PROPOSED SYNTHETIC FOOTBALL PITCH, DST LECONFIELD, BEVERLEY, EAST YORKSHIRE

Archaeological Watching Brief

Oxford Archaeology North

January 2007

Defence Estates

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SUMMARY

Following the completion of a geophysical survey undertaken by Archaeological Surveys in November 2005, Oxford Archaeology North (OA North) were commissioned by Defence Estates to undertake an archaeological watching brief during preparatory groundworks associated with the construction of a proposed synthetic football pitch at DST Leconfield, to the north-west of Beverley, East Yorkshire (NGR TA 0220 4310). The development site comprised a rectangular area measuring approximately 74m north-west/south-east by 52m north-east/south-west, to the south of the main camp buildings.

The watching brief was undertaken in two phases; the first observed the stripping of the area to construct the synthetic pitch and the second observed drainage and service trenches associated with the sports pitch. These groundworks were completed intermittently over a period of two weeks in January 2006. A number of features were revealed during the watching brief including one substantial ditch, two furrows, one shallow pit-type feature, one possible posthole, one tree bole and a goal post. Although the features were undated, it is likely that the ditch relates to the post-medieval enclosure of the landscape, whilst the alignment of one of the furrows suggests that it may belong to an earlier field system.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to offer thanks to Philip Abramson of Defence Estates for commissioning the project and for his assistance. OA North are also grateful to Kevin Walker and the staff of John Hellens (Contracts) Ltd, for all their help during the project.

Andy Lane undertook the watching brief, and also compiled this report. The drawings were produced by Marie Rowland and Mark Tidmarsh. Sandra Bonsall and Elizabeth Huckerby assessed the environmental remains, whilst the animal bone was assessed by Andrew Bates. The project was managed by Stephen Rowland, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 Following an assessment of the Defence Training Review (DTR) programme, it was established by the MoD that expansion of the physical training facilities was required at DST Leconfield, Beverley, East Yorkshire (NGR TA 0220 4310; Fig 1). Among these new facilities, it was proposed that an all-weather synthetic sports pitch should be constructed within a rectangular development area measuring 74m north-west/south-east by 52m north-east/south-west. The results of a desk based assessment of the area of DST Leconfield indicated that the site lay within an area of medium archaeological potential (Wessex Archaeology 2005).

1.1.2 Prior to the development taking place, a geophysical survey was undertaken in November 2005 (Archaeological Surveys 2005). This revealed the presence of a number of sub-surface anomalies within the proposed development area, including ridge and furrow, linear features possibly indicating a trackway and also possible field boundaries and plough marks. Because of the presence of these potential archaeological remains, it was decided that a watching brief should be undertaken during all groundworks within the development area. Following submission of costs and a project design (*Appendix 1*), Defence Estates commissioned Oxford Archaeology North (OA North) to undertake an archaeological watching brief during preparatory groundworks associated with the construction of the proposed synthetic football pitch. The project was undertaken intermittently over a period of two weeks in January 2006.

2. METHODOLOGY

2.1 INTRODUCTION

2.1.1 The OA North project design for the watching brief (*Appendix 1*) was adhered to in full throughout the duration of the project and all work was consistent with IFA standards and generally accepted best practice.

2.2 WATCHING BRIEF

2.2.1 Under constant archaeological supervision, the topsoil and some subsoils were removed by bulldozers using toothed blades. The final grade was enacted with a toothless blade. Also used on some occasions was a 360˚ mechanical excavator using both toothed and flat buckets. Any archaeological features were manually investigated and recorded using OA North's *pro-forma* sheets, and a monochrome and colour slide photographic record was maintained.

2.3 ENVIRONMENTAL ASSESSMENT

2.3.1 During the watching brief, sediment samples were taken from secure contexts for the assessment of charred and waterlogged plant remains in order to provide information about the environment and economy on and around the site during its period of use. Four environmental samples, from 7 litres to 21 litres in volume, were assessed, one each from ditch fills ***104*** and ***120*** and furrow fills ***108*** and ***115***.

2.3.2 The samples were hand-floated and the flots were collected on 250 micron mesh and air-dried. The flots were scanned with a Leica MZ60 stereo microscope and the plant material was provisionally identified and recorded using the botanical nomenclature of Stace (1991). Plant remains were scored on a scale of abundance of 1-5, where 1 is rare (less than 5 items) and 5 is abundant (more than 100 items; *Appendix 2*). The components of the matrix were also noted.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with current UKIC (1990) and English Heritage guidelines (1991). The paper and digital archive will be passed to Defence Estates who will deposit the archive with the East Riding of Yorkshire Record Office.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

3.1.1 The MOD training camp of DST Leconfield lies some 500m to the north of the modern outskirts of Beverley, in the East Riding of Yorkshire. Immediately to the west of the base lies the village of Leconfield. Leconfield is located at the eastern edge of the Yorkshire Wolds, where the chalk uplands fall gradually into the low-lying coastal plain of Holderness (Wessex Archaeology 2005).

3.1.2 The landscape of the study area is generally flat, rarely exceeding 10m OD, with the Upper Cretaceous chalk bedrock surmounted by deposits, up to 9m thick, of boulder clays and glacial and post-glacial outwash material. These deposits comprise glacial (Devensian) stony clay till, with later Devensian glacio-fluvial terrace gravels and sands below the western edge of the site and below Leconfield village (*ibid*). Prior to the groundworks taking place, the landuse within the development area was a grassed sportsfield.

