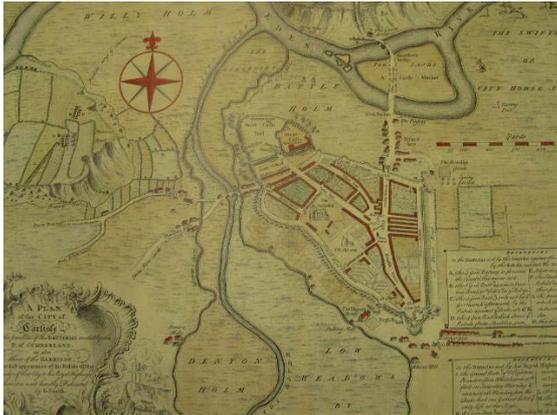


# Lower Viaduct Estate, Carlisle Cumbria



## Archaeological Impact Assessment



**Oxford Archaeology North**

June 2008

**Kier Scotland**

Issue No: 2008-09/842

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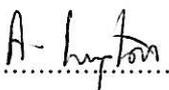
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**CONTENTS**

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<b>SUMMARY .....</b>	<b>2</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>4</b>
<b>1. INTRODUCTION.....</b>	<b>5</b>
1.1 Circumstances of the Project .....	5
1.2 Site Location, Topography and Geology.....	5
<b>2. METHODOLOGY .....</b>	<b>6</b>
2.1 Impact Assessment .....	6
<b>3. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL .....</b>	<b>7</b>
3.1 Archaeological and Historical Background.....	7
3.2 Cartographic Sources .....	8
3.3 Significance of the Archaeological Remains .....	9
3.4 Proposed Construction Details.....	11
<b>4. IMPACT AND RECOMMENDATIONS .....</b>	<b>12</b>
4.1 Impact Significance .....	12
4.2 Impact Assessment .....	13
4.3 Recommendations .....	14
<b>BIBLIOGRAPHY .....</b>	<b>16</b>
Primary and Cartographic Sources.....	16
Secondary Sources .....	16
<b>ILLUSTRATIONS .....</b>	<b>18</b>
List of Figures .....	18
<b>APPENDIX 1: CCCHES EVALUATION PROJECT BRIEF .....</b>	<b>19</b>
<b>APPENDIX 2: BOREHOLE INFORMATION.....</b>	<b>23</b>
<b>APPENDIX 3: HER INFORMATION .....</b>	<b>24</b>

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## SUMMARY

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Following the submission of a planning application for a new Tesco supermarket on the Lower Viaduct Estate, Carlisle (planning application ref: 1/05/1333), permission has been granted with a condition to undertake a programme of archaeological investigation. The site was identified as having a high archaeological potential in a desk-based assessment previously undertaken (LUAU 2000), due to its position close to the Roman fort and *vicus*, and just outside of the medieval town walls. More recently, by 1900, the site contained a railway goods station and grain shed. Consequently, a brief was issued by Cumbria County Council's Historic Environment Service (CCCHES) for archaeological evaluation trenching of the site covering a minimum 5% random sample. Subsequent to this, information from geotechnical site investigation work, including borehole data, has indicated areas of made ground and contamination from diesel from an on-site railway fuel storage tank. Therefore, CCCHES has agreed to a more targeted programme of evaluation trenching based on the outcome of an impact assessment, taking into account the details of the proposed construction works.

Until recently, the site was occupied by a car showroom, car parking and the now demolished Council offices. The proposed development mainly consists of the foodstore building in the southern half of the site, and car parking in the northern half. There is expected to be minimal intrusive work in the area of the car parking facilities, but the foodstore requires more intrusive foundations, consisting mainly of columns, foundation pads and an edge beam. The main support will be in the form of vibro-piling foundations inserted to a depth of between 4m-6m at a distance of approximately 1m centres below the foundation pads, and approximately 2.5m centres below the main floor slab.

