



YORK ARCHAEOLOGICAL TRUST



**LOTHERTON HALL, ABERFORD,
WEST YORKSHIRE**

**EARTHWORK SURVEY, STRIP AND RECORD AND
GEOTECHNICAL TEST PITTING REPORT**

by Ian Milsted, Marcus Abbott & Mark Johnson

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Abbreviations

YAT York Archaeological Trust

AOD Above Ordnance Datum

ABSTRACT

An earthwork survey of upstanding medieval ridge and furrow was undertaken at Lotherton Hall in advance of a road improvement scheme. Geotechnical test pits assessed the route and a strip, map and record exercise was maintained during works. Further evidence for medieval ridge and furrow was recorded along with several linear features of unknown date and modern drainage features. A structural wall of probable post-medieval date was encountered near the stables and associated with them.

1. INTRODUCTION

Nine geotechnical test pits were observed at Lotherton Hall on 16th and 17th January 2012 (Figures 1 and 2). These were dug to establish the depth of the underlying limestone and its soakaway capacity in advance of the construction of a new access road to Lotherton Hall and its gardens. An earthwork survey followed in February 2012 (Figures 3 and 11), which informed an archaeological strip and record exercise that was conducted during subsequent ground works (Figures 3-6)

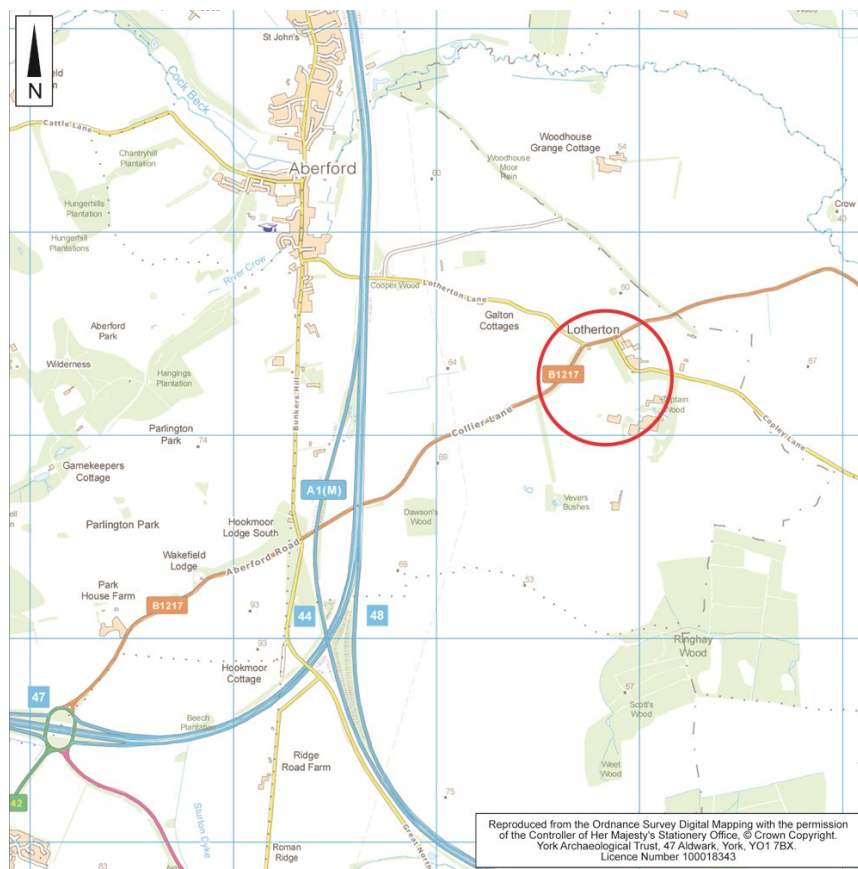


Figure 1 Location of Lotherton Hall

2. METHODOLOGY

The fieldwork was comprised of four elements, the observation of geotechnical works, salvage recording on the new stretch of road, observations of the widening of the existing road and landscape survey of surface archaeological features. The methodological approach for the various fieldwork elements was different and is set out below.

2.1 GEOTECHNICAL WORKS

Nine test pits were excavated by JCB using a 0.6m wide toothless ditching bucket. Each test pit was approximately 0.6m wide and 3m long, aligned north-south (Figure 2). Machine excavation was conducted under archaeological supervision in accordance with the specification issued by the West Yorkshire Archaeology Advisory Service (WYAAS). All deposits were exposed and recorded, including the uppermost natural stratum, whereupon excavation continued to expose the underlying bedrock.

2.2 NEW ROAD AND ROAD WIDENING

The new stretch of road (Figure 3) and areas of widening of the existing road (Figures 3-6) were all to be recorded by 'Strip and Record' according to Section 7.3 of the specification for archaeological works prepared by WYAAS. In the event, the new section of road was cut to formation level and stoned up prior to archaeological notification. Likewise, the spoil from excavating the road was re-deposited and compacted to form a fan-shaped, raised entranceway at the point where the new road meets the public highway. Accordingly, the visible parts of the sections were examined and the south-west facing section drawn.

The widening of the existing road involved the machine excavation of a 1.5m wide strip either side of the existing road way, to a depth of 0.25m below the surface of the road, under archaeological observation according to the WYAAS specification. Included in this operation was the widening of all the roads in the entrance complex (Figure 5), which again involved machine-excavation to a depth of c.0.25m below the road surface. Where the grass verges were higher than the road surface, a greater depth of soil was exposed in section.

2.3 LANDSCAPE SURVEY

The landscape survey (Figure 11) involved the survey of a strip of ground some 25m wide to either side of the new road and that part of the existing road subject to widening. The survey was carried out with a GPS mapping system in the manner specified in Section 7.1 of the WYAAS specification. Photographic recording, using colour slide supplemented by digital photographs, was in accordance with 7.1.7 of the WYAAS specification.

3. LOCATION, GEOLOGY AND TOPOGRAPHY

Lotherton Hall is situated at SE 4478 3615, and consists of a country house and gardens accessed by the B1217 Collier Lane between Aberford and Towton. It lies within the Leeds District, having historically been part of the township of Lotherton cum Aberford. The underlying bedrock is Dolostone of the Cadeby Formation (formerly known as Lower Magnesian Limestone), overlain by drift deposits of glacial clay. The study area (Figure 2) comprises a landscaped garden with established trees and a deer park, and is generally flat, rising steadily to the east and the south. Test pits 1-3 were located within the formal garden, test pits 4-8 in or near the deer park, and test pit 9 was excavated through the car park at the eastern side of the study area.

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The earliest known archaeological activity in the general area comprises isolated finds of Neolithic leaf-shaped arrowheads and a serrated blade some 1-1.5 kms from Lotherton Hall (Keighley, in Faull & Moorhouse (eds), 1981, 92). The WYAS specification cites substantial cropmark evidence for late prehistoric field systems and ditches in the immediate area, overlain by extensive and extant medieval and post-medieval ridge and furrow. This is clearly evident on the ground, and is unusual in West Yorkshire. To the west of the gardens is a deer park that may have removed the original village at an unknown point (Micheltore, in Faull & Moorhouse (eds) 1981, 440); a hall is referred to in 1086 and records of a village survive from 1356 but little is known between then and 1849 Tithe map, when the village has disappeared (www.heritagegateway.org, accessed 25/01/12). A windmill mound is recorded within the deer park (WYAS specification). The current hall is an 18th and 19th century reworking of an 18th century villa with 20th century formal gardens and a Grade 2* listed 12th century chapel surviving within the grounds. The whole was granted to Leeds City Council by the last owner, Sir Alvary Gascoigne, in 1968 and has since been used as a museum and art gallery (www.heritagegateway.org); the 1970s deer park, house, gardens and large aviary are a popular local attraction.

5. RESULTS

5.1 GEOTECHNICAL TEST PITTING BY IAN MILSTED

The test pits covered three broad areas of the study area: 1-3 within the formal garden to the north of the hall, 4-8 in or near the deer park to the north-west of the hall, and 9 within the car park to the east of the study area (Figure 2). They are described and discussed below in these broad groups.

