



PROPOSED HANGAR CONSTRUCTION AT DST LECONFIELD, BEVERLEY, EAST YORKSHIRE

ARCHAEOLOGICAL WATCHING BRIEF



Oxford Archaeology North

February 2006

Defence Estates

Issue No: 2005-6/430

OA North Job No: L9570

NGR: TA 02750 43300

Document Title: PROPOSED HANGAR CONSTRUCTION AT DST LECONFIELD,
BEVERLEY, EAST YORKSHIRE

Document Type: Archaeological Watching Brief

Client Name: Defence Estates

Issue Number: 2005-6/430

OA North Job Number: L9570

Site Code: DST05

National Grid Reference: TA 02750 43300

Prepared by: Jason Clarke Elizabeth Huckerby
Position: Assistant Supervisor Environmental Manager
Date: October 2005 February 2006

Checked by: Stephen Rowland Signed.....
Position: Project Manager
Date: February 2006

Approved by: Alan Lupton Signed.....
Position: Operations Manager
Date: February 2006

Oxford Archaeology North

Storey Institute
Meeting House Lane
Lancaster
LA1 1TF
t: (0044) 01524 848666
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

© Oxford Archaeological Unit Ltd (2006)

Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

Oxford Archaeological Unit Limited is a Registered Charity No: 285627

Disclaimer:

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.

CONTENTS

SUMMARY	2
ACKNOWLEDGEMENTS.....	3
1. INTRODUCTION.....	4
1.1 Circumstances of the Project.....	4
2. METHODOLOGY.....	5
2.1 Introduction	5
2.2 Watching Brief	5
2.3 Environmental	5
2.4 Archive.....	5
3. BACKGROUND.....	6
3.1 Location, Topography and Geology	6
3.2 Archaeological and Historical Background	6
4. FIELDWORK RESULTS	8
4.1 Watching Brief Results	8
4.2 Environmental results	9
5. DISCUSSION.....	11
5.1 Discussion	11
6. BIBLIOGRAPHY	13
6.1 Cartographic Sources	13
6.2 Secondary Sources	13
7. ILLUSTRATIONS	14
7.1 List of Figures	14
7.2 List of Plates.....	14
APPENDIX 1.....	15

SUMMARY

As part of the expanded training facilities at the DST Leconfield military base, located just to the north-west of Beverley, East Yorkshire (TA 02750 43300), Defence Estates propose to build a hangar on the site. A previous desk-based assessment (Wessex Archaeology 2005) identified that the site lay within an area of moderate archaeological potential and, accordingly, Defence Estates commissioned Oxford Archaeology North (OA North) to undertake an archaeological watching brief during preparatory groundworks associated with the development.

The watching brief was undertaken intermittently over a period of four weeks in July and August 2005 within a triangular area measuring 140m by 220m, named Roebuck Glade. Several factors limited the visibility of archaeology on the site, including the wooded nature of the previous land use; the variable depth of the subsoil, which meant that the natural drift geology was not consistently exposed; and, the fact that the development groundworks were enacted on a number of occasions with the use of a bulldozer using a toothed blade.

Despite this, several archaeological features were identified, the oldest of which were three furrows that may relate to medieval agricultural use of the site. Two features associated with the site's use as an airbase comprised a Second World War barrage balloon mooring block and a levelled concrete wall, which potentially dates to the first phase of construction at the airbase in 1937. Although not archaeological in origin, a concentration of pre-Quaternary spores (at least 1.5 million years old) were identified in a hollow within the natural drift deposits.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to offer thanks to Philip Abramson and Nial Hammond of Defence Estates for commissioning the project and for their assistance and interest. OA North are also grateful to Cliff Scott of Clugstones and the staff from Moorhead. OA North's environmental archaeologists would like to thank Jacqui Huntley, the English Heritage Regional Scientific Advisor for the North East, for examining the pre-Quaternary macrospores.

The watching brief was undertaken by Tony Lee and Jason Clarke, who also compiled this report; the drawings were produced by Christina Clarke and Mark Tidmarsh. Sandra Bonsall and Elizabeth Huckerby assessed the environmental sample. The project was managed by Stephen Rowland, who also edited the report, together with Alan Lupton.