The re-examination of the desk-based assessment (*ibid*) and cartographic sources has shown there to be archaeological potential due to the development site's close proximity to the medieval town walls and Roman fort, from which there may be associated extramural activity. Given the historically generally low-lying and relatively poorly drained topography of the site, it is possible that during the medieval period it served as a water meadow. The previously undeveloped open nature of the site into the post-medieval period, seen in the cartographic evidence, may have allowed earlier deposits to have remained, possibly even of a prehistoric date. Industrial activity encroached around the site until it was eventually occupied by the railway sidings and goods shed in the mid nineteenth century. The level of the development site is likely to have been raised at this time to enable the construction of the sidings, seen in the depth of made ground (varying in thickness between 1.1m to <5.9m below current ground level) identified from the borehole information, and may therefore protect any earlier deposits existing within the underlying alluvial deposits. Based on current knowledge, any surviving archaeological remains within the development site would be of low/local importance, although the subsequent discovery of additional features could alter this level.

To further assess the impact of the foodstore construction trial evaluation, to determine the date of the made ground deposits and any remaining archaeological deposits below these, is recommended. It is possible that the made ground may have either removed earlier deposits or significantly disturbed them. Any subsequent mitigation strategy will be based on the significance of any remains discovered;

current legislation (PPG 16) draws a distinction between archaeological remains of national importance and other remains considered to be of lesser significance. Those perceived to be of national importance may require preservation *in situ*, whilst those of lesser significance may undergo preservation by record, where high local or regional significance can be demonstrated. Only the railway sidings and goods sheds are known to have existed on the site and any associated or earlier remains would be negatively impacted on by the proposed development, although extramural features from the early post-medieval period or earlier may exist.

Any trenching undertaken would need to take into account the potential contamination identified in the south-east corner of the site (borehole (BH) 17 and 18), and across the site around BH 10, 12, 13, 14, 16 and 20, together with the depth of trenching required to reach the undisturbed (alluvial) deposits, and the ground water levels (occurring at between 2.5 and 3m in most boreholes). Consequently, the areas available for further archaeological investigation are in the vicinity of BH 11 and 15, where alluvial deposits were identified at depths of 1.8m and 1.1m respectively. The area around BH 12 and 13 is also a possibility, depending on the depths of investigation, as the alluvial deposits were identified at 1m-1.1m but there was also potential contamination at a deeper level.

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The impact assessment was undertaken by Ailsa Westgarth and the drawings were produced by Alix Sperr. The project was managed by Emily Mercer, who also edited the report.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Following the submission of a planning application for a new Tesco supermarket on the Lower Viaduct Estate, Carlisle (planning application ref: 1/05/1333), permission has been granted with a condition to undertake a programme of archaeological investigation. The site was identified as having a high archaeological potential in a desk-based assessment previously undertaken (LUAU 2000), due to its position close to the Roman fort and *vicus*, and just outside of the medieval town walls. More recently, by 1900, the site contained a railway goods station and grain shed. Consequently, a brief was issued by Cumbria County Council's Historic Environment Service (CCCHES) for archaeological evaluation trenching of the site covering a minimum 5% random sample (*Appendix 1*).
- 1.1.2 However, information from geotechnical site investigation work, including borehole data (*Appendix 2*) and underground utility mapping survey results (Fig 2), has indicated areas of contamination and made ground. Therefore, CCCHES has agreed to a more targeted programme of evaluation trenching based on the outcome of an impact assessment, taking into account the details of the proposed construction. This report sets out the results of this impact assessment.

### 1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The proposed development is located on the Lower Viaduct Estate (NGR NY 3995 5560), on a thin spur of land between the railway line and River Caldew (Fig 1). The study area lies below a steep scarp with the Roman city and medieval walled city, including Carlisle Castle and Cathedral overlooking the area. It is bounded to the south-west by the river, to the north-west and south-east by car parks and to the north-east by the raised West Coast Mainline. The land was recently occupied by former County Council offices, now demolished, and a still extant car showroom (Fig 2).
- 1.2.2 The city of Carlisle developed on raised land between the rivers Caldew and Petteril, overlooking the Eden valley. The site is on the flood plain of the River Caldew., with underlying alluvial deposits associated with the river (Young 1990, 2-4).
- 1.2.3 The solid geology is primarily made up of red and grey Triassic sandstone of the Sherwood sandstone group (British Geological Survey 1982). This is for the most part overlain by stagnogleyic argillic brown earths (Ordnance Survey 1983); however, this is obscured by the relatively urban nature of the topography. Glacial processes played a large part in the formation of the landscape, and have resulted in the deposition of large amounts of boulder clay, in many cases totally obscuring the underlying solid geology (Countryside Commission 1998, 21).