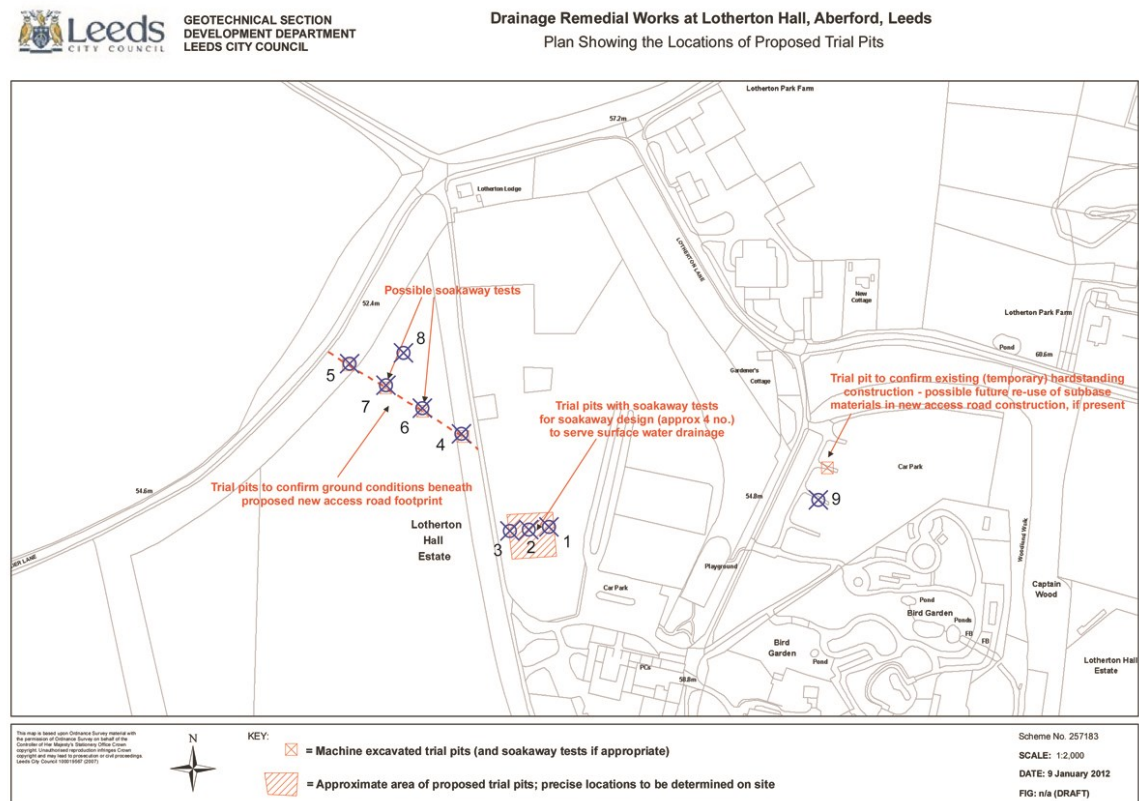


Figure 2 Test pit locations (in blue) and initial geotechnical plan

5.1.1 TEST PITS 1-3

Test Pit 1 measured 0.70m x 3m long and was aligned north-south. The earliest recorded deposit was 1005, a firm yellow-white sandy clay with patches of stiff red-brown clay that was observed at 0.45m BGL and interpreted as natural. At the northern end of the trench natural was cut by a possible ditch or gully, 1004, which was aligned east-west and at least 0.40m wide and 0.25m deep, with its northern edge lying beyond the northern limit of excavation (Plate 1). This gully was shallow and probably truncated by later ploughing, with the base sloping up very slightly at the limit of excavation, suggesting a probable total width of c.0.60m. 1004 was filled with 1003, a firm slightly red-brown clayey sandy silt that was distinct from the overlying deposit 1002, a 0.38m deep firm light yellow-brown very sandy silt

with occasional pebbles and charcoal flecks. This deposit was interpreted as forming the bulk of an extant medieval plough ridge through which the test pit was been cut, and was overlain by the topsoil, a 0.12-0.18m thick soft, slightly orange mid-brown very sandy silt. The interface between this and the probable ploughsoil was disturbed by the roots from nearby trees.



Plate 1 Gully 1004 in the west facing section of Test Pit 1

Test pit 2 measured 0.65m x 3m long and was aligned north-south. The earliest recorded deposit, 2003, was a very firm/stiff pale yellow-white sandy clay with red-brown clayey patches, observed at 0.40m BGL and interpreted as natural. This was overlain by 2002, a 0.25m thick layer of firm yellowy brown slightly clayey sandy silt with occasional pebbles, interpreted as a medieval ploughsoil forming the bulk of an extant ridge through which the test pit was cut. This was overlain by the topsoil, 2001, a soft yellowy mid brown very sandy silt with charcoal flecks that was between 0.17 and 0.24m thick.

Test pit 3 measured 0.65m x 3m long and was aligned north-south. The earliest recorded deposit was 3004, a layer of solid limestone that comprised the upper surface of the bedrock at c.0.55m BGL. This was overlain by 3003, a firm-stiff pale yellow-grey sandy clay with red-brown clay patches, interpreted as natural and up to 0.15m thick, with a slight slope upwards to the northern end to 0.38m BGL from 0.45m BGL further to the south. This was overlain by 3002, a firm orange-brown slightly clayey sandy silt between 0.17 and 0.25m thick,

interpreted as part of a medieval ridge. This was sealed beneath the topsoil, 3001, a 0.24m thick firm-friable, mid brown sandy silt.

5.1.2 TEST PITS 1-3 DISCUSSION

All three test pits were excavated through extant medieval plough ridges visible on the ground, and along the axis of these ridges. TP 1 lay squarely along a ridge, with TP 2 and 3 lying slightly off the central axis. The requirements of the geotechnical excavation did not allow a full profile of ridge and furrow to be recorded.

The ridges were all well-preserved, with up to 0.35m of material surviving, although this was generally less well-preserved in the western area of the garden. The possible gully in TP1 was very ephemeral but did contain a distinct fill; it is possible that this represents a remnant of an earlier field system sealed below the medieval ploughing, but it is also possible that it is a natural undulation in the geological deposits. No other archaeological features were observed in this area.

5.1.3 TEST PITS 4-8

Test pit 4 was located in the broad strip of lawn between the main access road and the eastern boundary of the deer park (Figure 2), measured 0.60m x 3m long and was aligned north-south. The earliest observed deposit, 4003, was a firm-stiff mid yellow-brown sandy clay with moderate quantities of small angular stones, pebbles and gravel. This was interpreted as natural and lay at 0.55m BGL. Overlying this was 4002, a 0.25m thick layer of firm, mid orange-brown slightly clayey sandy silt with moderate to frequent pebbles, which was interpreted as a ploughsoil as the medieval ridges, although not extant in this area, clearly ran towards it and had probably been truncated when the access road was created. Sealing 4002 was the topsoil, 4001, a 0.30m thick layer of soft-friable, mid brown very sandy silt.

Test pit 5 was located in wooded area immediately outside the western boundary of the deer park (Figure 2). TP5 was 0.70m wide and 2.8m long and aligned north-south. Medieval ridge and furrow was extant to the north-east of the test-pit location, clearly running into the deer park, but had not survived or was not present at TP5. The earliest identified deposit, 5003, was a stiff red clay with yellow sandy clay patches, interpreted as natural and observed at 0.50m BGL. This was overlain by 5002, a 0.25m thick layer of firm, slightly yellow red-brown clayey silt, which was interpreted as a probable remnant of medieval ploughsoil. Overlying this was the topsoil, 5001, a soft-friable dark brown humic sandy silt that was 0.25-0.30m thick and heavily disturbed at the interface with 5002 by numerous tree roots.

Test pits 6-8 were located within the deer park. The locations of TP6 and 7 were determined by the geotechnical requirements, which placed TP6 on a ridge and TP7 in a furrow; the position of TP8 was more flexible and at the archaeologist's suggestion was positioned in a furrow to provide a further example of this feature type, as the majority of the rest were positioned on ridges.