3.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

3.2.1 ***Introduction:*** within the development area, the desk-based assessment suggested that the greatest potential for archaeological remains are for those dating to the medieval and post-medieval periods, but this is likely, in part, to reflect the limited field investigation within the study area. Archaeological resources located within the wider area highlight the possibility that remains could be encountered dating from the prehistoric, Roman and early medieval periods (Wessex Archaeology 2005).

3.2.2 ***Prehistoric and Roman:*** the desk-based assessment, which covered a 2km by 2km study area, identified a number of findspots of isolated artefacts in the wider area, including Neolithic and Bronze Age flint artefacts (Wessex Archaeology 2005). Aerial photography has located possible Bronze Age round barrows to the north-west of the base and undated, but probably prehistoric, ring ditches to the south-east (*ibid*). Two undated trackways and ditch systems also lie to the north-west of the development area. During an excavation at Bryan Mills, Leconfield, spearheads of both Bronze Age and Iron Age date were recovered, along with large quantities of butchered bone, pottery, burnt stone and organic remains (Van de Noort and Ellis 2000). Over 100 low mounds at Scorborough (SM 26597), to the north of the development area, have been identified as the remains of an Iron Age Arras-style cemetery (Stead 1991). The nearby Late Iron Age/Romano-British settlement at Church Garth is also of some significance, while a Roman cremation was found in Leconfield in 1941 (Wessex Archaeology 2005). Other Roman material includes pottery from a field in Arram, to the north-east of the study area, and a fourth-century AD gold coin metal-detected from DST Leconfield itself (*ibid*). An excavation in 1824 at Woodhall Manor, just to the south of the airbase, uncovered foundations, tiles and two Roman coins (*ibid*).

3.2.3 ***Medieval:*** a ninth century Anglo-Saxon bronze strap-end and part of a silver Thor's hammer pendant indicate the presence of early medieval activity within the study area and the village of Leconfield is mentioned in the Domesday book, suggesting a pre-Norman origin (Wessex Archaeology 2005). A Saxon window within Arram church, to the north-east of the airbase, would also suggest early medieval occupation at this site. Arram grange, to the east, was a Cistercian foundation (*ibid*). During the Middle Ages, the Percy family, based, to the west of the study area at the moated site of Leconfield Castle, had established a Deer Park at Leconfield by 1314 (*ibid*). Traces of ridge and furrow across much of the site and the fact that Leconfield had formerly supported three manors, may indicate that prime arable land had been emparked. At its enclosure, between 1488 and 1517, the park covered 140 acres. In 1537, the Percys were stripped of their Leconfield estate, which passed to the crown and, in 1542, Henry VIII expanded the total area of the park and divided it into three parts: Old, New and Coursing Parks (the latter of which encompasses the current development area), each surrounded by a pale. Lodges are known to have existed, including a brick tower extant in 1530, a moated brick lodge in New Park, and timber lodges in each of the other two parks (*ibid*).

3.2.4 ***Post-medieval:*** the post-medieval North Bullock Dyke, an apparent continuation of a medieval system of substantial drainage channels in the area, runs through the development area, and was infilled or culverted during the construction of the airfield (Wessex Archaeology 2005). DST Leconfield was completed in 1936 as part of RAF Bomber Command, and equipped with Handley Page Heyford biplane bombers from 1937 (Bomber Command 2005). In September 1939 Leconfield was taken over by Fighter Command's No 13 group, which required an airfield to provide defensive cover for the Humber area; however, the airfield was generally used as a rest station for squadrons based in the south of England (*ibid*). In early 1942 the airfield was returned to Bomber Command and was converted to a standard heavy bomber station with three concrete runways and a perimeter track, with the majority of the related buildings standing about 500m to the north-west of the present development area. The last mission from Leconfield was flown in May 1945 when the site was transferred to Transport Command (*ibid*). The site retained its function as an air base until 1976, when it became Normandy Barracks and was used as a training area for mechanised transport vehicles (Wessex Archaeology 2005).

4. FIELDWORK RESULTS

4.1 WATCHING BRIEF RESULTS

4.1.1 ***Introduction:*** the development area (Figs 2 and 3) was mechanically stripped of topsoil to a depth of up to 0.46m, revealing the underlying subsoil and natural geology (Plate 1). Six north-east/south-west aligned linear drainage channels (A-F) approximately 0.3m wide, were excavated to a depth of 0.4m, allowing an opportunity to observe in section any features running across the site.

4.1.2 ***Results:*** The visibility of archaeological features was affected by the type of machinery used, with improved results when the 360° mechanical excavator was used compared to the bulldozer. The drainage channels (A-F) were excavated after the laying of geotextile fabric and crushed stone, with a 360˚ mechanical excavator using a 0.3m wide toothless trenching bucket allowing for moderately good visibility. In total, seven features were observed cutting the natural geology. Table 1 summarises the features seen on site by their context, description and interpretation.

Context	Description	Interpretation
105	North-west/south-east aligned linear feature, 2.02m wide, 0.8m deep, observed for *c* 5m in length. Same as feature ***121***	Possible boundary ditch
107	Shallow sub-oval depression measuring 1.75m by 1.05m with a depth of 0.1m	Tree bole
109	North-west/south-east aligned shallow linear feature, 0.66m wide, 0.09m deep, observed for *c* 9m	Plough furrow
111	Sub-oval pit-type feature, 5.49m by 2.34m, 0.31m deep	Possible pit/tree bole
114	Sub-circular, vertical-sided hole, 0.23m by 0.2m in plan, with a depth of 0.58m	Possible posthole/animal burrow
116	North-west/south-east aligned shallow linear feature, 1.50m wide, 0.11m deep, observed for 3.6m. Same feature as ***118***	Plough furrow
118	North-west/south-east aligned shallow linear feature, 1.84 wide, 0.11m deep, observed for *c* 7m. Same feature as ***116***	Plough furrow
121	North-west/south-east aligned linear feature, 1.6m wide, 0.65m deep, observed for *c* 12m. Same as feature ***105***	Possible boundary ditch
	Metal object	Goal post

Table 1: Summary of archaeological features observed and recorded on site

4.1.3 The groundworks revealed a dark brown sandy-silt topsoil ***102***, 0.15m to 0.25m in depth. The subsoil, a mid-reddish-brown silty-sand ***101***, 0.15m to 0.26m+ in depth, was stripped at varying levels across the site, becoming thicker within the south-eastern part of the site. The observed underlying geology ***100***, was a light yellowy-cream sand with frequent gravel and occasional chalk inclusions.

