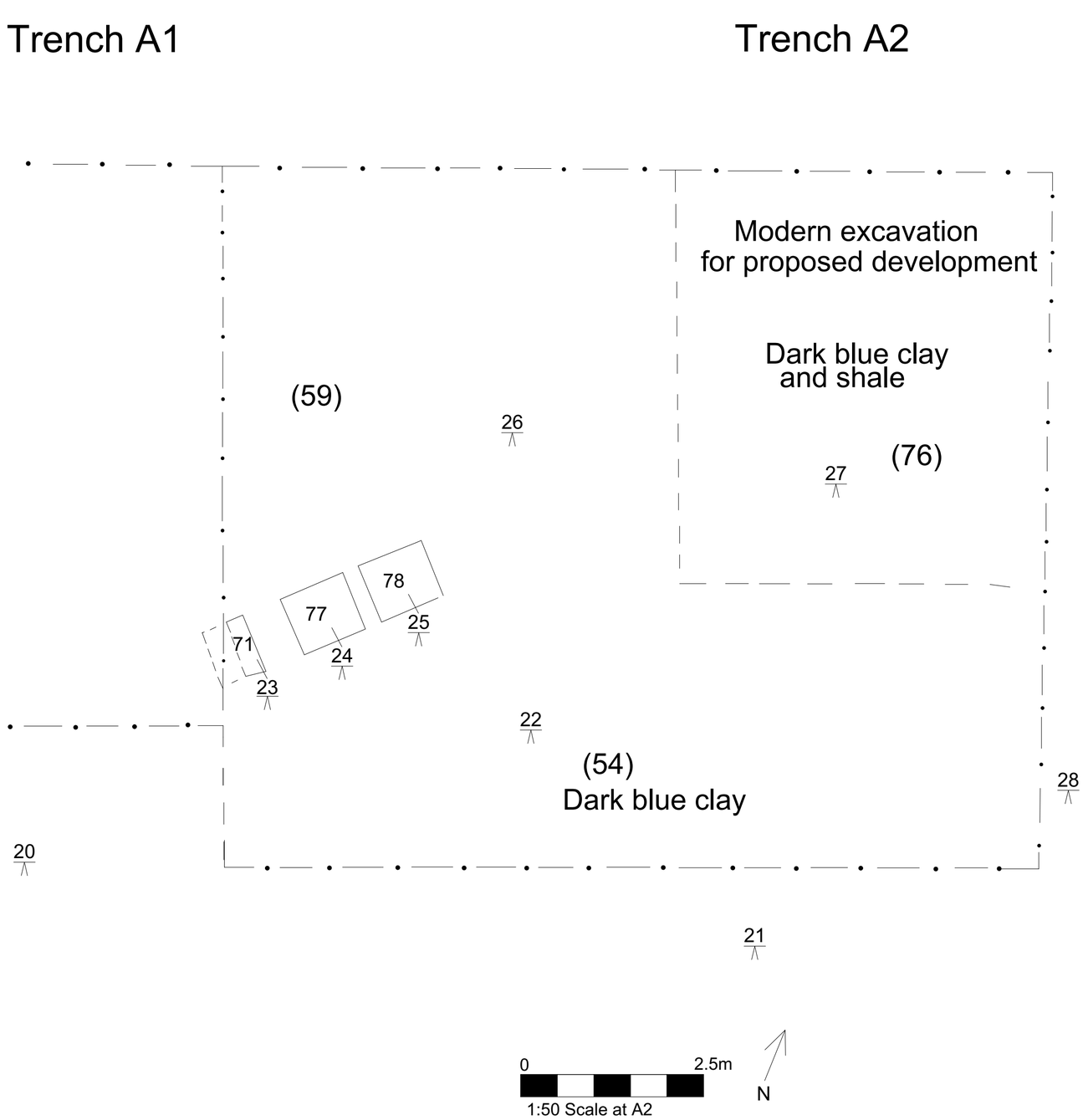


Figure 10: Trench Plan Area 2