TP6 was located on the eastern side of the deer park, was 0.62m x 3m long and aligned north-south. The earliest identified deposit, 6003, was a firm-stiff yellow sandy clay with stones and red-brown streaks and patches of clay. This was observed at 0.68-0.70m BGL and interpreted as natural. Overlying 6003 was 6002, a 0.30-0.45m thick layer of firm orange-brown clayey sandy silt with stones, interpreted as the extant medieval ridge that the test pit was cut through. This was sealed by topsoil, 6001, a 0.26m layer of fairly firm, mid grey-brown slightly clayey sandy silt.

TP7 measured 0.70m x 2.8m long and was aligned north-south. The earliest identified deposit was 7003, a stiff yellow sandy clay observed at 0.56m BGL and interpreted as natural. Overlying this was 7002, a 0.38m thick layer of firm mid orange-brown very clayey sandy silt with occasional flecks of red burnt shale and moderate small stones. This was interpreted as a medieval ploughsoil lying within a furrow between two ridges, and was sealed by the topsoil, 7001, a 0.20m thick layer of firm friable, mid brown-grey, slightly clayey sandy silt.

TP8 measured 0.62m x 2.8m long and was aligned north-south. The earliest identified deposit was 8003, a stiff, pink-brown sandy clay, observed at 0.37m BGL and interpreted as natural. Overlying this was 8002, a 0.10-0.20m thick layer of firm, mid orange-brown clayey silt with occasional flecks of red burnt shale and charcoal, interpreted as a furrow fill. This was sealed by the topsoil, 8001, a 0.18-0.20m thick layer of soft, mid grey-brown, sandy silt.

5.1.4 TEST PITS 4-8 DISCUSSION

The nature of the natural drift deposits was shown to be generally stonier than in the lawned area, and changed in character from yellow-brown sandy clay at the eastern side of the deer park, becoming progressively more red and clayey towards the north-west. The medieval plough ridges were well-preserved within the deer park, with TPs 7 and 8 showing a variable amount of preservation of deposits within the furrows. The plough soils were markedly stonier than those encountered in the lawn to the south-east. No other archaeological features were identified.

5.1.5 TEST PIT 9

Test pit 9 was primarily dug to assess the extent of the aggregate sub-base beneath the existing car park surface with a view to its reuse during the planned ground works. TP9 measured 0.62m X 1.3m long and was aligned east-west. Natural drift geology, 9004, in the form of a very stiff orange-brown sandy clay was identified at 0.37m BGL which became progressively more plastic and red in colour with depth. This was overlain by 9003, a 0.20m thick layer of firm-friable, mid brown, clayey silt interpreted as a truncated former topsoil. This was sealed by a 0.08m thick crushed limestone sub-base, 9002, beneath the 0.10m thick tarmac car park surface, 9001.

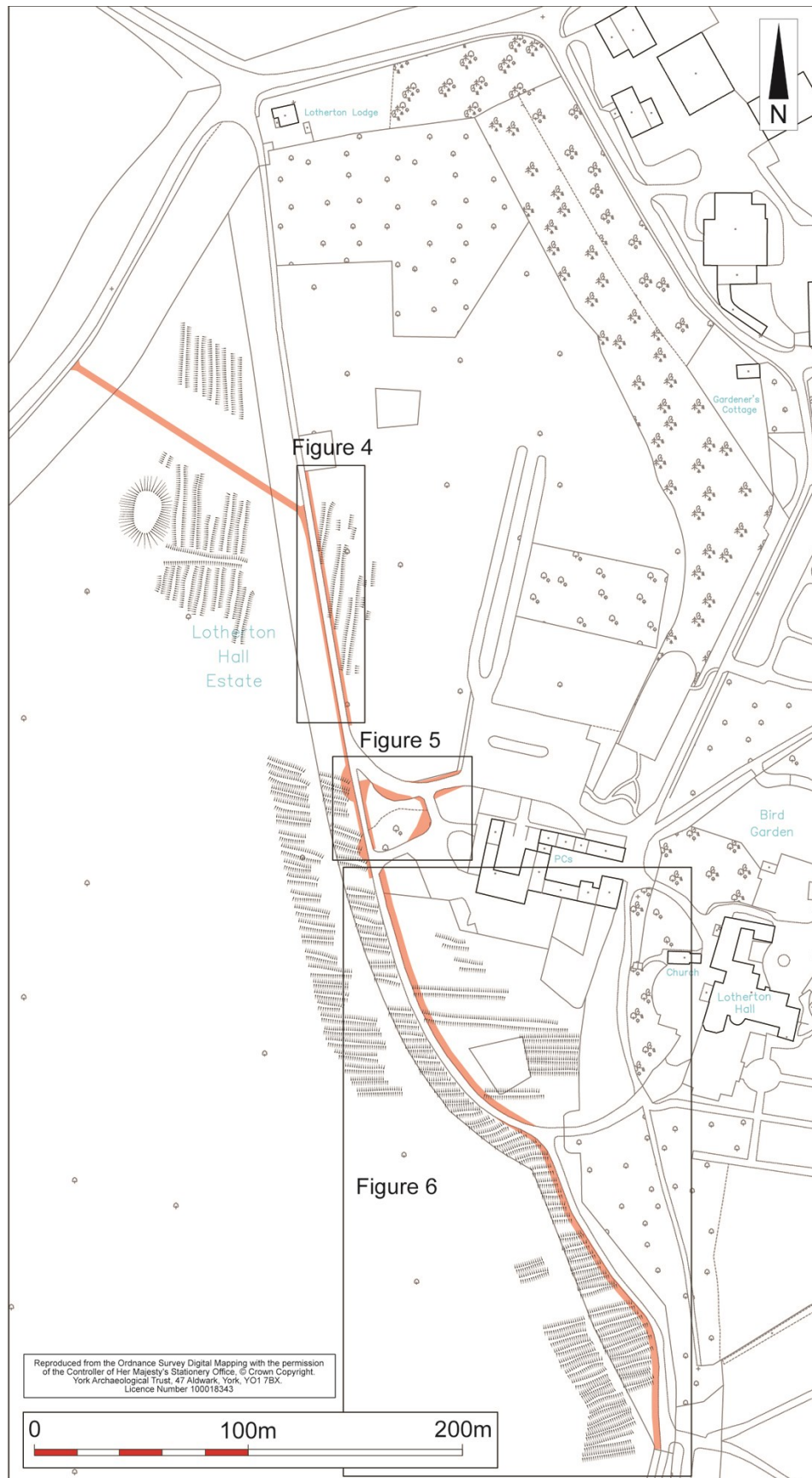


Figure 3 Plan of works, showing earthwork survey, stripped areas in red and figures

5.2 OBSERVATION OF THE NEW ACCESS ROAD BY MARK JOHNSON

The new road lies in grassed parkland, which supports a scattering of trees, in the northern part of the deer-park (Figure 3). At the time of archaeological inspection the course of the new road had been cut, stoned up with building rubble and the resultant spoil used to create a wide and elevated junction area with the public highway at its north-west end. The course of this road, which is located just to the north of a probable medieval mill mound, cut through an area that contains well pronounced and preserved ridge and furrow. That part of the sections that remained visible were inspected for depositional sequence and the presence of any artefactual material. The still visible parts of the south-western facing section were drawn at a scale of 1:20.

At the point where the road cut through the ridge and furrow some seven ridges and eight furrows were present. These represent the remains of a former arable field system. The spacing of the ridges and furrows is typically some 7m–8m apart. Such spacing is suggestive of a medieval date, a factor seemingly borne out by its forming part of what is a much more extensive system. From the base of the furrows to the top of the ridges heights of up to 400mm are common, particularly in the central area which is more pronounced. To the western extremity the ridge and furrow is less pronounced, this may be due to works associated with the adjacent public highway which is somewhat elevated in relation to the deer-park in this area. Tree planting activity in recent decades may also have served to lessen the upstanding character of the system in this area. The eastern side of the deer-park in this area is demarcated by a 'deer-proof' boundary that appears to have cut through the ridge and furrow system. This boundary follows the classic form of an internal ditch and a very low external bank surmounted by a pale or fence; albeit one created in the 1970s. The ditch itself is typically less than 1m deep though in many places in excess of 5m wide whilst the external bank is barely higher than the ridges of the adjacent field system. The pale is fabricated of steel tall steel fencing posts and wire mesh. The short stretch of new road between the deer fence and the existing road cuts through a grassed area. This ribbon-like grassed area appears fairly flat and no ridges or furrows can be seen within it. That this is so indicates that any such features have been removed, perhaps during a levelling process associated with the construction of the existing roadway.