4.1.4 A linear feature observed as two segments, ***105*** and ***121***, was located running north-west/south-east across the site (Fig 3), and seems to correlate with features identified by the geophysical survey (Archaeological Surveys 2005). The slight discrepancy in location is likely to relate to the manual survey techniques employed during the watching brief. Ditch segment ***105*** (Plate 2) contained two fills; the upper, ***103***, comprised a mid-reddish-brown silty-sand with occasional gravel, 0.37m thick, whilst the lower, ***104***, was a 0.44m thick dark reddish-brown sandy-silt with moderate gravel inclusions (Fig 4). Lower deposit ***104*** seems to have been formed by the gradual silting-up of the ditch, with upper deposit ***103*** potentially representing a deliberate backfill. Ditch ***105*** measured 2.02m in width, 0.8m in depth and was observed for approximately 5m. The profile was 'U'-shaped with concave sides and a rounded base. Ditch segment ***121*** (Plate 3; Fig 4) contained two fills, the upper, ***119***, was a mid- to dark reddish-brown silty-sand with moderate gravel inclusions and was 0.46m thick; this context produced animal bone fragments (see *Section 4.2* and Table 2). The lower fill, ***120***, was of light brown silty-sand with occasional gravel inclusions. The formation process appeared similar to those in ditch ***105***. Ditch ***121*** measured 1.6m in width, 0.65m in depth and was observed for a length of approximately 12m. The profile was 'V'-shaped (Plate 4), with moderately steep, slightly concave, sides and a rounded base.

4.1.5 Two shallow linear features, ***109*** and ***116***/***118*** (Figs 3 and 4) were located, although neither appeared to correlate particularly closely with features identified by the geophysical survey (Archaeological Surveys 2005). Linear feature ***109*** (Fig 4; Plate 5), most probably a plough furrow, was aligned north-west/south-east and measured 0.66m in width, 0.09m in depth and observed for approximately 9m. Furrow ***109*** was shallow with gentle concave sides and a rounded base; it contained a single fill, ***108***, a mid-reddish-brown silty-sand. A second plough furrow was excavated in two segments, ***116*** and ***118***, each aligned north-west/south-east and running parallel with ditch ***105***/***121***. Segment ***116***, to the south-east (Figs 3 and 4), measured 1.5m in width, 0.11m in depth and was observed for 3.6m (Plate 6); it was filled with ***115***, a mid-reddish-brown sandy-silt with occasional gravel inclusions. This feature exhibited shallow, slightly concave sides and a curved base, which had been disturbed by roots and animal burrows. Segment ***118***, to the north-west (Figs 3 and 4), measured 1.84m in width, 0.11m in depth and was observed for approximately 7m (Plate 7). This feature contained deposit ***117***, a mid-reddish-brown silty-sand with occasional small gravel inclusions and displayed gently sloping, slightly concave sides to a moderately flat base.

4.1.6 Sub-oval pit-type feature ***111*** was located within the south-eastern part of the site, and measured 5.49m by 2.34m and 0.31m deep (Figs 3 and 5; Plate 8). It was set within an area heavily disturbed by tree roots and animal burrows and

may itself represent a tree bole. Feature ***111*** contained a mid- to dark brown silty-sand, ***110***, and had moderately steep concave sides with an uneven, but fairly level, base. Immediately to the north-east of feature ***111***, a possible posthole, ***114*** (Fig 5), was located, measuring 0.23m by 0.2m with a depth of 0.58m. This posthole contained two fills; an upper fill, ***112***, of light brown silty-sand and a lower fill, ***113***, of light brown silty-sand with sand and gravel inclusions. Feature ***114*** had vertical sides with a rounded base. The proximity of numerous tree root disturbance and animal burrows suggests that feature ***114*** may also be the product of burrowing animals.

4.1.7 A tree bole, ***107***, was located towards the south-eastern area of site and measured 1.05m by 1.75m and 0.1m deep. Sub-oval in plan (Plate 10), it had gently-sloping concave sides. Feature ***107*** contained ***106***, a mid- to dark reddish-brown silty-sand with occasional gravel inclusions. The presence of these tree boles suggests that this area was once at least partially wooded. Within the northern part of the site a goal post was observed (Plate 11) and correlates with an area of magnetic disturbance identified by the geophysical survey (Archaeological Surveys 2005).

4.1.8 The excavation of the six drainage channels (A-F) revealed two ditches in section. Aligned north-west/south-east, ditch ***122*** was observed in drainage channel A (Plate 12) and was 2.5m wide and 0.4m in depth (excavated). It contained a dark reddish-brown silty-sand with occasional gravel inclusions, and displayed concave gradually sloping sides (Plate 13). The second ditch, ***123***, was observed in drainage channel B and was 3m wide, 0.4m in depth and was aligned north-west/south-east, with a similar profile to ditch ***122***. It contained a mid-brown silty-sand with occasional gravel inclusions. Both of these ditch sections appear to be the continuation of ditch ***105***/***121***. No other features were identified during the cutting of the drainage channels due to the greater depth of the subsoil to the south-east of the site, combined with the shallow nature of the drainage channels, meaning that the natural geology was not exposed.

