AD387

Land at Hadston Industrial Estate
Hadston, Northumberland

Archaeological Evaluation

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EXECUTIVE SUMMARY

AD Archaeology Ltd. was commissioned by Advance Northumberland to carry out evaluation trenching in advance of a proposed housing development of land which forms part of Hadston Industrial Estate. The proposed development site was formerly occupied by two industrial units (either side of a road) in the western half of the site with landscaped grassed areas to the east.

No significant archaeological features were located in the evaluation trenches. The trenching established that there had been extensive groundworks associated with the construction of the Industrial Estate which would have impacted negatively on potential archaeological features, if previously present.

Three different episodes or areas of groundworks were identified. In the area of the former western building, the ground surface had been terraced into to form a level construction area, at a depth of 0.30-0.33m BGL (21.43-2.48m AOD). In the area of the former eastern industrial building, the ground surface had been terraced into to form a level construction area, at a depth of 0.43-0.60m BGL (20.15-20.48m AOD). In the grassed area in the eastern area of the site levels had been reduced by depth of between 0.62-1.70m BGL (19.20-19.69m AOD) with natural clays then being redeposited to form the present ground level.

In all three areas no archaeological features were located and no pre-modern layers such as a former ploughsoil horizon survived. In view of these negative results no further archaeological work would be appropriate at the site.

1 INTRODUCTION

1.1 The Project

1.1.1 The archaeological works were undertaken in advance of a proposed housing development on land, which forms part of Hadston Industrial Estate. The site consists of an area of two former buildings, tarmac hardstanding and landscaped grassed areas. Hadston Industrial Estate lies off the B1330 north of the centre of Hadston Village. The site is centred on NGR NU 2500 0040 and has a total area of 2.4 hectares. The trenching was undertaken in week commencing 26th September 2021.

1.2 Geology

1.2.1 The bedrock geology of the site comprises Pennine Middle Coal Measures Formation – mudstone, siltstone and sandstone. Sedimentary bedrock formed approximately 309 to 312 million years ago in the Carboniferous Period. This is overlain by superficial geology of glacial till formed up to 3 million years ago in the Quaternary Period when the local environment was dominated by ice age conditions (BGS 2021).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 The Northumberland Coastline, and more specifically Druridge Bay to the east of the site, is known to have been a focus for prehistoric activity. The area of coastline at Low Hauxley, 3.5km to the north-east of the site, has been the subject of several archaeological investigations as a result of the exposure of Bronze Age cairns and cists by erosion and movement of the dunes. A number of excavations since 1982 have rescued parts of a Bronze Age cemetery consisting of cists containing both inhumations and cremations that were buried beneath circular cairns. The "Rescued from the Sea" project undertaken by ARS 2013-4 discovered beneath the Bronze Age cemetery a Mesolithic occupation layer that produced over 20,000 worked flints and above the cemetery an Iron Age house rebuilt in the Romano-British period.

2.2 Recent discoveries have indicated that the Northumberland Coastal Plain contains a density of late prehistoric settlement settlements. One such settlement is located 800m south-west of the site to the east of Woodside Burn (HER23355). This site was identified through study of aerial photography. The cropmark consists of an irregular enclosure which appears to be surrounded by a single ditch on the north, south and west sides, and a double ditch on the east side. A background of prehistoric artefactual evidence and known sites indicates that the site lies in an area that would have been fertile and populated throughout the prehistoric period.

2.3 The HER does not record any known military features of Roman date on the development site itself or within the study area of the site, although it is likely the enclosure (HER 23355) continued into the Romano-British Period.

2.4 The HER does not record any known features of early-medieval period date within the development site or the study area.

2.5 The HER lists Hadston Deserted Medieval Village (ID 3; HER 5608) at Hadston Farm 450m to the east of the site. Earthworks survive in and around the farm and there is reference to a possible manor house at Hadston Farm.

2.6 Hadston is first mentioned in 12th Century documentary references to the parish of Warkworth. Through the medieval and earlier post-medieval period the area of the site is likely to have been utilised as agricultural land. The site would have been situated between the villages of Hadston and Broomhill.

2.7 The industrial revolution brought change to the area with the sinking of mines, the development of road and railway communications and an increase in housing and population. In 1867 Mr Baker Cresswell leased land to the Broomhill Colliery Company and several drift mines were worked in conjunction with Broomhill Colliery (the latter being north of the site). The site of the former Broomhill Colliery Brickworks lay 250m west of the site (HER20816). The Amble Railway Line (HER

27319) constructed in 1849 ran north-east/south-west to the north of the site on which lay Broomhill Railway Station (HER 27321).

2.8 During the Second World War defensive structures were constructed along the Northumberland Coastline. Remains of a World War II light anti-aircraft artillery site (HER 5588) are located 950m to the west of the site, with a pillbox (HER 13877) east of Hadston Farm.