Within those parts of the sections visible only two deposits were seen. The upper of these context 101, was a friable, mid-dark greyish brown, sandy silt containing very occasional pebbles. This material, which represents the topsoil was typically only around 0.23m deep on the ridges though became deeper within the furrows – the exact depths in these lower areas not being ascertained due to the presence of the stoning up materials. Directly below 101 lay context 102, essentially a friable, light-mid slightly orangey yellow-brown, slightly clayey, silty

sand containing occasional pebbles and of very clean appearance. This latter material seems likely to represent an undisturbed natural subsoil. No artefactual material, ancient or modern, was observed within either of these deposits.



Plate 2 The course of the new access road, looking SE



Plate 3 Ridge and furrow in the central part of the new access road, looking N

5.3 WIDENING THE EXISTING ROAD: NORTHERN AREA BY IAN MILSTED

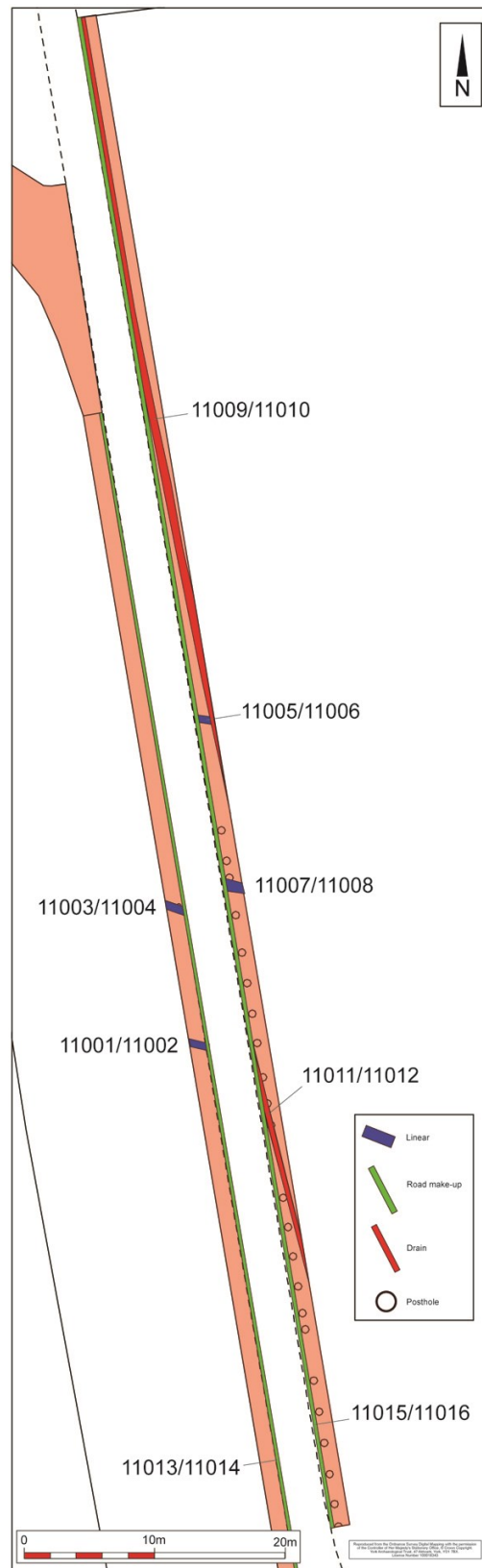


Figure 4 Detail of the northern road widening

The existing road is positioned on a slightly raised corridor of land, which consists of a modern make-up deposit of crushed limestone (Figures 3 and 4). The construction of the road had removed virtually all trace of the ridge-and furrow either side of it, leaving only the most ephemeral of traces.

The excavation commenced with a trench either side of the existing road between the entrance booth and the junction with the new roadway through the deer park. The western trench was excavated first (Plates 4 and 5).

The shallow depth of the excavation, at only 0.25m below the surface of the road, meant that only the topsoil was removed to its interface with a sub-soil. Topsoil, context 11000, consisted of a soft, dark grey, slightly clayey sandy silt, and lay over a subsoil that was a firm, mid orange-brown, slightly clayey sand with occasional charcoal flecks (context 2017). This interface between these two deposits had been exploited by plant roots, especially by trees, which on occasion made the distinction between the two difficult to determine. In some places, topsoil remained *in situ* after the depth had been attained. This occurred in the southern 25m of the western trench and the northern 50m and southern 8m of the eastern trench. Between 27m and 33m from the northern end of the eastern trench, the depth of soil in the eastern section dropped from c. 0.10m to 0.05m, possible representing the remains of a medieval plough ridge.



Plate 4 Sample view of northern road widening, west side, looking north



Plate 5 Eastern side of northern road area, looking south

Several features were identified (Figure 4, Plates 6-10), most of which probably cut through the topsoil, except for the earliest identified features, which were four linears aligned WNW-ESE (fill/cut 11001/11002, 11003/11004, 11005/11006, 11007/11008), one of which, 11007/11008 was very ephemeral. These consisted of shallow trenches up to 0.48m wide and 0.10m deep that were interpreted as possible truncated medieval furrows. 11001/2 and 11003/4 were identified in the western widening trench, about 10m apart. 11005/6 and 11007/8 were identified in the eastern side and were similarly spaced; 11007/8 may represent the plough-smeared continuation of 11003/4 on the western side. The fills of these features consisted of a compact-friable, red-brown gravelly sandy silt.



Plate 6 Linear feature 11001, looking north



Plate 7 Linear 11003 with modern posthole, looking north



Plate 8 Linear 11005, looking north



Plate 9 Linear 11007, looking south

The eastern widening trench also contained two linears aligned NNW-SSE, 11009/11010 and 11011/11012. These were up to 0.40m wide, consisted of compacted crushed limestone fragments in vertically sided trenches and were interpreted as modern land drains. 11010

was cut through the furrow fill 11005, and on this basis the drains were grouped above the possible furrows.



Plate 10 Drains 11009 and 11011, looking north

Cutting everything else in both trenches was the construction make-up and cut of the extant roadway. On both sides this was manifest as a 0.20m wide strip of crushed limestone hardcore adjacent to the road edge; in the western trench this was numbered 11013/11014 and in the eastern side 11015/11016.

Visible along both trenches (but only illustrated in Figure 4 in the eastern trench) was a line of modern postholes at intervals of c.2.4 – 2.6m that were the remnants of a low fence flanking the existing roadway, grubbed up by the machine prior to excavation. These were not numbered.

The road widening was extended southwards past the entrance booth (Figure 5, Plates 11-15). No further archaeological deposits were identified. The western side of the widening encompassed two semi-circular projections that will provide space for larger vehicles to turn.

The depth of topsoil decreased as the excavation proceeded southwards, from c.0.25m at the entrance booth to 0.15m about 20m along, before increasing again to around 0.27m within the southernmost turning area. On the eastern side, south of the entrance booth, the verge beside the road formed a low rise above the level of the existing roadway, creating a 0.50m deep trench in which the possible interface between the sub-soil and natural clayey sand with frequent limestone fragments was exposed for c.4m between 15 and 19m south of the entrance booth.



Plate 11 Northern turning circle, looking north east with stoned-up roadway



Plate 12 Southern turning area, looking south



Plate 13 East facing section of southern turning circle



Plate 14 West facing section of trench between turning circles



Plate 15 Road widening opposite turning circles, looking south

The complex of grass islands created by the network of small lanes behind the entrance booth was also altered under observation (Figure 5). These were divided into 6 areas, lettered A to F, which effectively represent the widening of the lanes to create a quasi-roundabout (Plates 16-26).