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## 2. METHODOLOGY

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### 2.1 IMPACT ASSESSMENT

- 2.1.1 Using the information obtained from the previous desk-based assessment (LUAU 2000), identifying the potential for archaeological remains, the site was examined in terms of the proposed construction details and how this may impact upon any potential below ground remains. The cartographic sources used in the desk-based assessment (*ibid*) were re-examined for evidence of previous activity within the development site, and borehole information (*Appendix 2, Fig 2*), supplied by Goodson Associates Ltd on behalf of the client, was also examined to ascertain the levels of made ground and areas of potential contamination within the site.
- 2.1.2 Several sources of information were consulted as part of the assessment, to provide information on the developmental history of the site. These were held at the Carlisle County Record Office, which holds cartographic and documentary sources relating to the site.

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### 3. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

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#### 3.1 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1.1 The following background allows the site to be considered within the wider historical and archaeological context when assessing the potential for archaeological remains, and has been taken from the previous desk-based assessment (LUAU 2000).
- 3.1.2 Carlisle is situated on the Solway Plain, an area characterised by a relatively large number of prehistoric settlement sites, many apparently dating to the Iron Age, which took advantage of the relatively fertile soils (Bewley 1994). The promontory on which Carlisle Castle stands has been used as a defended settlement, probably since at least the Iron Age, and it is suggested that the castle site may have been a pre-Roman dun (Doubleday 1901). The topography of the city, being a naturally well-defined promontory between the river Eden and Caldew, was exploited by the establishment of a Roman fort in the early AD 70s (McCarthy *et al* 1990). An associated *vicus* grew up to the south of the fort. Further excavations have revealed extra-mural settlement to the south-east along Botchergate and to the north towards the fort at Stanwix, following Scotch street and leading to a river crossing of the Eden. All the identified civilian settlement lay on the promontory with burials extending along Botchergate, outside of the settlement. By the late Roman period the settlement had been awarded the status of a *civitas* capital, known as *Civitas Carvetiorum* indicating its importance (Charlesworth 1978). Occupation of the fort continued, albeit perhaps in some probable military overarching authority and a gradually more diminishing physical form, into the early fifth century with evidence suggesting that the civilian settlement decayed during the late fourth to early fifth centuries (McCarthy 1982).
- 3.1.3 Evidence for early medieval activity within Carlisle is limited. Excavation at Blackfriars street showed that 'Roman' activity appeared to extend beyond the traditional end of Roman government but that the rest of the town appears to have decayed (McCarthy 1990). Later activity was identified as Anglian but more precise dating is impossible (*ibid*). Documentary evidence suggests that some elements of urban life were still in existence in the seventh century when according to Bede, St Cuthbert saw water systems in use (Colgrave 1940). In addition, Bede records a nunnery and monastery associated with the Church of St Cuthbert, which clearly precedes the twelfth century Cathedral precinct (McCarthy 1990). Nothing concrete is known of the town during the ninth and tenth centuries, although metal work of this period has been found within the Cathedral precinct (Gaimster *et al* 1989). The Danes are recorded as having overrun the region in 875 (Earle and Plummer 1892).
- 3.1.4 In 1092 William Rufus restored the town and erected the castle (*ibid*). He also garrisoned the town and brought in labourers from the south to farm the lands (Whellan 1860). Between 1135 and the thirteenth century Carlisle passed between English and Scottish hands several times with the Pope decreeing that Cumberland and Northumberland were English property. The visit of Henry I in 1122 prompted a major period of rebuilding within the Castle and the