4.2 FINDS

4.2.1 A very small assemblage of finds was recovered from the watching brief, these being fragments of animal bone from ***119***, the upper fill of ditch segment ***121***. The 14 fragments recovered included those of canid, sheep/goat, cow and possibly horse (Table 2). None of the fragments exhibited butchery marks, but possibly relate to food remains (with the exception of the dog). Alternatively they could represent the scavenged remains of animals that had died in the fields and were subsequently dumped in the ditch.

Context	Quantity	Material	Description
119	3	Animal Bone	Fragments of cattle humerus (probably from the same bone)
119	6	Animal bone	Large mammal fragments (probably of the same cow humerus
119	1	Animal bone	Cattle ulna
119	1	Animal bone	Fragment of cattle radius
119	1	Animal bone	Large mammal rib (horse?)
119	1	Animal bone	Sheep/goat maxillary molar (M3)
119	1	Animal bone	Fragment of canid bone

Table 2: Finds from the watching brief

4.3 ENVIRONMENTAL RESULTS

4.3.1 The results of the assessment are shown in *Appendix 2*. Waterlogged plant remains, probably modern, were recorded from both furrow samples in very low numbers and included *Chenopodium album* (fat hen), *Rumex acetosa* (common sorrel), *Trifolium* sp. (clover) and *Bromus* sp. (bromes). Nor were charred plant remains in great evidence, although the sample from furrow fill ***115*** contained one charred *Triticum aestivum* (bread wheat) grain and the sample from ditch fill ***120*** contained 3 charred indeterminate cereal fragments. The 'tarry' appearance of the cereal fragments suggest that they had been subjected to a very high temperature. All of the samples contained small quantities of charcoal fragments. Snail shells were present in all the samples and were abundant in that from ditch fill ***120***. Hammerscale was present in the sample from furrow fill ***108***).

4.3.2 In conclusion, there is no potential for further analysis of the material from these samples, and it is recommended that they are disposed of.

5. DISCUSSION

5.1 DISCUSSION

5.1.1 The geophysical survey (Archaeological Surveys 2005) identified a number of putative archaeological features. These included probable field boundaries; ridge and furrow and/or trackways, aligned approximately north-west/south-east; several probable plough marks and furrows, aligned approximately east/west; and also a number of dipolar anomalies relating to magnetic disturbance from ferrous objects (Fig 2). A number of these features were located during the watching brief, namely ditch ***105/121/122/123*** and furrow ***116/118***. Several of the features identified during the geophysical survey were not observed, which may be due to the presence of subsoils covering the natural geology in these areas and the method of grading with a bulldozer making it difficult to identify features. Conversely, one or two features found during the watching brief, including furrow ***109*** and pits/tree boles ***107***, ***111*** and ***114***, could not be related to the geophysical results. This may pertain to the fact that their fills, derived from the local subsoils, would not be expected to have a higher organic (and therefore, ionised) content.

5.1.2 The overall lack of datable artefacts means that is very hard to date the identified features. Ditch ***105/121*** is on the same alignment as the field boundaries seen on the Ordnance Survey First Edition 6": 1 mile map (1855) and is likely to represent one of these post-medieval features. The presence of a variety of animal bone from the upper fill of ditch segment ***121*** suggests that the land use may have changed from arable to pastoral activities. Furrow ***116/118***, which runs on a similar alignment to ditch ***105/121***, would appear to be associated, and lends further credence to the use of ditch ***105/121*** as a boundary. Furrow ***109*** does not align with the other linear features (***105/121*** and ***116/118***) and may be of an earlier, possibly medieval date. Disparate patches of ridge and furrow were identifed in the locale of the development area (Wessex Archaeology 2005) and were also observed during a watching brief 500m to the south/east (OA North 2006). It is uncertain whether the tree boles and other evidence of root disturbance relate to the medieval deer park, or even to prehistoric clearance of primary woodland, but it seems more likely that they pertain to post-war plantation of the area. Putative posthole ***114*** was found within a disturbed area, but the slight undermining of the sides suggests that this feature really represents an animal burrow. The goal post reflects more recent use as a football pitch.

5.2 CONCLUSION

5.2.1 Although the natural glacial geology was exposed across large parts of the development area, the variable depths of the subsoil meant that within some areas, particularly to the south-east of the development area, the natural geology was not always exposed during the course of the groundworks while at other times, this exposure was somewhat patchy. While incomplete exposure of the natural geology might partly explain why few archaeological features were recognised, other factors were also involved, principally the

poor visibility afforded by the method of topsoil stripping, including the use of toothed buckets and blades. However, the areas stripped by toothless ditching buckets allowed for good visibility. The watching brief was successful in the observation of some archaeological features within the site, utilising and expanding on the results from the geophysical survey to provide evidence of two field systems of differing periods within the site.

5.3 IMPACT

5.3.1 The watching brief enabled the archaeological features that were exposed after the removal of the subsoil to be investigated and recorded. The areas where the natural geology was not exposed due to the depth of subsoil will be preserved *in situ*, safeguarding the archaeology for the future. Any further groundworks within the area would, however, have a negative impact on the archaeological resource, which has been shown to be well-preserved in the area.