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 Ministry of Defence (MoD) that expansion of the training facilities was required at DST Leconfield, north-west of Beverley, East Yorkshire (Fig 1). The proposed expansion was to take place within a triangular development area measuring 140m by 220m named Roebuck Glade (Fig 2). In March 2005, Wessex Archaeology compiled a desk-based assessment of the proposed development area (Wessex Archaeology 2005), reaching the conclusion that the site lay within an area of medium archaeological potential. 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 a proposed hangar on the site. The project was undertaken intermittently over a period of four weeks in July and August 2005.

2. METHODOLOGY

2.1 INTRODUCTION

- 2.1.1 The OA North project design (*Appendix 1*), approved by Defence Estates, was adhered to in full throughout the duration of the project and conformed to IFA standards and accepted best practice.

2.2 WATCHING BRIEF

- 2.2.1 All groundworks on the site were conducted under constant archaeological supervision and comprised stripping of topsoil and subsoil to a maximum depth of 1m. These works were enacted by up to two bulldozers using toothed blades, along with, on most occasions, a 360° mechanical excavator, at times using a toothed bucket but, on request, using a flat ditching bucket. All exposed soil horizons were examined and described and spoil heaps were carefully checked for any unstratified finds.
- 2.2.2 A daily record of the nature, extent and depths of groundworks was maintained throughout the duration of the project. Any archaeological features were recorded on OA North's *pro-forma* sheets, using a system based on that of the English Heritage Centre for Archaeology. A monochrome and colour slide photographic record was maintained throughout and, where appropriate, scaled plans and sections were produced to locate the presence of archaeological features as accurately as possible.

2.3 ENVIRONMENTAL

- 2.3.1 A single bulk sample (10 litres in volume) was taken for the palaeoenvironmental assessment of charred and waterlogged plant remains from context *I*, a natural depression within the underlying geology. The sample was hand-floated and the flot collected on a 250 micron mesh and air dried. A representative sample of the flot was scanned with a Leica MZ6 stereo microscope and the plant material was recorded and provisionally identified. The data are shown on Table 2. Botanical nomenclature follows Stace (1991). Plant remains were scored 1-4 on a scale of abundance, where 1 is rare (less than 5 items) and 4 is abundant (more than 100 items). 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 deposited with the Defence Estates for transmission to the relevant county record office. Defence Estates will also lodge a copy of this report with the East Yorkshire Sites and Monuments Record.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The military base at DST Leconfield (approximately centred on NGR TA 02750 43300) lies some 500m to the north-west 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 AOD, 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) stoney clay till, with later Devensian glacio-fluvial terrace gravels and sands below the western edge of the site and below Leconfield village (Wessex Archaeology 2005). Immediately prior to redevelopment, the landuse on site comprised 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 (*ibid*).

3.2 ARCHAEOLOGICAL AND HISTORICAL 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.
- 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 flints (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 Scarborough, to the north of the development area, have been identified as the remains of an Iron Age Arras-style cemetery (SM 26597) (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. 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 (Wessex Archaeology 2005). 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 level of visibility for potential archaeological features was largely dependent upon the nature of the machinery used for the groundworks. Visibility with the 360° mechanical excavator and toothless bucket was good, but that provided by the bulldozers was inevitably poor.
- 4.1.2 **Results:** initial groundworks, undertaken to the north of the triangular development area, comprised the removal of the mid-brown friable silty-sand topsoil, **2**, to a depth of 0.3m - 0.4m. During these works, there was frequent evidence for the recently removed woodland that previously occupied the site, and a quantity of modern debris was also observed, including bitumen, clinker and aggregate. However, no archaeological finds were observed during the stripping, on the spoil heap, or within the exposed light grey-brown silty-sand subsoil, **3**.
- 4.1.3 Where groundworks were undertaken to depths below 0.3m, care was taken to remove the topsoil and subsoil stratigraphically, down to the uppermost level of the natural glacial deposits, **4**. Such deposits were encountered at depths of between 0.4m and 0.8m (depths increasing towards the south of the development area) and comprised sandy-flint gravels with inclusions of chalk and clay, along with occasional flecks of charcoal. The homogeneity of the subsoil exposed within the sections of the deeper groundworks may have arisen from deep ploughing prior to the planting of woodland in the area, along with the concomitant bioturbation indicated by the large number of tree roots observed within this layer. A number of modern ceramic land drains, along with numerous disconnected electricity cables, were also observed throughout the course of the watching brief, indicating the scale of previous disturbance. In total, six features were observed or recorded. Table 1 summarises the features seen on site by their context, description and interpretation.
- 4.1.4 Although of palaeoenvironmental rather than of archaeological interest, the earliest feature was located within the north-west area of the site. Recorded at a depth of 1.25m below the surrounding ground level, Context **1** comprised a 60mm deep spread of seemingly charcoal-rich sandy-clay measuring 1.8m by 0.95m and with an appearance that might be considered typical of a hearth-fill. The context appeared to fill a natural depression within the glacial gravels, as there was no evidence for a man-made cut. There was, however, no evidence for *in-situ* burning, nor for any artefacts within the locale of Context **1**. An environmental sample was taken from the context (*Section 4.2.1*).
- 4.1.5 Three parallel furrows (Contexts **7-9**) were located within the central part of the development area, where the natural post-glacial deposits were at times exposed at a more shallow depth (Fig 3). Each furrow was 1.75m wide, 0.4m deep and was aligned roughly east/west at 9m intervals. No finds were recovered from these features.