2.9 Historic map regression has shown the site to have been undeveloped during the later post-medieval period, though the site may have been in use for agricultural activity and ploughing may have impacted on any potential sub-surface archaeological features. By the time of the third edition Ordnance Survey of 1921 part of the site is show as being occupied by cricket pitches and a recreation ground suggesting the possibility that some levelling of the site may have taken place to accommodate these features which would have potentially impacted sub-surface archaeological remains present on the site. The greatest impact to the site will have occurred in the recent past with the construction of the Hadston Industrial Estate, it is likely that that this will have disturbed and truncated archaeological features surviving on the site though the extent of this disturbance is unclear.

3 AIMS AND OBJECTIVES

3.1 The objective of the evaluation trenching was to establish the presence or absence of archaeological features on the site and to determine their nature, depth, importance and level of preservation.

4 METHODOLOGY

4.1 General Methodology

4.1.1 The evaluation and recording was carried out in compliance with all the relevant codes of practice by suitably qualified and experienced staff.

4.2 Excavation and Recording

4.2.1 The evaluation trench strategy was agreed with the Assistant County Archaeologist for Northumberland (Appendix 2). Two trenches (Trenches 17 and 18) were to be excavated through a mound in the south-eastern corner of the site. However the mound proved to be in excess of 2m in height above the surrounding site and given the depth of natural subsoil in this area (at 2.90mBGL from geotechnical borehole information) it would have been impractical to have excavated these two trenches. The trenches dug immediately to the north of the mound (Trenches 13, 14 and 16) demonstrated that this south-eastern sector of the site had been heavily disturbed during the construction of the Industrial Estate. There were some minor adjustments to a small number of trenches to avoid services.

5 RESULTS OF THE EVALUATION

Western area of site formerly occupied by an industrial building

5.1 Trench 1 (Fig. 2; Plate 1)

5.1.1 Trench 1, which was 10m by 1.8m in size, was oriented NNW-SSE and located in an area of tarmac adjacent to a former industrial building. The natural subsoil (101) consisting of a yellow clay was located at a depth of 0.30m BGL (21.45m AOD) and was overlain by a tarmac surface and its bedding material of stone chippings and cobbles in matrix of ash and gravel (100), of a combined depth of 0.30m. A service associated with the former building was identified.

5.2 Trench 2 (Fig. 2; Plate 2)

5.2.1 Trench 2, which was 20m by 1.8m in size, was oriented ENE-WSW and located in a grassed area to the north of the former building. The natural subsoil (201) consisting of a brown clay was located at a depth of 0.32m BGL (21.48m AOD) and was overlain by a grey loam (200), 0.32m in depth.

5.3 Trench 3 (Fig. 2)

5.3.1 Trench 3, which was 20m by 1.8m in size, was oriented NNW-SSE and located in a grassed area to the east of the former building. The natural subsoil (301) consisting of a yellow clay was located at a depth of 0.33m BGL (21.43m AOD) and was overlain by a grey loam (300), 0.33m in depth. Two services associated with the building were identified.

Eastern area of site formerly occupied by an industrial building

5.4 Trench 4 (Fig. 2; Plate 3)

5.4.1 Trench 4, which was 23m by 1.8m in size, was oriented NNW-SSE. The natural subsoil (401) consisting of a brown clay was located at a depth of 0.43m BGL (20.48m AOD) and was overlain by gravel and cobbles in a matrix of ash, stone chippings and grey loam (400), of a combined depth of 0.43m.

5.5 Trench 5 (Fig. 2; Plate 4)

5.5.1 Trench 5, which was 18m by 1.8m in size, was oriented ENE-WSW. The natural subsoil (502) consisting of a yellow-brown clay was located at a depth of 0.60m BGL (20.15m AOD) and was overlain by a mixed layer of yellow and brown clay intermixed with lenses of loam (501), 0.15m in depth. This was overlain by a layer of gravel and cobbles in a matrix of ash, stone chippings and grey loam (500), of a combined depth of 0.45m.

5.6 Trench 6 (Fig. 2)

5.6.1 Trench 6, which was 18m by 1.8m in size, was oriented north-east/south-west. The natural subsoil (601) consisting of a brown clay was located at a depth of 0.55m BGL (20.56m AOD) and was overlain by gravel and cobbles in a matrix of ash, stone chippings and grey loam (600), of a combined depth of 0.55m.

5.1 Trench 7 (Fig. 2)

5.7.1 Trench 7, which was 16m by 1.8m in size, was oriented ENE-WSW. The natural subsoil (701) consisting of a brown clay was located at a depth of 0.55m BGL (20.37m AOD) and was overlain by gravel and cobbles in a matrix of ash, stone chippings and grey loam (700), of a combined depth of 0.55m. Two services associated with the former industrial building were located.