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7. ILLUSTRATIONS

7.1 LIST OF FIGURES

7.2 LIST OF PLATES

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metres

Figure 1: Location Map

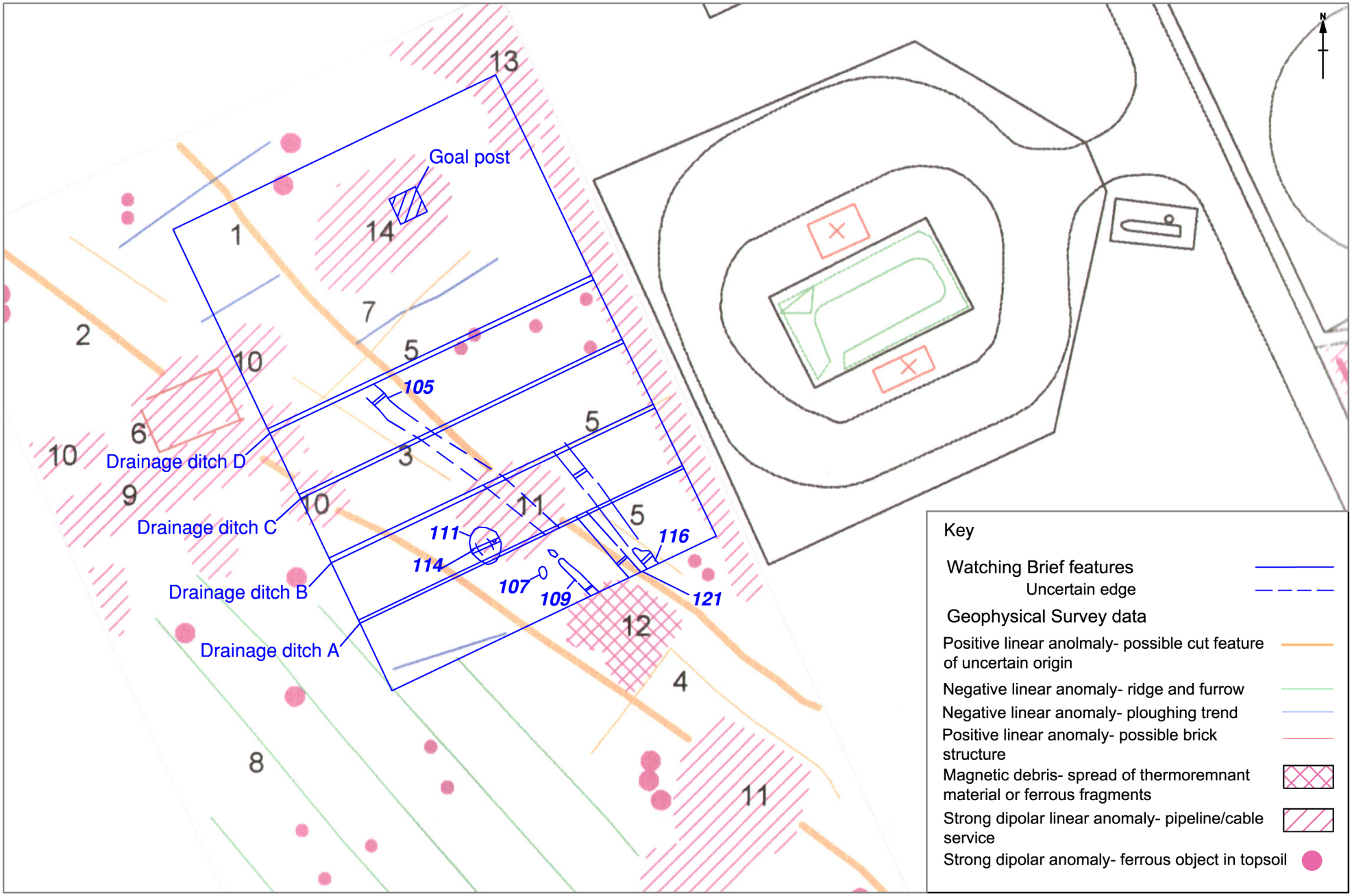
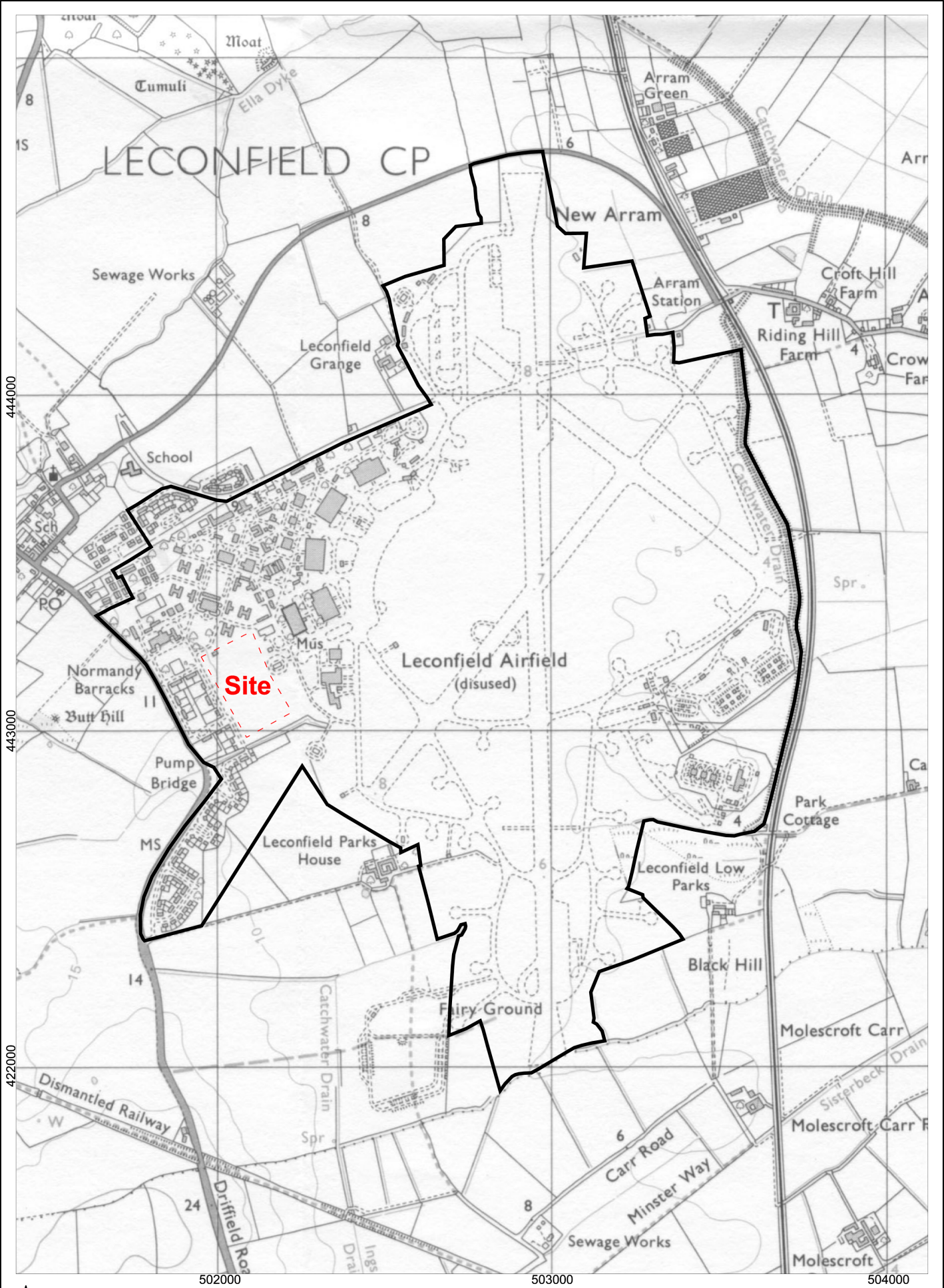