Context	Description	Interpretation
1	Spread of charcoal within natural depression.	Glacial outwash material
5	1m by 1m square concrete block with a centred 0.3m steel hoop.	Base for the tying down of barrage balloons during the Second World War.
6	Concrete wall levelled to the top of the natural geology, 0.6m in width and running north/south along the width of the easement.	Possibly relates to an early perimeter wall on the airbase that was completely levelled for the building of a new runway during the Second World War.
7, 8 and 9	Three parallel linear features running east/west. Typically 9m apart and each measuring 1.7m in width.	Possible medieval plough furrows.

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

4.1.6 The two remaining features were located within the north-eastern part of the site and relate to twentieth century activity at the airbase. Close to the eastern edge of the development area, a 1m by 1m square concrete base with a 0.3m wide central steel hoop was uncovered at a depth of 0.4m (Fig 4). This feature, **5**, is probably a base for tying down barrage balloons to protect the base from aerial attack during the Second World War. No further such concrete bases were discovered during the watching brief, which could relate to later removal, or, to the random nature of their locations. The final feature observed was located approximately 20m north of concrete block **5**. This comprised an 18m long stretch of north/south aligned concrete wall, **6**, 0.6m in width and levelled to the top of the natural subsoil. No dating evidence was associated with wall **6**, but its construction would suggest that it, too, was of early to mid-twentieth century date.

4.1.7 Because of the intermittent nature of the watching brief, it is possible that other concrete features may have been discovered without an archaeologist on site. For example, after the discovery of concrete features **5** and **6**, the archaeologist was told by the contractors of another concrete feature that had been found in the same area and then extracted without being recorded. This feature was described as a possible concrete housing for an arresting cable to hook onto jet aircraft as they land. Such devices are usually found on aircraft carriers, so this particular fixture could have possibly been something different.

4.2 ENVIRONMENTAL RESULTS

4.2.1 The results of the assessment of Sample 1 from Context **1** are shown in Table 2. The only plant remains recorded in the sample were abundant pre-Quaternary macrospores (from plants such as ferns) and some highly abraded and rounded charcoal. The main body of the flot was abraded coal with a little

mineral material. The abrasion suggests that the material had spent time being moved around before deposition (Jacqui Huntley *pers comm*). There is no potential for further analysis.

Sample	Context	Feature	Sample vol.	Flot description	Plant remains	Potential
1	<i>I</i>	Deposit within natural	10 litres	745 ml. Coal (4), sand (4), abraded	Pre-Quaternary macrospores (4)	None

Table 2. Assessment of plant remains from DST Leconfield. Plant remains are scored on a scale of 1-4, where 1 is rare (1-5 items) and 4 is abundant (more than 100 items)