Eastern area of site – Grassed Area

5.8 Trench 8 (Fig. 2)

5.8.1 Trench 8, which was 25m by 1.8m in size, was oriented north-east/south-west and located in the north-western area of the grassed field. The natural subsoil (803) consisting of a brown clay was located at a depth of 1.70m BGL (19.59m AOD) and was overlain by a 0.30m deep layer of grey silty loam (802) overlain by a 1.20m deep mixed deposit of brown and yellow clay with lenses of grey loam (801). This layer of redeposited material (801) was overlain by a grey loam topsoil (800), 0.20m in depth. Due to the depth at which natural subsoil lay, rather than being exposed throughout the length of the trench, two 7m by 1.8m trenches were excavated to full depth at either end of the trench.

5.9 Trench 9 (Fig. 2)

5.9.1 Trench 9, which was 25m by 1.8m in size, was oriented north-west/south-east and located in the north-western area of the grassed field. The natural subsoil (902) consisting of a brown clay merging with a yellow sandy clay was located at a depth of 1.50m BGL (19.54m AOD) and was overlain by a 1.20m deep mixed deposit of brown and yellow clay with lenses of grey loam (901). This layer of redeposited material (901) was overlain by a grey loam topsoil (900), 0.30m in depth. The natural clay (902) was exposed in a 5m by 1.8m sondage at the north-western end of the trench.

5.10 Trench 10 (Fig. 2; Plate 5)

5.10.1 Trench 10, which was 25m by 1.8m in size, was oriented north-west/south-east and located in the northern area of the grassed field. The natural subsoil (1002) consisting of a brown clay was located at a depth of 0.70m BGL (19.69m AOD) and

was overlain by a 0.50m deep mixed deposit of brown and yellow clay with lenses of grey loam (1001). This layer of redeposited material (1001) was overlain by a grey loam topsoil (1000), 0.20m in depth.

5.11 Trench 11 (Fig. 2)

5.11.1 Trench 11, which was 25m by 1.8m in size, was oriented NNW-SSE and located in the western area of the grassed field. The natural subsoil (1102) consisting of a yellow clay was located at a depth of 0.80m BGL (19.67m AOD) and was overlain by a 0.55m deep mixed deposit of brown and yellow clay with lenses of grey loam (1101). This layer of redeposited material (1101) was overlain by a grey loam topsoil (1100), 0.25m in depth.

5.12 Trench 12 (Fig. 2)

5.12.1 Trench 12, which was 25m by 1.8m in size, was oriented NNW-SSE and located in the central area of the grassed field. The natural subsoil (1202) consisting of a brown clay was located at a depth of 0.72m BGL (19.66m AOD) and was overlain by a 0.52m deep mixed deposit of brown and yellow clay with lenses of grey loam (1201). This layer of redeposited material (1201) was overlain by a grey loam topsoil (1200), 0.20m in depth.

5.13 Trench 13 (Fig. 2; Plate 6)

5.13.1 Trench 13, which was 25m by 1.8m in size, was oriented north-east/south-west and located in the southern area of the grassed field. The natural subsoil (1302) consisting of a yellow-brown clay was located at a depth of 0.62m BGL (19.60m AOD) and was overlain by a 0.42m deep mixed deposit of brown and yellow clay with lenses of grey loam (1301). This layer of redeposited material (1301) was overlain by a grey loam topsoil (1300), 0.20m in depth.

5.14 Trench 14 (Fig. 2; Plate 7)

5.14.1 Trench 14, which was 25m by 1.8m in size, was oriented ENE-WSW and located in the southern area of the grassed field. The natural subsoil (1402) consisting of a brown clay was located at a depth of 0.81m BGL (19.20m AOD) and was overlain by a 0.65m deep mixed deposit of brown and yellow clay with lenses of grey loam (1401). This layer of redeposited material (1401) was overlain by a grey loam topsoil (1400), 0.26m in depth.

5.15 Trench 15 (Fig. 2)

5.15.1 Trench 15, which was 25m by 1.8m in size, was oriented north-west/south-east and located in the north-eastern area of the grassed field. The natural subsoil (1502) consisting of a brown clay was located at a depth of 1.10m BGL (19.33m AOD) and was overlain by a 0.85m deep mixed deposit of brown and yellow clay with

lenses of grey loam (1501). This layer of redeposited material (1501) was overlain by a grey loam topsoil (1500), 0.25m in depth.

5.16 Trench 16 (Fig. 2; Plate 8)

5.16.1 Trench 16, which was 25m by 1.8m in size, was oriented NNW-SSE and located in the south-eastern area of the grassed field. The natural subsoil (1602) consisting of a brown clay was located at a depth of 0.90m BGL (19.60m AOD) and was overlain by a 0.65m deep mixed deposit of brown and yellow clay with lenses of grey loam (1601). This layer of redeposited material (1601) was overlain by a grey loam topsoil (1600), 0.25m in depth.