Figure 3: Plan of recorded features, drainage/service locations and geophysical survey results



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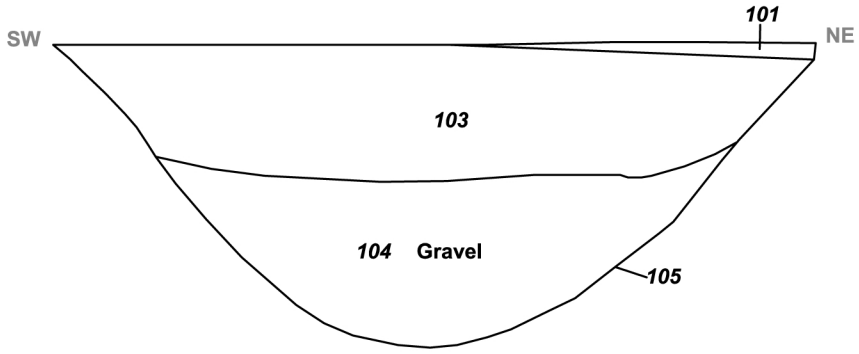
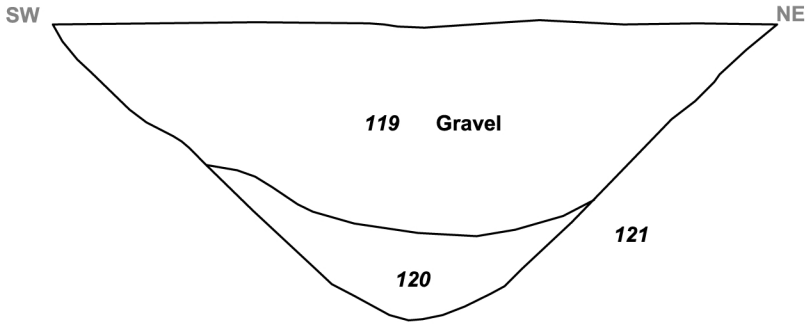
Scale 1:15000 at A4