5. DISCUSSION

5.1 DISCUSSION

- 5.1.1 Although the natural glacial geology was exposed across large areas of the development area, the variable depths of the topsoil and subsoil meant that within some areas, particularly the southern part of the development area, the natural geology was not always exposed during the course of the groundworks. At other times, this exposure was somewhat patchy. While incomplete exposure of the natural might partly explain why very few archaeological features were recognised, other factors were also involved. The method of topsoil stripping, including the use of toothed buckets and bulldozer blades, made visibility very poor and, perhaps unsurprisingly, the best results were achieved when groundworks were enacted using only the toothless bucket. Another factor likely to have influenced the survival and recognition of archaeological features is the fact that the area had been deliberately planted with trees following the end of World War Two. Deep ploughing in advance of this process, combined with bioturbation from tree roots, has converted much of the upper layer of the natural geology to homogenous subsoil within which no archaeological features could be discerned. In addition, the evidence of wall 6 (*Section 5.1.4*) would suggest that the area had been heavily prepared prior to the conversion of the airbase during World War Two, a process which is highly likely to have been detrimental to any archaeological features located on higher areas of the site. These factors may explain why only the deepest features, such as Context 1, and furrows 7, 8 and 9, and the latest, such as concrete block 5, survived.
- 5.1.2 Located within a natural depression within the natural geology and containing abraded material, it seems probable that the deposition of Context 1 was waterborne. The furrows, too deep and widespread to represent modern deep ploughing, do not appear to be on quite the same alignment as the field boundaries marked on the 1855 Ordnance Survey map. It is highly likely that not only do they pre-date the later post-medieval enclosure, but may actually be medieval in date. It is possible that such features are a relict of the ridge and furrow seen in other areas within and around the site, although the absence of headlands and complete exposure of an aratral plan makes it difficult to ascribe them a medieval date. If they are medieval, however, they are likely to pre-date the fourteenth century emparkation of the area. If such features should be encountered at other points during the development, it is possible that dating evidence may be encountered.
- 5.1.3 It is highly likely that concrete structure 5, a probable barrage balloon mooring block, relates to the use of the airfield during the Second World War. It is tempting to suggest that this feature relates to the later use of the airfield, once it had been converted for the use of bombers, since barrage balloons might be considered a hindrance to the effective use of fighter planes required to respond to an enemy raid. It is possible that other such features were more deeply buried than that recorded, or that their distribution was at intervals too wide to be consistently encountered within the development area. It is also

likely that those in more obtrusive positions would have been removed. Although perhaps not as significant as bunkers, bomb shelters and other items of airfield architecture, mooring blocks are less likely to appear on official plans, and the mapping of such features would highlight a little-studied area of airfield defence.

- 5.1.4 Wall **6**, although undated, may well pre-date the Second World War conversion of the airfield. If it were to continue on the same alignment, it would bisect one of the extant runways and, as such, runs very close to the main area of runway in the area. The effort that was expended levelling this feature would also indicate that it relates to an earlier phase of the airfield, possibly even to its initial use as a base for biplane bombers during the late 1930s.
- 5.1.5 ***Environmental Assessment:*** the only plant remains recorded in the sample were pre-Quaternary macrospores and some abraded charcoal. These spores are at least 1.5 million years old and, given that they are likely to have eroded from the coal present within the sample, potentially very much older. The degree of abrasion and location of this material within drift deposits would suggest that the material derived from glacial outwash.

6. BIBLIOGRAPHY

6.1 CARTOGRAPHIC SOURCES

Ordnance Survey First Edition 6": 1mile 1855

Ordnance Survey Fourth Edition 6": 1mile 1951

6.2 SECONDARY SOURCES

Bomber Command, 2005 *Bomber Command, Leconfield*
www.raf.mod.uk/bombercommand/s59.html

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

Stace, C, 1991 *The New Flora of the British Isles*, Cambridge

Stead, IM, 1991 *Iron Age Cemeteries in East Yorkshire*. London. English Heritage
Archaeological Report 22

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

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

Van de Noort, R, and Ellis, S, 2000 *Wetland Heritage of the Hull Valley* in Hull and Humber Wetlands Project. Centre for Wetland Archaeology

7. ILLUSTRATIONS

7.1 LIST OF FIGURES

Figure 1: Location Map

Figure 2: Watching brief location map

Figure 3: Plough Furrows observed during topsoil strip

Figure 4: Location plan of Features **5** and **6**

7.2 LIST OF PLATES

Plate 1: Section showing the depth of topsoil and subsoil

Plate 2: Concrete base, **5**, mooring for barrage balloon

Plate 3: East/west concrete wall, **6**, probably relating to the pre-World War II airbase