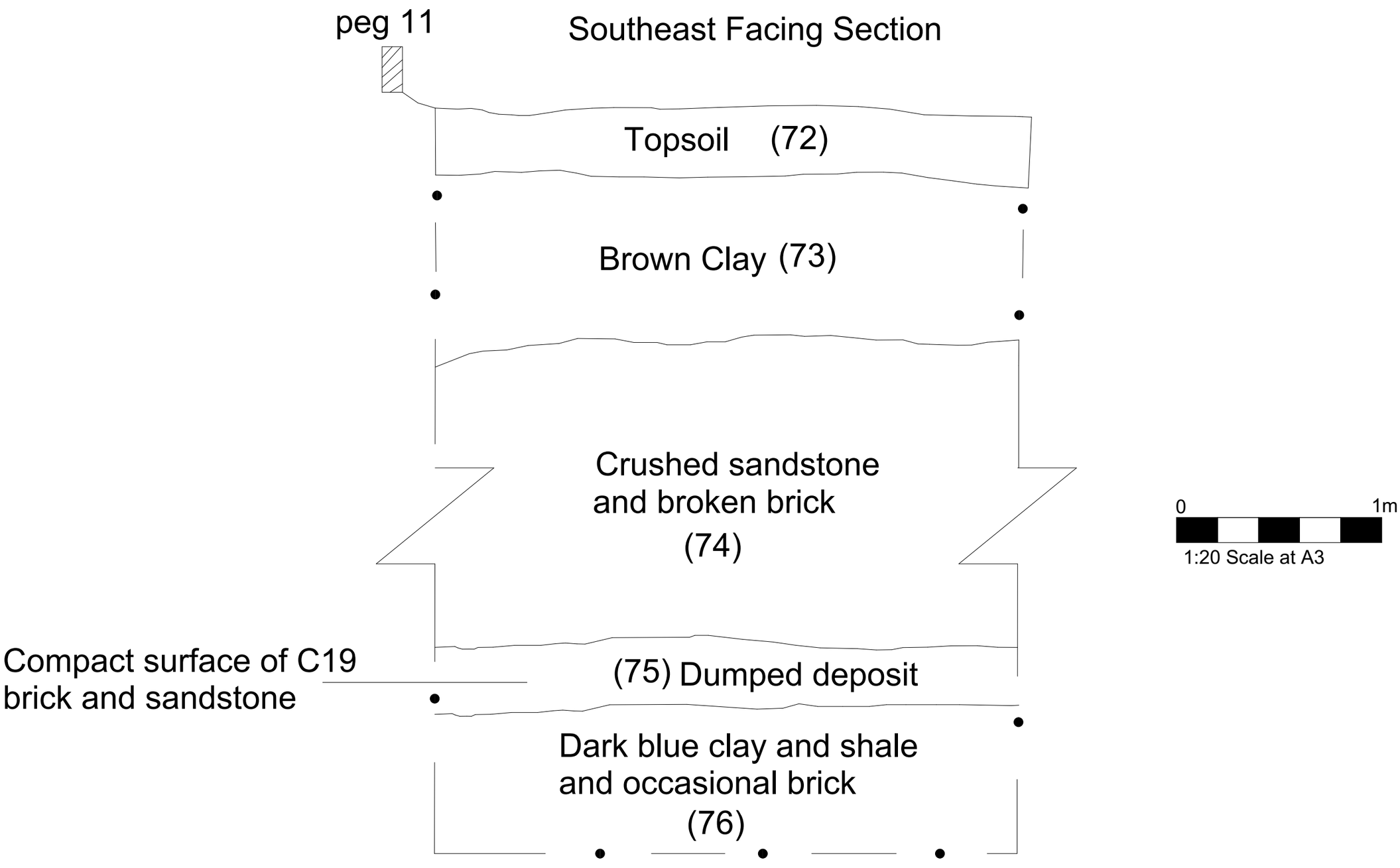
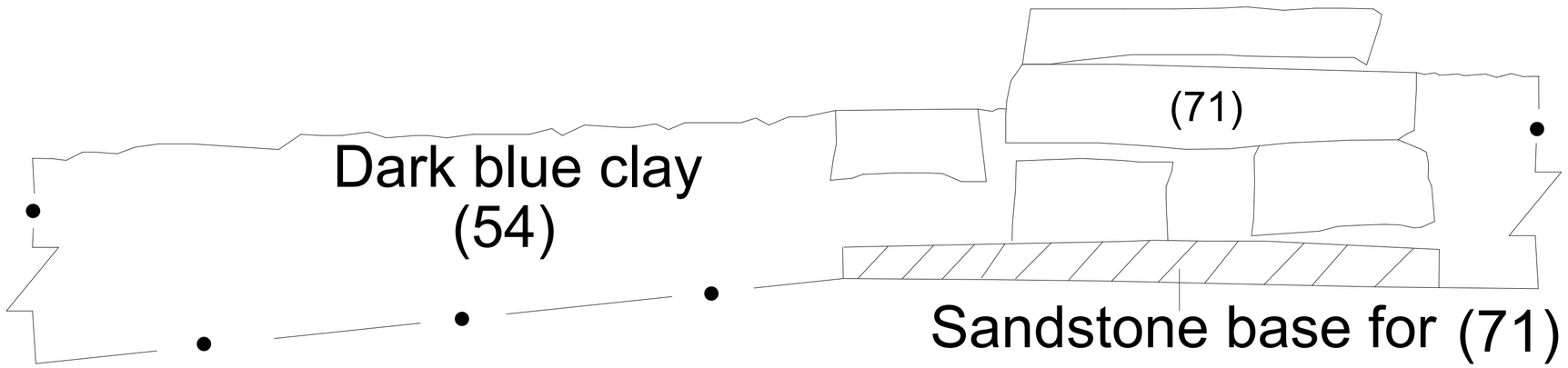