Figure 2: Watching Brief location



Section of ditch segment ***105***



Section of ditch segment ***121***

Figure 4: Sections of ditch segments ***105*** and ***121***

Plate 1: General view of site after initial topsoil strip, looking north-west

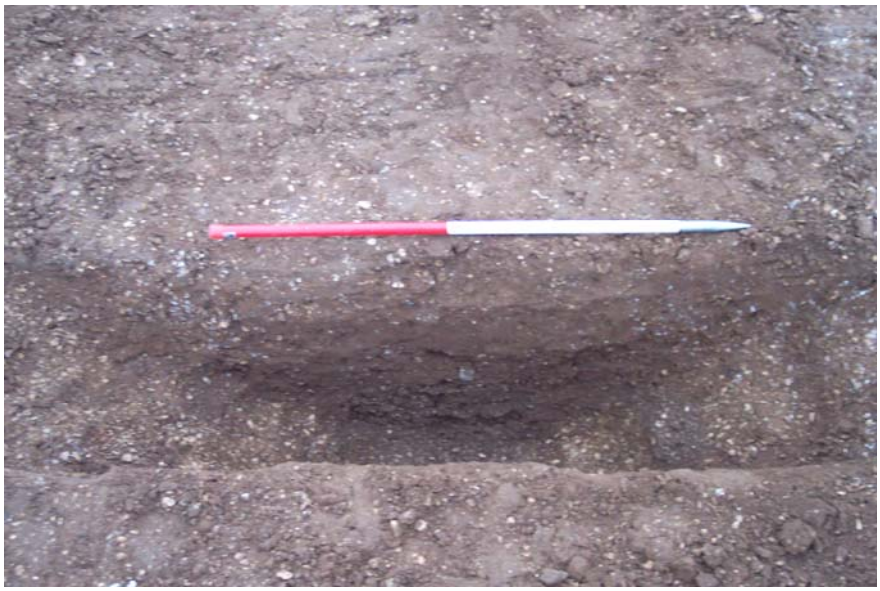


Plate 2: South-east-facing section of ditch ***105***

Plate 3: Ditch ***121***, looking north-west

Plate 4: South-east-facing section of ditch ***121***

Plate 5: South-east-facing section of furrow ***109***

Plate 6: South-east-facing section of furrow ***116***

Plate 7: South-east-facing section of furrow ***118***

Plate 8: South-east-facing section of pit ***111***

Plate 9: Close-up view of posthole ***114***, looking north-west

Plate 10: South-facing section of tree bole ***107***

Plate 11: Goal post

Plate 12: Excavation of drainage channel (A), looking south-west

Plate 13: South-east-facing section of ditch within drainage channel (A)

APPENDIX 1: PROJECT DESIGN

PROPOSED SYNTHETIC FOOTBALL PITCH, DST LECONFIELD, BEVERLEY
EAST YORKSHIRE

Archaeological Watching Brief Project Design

Oxford Archaeology North

January 2006

Defence Estates

OA North Reference No: t2481

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Defence Estates (hereafter the Client) has requested that Oxford Archaeology North (OA North) submit a project design and cost to undertake an archaeological watching brief in accordance with a statement of requirement devised by the Defence Estates archaeologist, during groundworks associated with the construction of a proposed synthetic football pitch at DST Leconfield, close to Beverley, East Yorkshire. The development lies to the west of the disused airfiledto and is within what, as a result of the desk-based assessment (Wessex Archaeology 2004), has been described as an area of medium archaeological potential.

1.1.2 The landscape of the study area is generally flat, rarely exceeding 10m AOD, with the chalk bedrock surmounted by deposits of boulder clays and glacial and post-glacial outwash material. The current landuse is a tree plantation and concrete runway, but an aerial photograph, dated to 1946, indicates the area to formerly have been grassed in the recent past.

1.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

1.2.1 Within the development area the greatest potential for archaeological remains are for those dating to the medieval and post-medieval periods, but this is likely, in part, to reflect the limited field investigation within the study area. Archaeological resources located within the wider area highlight the possibility that remains could be encountered dating from the prehistoric, Roman and Early Medieval periods. The desk-based assessment, which covered a 2km by 2km study area, identified a number of findspots of isolated artefacts in the wider area, including Neolithic and Bronze Age flints and spearheads of both Bronze Age and Iron Age date. Roman material includes pottery from a field in Arram, to the north-east of the study area and a fourth century AD gold coin to the south. A ninth century Anglo-Saxon bronze strap-end and part of a silver Thor's hammer pendant indicate the presence of Early Medieval activity within the study area. Aerial photography has located possible Bronze Age round barrows to the north-west and undated, but probably prehistoric, ring ditches to the south-east. Two undated trackways and ditch systems also to the north-west of the development area. An excavation in 1824 at Woodhall Manor uncovered foundations, tiles and two Roman coins

1.2.2 During the Middle Ages, the Percy family, based at the moated site of Leconsfield Castle, to the west of the study area, had established a deer park at Leconsfield by 1314. At its enclosure, between 1488 and 1517, the park covered 140 acres. In 1537 the Percies were stripped of their Leconfield estate, which passed to the crown and, in 1542, Henry VIII expanded the total area of the park and divided it into three parts: Old, New and Coursing Parks (the latter of which encompasses the development area), each surrounded by a pale. Lodges are known to have existed, including a brick tower extant in 1530, a moated brick lodge in New Park and timber lodges in each of the other two. The villages of Arram, to the north-east, and Leconfield, to the west, are both of medieval origin, and a Saxon window within Arram church would suggest Early Medieval occupation at this site. Arram grange, to the east, was a Cistercian foundation.

1.2.3 The post-medieval North Bullock Dyke runs through the development area, and was infilled or culverted during the construction of the airfield. DST Leconfield was built in 1937 as an airbase for biplane bombers and, in 1942, was converted to a standard heavy bomber station with three concrete runways and a perimeter track. The majority of the buildings stand about 500m to the north-west of the development area. The site continued to be used as an airforce base until 1976, when it became Normandy Barracks and was used as a training area for mechanised transport vehicles.

1.3 OXFORD ARCHAEOLOGY NORTH

1.3.1 Oxford Archaeology North has considerable experience of excavation of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England during the past 24 years. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.

1.3.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute of Field Archaeologists **(IFA) registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

2 OBJECTIVES

2.1 The following programme has been designed to identify any surviving archaeological deposits and provide for accurate recording of any archaeological remains that are disturbed by groundworks for the proposed development.

2.2 ***Watching brief:*** to carry out a watching brief during associated ground disturbance, such as topsoil stripping, removal of overburden, excavation of foundations, service trenches and access roads, to determine the quality, extent and importance of any archaeological remains on the site.

2.3 ***Report and Archive:*** a report will be produced for the client within eight weeks of completion of the fieldwork. A site archive will be produced to English Heritage guidelines (MAP 2) and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990).