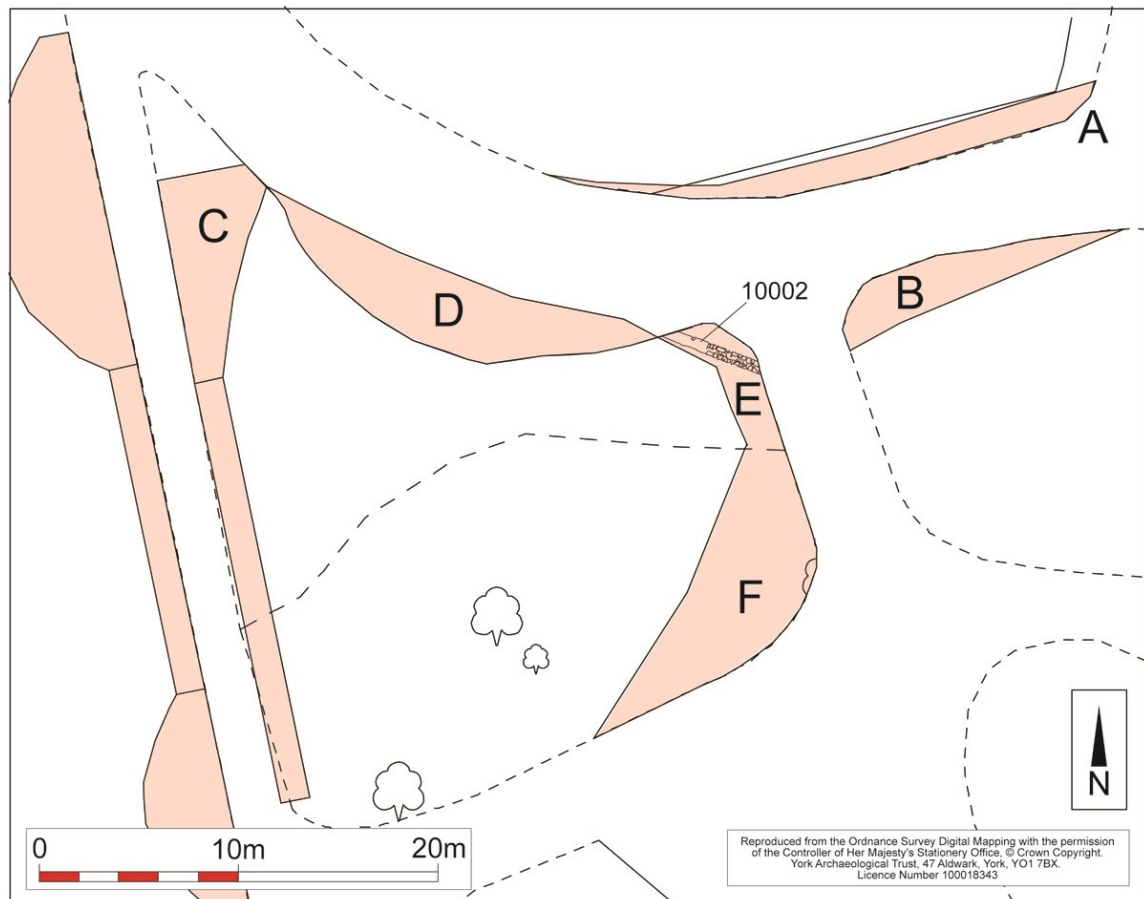


Figure 5 Detail of car park entrance area

Areas A and D exposed the crushed limestone road make-up at 0.05m BGL. In area B, the excavation ceased at 0.30m BGL, just at the interface between topsoil and subsoil. A 0.40m wide service cut ran through on a N-S alignment; this was not excavated below the depth limit. Area C, located behind the entrance booth, was only 0.25m deep and contained crushed hardcore overlying a firm orange-brown clayey sand subsoil that was riddled with tree roots. The southern end of area C extended into the eastern side of the roadway widening trench described above.

Areas E and F contained the only significant structural archaeological remains exposed during the northern half of the road widening operation. In area E, a large wall foundation was exposed and numbered 10002 (Figure 5, Plates 23 and 24). This was c.0.60m wide and

constructed of rough-hewn limestone facing blocks with a rubble core. The wall was revealed at 0.30m below the road way, and was aligned NW-SE, seeming to line up with the edge of the extant stables and coach house block some 35m to the SE. Immediately south of this wall, a disturbed loose topsoil produced a small quantity of late C19th / early C20th pottery and glass (see appendix 1); this deposit, 10001, probably represents a dump of waste material used as a levelling deposit during landscaping. This was further evidenced in area F by an apparent earlier surface of clinker that lay at 0.20 BGL beneath modern topsoil and subsoil, and sealed a further deposit of subsoil that was exposed to a depth of 0.08m in the base of the excavation.

This activity can probably be associated with the creation of the deer park during the 1970s, when the Lotherton estate was adapted for public access by the City of Leeds. The wall is large enough to have formed the front of a building, but with no evidence for a return or a parallel rear wall, it may be that it was a boundary springing NW from the stable buildings that survive today.