Figure 11: Southeast Facing Section of Area A2

Southwest Face of Brick Pier In Area A2



0 1m

1:20 Scale at A3

Figure 12: Southwest Face of Pier (71) in Area A2

Fig 13: Context catalogue

1 of 6

Context No.	Context description	Area/ Date
1	Topsoil. Loose mid- grey sandy silt, with lenses of crushed coal observed in west facing section.	Area C 28/03/2011
2	Layer. Layer of crushed coal and cinders 200mm thick. Occasional brick fragments were recorded.	Area C 28/03/2011
3	Yellow brown sandy clay with 40% inclusions of sub- oval and angular bluish grey pebbles observed in the north- east corner of the trench.	Area C 28/03/2011
4	Field drain measuring 0.5m in width, oriented northwest- southeast.	Area C 28/03/2011
5	Cut. Cut for field drain (04)	Area C 28/03/2011
6	Field drain measuring 0.5m in width, oriented northeast- southwest.	Area C 28/03/2011
7	Cut. Cut for field drain (06).	Area C 28/03/2011
8	Deposit. Rectilinear trench seen as a well defined dark stain located between field drains (04) and (06).	Area C 29/03/2011
9	Cut. Cut for (08).	Area C 29/03/2011
10	Deposit. Square pit to the east of (08) observed as a dark deposit between field drains (04) and (06).	Area C 29/03/2011
11	Cut. Cut for (10)	Area C 29/03/2011
12	Deposit. Area of broken yellow sandstones, lumps of lime mortar and occasional broken roof slates.	Area C 29/03/2011
13	Deposit. Demolition debris including broken half bricks and sandstones located to the east of (12). The sandstones measured between 300mm x 200mm and 20mm x 20mm.	Area C 29/03/2011
14	Layer. Natural light brown clay.	Area C 29/03/2011
15	VOID	
16	VOID	

17	VOID	
18	VOID	
19	VOID	
20	Tarmac road surface 0.18m thick.	Area B 29/03/2011
21	Deposit. MOT crush and run sub- surface 0.18m thick.	Area B 29/03/2011
22	Masonry. Concrete base for road kerb stones.	Area B 29/03/2011
22a.	Masonry. Thick concrete base for 22, measured 640mm x 340mm x 320mm.	Area B 29/03/2011
23	Deposit. Pinkish brown crushed sandstones below (21), with 20% rounded stone inclusions measuring between 40mm x 40mm x 5mm and 120mm x 120mm x 110mm.	Area B 29/03/2011
24	Deposit. Very dark grey black crushed coal, largest coal pieces measured 50mm x 40mm x 17mm. Located beneath (23).	Area B 29/03/2011
25	Deposit. Made up ground containing demolition material above square concrete cap for mine shaft (26).	Area B 29/03/2011
26	Masonry. Square concrete cap for mine shaft, measuring 6.0m x 6.2m. depth unknown, but tape measure inserted into small hole in concrete down to a depth of 2.07m	Area B 29/03/2011
27	Cut. Cut for (or edge of) mine shaft, west side, defined by a strip of clay material 5.0m in length.	Area B 29/03/2011
28	Masonry. Concrete kerb base west side of road measuring 0.43m x 0.11m (length unknown).	Area B 29/03/2011
29	Street light base, 1m in diameter.	Area B 29/03/2011
30	Deposit. Deposit of dark clayey silty soil containing bricks, sandstones and stone settings. Sandstones measured maximum of 200mm x 150mm x 170mm. Interpreted as a possible 19th century surface to the west of the road (20).	Area B 29/03/2011
31	Masonry. Section of stone capped handmade brick drain to the northeast of the mine shaft measuring 6.5m x 0.5m x 0.3m. bricks measured 230mm x 80mm x 120mm max.	Area B 29/03/2011
32	Cut. Cut for (31) 6.5m in length.	Area B

		29/03/2011
33	Deep deposits of mixed blue-grey and orange clays filling trench to the west of concrete cap (26). See east facing section, Area B. Interpreted as natural.	Area B 29/03/2011
34	Deposit. Fill of [27], dark material comprised of grey- blue clay with inclusions of degraded coal and rubble. Deposit measured 5.0m x 0.96m, depth unexcavated.	Area B 29/03/2011
35	Deposit. Yellow brown sandy silt located below concrete kerb base (22), measured 50mm x 90mmx 60mm.	Area B 29/03/2011
36	VOID	
37	Cut. Cut for (or edge of) mine shaft defined by dark strip of clay (38).	Area B 29/03/2011
38	Deposit. Fill of [37]. Dark material comprised of grey-blue clay with inclusions of degraded coal and rubble, measuring 5.0m in length, depth unexcavated.	Area B 29/03/2011
39	Masonry. Base of (31), comprised of small rounded cobbles measuring between 60mm x 50mm x 20mm and 80mm x 70mm x 100mm, with a compacted orange brown sandy silt matrix.	Area B 29/03/2011
40	Deposit. Orange brown fine sandy silt fill of (31) and (39) with small lenses of lime mortar and occasional inclusions of coal flecks and rubble. Small finds no. 1, corroded iron bolt.	Area B 29/03/2011
41	VOID	
42	VOID	
43	VOID	
44	VOID	
45	VOID	
46	VOID	
47	VOID	
48	VOID	
49	VOID	