foundation of an Augustinian Priory in 1133 (McCarthy *et al* 1990). The thirteenth century saw the foundation of two monastic establishments by the Dominicans (Blackfriars) and Franciscans. The Blackfriars monastery was located within the city walls adjacent to the site (Summerson 1993, 103). During the fourteenth century Carlisle was subject to a number of raids during the Wars of Independence, being sacked and burnt in 1391. By the late fifteenth century a period of anarchy developed along the borders, leading to the development of the Border Reivers (Fraser 1971). In an attempt to control the area marsh wardenship was established in three areas. Carlisle was the seat of the Wardenry of the West. After the unification of the country in 1603, the borders were calmed and Carlisle's influence waned. During the Civil War, Carlisle was held by the Royalists before being recaptured by Parliamentary forces in 1645 (McCarthy *et al* 1990). Carlisle was also affected by the Jacobite Rebellions in 1715 and 1745.

- 3.1.5 During the late eighteenth and early nineteenth century Carlisle enjoyed a steady industrial growth, with the first textile mill built on English Damside in 1724, immediately to the east of the site (HER 18983). Textiles and biscuit manufacturers were most important within the town (Whellan 1860). The construction of the railway in the mid nineteenth century aided Carlisle's development as an industrial centre with good distribution links throughout the county. Within the site several railway sidings and goods yards were constructed in the late 1800s, along with a gas works on the plot immediately to the south-east of the site. The railway sidings were removed and later replaced with offices and a car showroom in the 1970s.
- 3.1.6 No archaeological sites are recorded in the Historic Environment Record (HER) for the development site (*Appendix 3*).

## 3.2 CARTOGRAPHIC SOURCES

- 3.2.1 The cartographic sources used during the desk-based assessment (LUAU 2000) were re-examined to identify the potential for archaeological remains against the proposed construction details (Fig 3).
- 3.2.2 ***Richard's plan and prospect, 1685:*** this was the earliest available detailed map for the site, and shows Carlisle to be a walled city with some small-scale development outside the city walls along the western and northern routes into the city. The site is shown to be open pasture land with no marked features. A small stream runs parallel to the River Caldew between the city walls and river.
- 3.2.3 ***Smith's plan of Carlisle, 1746:*** this map shows the city beginning to develop beyond the medieval walls. However, the site still remains as open fields. Directly adjacent to the site are gardens and the Mayor's House. A fulling mill (HER 18983), built in 1724, is also shown adjacent to the site. Other smaller buildings are also shown between the stream and city walls.
- 3.2.4 ***Wood's plan of Carlisle, 1821:*** the area adjacent to the eastern edge of the development area is becoming more built up. The area between the stream and the city walls is now called Damside. Several buildings straddle the small

stream, indicating a probable industrial use. The development site is still shown as open land, under the ownership of Lord Lonsdale.

- 3.2.5 **Ordnance Survey, first edition map, 1865, 25":1 mile (Fig 4):** by the second half of the nineteenth century the area around the development site had become industrial. Gas works were situated immediately to the south-east of the outlined development area, and several surrounding factories, including the Denton Hill textile works, were located directly across the River Caldew. However, the site is still largely undeveloped with only some encroachment by the railway sidings in the north-east corner and several paths crossing the area.
- 3.2.6 **Ordnance Survey, second edition map, 1901, 25":1 mile (Fig 5):** by the end of the nineteenth century the site had been fully developed into railway sidings and goods sheds. A grain shed also stands on the eastern edge of the site. All of the surrounding area has now been built on, either for factories or housing.
- 3.2.7 **Ordnance Survey, third edition map, 1925, 25":1 mile (Fig 7):** the 1925 map shows little change within the site or surrounding areas, with the railway sidings and goods sheds still present.
- 3.2.8 **Ordnance Survey map of 2006:** present mapping shows the site to be offices and a car showroom. The adjacent gas works is no longer extant and has been replaced with a public car park. The industrial buildings in the surrounding area are mainly extant but have been changed in use to offices. The area across the river is now in use as a small retail outlet.