Plate 16 Area A, looking east



Plate 17 Area D, looking south-east



Plate 18 Area B, looking west



Plate 19 Area C, looking north east



Plate 20 Area C and road trench, looking south



Plate 21 Area C east facing section, showing roadway make-up



Plate 22 Area C west facing section



Plate 23 Area E, looking south, showing wall 10002



Plate 24 Area E and wall 10002, looking south-east



Plate 25 Area F, looking south-west



Plate 26 Area F south-east facing section

5.4 WIDENING THE EXISTING ROAD: CENTRAL AREA BY MARK JOHNSON

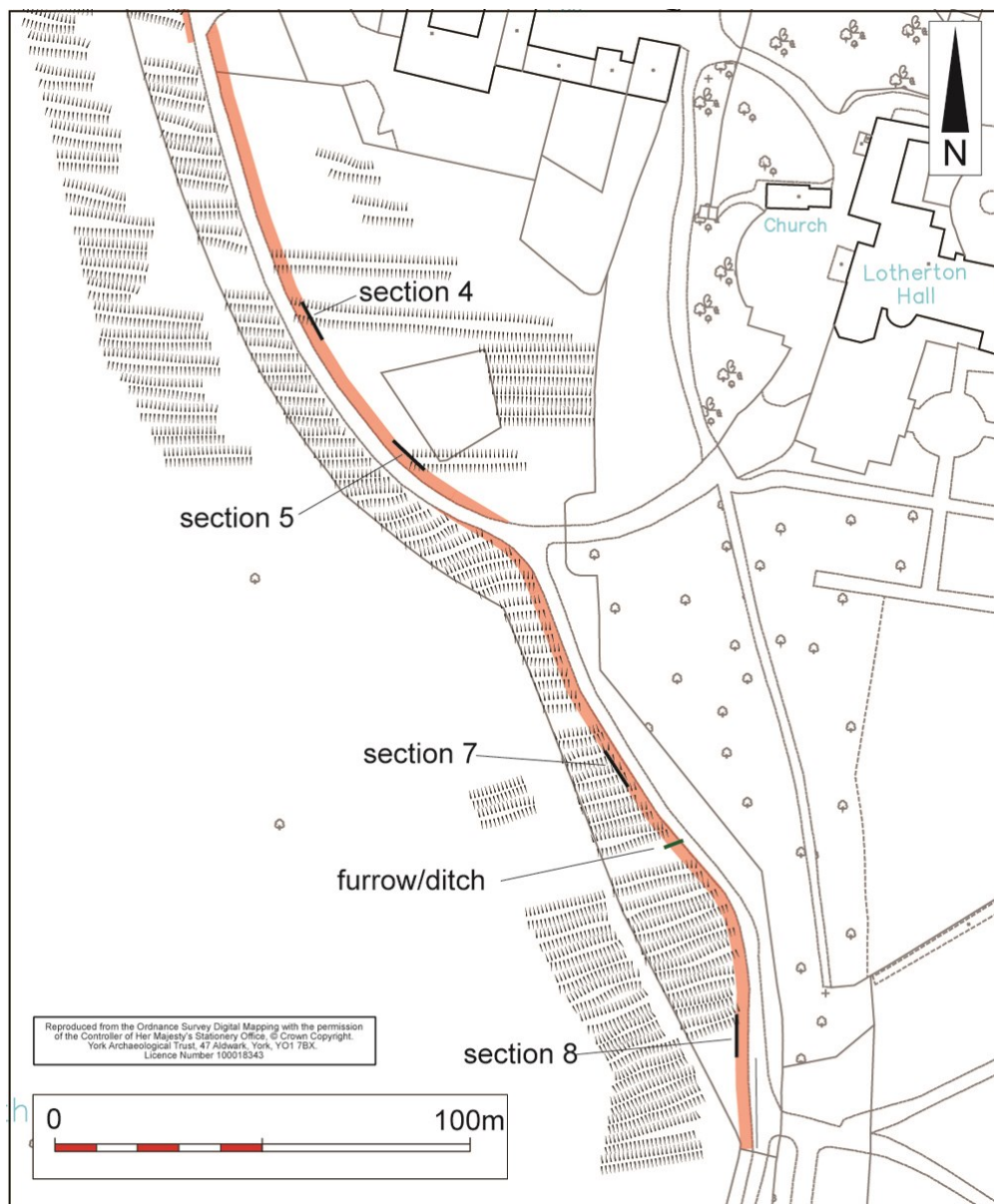


Figure 6 Detail of central and southern road widening

The existing road in this area is approximately 3m wide and is comprised of a tarmac surface, generally around 60mm thick, over a road makeup of compacted limestone (Figure 6, Plate 27). The construction of this road had removed much, but not all, of the surface indicators of ridge and furrow within a 2m – 4m strip at the road's sides. Beyond this strip areas of ridge and furrow are still visible.

The existing road in this central area, almost up to the 'T' junction with the Hall access drive, was widened exclusively on its eastern side. The road widening trench measured some 3.2m

wide and was cut to a depth corresponding with the base of the limestone makeup for the existing road. This was typically for depths of between 250 – 400mm. This depth was sufficient to cut fully through the topsoil, context 12001/12003, and into the subsoil context 12004. The topsoil was a friable, dark greyish brown, slightly clayey, fine sandy silt, containing occasional small pebbles, whose thickness ranged from 120mm – 380mm. The subsoil was a slightly plastic, orangish brown clayey silt. This latter material was noted as becoming increasingly clayey with depth and in the central parts of the area displayed a more yellowish hue.

Evidence for what appears to have been attempts to improve land drainage was evident in the northern 36m of this area. This took the form of a 260mm wide cut, context 12005, some 400mm deep located some 1.5m to the east, and parallel to, the existing road. This steep sided cut was filled with limestone chippings, context 12006, and seems likely to have functioned as a simple soak-away. Within this same area it was additionally noted that a thin layer of limestone chippings, typically only 50mm or so thick, context 12002, was sandwiched within the topsoil. It may be that the uppermost 100mm or so of the topsoil had been stripped, the chippings laid and the upper part of the topsoil replaced – presumably at the time the existing tarmac roadway was laid? This northernmost part of the road does lie at a level slightly lower than that to the south and these drainage works may have been installed to counteract what may have been a tendency for this part of the site to hold surface water?

A further modern feature was noted at a distance of some 55.5m from the point of commencement of the southern roadworks. This was a straight sided, east – west aligned cut, context 12010, some 550mm wide backfilled with limestone and a yellowish grey clay, context 12009. This feature aligned perfectly with an inspection chamber and a low level brick construction to the eastern side of the site and seems certain to represent a drain of some sort. Laying underneath the new road works, this vertically sided feature was excavated up to a depth of 150mm within a small sondage. Further excavation of this undoubtedly modern feature was precluded by the need not to cause a weakness to the drain by the removal of further backfill.

As has been noted, ridge and furrow is present to the sides of the existing road in much of this central area of the site, though has to some degree been lost within a narrow strip immediately adjacent to the road. This ridge and furrow is aligned obliquely to the road. Away from the road the ridge and furrow, whilst largely traceable on the ground, is not at all prominent. During the stripping process the ridge and furrow was only occasionally visible as a poorly distinguishable stripe, it being somewhat clearer in section. Several long sections of

this were drawn; the positions of these are shown in Figure 6. Within these sections the cuts of the furrows were seen to be quite shallow and it seldom proved possible to draw a clear distinction between the extant topsoil and a separate furrow fill below. Within the area of Section 4 however, it was possible to draw such a distinction (Figure 7). Here the furrow fills, context 12008, (cuts context 12009) were seen to be of paler colour than the topsoil, being a lighter greyish brown and also slightly clayier in consistency.

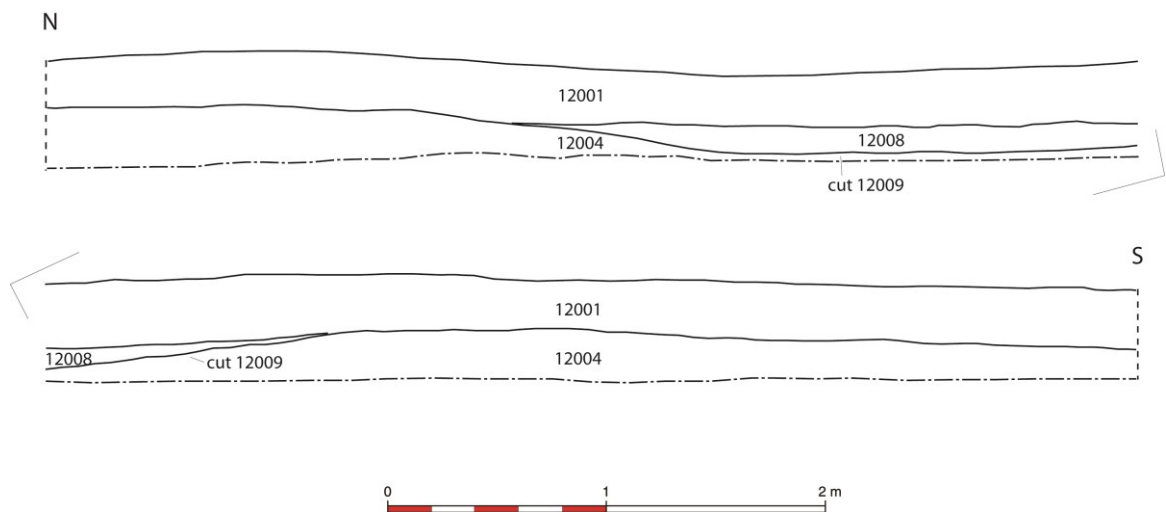


Figure 7 Section 4, SW facing (see Figure 6 for location)

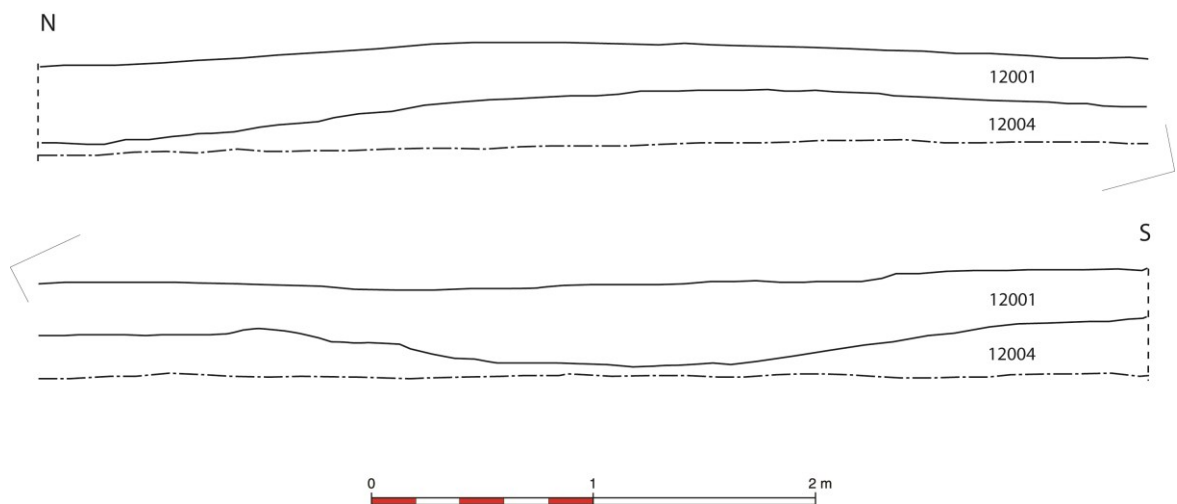


Figure 8 Section 5, SW facing (see Figure 6 for location)



Plate 27 Machining of road widening trench in progress, looking SE

5.5 WIDENING THE EXISTING ROAD: SOUTHERN AREA BY MARK JOHNSON

In this area the existing road is again approximately 3m wide and is comprised of a tarmac surface, generally around 60mm thick, over a road makeup of compacted limestone (Figure 6, Plate 28). The construction of this road had removed some of the surface indicators of ridge and furrow immediately adjacent to the road's sides. Beyond this strip areas of ridge and furrow are still largely visible.