50	Topsoil. Thin layer of topsoil, 0.30m in depth.	Area A1 30/03/2011
51	Layer. Thick sealing layer of mixed clays, below (50).	Area A1 30/03/2011
52	Layer. Clay, containing large amounts of demolition debris including machine made whole and broken brick inclusions, with frog indents. Some of the bricks had been moulded with a slight curvature, these have been interpreted as bricks used in a chimney stack. Also recovered from the demolition deposit was a section of 3 coursed wall and large dressed sandstone lintels and window cills. This deposit was confined to the western half of the trench, the east was filled by mixed clays (54).	Area A1 30/03/2011
53	Deposit. Mixed brown yellow clay with inclusions of curved bricks.	Area A1 30/03/2011
54	Deposit. Mixed blue-grey/ brown clays covering east side of trench.	Area A1 30/03/2011
54A	Layer. Buried soil surface with turf surviving, located directly above (59).	Area A1 30/03/2011
[55]	Sondage. 2.0m x 3.0m sondage put in over (53) in order to test the depth of the rubble deposit and locate natural ground.	Area A1 30/03/2011
56	Deposit. 1m deep, located within sondage [55]. Smelly deposit of dark greyish blue clay below (53). Same as 54?	Area A1 30/03/2011
57	Drain. Northeast-southwest drain filled by yellow clay and handmade bricks.	Area A1 30/03/2011
58	Cut for (57).	Area A1 30/03/2011
59	Deposit. 1.0m deep layer of brown cinders, ash, brick, soil, turfs (54A) and lime mortar located below (56) and (54A). Interpreted as 19th century demolition debris. Purple slate roof slates (120mm x 100mm 1 5mm) were also found in this deposit, with brick fragments (between 140 x 77 x 56mm and 200 x 100 x 75mm), pottery, glass medicine bottles, Hartley's jam jar fragments (small finds no. 3) and the partially articulated skeleton of a young male sheep (?) (small finds no. 2). Skeleton was fairly complete, bones found included; 2 scapulae, 8 vertebrae, ribs, fibula, skull fragments, pelvis fragments, a femur and a single molar. Remains did not exhibit signs of butchery. Found directly adjacent to jam jar fragments.	Area A1 30/03/2011
60	Layer. Natural light bluish grey clay, between 3.5-4.0m below modern land surface.	Area A1 30/03/2011

61	Masonry Fill. Sandstone backfill in brick well shaft (62). Sandstones measured between 0.38m x 0.57m x 0.20m and 120mm x 90mm x 60mm. Water level was observed in (62) at 0.43m below the surface. The sandstone rubble may relate to the demolition of the colliery.	Area A1 05/04/2011
62	Masonry. Roughly circular handmade brick shaft lining, 1.32m in diameter. Depth to water measured as 0.43m. Bricks measured 235mm x 110mm x 78mm (2 ¼ x 4 ½ x 9 ¼ in.), bonded with white lime mortar.	Area A1 05/04/2011
63	Cut. Cut for shaft (62). Rounded cut measuring 290mm from edge of cut to edge of shaft. Cut 1.90m in diameter. Filled by (66) and (62).	Area A1 05/04/2011
64	Masonry. Field drain, measuring 3.46m in length (as exc.) and 0.14m in width.	Area A1 05/04/2011
65	Cut. Cut for field drain (64). Cut measured 85mm in width either side of field drain (total width 310mm). Length 3.46m.	Area A1 05/04/2011
66	Deposit. Fill of [63], mixed blue/ grey/ brown clays, deposit measured 290mm around edge of (62). Possibly redeposited natural(?)	Area A1 05/04/2011
67	Deposit. Grey -brown sandy clay with small shale inclusions measuring 40mm x 20mm x 10mm. Cut by [63]. Observed beneath demolition deposit (59).	Area A1 05/04/2011
68	Deposit. Fill of [65]. Dark brown sandy clay between edges of cut and field drain (64), measuring 85mm on either side of drain. Measured 3.46m in length. Stone inclusions were recorded measuring 90mm x 40mm x45mm.	Area A1 05/04/2011
69	Deposit. Very dark grey/ black compacted shale with sandy clay silt. Similar to (67). Observed in the east end of the south east facing section in the test pit at the west end of the trench. Observed to measure 300mm x 60mm.	Area A1 05/04/2011
70	Cut. Cut into natural (60). The cut had slightly curved sides but base not visible due to water logging.	Area A1 05/04/2011
70A	Deposit. Observed in west end of southeast facing section of sondage at west end of trench. Fill of [71]. Dark brown sandy clay with inclusions of demolition debris comprising brick fragments	Area A1 05/04/2011

	measuring between 60x110x70mm and 30x20x10mm with lime mortar visible on some of the fragments. Deposit measured 1.85m (length)x 0.44m depth.	
71	Masonry. Handmade red brick pillar, bricks measured 9 x 4 ½ x 3 ins. Set in white lime mortar. The brick column was located on a sandstone slab base. The pillar survived to 0.25m height, 0.40m width. Located 4.10m to the east of the well (62) in trench A. within dark blue clay (54). Interpreted as possible machine bases.	Area A2 7/04/11
72	Topsoil, 0.30m in depth.	Area A2 7/04/11
73	Deposit. Brown clay 0.90m in depth.	Area A2 7/04/11
74	Deposit. Crushed sandstones and broken bricks, 1.5m in depth.	Area A2 7/04/11
75	Deposit. Compact surface of 19th century bricks and sandstone, 0.30m in depth.	Area A2 7/04/11
76	Layer. dark blue clay, shale and occasional bricks	Area A2 7/04/11
77	Masonry. Complete brick column on sandstone base, 0.30m to the north east of (71A). Large sandstone was located on top of pillar. Interpreted as possible machine blocks for steam engine (?)	Area A2 7/04/11
78	Masonry. Complete brick column on sandstone base, 0.5m to the north east of (77.) Interpreted as possible machine blocks for steam engine (?)	Area A2 7/04/11