6 DISCUSSION

6.1 No significant archaeological features were located in the evaluation trenches. The trenching established that there had been extensive groundworks associated with the construction of the Industrial Estate which would have impacted negatively on potential archaeological features, if previously present.

6.2 Three different episodes or areas of groundworks were identified. In the area of the former western building, the ground surface had been terraced into to form a level construction area, at a depth of 0.30-0.33m BGL (21.43-2.48m AOD). In the area of the former eastern industrial building, the ground surface had been terraced into to form a level construction area, at a depth of 0.43-0.60m BGL (20.15-20.48m AOD). In the grassed area in the eastern area of the site levels had been reduced by depth of between 0.62-1.70m BGL (19.20-19.69m AOD) with natural clays then being redeposited to form the present ground level.

6.3 In all three areas no archaeological features were located and no pre-modern layers such as a former ploughsoil horizon survived. In view of these negative results no further archaeological work would be appropriate at the site.

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APPENDIX 1: LIST OF CONTEXTS

Context	Depth	Description
100	0.30m	Trench 1 – Tarmac and bedding
101	-	Trench 1 – Natural subsoil
200	0.32m	Trench 2 – Topsoil
201	-	Trench 2 – Natural subsoil
300	0.33m	Trench 3 – Topsoil
301	-	Trench 3 – Natural subsoil
400	0.43m	Trench 4 – Demolition material
401	-	Trench 4 – Natural subsoil
500	0.45m	Trench 5 – Demolition material
501	0.15m	Trench 5 – Redeposited clays
502	-	Trench 5 – Natural subsoil
600	0.55m	Trench 6 - Demolition material
601	-	Trench 6 – Natural subsoil
700	0.55m	Trench 7 – Demolition material
701	-	Trench 7 – Natural subsoil
800	0.20m	Trench 8 – Topsoil
801	1.20m	Trench 8 – Redeposited clays
802	0.30m	Trench 8- Silty loam
803	-	Trench 8 – Natural subsoil
900	0.30m	Trench 9 – Topsoil
901	1.20m	Trench 9 – Redeposited clays
902	-	Trench 9 – Natural subsoil
1000	0.20m	Trench 10 – Topsoil
1001	0.50m	Trench 10 – Redeposited clays
1002	-	Trench 10 – Natural subsoil
1100	0.25m	Trench 11- Topsoil
1101	0.55m	Trench 11 – Redeposited clays
1102	-	Trench 11- Natural subsoil
1200	0.20m	Trench 12- Topsoil
1201	0.52m	Trench 12- Redeposited clays
1202	-	Trench 12 – Natural subsoil
1300	0.20m	Trench 13 - Topsoil
1301	0.42m	Trench 13 – Redeposited clays
1302	-	Trench 13 – Natural subsoil
1400	0.26m	Trench 14 – Topsoil
1401	0.65m	Trench 14 – Redeposited clays
1402	-	Trench 14 – Natural subsoil
1500	0.25m	Trench 15 – Topsoil
1501	0.85m	Trench 15 -Redeposited clays
1502	-	Trench 15 – Natural subsoil
1600	0.25m	Trench 16 – Topsoil

1601	0.65m	Trench 16 – Redeposited clays
1602	-	Trench 16 – Natural subsoil

APPENDIX 2: SPECIFICATION

WRITTEN SCHEME OF INVESTIGATION FOR LAND AT HADSTON INDUSTRIAL ESTATE, HADSTON, NORTHUMBERLAND

1 Introduction

1.1 This written scheme of investigation represents a methods statement for undertaking an archaeological evaluation in advance of the construction of a housing development on the site, which forms part of Hadston Industrial Estate. The site consists of the buildings, tarmac hardstanding and landscaped grassed areas of the Hadston Industrial Estate which lies off the B1330 north of the centre of Hadston Village. The site is centred on NGR NU 250 004 and has a total area of 2.4 hectares.

1.2 Policy relating to the assessment and mitigation of impacts to the heritage resource within the planning system is set out in the National Planning Policy Framework (NPPF). The Framework identifies that the planning system should perform 'an environmental role', contributing to and protecting the built and historic environment and that the pursuit of 'sustainable development' includes seeking improvements to the built, natural and historic environment.

1.3 The Framework further clarifies that, in circumstances where heritage assets will be damaged or lost as a result of development, Local Planning Authorities should require developers to record and advance the understanding of the asset to be lost in a manner appropriate to the significance of the asset. The evidence (and any archive) generated as part of the plan making process should be made publically accessible; copies of the evidence generated should be deposited with the relevant Historic Environment Record and archives with the relevant museum.

1.4 The National Planning Policy Framework states that "Where a site on which a development proposal includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate assessment and, where necessary, a field evaluation" NPPF page 128. This Written Scheme of Investigation relates to the field evaluation stage of the project.