The existing road in this southern area, from the 'T' junction with the Hall access drive to the junction leading to the event field, i.e. to the southern limit of the road widening, was widened exclusively on its western side. The road widening trench measured some 3.2m wide and was cut to a depth corresponding with the base of the limestone makeup for the existing road. This was typically for depths of between 250 – 400mm. This depth was sufficient to cut fully through the topsoil, context 101, and into the subsoil context 104. The topsoil was a friable, dark greyish brown, slightly clayey, fine sandy silt, containing occasional small pebbles, and whose thickness ranged from 120mm – 380mm. The subsoil was generally a slightly plastic, orangish brown clayey silt. This latter material was noted however, as being

clayeyier in the central parts of the area and containing fragments of partially decayed limestone.

Modern activity in this stretch of the new roadway was limited to two features. One of these had involved works in a strip some 15m long by around 3.5m wide on the western side of the extreme southern end of the existing road. These works had involved the recent removal of topsoil and its replacement by a layer of limestone chippings some 150-250mm deep, context 12011. The purpose of this had been to create a wider area of hard surface for large vehicles entering the 'event field' which lies immediately to the east of this point. The other evidence for modern activity was a ceramic land drain, context 12013, aligned south-west – north-east, within a narrow steep sided cut, context 12013, some 59m south-east of the 'T' junction of the Hall access drive.

Ridge and furrow is again present to the sides of the existing road in much of this southern part of the site, though is somewhat less visible within a narrow strip immediately adjacent to the road. Away from the road the ridge and furrow, whilst largely traceable on the ground, is not at all prominent. A number of sections of the ridge and furrow were drawn and the positions of these are shown in Figure 6. Within these sections the cuts of the furrows were again seen to be generally very shallow and it was not possible to draw a meaningful distinction between the soil at the top of the ridges and that at the bases of the furrows. The fairly indistinct character of the ridge and furrow may in part relate to truncation or compaction caused by post-medieval land-use. Alternatively, it may be resultant upon its never developing substantial height and depth characteristics during the medieval period. The only exception to this was in the central part of this area where a particularly wide and deep furrow cut, context 12014, with a pale brownish grey silty fill, context 12015, is present (Plate 28). It is possible that this feature represents a division within an open ridge and furrow field that served to delineate the strips on one side from those on the other. As such this may have functioned as a ditch-like boundary.



Plate 28 Ditch like furrow 12014, looking SSE

The only other feature observed within this stretch of the road widening works was a cut, context 12016, located adjacent to the western side of the road widening trench some 54m south-east of the 'T' junction of the Hall access drive. This cut had steep 'V' shaped sides, was some 530mm deep (below existing ground level), and had a loose fill indistinguishable from the topsoil, context 12017. The fill characteristics of this feature, which may be a post-hole, suggest the likelihood that this is of post-medieval – modern date rather than being of any great antiquity.

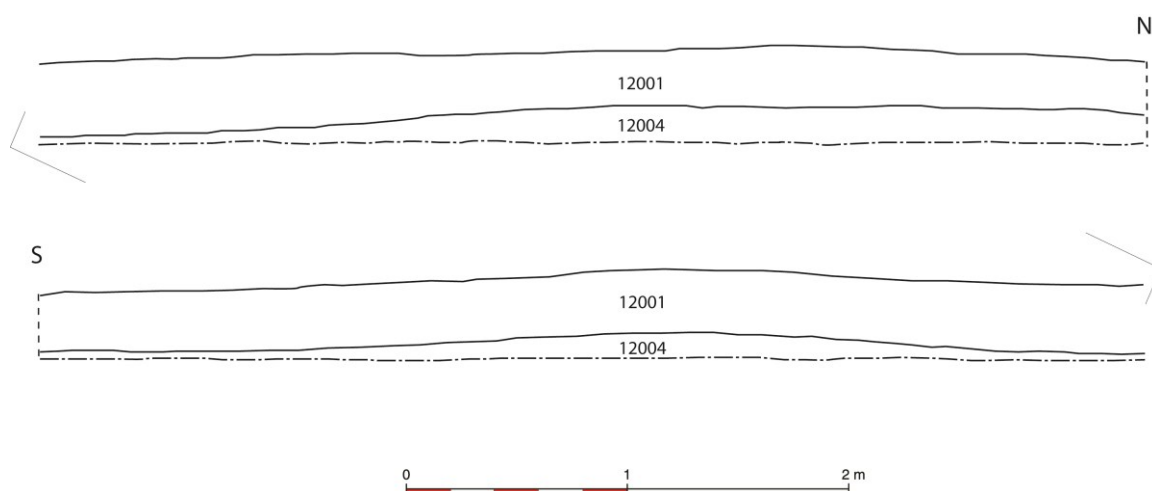


Figure 9 Section 7, NE facing (see Figure 6 for location)

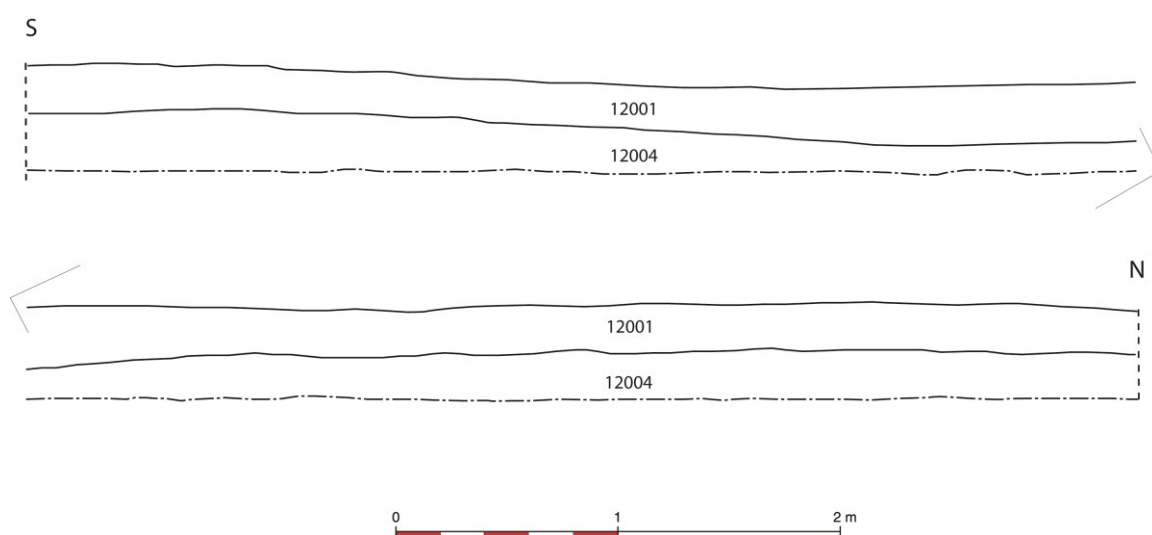


Figure 10 Section 8, NE facing (see Figure 6 for location)