Figure 13: Context catalogue 6 of 6

Level No.	TBM height	Backsight	Instrument height	Foresight	Reduced level	Remarks (context No)
1	77.72	3.36	81.08	0.80	80.28	Peg 1
2	77.72	3.36	81.08	1.055	80.025	Peg 4
3	77.72	3.36	81.08	1.475	79.605	N of Peg 3
4	77.72	3.36	81.08	1.095	79.985	N of Peg 2
5	77.72	3.36	81.08	1.52	79.56	inside NW corner of trench adj. to peg 1 on line of field drain(04)
6	77.72	3.36	81.08	1.56	79.52	NE corner of trench adj. to peg 4 on (03)
7	77.72	3.36	81.08	1.835	79.245	inside SE inside corner of trench N of peg 3 on (14)
8	77.72	3.36	81.08	1.54	79.54	inside SW corner of trench N of peg 2 on (14)
9	77.72	3.36	81.08	1.62	79.46	(12)
10	77.72	3.36	81.08	1.70	79.38	(13)
11	77.72	3.36	81.08	1.63	79.45	Field drain (04)
12	77.72	3.36	81.08	1.69	79.39	Field drain (06)
13	77.72	3.36	81.08	1.555	79.525	(08)
14	77.72	3.36	81.08	1.67	79.41	in centre of trench on (14)

Figure 14: Levels schedule for Area C

Level No.	TBM height	Backsight	Instrument height	Foresight	Reduced level	Remarks (context No)
1	77.72	2.41	80.13	0.70	79.43	Peg 15
2	77.72	2.41	80.13	0.515	79.615	Peg 16
3	77.72	2.41	80.13	0.60	79.53	Peg 17
4	77.72	2.41	80.13	0.90	79.23	Peg 12
5	77.72	2.41	80.13	1.58	78.55	Peg 13
6	77.72	2.41	80.13	1.08	79.05	Peg 14
7	77.72	2.41	80.13	1.11	79.02	31
8	77.72	2.41	80.13	1.26	78.87	31
9	77.72	2.41	80.13	1.42	78.71	39
10	77.72	2.41	80.13	1.285	78.845	30
11	77.72	2.41	80.13	1.74	78.39	35
12	77.72	2.41	80.13	1.675	78.455	26
13	77.72	2.41	80.13	1.17	78.96	33
14	77.72	2.41	80.13	1.625	78.505	33
15	77.72	2.41	80.13	2.03	78.1	23
16	77.72	2.41	80.13	1.05	79.08	30
17	77.72	2.41		1.37	78.76	Centre of east edge of trench

Figure 15: Levels schedule for Area B

Level No.	TBM height	Backsight	Instrument height	Foresight	Reduced level	Remarks (context No)
1						
2	77.72	2.18	79.90	0.155	9.745	Peg 10
3	77.72	2.18	79.90	1.65	78.25	NW corner
4	77.72	2.18	79.90	1.87	78.03 -	NE corner
5	77.72	2.18	79.90	1.79	78.11	SE corner
6	77.72	2.18	79.90	1.575	78.325	SW corner
7	77.72	2.18	79.90	2.935	76.965	61
8	77.72	2.18	79.90	2.385	77.515	62
9	77.72	2.18	79.90	2.445	77.455	64
10	77.72	2.18	79.90	2.485	77.415	59
11	77.72	2.18	79.90	2.49	77.41	59
12	77.72	2.18	79.90	1.59	78.31 -	N edge of trench slope
13	77.72	2.18	79.90	2.035	77.865	54a
14	77.72	2.18	79.90	2.033	77.57	59
15	77.72	2.18	79.90	3.04	76.86 -	60(test pit base)
16	77.72	2.18	79.90	2.38	77.52	59
17	77.72	2.18	79.90	2.38	77.52	67

Figure 16: Levels schedule for Area A1

Level No.	TBM height	Backsight	Instrument height	Foresight	Reduced level	Remarks (context No)
20	77.72	1.87	79.59	1.215	78.375	Centre of south side of A2
21	77.72	1.87	79.59	1.335	78.255	Centre of south side of A2
22	77.72	1.87	79.59	1.88	77.71	54
23	77.72	1.87	79.59	1.83	77.76	71
24	77.72	1.87	79.59	1.84	77.75	77
25	77.72	1.87	79.59	1.855	77.735	78
26	77.72	1.87	79.59	2.155	77.435	54
27	77.72	1.87	79.59	2.255	77.335	76
28	77.72	1.87	79.59	1.06	78.53	Centre of east side of A2