2 Archaeological and Historical Background

2.1 The Northumberland Coastline, and more specifically Druridge Bay to the east of the site, is known to have been a focus for prehistoric activity. The area of coastline at Low Hauxley, 3.5km to the north-east of the site, has been the subject of several archaeological investigations as a result of the exposure of Bronze Age cairns and cists by erosion and movement of the dunes. A number of excavations since 1982 have rescued parts of a Bronze Age cemetery consisting of cists containing both

inhumations and cremations that were buried beneath circular cairns. The "Rescued from the Sea" project undertaken by ARS 2013-4 discovered beneath the Bronze Age cemetery a Mesolithic occupation layer that produced over 20,000 worked flints and above the cemetery an Iron Age house rebuilt in the Romano-British period.

2.2 Recent discoveries have indicated that the Northumberland Coastal Plain contains a density of late prehistoric settlement settlements. One such settlement is located 800m south-west of the site to the east of Woodside Burn (HER23355). This site was identified through study of aerial photography. The cropmark consists of an irregular enclosure which appears to be surrounded by a single ditch on the north, south and west sides, and a double ditch on the east side. A background of prehistoric artefactual evidence and known sites indicates that the site lies in an area that would have been fertile and populated throughout the prehistoric period.

2.3 The HER does not record any known military features of Roman date on the development site itself or within the study area of the site, although it is likely the enclosure (HER 23355) continued into the Romano-British Period.

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2.7 The industrial revolution brought change to the area with the sinking of mines, the development of road and railway communications and an increase in housing and population. In 1867 Mr Baker Cresswell leased land to the Broomhill Colliery Company and several drift mines were worked in conjunction with Broomhill Colliery (the latter being north of the site). The site of the former Broomhill Colliery Brickworks lay 250m west of the site (HER20816). The Amble Railway Line (HER 27319) constructed in 1849 ran north-east/south-west to the north of the site on which lay Broomhill Railway Station (HER 27321).

2.8 During the Second World War defensive structures were constructed along the Northumberland Coastline. Remains of a World War II light anti-aircraft artillery site (HER 5588) are located 950m to the west of the site, with a pillbox (HER 13877) east of Hadston Farm.

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archaeological features. By the time of the third edition Ordnance Survey of 1921 part of the site is show as being occupied by cricket pitches and a recreation ground suggesting the possibility that some levelling of the site may have taken place to accommodate these features which would have potentially impacted sub-surface archaeological remains present on the site. The greatest impact to the site will have occurred in the recent past with the construction of the Hadston Industrial Estate, it is likely that that this will have disturbed and truncated any archaeological features surviving on the site though the extent of this disturbance is unclear. A topographic survey shows the extent of groundworks and landscaping. In the western portion of the site which averaged 21.5-21.90mAOD there is raised landscaping bank along the western perimeter, with trees and shrubbery to the south. A rectangular car-parking area and concrete base is laid-out in the central area with a grassed area to the north, which is possibly less disturbed than other areas of the western portion of the site. In the eastern portion of the site the area fronting the road has been disturbed with the construction of buildings, hardstanding and car-parking areas (Area C). It is clear that terracing has taken place prior to construction of a building, now demolished, in Area C. Whilst the topographical survey did not extend into the interior of Area C, the northern fenceline was at 20.40-20.60m AOD compared to 20.80-21.00m AOD a few metres to the north. On the western side the ground level fell from 21.80-21.90m next to the road to 20.90m-21.00m at the western fenceline of Area C. To the east and north-east of the built area the site is a generally and flat relatively undisturbed being largely occupied by rough grass (Area A). Along the southern perimeter of this section of the site is a raised east-west embankment (Area B at 20.90-21.50m AOD as opposed to an average of 19.70m-19.90m, immediately north in the undisturbed area (Area A). To the north of this raised east-west bank the grassed area of the site in Area A is generally flatter with a few undulations and a road curving into its northern end. Areas D and E on the western side of the site consists of car park area (Area E) with an undisturbed portion of land to the north and east (Area D). A subsequent geotechnical survey was undertaken at the site (Coast Consulting Engineers 2021). The results of this were inconclusive in terms of assessing disturbance on the site although the results suggest that in neither Areas A or C, where previous building work has taken place, has construction work involved terracing into the natural subsoil. The survey did show that the mounded area in Area B represents a substantial earthwork with up to 2.90m of mounded material overlying the natural subsoil. The groundworks involved in the construction of this mound are likely to have impacted negatively on any archaeological features, if present.

3 Required Course of Action

3.1 A trenching strategy of a 4% sample is recommended in the undisturbed areas of the site (10 Trenches 25m x 1.8m in Area A and 2 Trenches 20m x 1.8m in Area D). In the disturbed areas of the site (Areas B – 2 Trenches 15m x 1.8m, C – 3 Trenches 20m x 1.8m and E- 1 Trench 15m x 1.8m) 2.5% sample is recommended.