3 METHOD STATEMENT

3.1 WATCHING BRIEF

3.1.1 ***Methodology:*** a programme of field observation will accurately record the location, extent, and character of any surviving archaeological features and/or deposits within the proposed ground disturbance. This work will comprise observation during topsoil stripping and any excavation, including building foundations and service trenches, the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all archaeological features and horizons, and any artefacts, identified during observation.

3.1.2 Putative archaeological features and/or deposits identified by the machining process, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions and, where appropriate, sections will be studied and drawn. Any such features will be sample excavated (ie. selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal).

3.1.3 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where appropriate). Features will be planned accurately at appropriate scales and annotated on to a large-scale plan provided by the Client. A photographic record will be undertaken simultaneously.

3.1.4 A plan will be produced of the areas of groundworks showing the location and extent of the ground disturbance and one or more dimensioned sections will be produced.

3.1.5 ***Treatment of finds:*** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines.

3.1.6 ***Treasure:*** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.

3.1.7 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.

3.1.8 ***Human Remains****:* any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. LCAS and the local Coroner will be informed immediately. If removal is essential, the exhumation of any funerary remains will require the provision of a Home Office license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations.

3.1.9 ***Contingency plan:*** in the event of significant archaeological features being encountered during the watching brief, discussions will take place with the DE Archaeologist or his representative, as to the extent of further works to be carried out. All further works would be subject to a variation to this project design. In the event of environmental/organic deposits being present on site, it would be necessary to discuss and agree a programme of palaeoenvironmental sampling and or dating with the DE Archaeologist.

3.2 ARCHIVE/REPORT

3.2.1 ***Archive:*** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Humberside SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the County Record Office, and a full copy of the record archive (microform or microfiche) together with the material archive (artefacts, ecofacts, and samples) with an appropriate museum.

3.2.2 ***Report:*** five bound and one unbound copy of a written synthetic report will be submitted to the Client. In addition, three CDs will be made, containing the report as a text only .rtf file and with figures and plates as tiff files (saved or scanned at both high (800-1200 dpi) and low (200dpi) resolution). Each CD will also contain the entire report, including images, as in .pdf format. Digitised survey information, geo-referenced to the OS, will also be included where appropriate. One bound copy and a digital copy (.pdf version) will submitted to the Humberside SMR within eight weeks of completion of fieldwork. Any finds recovered will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted. The report will also include a complete bibliography of sources from which data has been derived; a location plan with NGR references; a narrative of the results suitably illustrated by plans and sections at an appropriate scale; specialist contributions were necessary; an interpretation and discussion of the results; an assessment of the impact of the proposed development and any recommendations for the mitigation of future development on the site. Catalogues of finds and contexts will be included as appendices.

3.2.3 ***Confidentiality:*** all internal reports to the Client are designed as documents for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

4 PROJECT MONITORING

4.1 Monitoring of this project will be undertaken through the auspices of the Defence Estates Archaeologist, who will be informed of the start and end dates of the work.

5 WORK TIMETABLE

5.1 The duration of the archaeological presence for the watching brief is provisionally scheduled at two weeks, but it is possible that unforseen delays may extend the duration of groundworks, and thus that of the necessary archaeological presence. A contingency has been added accordingly.

5.2 The client report will be completed within approximately eight weeks following completion of the fieldwork.

6 STAFFING

6.1 The project will be under the direct management of **Stephen Rowland** (OA North Project Manager) to whom all correspondence should be addressed.

6.2 The watching brief and any subsequent excavation will be supervised in the field by an OA North project supervisor. All OA North project supervisors are experienced field archaeologists and are capable of independently undertaking small to medium-sized projects.

6.3 Assessment of the finds from the evaluation will be undertaken under the auspices of OA North's in-house finds specialist **Chris Howard-Davis** (OA North Finds Manager). Chris acts as OA North's in-house finds specialist and has extensive knowledge of all finds of all periods from archaeological sites in northern England.

7 INSURANCE

7.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

8 BIBLIOGRAPHY

English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London

United Kingdom Institute for Conservation (UKIC), 1990 *Guidelines for the preparation of archives for long-term storage*

Wessex Archaeology 2005, *DST Leconfield, East Riding of Yorkshire, Archaeological Desk-Based Assessment*, Unpubl Rep

APPENDIX 2: SUMMARY OF PALAEOENVIRONMENTAL ASSESSMENT RESULTS

Sample	Context	Feature	Volume (litres)	Flot description	Plant remains	Potential
1	***104***	Ditch	21	(50 ml) Charcoal >2mm (2) mm (5), small mammal bone (4),sand (5), modern roots (5), earthworm egg cases (1), shells (5)		None
2	***108***	Furrow	7	(550 ml) Charcoal >2mm (2), <2mm (3), sand (5). Insect fragments (1), mammal bone (1), hammerscale (3), modern roots (4), earthworm egg cases (1), snail shells (1)	WPR (1) *Bromus* sp., *Chenopodium album*	None
3	***120***	Ditch	14	1000 ml. Charcoal >2mm (3), <2mm (2), small mammal bone (3), sand (5), modern roots (2), earthworm egg cases (2), snail shells (5)	CPR (1) Cerealia indet	None
4	***115***	Furrow	7	(210 ml.) Charcoal >2mm (1), ,2mm (2), small mammal bone (1), sand (5), coal (1), modern roots (3), earthworm egg cases (1), snail shells (2)	CPR (1)*Triticum aestivium* WPR (1) *Chenopodium album, Rumex acetosa*	None

Assessment of charred and waterlogged plant remains from DST Leconfield. Plant remains are scored on a scale of 1-5, where 1 is rare (1-5 items) and 5 is abundant (more than 100 items)
CPR = Charred plant remains
WPR = Waterlogged plant remains