Figure 17: Levels schedule for Area A2

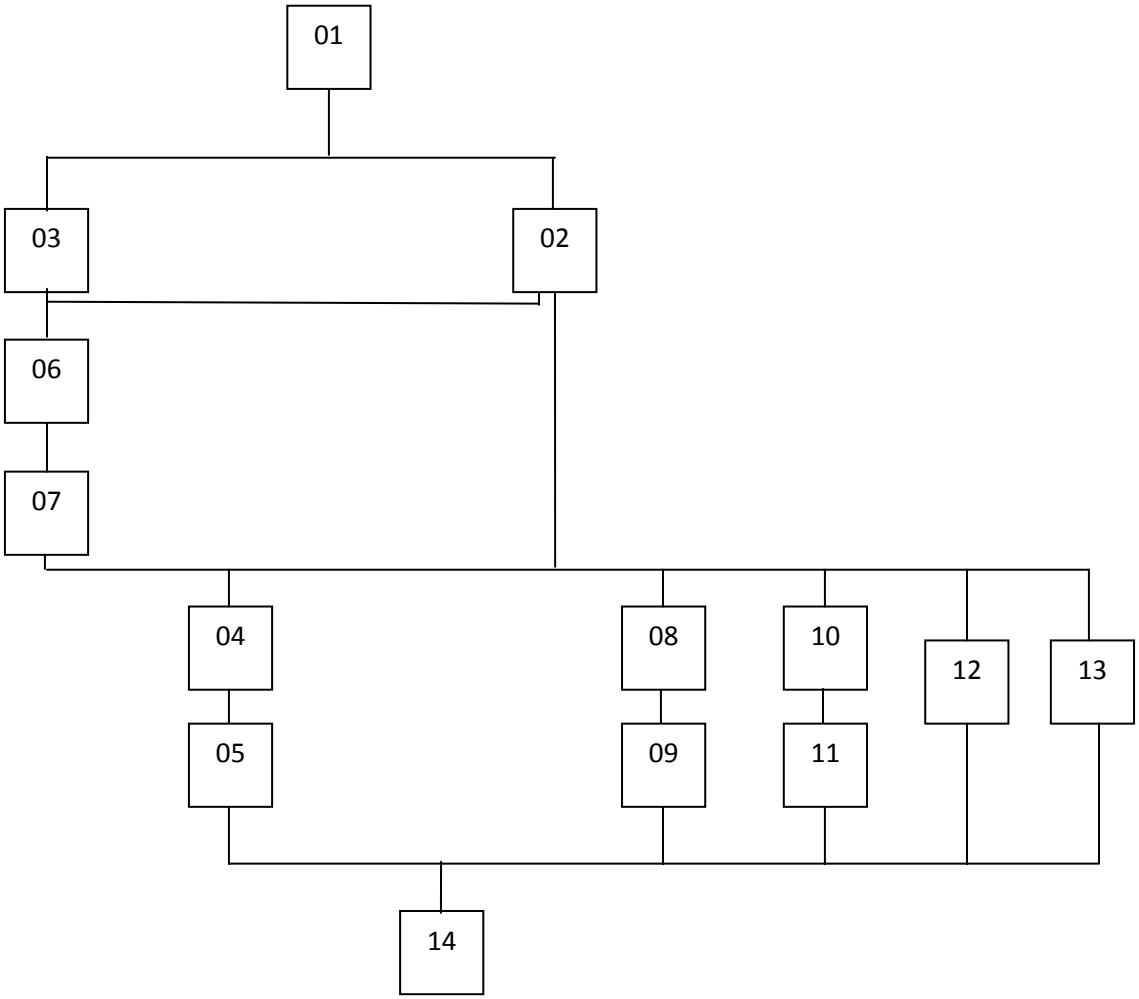


Figure 18: Harris Matrix for Area C

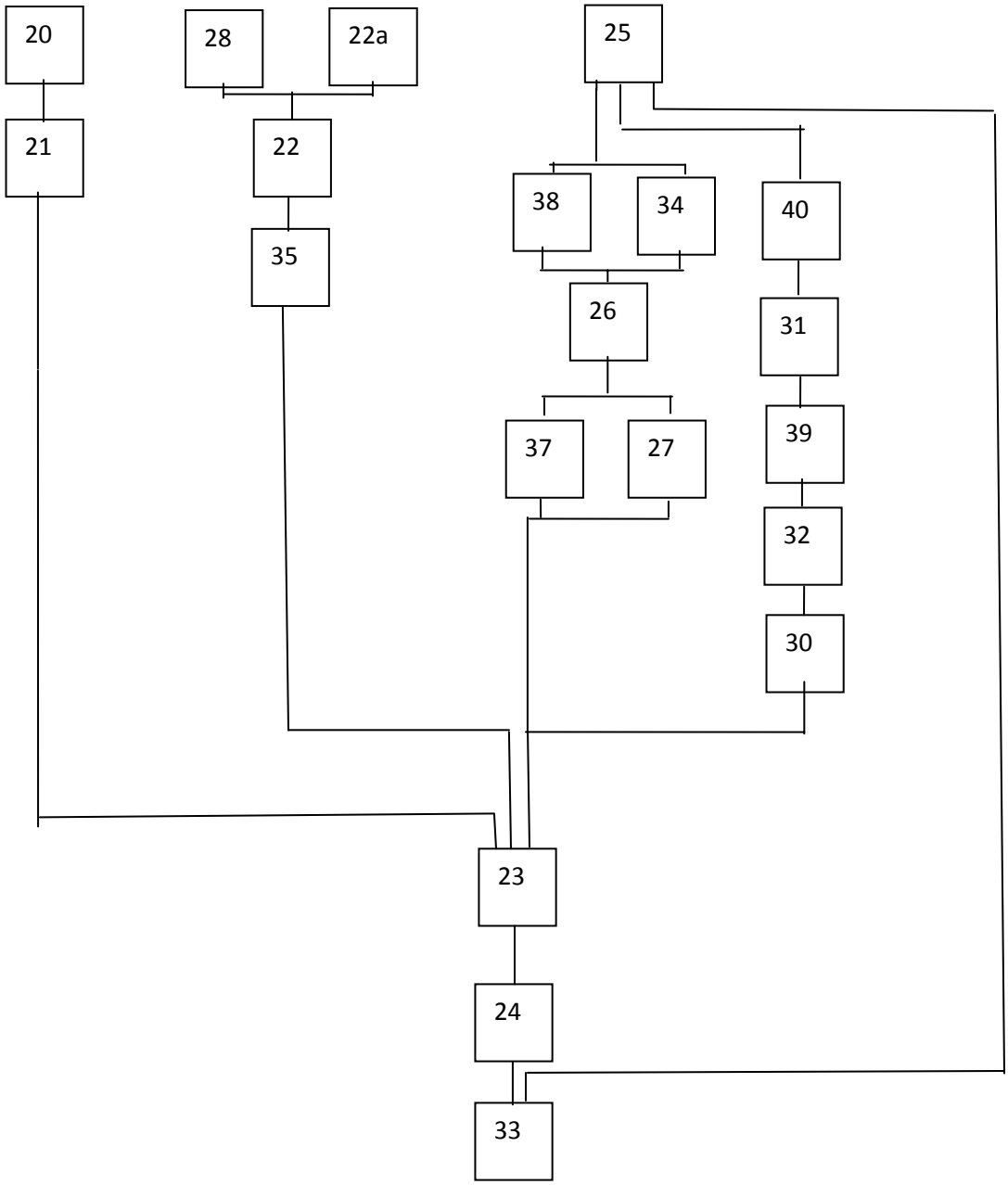


Figure 19: Harris Matrix for Area B

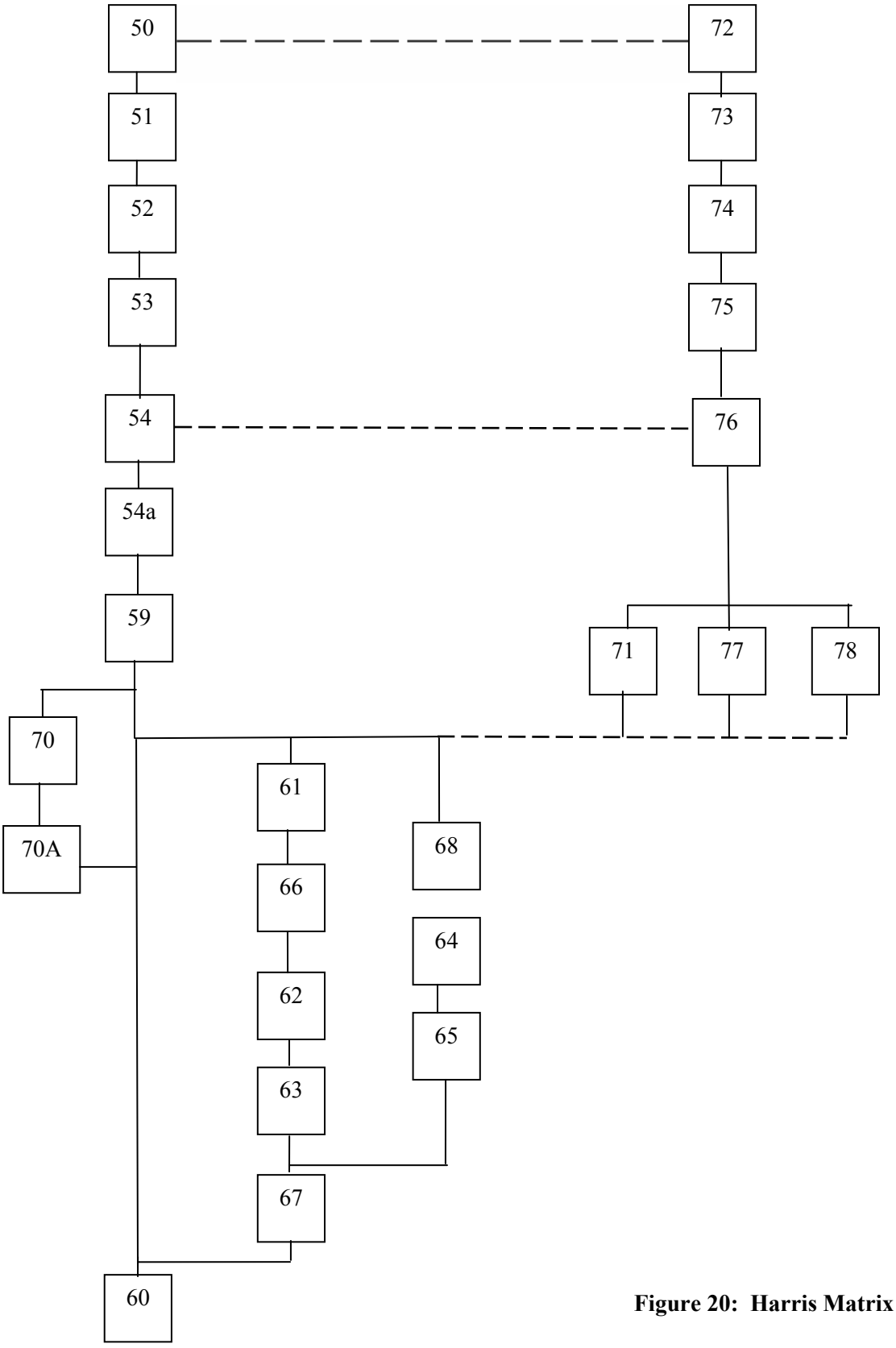


Figure 20: Harris Matrix for Area A

Small Finds No. (s.f. No.)	Description	Context No.
01	Corroded Iron Bolt, measured 110mm x 20mm	Unstratified
02	Faunal material. Articulated bones from a young male sheep (?). Skeleton was fairly complete, bones found included; 2 scapulae, 8 vertebrae, ribs, fibula, skull fragments, pelvis fragments, a femur and a single molar. Remains did not exhibit signs of butchery.	(59)
03	Ceramic. Hartley's Jam Jar fragments, found adjacent to s.f. No. 02	(59)
04	Ceramic. Fragments of red glazed pottery, possibly Victorian	(66)
05	Ceramic. Brick (?) fragments with some purple glaze	(66)
06	Lime mortar	(71A)
07	Ceramic. Clay pipe stem (late)	(71A)

Figure 21: Small finds register

Item	Material	Size	Number of items	Box/file Number
Project Design/ Risk Assessment/ Method Statement	Paper	A4 double sided	8	1
Primary Fieldwork Records:Trench and context records and indices	Paper	A4 double sided	6	
Primary Drawings: Developer Plans Field drawings; plans and sections	 Paper Paper	 A3 single sided A3 single sided	 4 10	
Final report	Paper	A4 double sided	36	1
Photographic Record: Indices: Monochrome& Digital Monochrome Negatives and prints	Paper	A4 double sided	4	1
Electronic media: archive CD containing digital photographs and report as PDF document			1	1