APPENDIX 1

PROPOSED HANGAR CONSTRUCTION AT DST LECONFIELD, BEVERLEY, EAST YORKSHIRE

Archaeological Watching Brief Project Design



Oxford Archaeology North

July 2005

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 hangar at DST Leconfield, close to Beverley, East Yorkshire. The development, bounded to the north-west by a runway, covers a triangular area 140m by 220m (30,000m²) named Roebuck Glade 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 Leconfield Castle, to the west of the study area, had established a deer park at Leconfield 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 be 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 unforeseen 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



Reproduced from the Landranger 1:250,000 scale by permission of the Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 1990. All rights reserved. Licence No AL 100005569

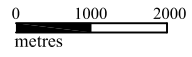


Figure 1: Location Map

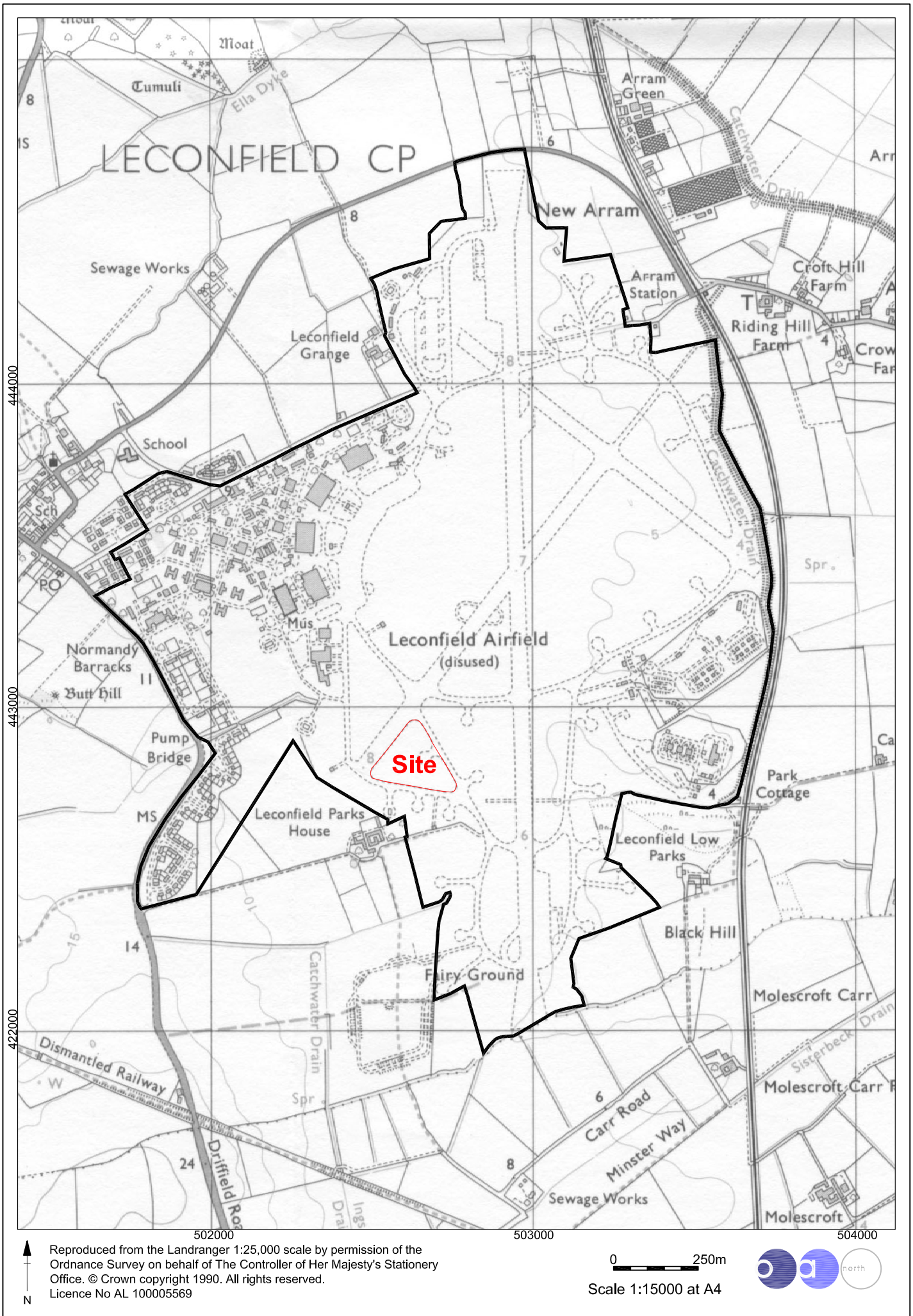
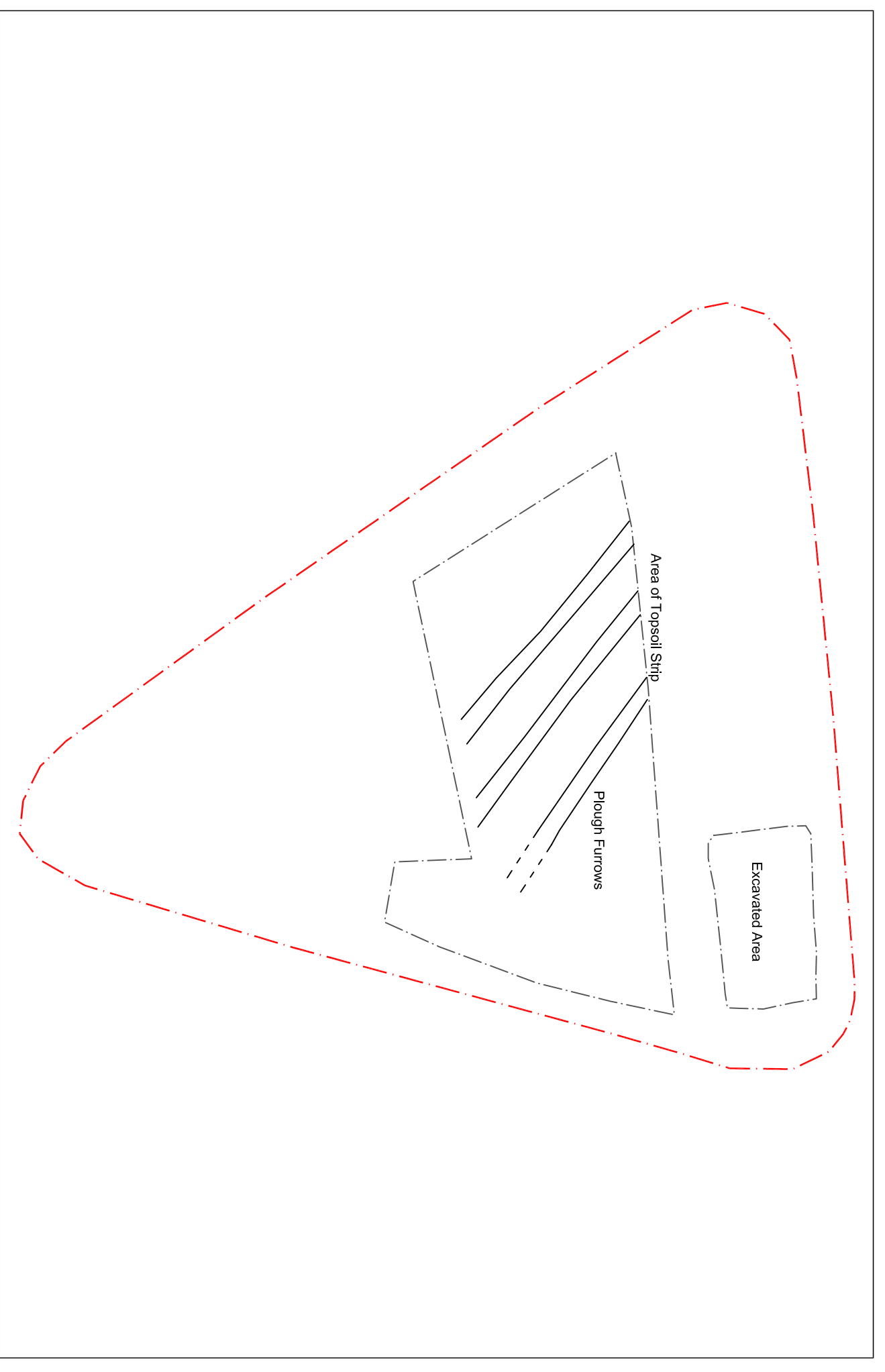