3.2 Any variation or alteration to this scheme would require approval by Northumberland County Council Conservation Team (NCCCT). Contingency trenching

of up to a further 1% sample trenches has been defined. The contingency would only be drawn upon, following discussions and agreement between the client and NCCCT. However, minor expansions to trenches to clarify features can be undertaken in advance of a meeting so long as the client is kept informed. Any variation or alteration to this scheme would require approval by NCCCT.

3.3 During the course of the trenching it may become apparent that variation is required, dependent on the nature, extent and importance of archaeological remains uncovered. It also may become apparent during the course of the operation that some areas where trenches have been sited are inappropriate for potential archaeological activity (for instance lying entirely within the line of a furrow) or due to logistical or practical reasons. Trenches can only be moved with the approval of NCCCT.

4 General Standards

4.1 All work will be carried out in compliance with the codes of practice of the Institute of Field Archaeologists (CIfA) (CIfA 2014a) and will follow the CIfA Standard and Guidance for Archaeological Field Evaluation (CIfA 2014b). All work will be in compliance with the Regional Statement of Good Practice (Yorkshire, The Humber and the North-East 2009).

5 Pre-site work preparation

5.1 All staff will familiarise themselves with the archaeological background of the site, and the results of any previous work in the area, prior to the start of work on site. All staff will be briefed in the work required under the specification and the project aims and methodologies.

5.2 The Great North Museum will be contacted to discuss archiving, should significant archaeological features be recorded.

5.3 An environmental sampling strategy in accordance with the previous advice of the Historic England North East Regional Science Advisor (see 8 below) will be followed.

6 Fieldwork

6.1 Each evaluation trench will be accurately survey and related to the National Grid, using a Total Station Theodolite or GPS system, and located on a map of the area at an appropriate scale.

6.2 Topsoil and unstratified modern material will be removed mechanically by a machine using a wide toothless ditching blade. This machine stripping will be carried out under continuous archaeological supervision.

6.3 The topsoil or recent overburden will be removed in successive level spits down to the first significant archaeological horizon or the natural subsoil, whichever is encountered first.

6.4 All faces of the trenches that require examination or recording will be cleaned sufficiently to establish the presence or absence of archaeological remains, particularly the top of the first significant archaeological horizon or the natural subsoil. All subsequent deposits will be hand-excavated.

6.5 In the event that small discrete archaeological features are revealed including but not limited to postholes and pits, during machining or subsequent cleaning of the trench, the trench will be expanded either side of the feature by a machine bucket width as standard. If further additional trench expansion is required this should be carried out following discussions with the Assistant County Archaeologist and the client.

6.6 The archaeology will be investigated sufficiently to establish its nature, extent and date, unless it is deemed of sufficient importance to require total preservation in situ. This will be achieved by excavation of the following samples of all exposed features.

- 50% of every discrete feature (e.g. pits, post-holes) 25% of the area of linear/curvilinear features (e.g. ditches, gullies) with a non-uniform fill
- 10% of the area of linear/curvilinear features (e.g. ditches, gullies) with a uniform fill
- All terminals and intersections of features will be excavated

6.7 Within the constraints of the site, the excavations will be maintained in a manner that allows quick and easy inspection without any requirement for additional cleaning.

6.8 Deposits will be assessed for their potential for providing environmental or dating evidence. Sampling will be in line with the strategy agreed with Historic England Regional Science Advisor and NCCCT.

6.9 In the event of human burials being discovered, they will be left in situ, covered and protected and the coroners' office will be informed. If removal is essential, work will comply with relevant Ministry of Justice regulations.

6.10 Appropriate procedures under the relevant legislation will be followed in the event of the discovery of artefacts covered by the provisions of the Treasure Act 1996.

6.11 The drawn record from the site will include a representative selection of long sections from the excavations that clearly allow the nature and depth and any significant changes in the deposits recorded to be demonstrated. If there is any uncertainty, advice will be sought from the Assistant County Archaeologist as to which sections may be appropriate for inclusion within the site record.

6.12 During and after the excavation, all recovered artefacts will be stored in the appropriate materials and storage conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, and regular monitoring of conditions, immediate selection for conservation of vulnerable material).

7 Archaeological Recording

7.1 A full and proper record (written, graphic and photographic as appropriate) will be made for all work, using pro forma record sheets and text descriptions appropriate to the work. Accurate scale plans and section drawings will be drawn at 1:50, 1:20 and 1:10 scales as appropriate.

7.2 The stratigraphy of all trenches will be recorded even where no archaeological deposits have been identified.

7.3 All archaeological deposits and features, the current ground level and base of each trench will be recorded with an above ordnance datum (AOD) level.

7.4 A photographic record of all archaeological features will be taken, both in detail and in a wider context. These will be digital photographs and will include a clearly visible, graduated metric scale. A register of all photographs will be kept. The photographic record will be sent to ADS York if appropriate in an approved format to be stored as part of their electronic archive.