Small Finds: bagged			7	2

Figure 22: Quantified index to field archive

Appendix 3 : Plates

Plate 1: Shows topsoil (1), cinders (2) and sandy clay (3) in Area C

Plate 2: Detail of south facing section in trench C prior to excavation of deposit (2)

Plate 3: Area C after stripping. NB. field drains (04) and (06) demolition debris (12) and (13)

Plate 4: Shows demolition deposit (13) above natural (14) in south-east of Area C

Plate 5: Area B during machine removal of the tarmac road

Plate 6: Area B after removal of tarmac (20) down to pinkish brown crushed sandstones (23).

Plate 7: Area B west of road; demolition material (25) over pinkish brown crushed sandstones (23).

Plate 8: Concrete cap on mine shaft (26), with deposit (38) filling the cut [37] around the perimeter

Plate 9: blue and orange clay deposits (33) below made ground (25) to the west of the concrete cap (26).

Plate 10: Area B west of road; further deposit (30) below (25) containing drain cut [32]. Capped mine shaft to left.

Plate 11: nineteenth century drain (31) in deposit (30)

Plate 12: Area B after excavation

Plate 13: Area A1: Mixed clays (51) below topsoil (50) and showing top of demolition material (52)

Plate 14: Area A1: Demolition material (52) initially thought to be *in situ*

Plate 15: Area A1: Mixed clays (51) showing lower level of demolition material (52)