Figure 2: Watching Brief location



Key:
 --- Limit of Watching Brief
 - - - Site Limits

0 20m



Figure 3: Plough furrows observed during topsoil strip

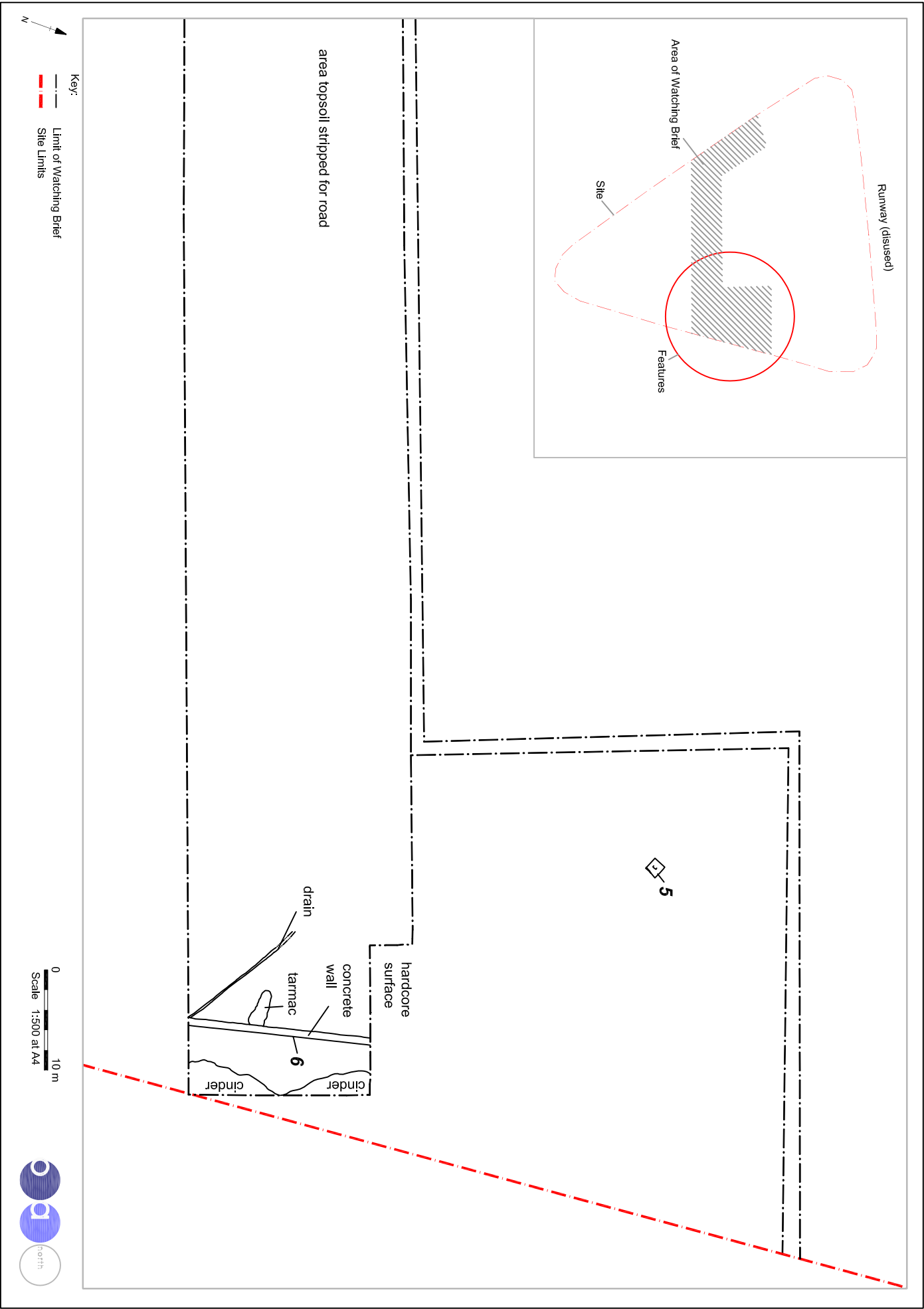


Figure 4: Plan of Feature 5 and 6



Plate 1: Section showing the depth of topsoil and subsoil



Plate 2: Concrete base, 5, mooring base for barrage balloon



Plate 3: East/west concrete wall, 6, probably relating to the pre-World War II airbase