7.5 Where stratified deposits are encountered, a 'Harris' matrix will be compiled

8 Environmental Sampling and Scientific Dating Strategy

8.1 This sampling strategy is intended to provide sufficient data to characterise the nature and informative potential of deposits and features identified during the works. Because this is the first stage of intrusive works and there is a possibility that a wide range of features may be encountered, this strategy is best set out as a series of principles.

These are:

- 30l samples will be taken from structural, occupational and industrial features, as well as pits and ditch fills. Other features should be sampled to help to characterise the deposits on the site. Priority should be given to processing samples from identifiable, dated features, or to those undated features which have potential for other forms of dating (e.g. radiocarbon dating).

- Bulk sample residues should be checked for the presence of industrial waste (e.g.slags, hammerscale) and small faunal remains (e.g. fishbones, small mammal/avian bones) as well as for plant material.

• The potential of buried soils and ditch fills to provide dated (using radiocarbon dating) pollen cores or Optically Stimulated Luminescence (OSL) dating of sediments should be considered, although this type of sampling will be undertaken in consultation with the Historic England Regional Scientific Advisor.

8.2 In the event that hearths, kilns or ovens are identified, provision will be made to collect at least one archaeo-magnetic date to be calculated from each individual hearth surface (or in the case of domestic dwellings a minimum of one per building identifed). Where applicable, samples to be collected from the site and processed by a suitably trained specialist for dating purposes.

8.3 The selection of suitable deposits for sampling will be confirmed at site meetings with the NCCCT. Analysis of environmental sampling and radiocarbon dating will be required should significant archaeological deposits be located. Costs for sampling and dating should be clearly stated as contingencies in costings for the evaluation. In principle palaeoenvironmental samples will be taken from deposits which have clear stratigraphic relationships. Particular attention will be paid to the recovery of samples from any waterlogged samples that may be present.

9 Monitoring

9.1 The County Archaeologist will be informed on the start date and timetable for the evaluation in advance of work commencing.

9.2 Reasonable access to the site will be afforded to the County Archaeologists or his/her nominee at all times, for the purposes of monitoring the archaeological evaluation. Up to 2 monitoring visits will be made by the County Archaeologists or his/her nominee, any further visits will be made at the request of the client. The first site monitoring visit will be free and those after that will be charged for time and travel by NCCCT.

9.3 Regular communication between the contractor, the County Archaeologist and other interested parties will be maintained to ensure the project aims and objectives are achieved.

9.4 If appropriate, specialists will be contacted and allowed access to the site to help inform any detailed study / information retrieval depending upon the nature of the archaeological features being revealed.

10 Post excavation work, archive, and report preparation

10.1 Finds

10.1.1 All finds processing, conservation work and storage of finds will be carried out in compliance with the CIfA Guidelines for Finds Work (CIfA 2014c) and those set by UKIC.

10.1.2 The deposition and disposal of artefacts will be agreed with the legal owner and recipient museum prior to the work taking place. Where the landowner decides to retain artefacts, adequate provision will be made for recording them. Details of land ownership will be provided by the developer.

10.1.3 All retained artefacts will be cleaned and packaged in accordance with the requirements of the recipient museum.

11.1 Site Archive

11.1.1 The archive and the finds will be deposited in the appropriate local museum, within 6 months of completion of the post-excavation work and report.

11.1.2 Archiving work will be carried out compliance with the CIfA Guidelines for Archiving (CIfA 2014d).

11.1.3 Before fieldwork, contact will be made with the landowners and with the appropriate local museum to make the relevant arrangements. Details of land ownership will be provided by the developer.

11.1.4 NCCCT will require confirmation that the archive had been submitted in a satisfactory form to the relevant museum.

11.2 Report

11.2.1 NCCCT requires one digital copy (in Word or PDF format) of the report.

11.2.2 The report will include the following as a minimum:

The report will include the following as a minimum:

• Planning application numbers, NCCCT reference, OASIS reference numbers and an 8 figure grid reference

• A location plan of the site at an appropriate scale of at least 1:10 000. This will be at a recognisable planning scale, and located with reference to the national grid, to allow the results to be accurately plotted on the Sites and Monuments Record

• Plans and sections of main trench axes and excavated features located at a recognisable planning scale (1:10, 1:20, 1:50 or 1:100, as appropriate)

• Period based discussion of the known and potential archaeological sites within the proposed development area

• A summary statement of the results

• A table summarising the deposits, features, classes and numbers of artefacts encountered and spot dating of significant finds

• A description of the geology on the site

• Discussion of the physical impact of the proposed development on known and potential archaeological sites

11.2.3 Any variation to the above requirements will be approved by the planning authority prior to work being submitted

12 OASIS

12.1 NCCCT supports the Online Access to Index of Archaeological Investigations (OASIS) Project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large scale developer funded fieldwork.