Plate 16: Area A1: Mixed blue-grey and brown clays (54) with lighter area to right of photograph indicating site of test pit dug into demolition material (53): drain running in from left (57) & [58]

Plate 17: Area A1: Test pit against north-east section .Below the demolition layer (53) is a thick deposit of redeposited blue clay (56). Below this is a thin dark layer of buried soil (with turf) (54A) and below that is another (earlier) demolition deposit (59). Below that, is the natural clay base (60) at a depth of 3.5 to 4m below the present surface. In the north (RH) section is a rectangular patch which mark the location of the drain (57) and cut (58) removed during excavation.

Plate 18: Area A1: Hand made bricks, C19th pottery, blue slate roof tiles, and bones from a young ram in demolition deposit (59) towards bottom of picture.

Plate 19: Area A1: looking southwest. Ranging rod in 2nd sondage and well head in archaeological surface left of centre

Plate 20: Area 1: Brick lined well head with field drain in foreground

Plate 21: Area A1: Brick lined shaft with sandstone fill

Plate 22: Area A1: Sondage against north-west section. Deposits (59), (67) and natural (60).NB depth of excavation below current ground surface

Plate 23: Area A1: Side of brick pier (71) as it was first exposed in section

Plate 24: Area A2: Deposits (72) (73) (74) and (75) overlying (76) observed during excavations to provide a working area around brick pier (71)

Plate 25: Area A2; Brick piers (71), (77) and (78) looking north-east

Plate 26: Excavated trench A looking north-west