5.6 LANDSCAPE SURVEY BY MARCUS ABBOTT

Data collection for the landscape survey, encompassing a 25m corridor to either side of the new road and that part of the existing road to be widened, was carried out with the aid of a GPS system (Figure 11, Plates 29-33). This data was then downloaded onto an Ordnance Survey vector map and a hachure map created of the plotted earthworks. The earthworks were seen to be comprised overwhelmingly of traces of ridge and furrow field systems. Within the survey area there are traces of two distinct systems, southern one aligned approximately east – west and a northern one aligned approximately north – south. Across the bulk of the survey area this is not at all pronounced – indeed in some parts it is barely visible at all. The most visibly distinct part is that in the north, in the area of the new access road. The majority of the ridge and furrow is spaced at intervals of around 8m (centre of ridge

– ridge, furrow – furrow), though in the southern part of the site it tends to be around a metre narrower than this. The surviving height of the system (top of ridge – base of furrow) ranges from the barely perceptible to around 400mm in the extreme north of the area. There is a low, somewhat elongated mound immediately south of the new road. This measures slightly in excess of 35m (north – south) by around 23m (east – west) and stands around 1m tall at its highest. This mound appears to overlay the ridge and furrow system. Also overlaying the field system is a level surfaced corridor-like strip that extends from the south-eastern corner of the mound towards the east. This may have formed a track leading to the mound. The mound has previously been interpreted as a mill mound, almost certainly for a post-mill. The deer park boundary immediately to the west of the widened road, which is formed of a fence with internal ditch, is of 1970's date.



Plate 29 North-eastern area of ridge and furrow, looking N (arrow 'A' of Figure 11)



Plate 30 East central area of ridge and furrow, looking NW (arrow 'B' of Figure 11)



Plate 31 South central area of ridge and furrow, looking WNW (arrow 'C' of Figure 11)



Plate 32 South-western area of ridge and furrow, looking NE (arrow 'D' of Figure 11)



Plate 33 Mound in the north-western area, looking SW (arrow 'E' of Figure 11)

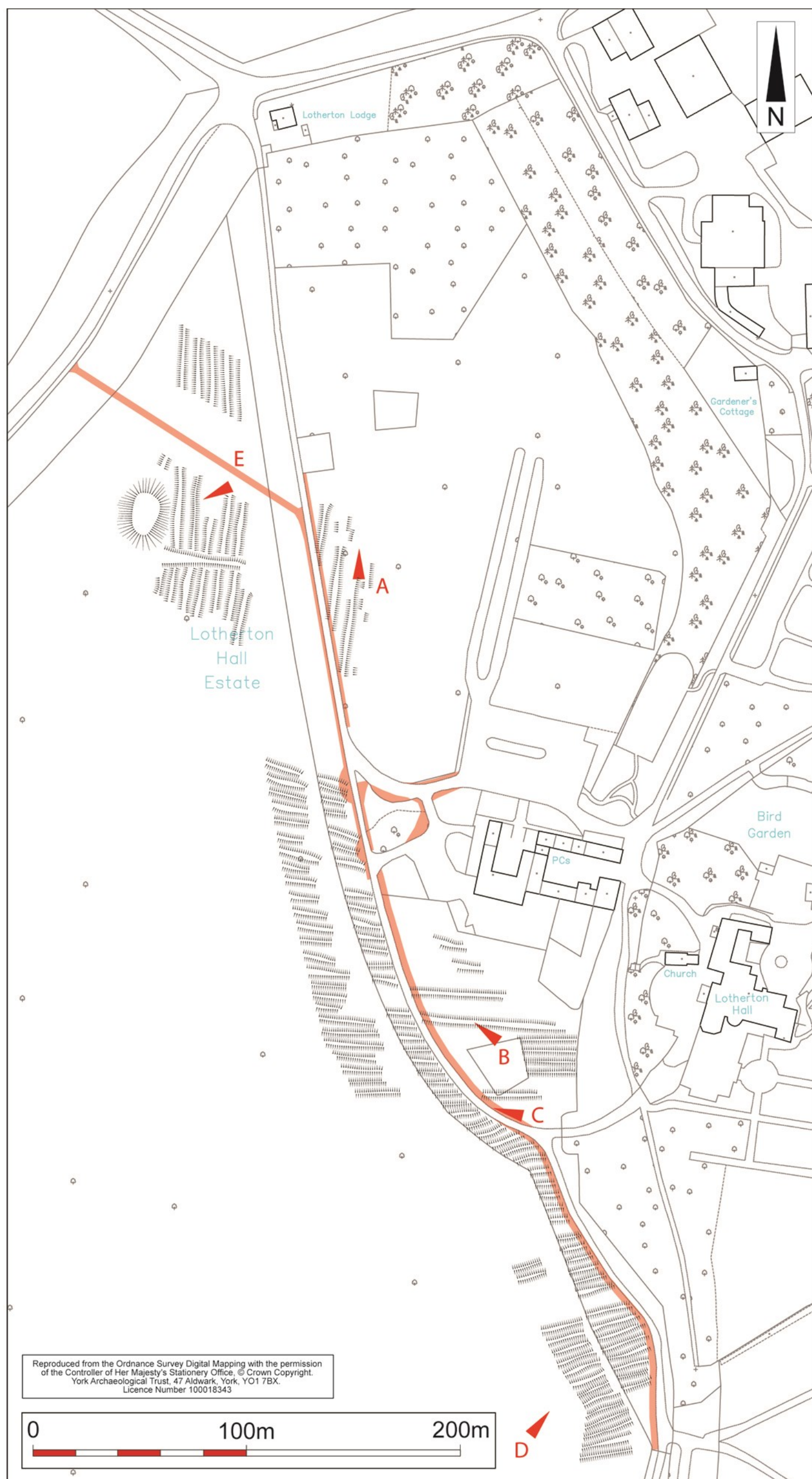


Figure 11 Earthwork survey and survey photograph locations

6. LIST OF SOURCES

http://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=1001223&resourceID=5

Accessed 25th January 2012

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Illustrations	I.D. Milsted, M Johnson, M Abbott
Editor	M.R. Stockwell

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APPENDIX 1: FINDS REPORTS

POTTERY BY ANNE JENNER

Two sherds of post medieval domestic pottery were viewed. They consist of a 19th century large transfer printed dish or bowl rim sherd and a slip ware pancheon rim sherd. The former might be a table or kitchen to table ware and the latter probably used in the kitchen for bread, wine, beer or even washing as pancheons were an-all purpose kitchen item. Together, they present a small glimpse into a 19th century household.

The transfer printed bowl has a flat everted rim with a band of blue geometric decoration along it. These wares are generally thought to be in currency during the 19th century. At this time there were many factories making them; consequently it can be very difficult to assign a provenance with any accuracy. Added to this there is no factory stamp or makers mark (usually under the base of a vessel) on this sherd. However, a factory known as 'Leeds Pottery' began life at Hunslet in the middle of the 18th century (Drakard 1992, 44) and, though famous for 'cream wares', was also producing transfer printed wares by the late 18th/19th centuries.

The slip ware sherd has a large diameter (approximately 44cm), thick walls and a lightly oxidised fabric. Slipwares are made from the late 17th/18th centuries, though this piece is probably a product of the 19th century. As with the transfer printed piece, slipwares were made in Staffordshire but also in many other places across the Country. It is therefore difficult to assign it to a specific production centre (Barker and Crompton 2007, 8).

Due to the paucity of material evidence from the site, and despite the proximity of probable kiln sources, there are no further recommendations for further research.

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Barker, D. and Crompton, S. 2007. *Slipware in the collection of the Potteris Museum & Gallery*. London

Drakard, D. 1991. *Printed English Pottery*. History and Humour in the Age of George III 1760-1820.

GLASS BY KAREN WESTON

A single sherd of glass was recovered from context 10001. This comprised the base and partial body of a round base aqua mineral water bottle dating to the late 19th/ early 20th century. It would have contained carbonated mineral water and was probably made in Sheffield.

The sherd was inscribed: '...D WATERS/..AW/....ET.PLACE/...IELD/....SUPERIOR'

There are no recommendations for further work.