12.2 The archaeological contractor will therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Once a report has become a public document by submission to or incorporation into the HER, Northumberland HER will validate the OASIS form thus placing the information into the public domain on the OASIS website. The archaeological consultant or contractor will indicate that they agree to this procedure within the specification/project design/written scheme of investigation submitted to NCCCT for approval

13 Publication

13.1 A summary will be prepared for 'Archaeology in Northumberland' and submitted to Liz Williams, Northumberland HER Officer, by December of the year in which the work is completed.

13.2 A short report of the work will also be submitted to a local journal if appropriate.

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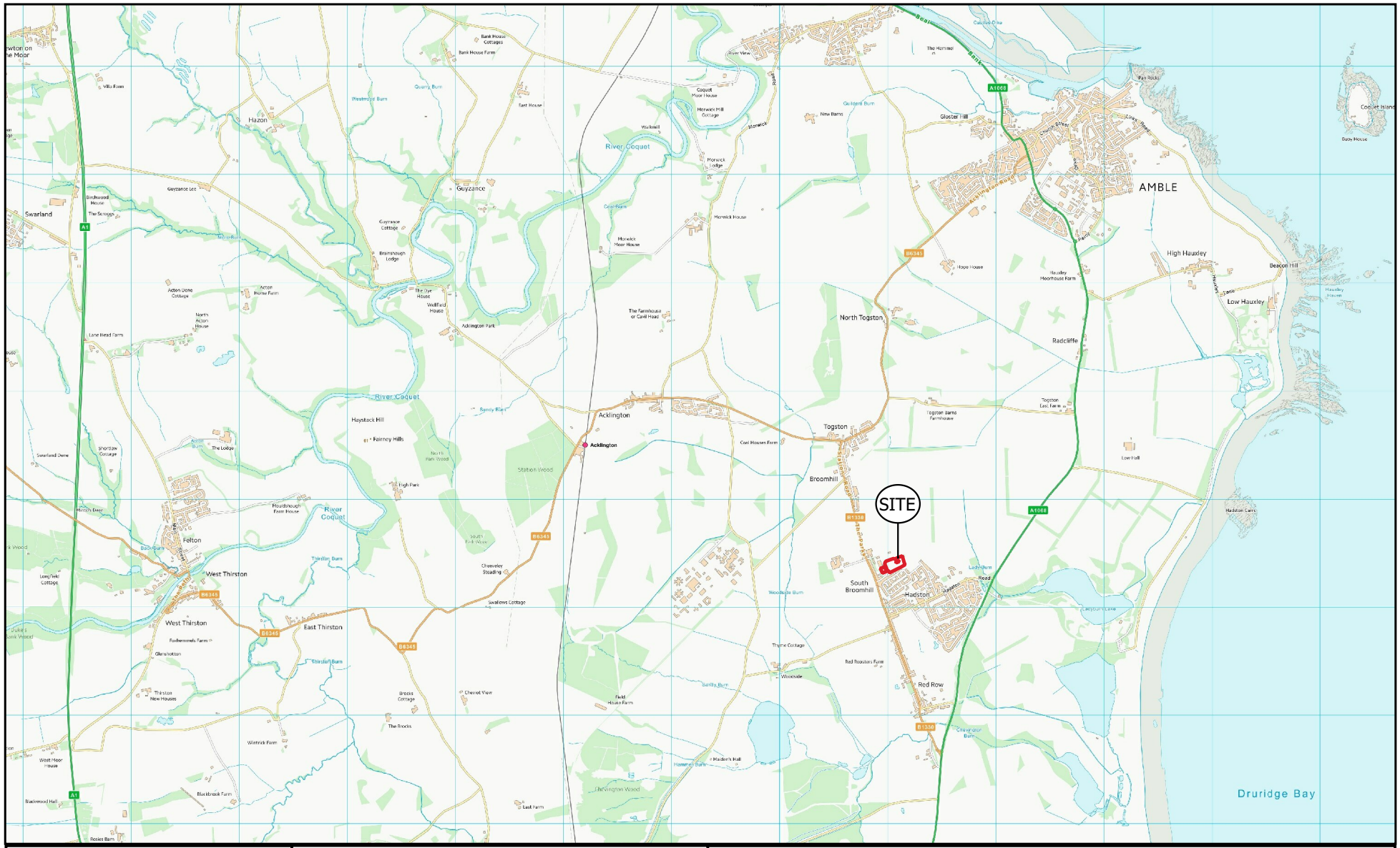

AD Archaeology Ltd

0 1 2 km

scale: 1:50,000

Figure 1: General location of site

Figure 2: Hadston Industrial Estate Evaluation trench location plan

Plate 1: Trench 1 looking south

Plate 2: Trench 2 looking west

Plate 3 Trench 4 looking north

Plate 4 Trench 5 looking west

Plate 5 Trench 10 looking south-east

Plate 6 Trench 13 looing south-east

Plate 7 Trench 14 looking south-west

Plate 8 Trench 16 looking south