### 3.3 SIGNIFICANCE OF THE ARCHAEOLOGICAL REMAINS

- 3.3.1 There are a number of different methodologies used to assess the archaeological significance of sites; that to be used here is the 'Secretary of State's criteria for scheduling ancient monuments' which is included as Annex 4 of PPG 16 (DoE 1990).
- 3.3.2 **Rarity:** there is no evidence within the documentary sources examined as during the archaeological assessment of the site to suggest there are any archaeological remains of any rarity.
- 3.3.3 **Documentation:** whilst the earliest available documentary (cartographic) sources pertaining to the site date to the early post-medieval period, these have shown there to be little of any historical or archaeological significance within the proposed development site.
- 3.3.4 **Group Value:** should any remains of the railway sidings and goods shed exist below ground, these would have a group value.
- 3.3.5 **Survival/Condition:** no assessment of the survival and condition of any archaeological remains has been undertaken within the site to date. There is a thick layer of made ground (*Appendix 2*) that may have been laid down for the purposes of the railway sidings, and this may overlie earlier deposits.

- 3.3.6 **Fragility/Vulnerability:** any surviving below ground archaeological remains will be vulnerable to impact from the construction of the proposed development.
- 3.3.7 **Diversity:** the development site was open fields until the later post-medieval period, with subsequent development relating to the railway until the later twentieth century.
- 3.3.8 **Potential:** the close proximity of the development site to the medieval town walls and Roman fort implies that there is potential for associated extramural activity during these periods. Given the historically generally low-lying and relatively poorly drained topography of the site, it is possible that during the medieval period it served as a water meadow. The previously undeveloped open nature of the site into the post-medieval period, seen in the cartographic evidence, may have allowed earlier deposits to have remained undisturbed, possibly even of a prehistoric date. Industrial activity encroached around the site until it was eventually occupied by the railway sidings and goods shed in the mid nineteenth century. The level of the development site is likely to have been raised at this time to enable the construction of the sidings, seen in the depth of made ground identified from the borehole information (*Appendix 2*); this made ground may therefore protect any earlier deposits.
- 3.3.9 **Significance:** Table 1 shows the sensitivity of a site scaled in accordance with its relative importance using the following terms for archaeological issues, with guideline recommendations for a mitigation strategy.

Importance	Examples of Site Type	Negative Impact
National	Scheduled Monuments (SMs), Grade I, II* and II Listed Buildings	To be avoided
Regional/County	Conservation Areas, Registered Parks and Gardens (Statutory Designated Sites) Sites and Monuments Record/Historic Environment Record	Avoidance recommended
Local/Borough	Sites with a local or borough value or interest for cultural appreciation Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	Avoidance not envisaged
Low/Local	Sites with a low local value or interest for cultural appreciation Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	Avoidance not envisaged
Negligible	Sites or features with no significant value or interest	Avoidance unnecessary

*Table 1: Criteria used to determine Importance of Sites*

- 3.3.10 Based on current knowledge, any surviving archaeological remains within the development site would be of low/local importance. The subsequent discovery of additional features could alter this assessed levels of significance.

### 3.4 PROPOSED CONSTRUCTION DETAILS

3.4.1 Figure 2 shows the extant features on site, including buildings, landscape features, and underground services, although the Council offices have recently been demolished. The location of the recent geotechnical boreholes (*Appendix 2*) are also shown, together with the area of known contamination. From environmental investigations the contamination is known to be diesel from an on-site railway fuel storage tank and from the off-site gasworks (Goodson Associates Ltd 2008). Figure 3, on the other hand, shows the proposed development. Almost half of the site will be given over to car parking facilities, where there will be minimal impact expected. The area of the foodstore shows the details of the intrusive foundations, consisting mainly of columns, foundation pads and an edge beam. The main support will be in the form of vibro-piling foundations inserted to a depth of between 4m-6m. Below the foundation pads these will be at a distance of approximately 1m centres, and below the main floor slab these will be approximately 2.5m centres.

## 4. IMPACT AND RECOMMENDATIONS

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### 4.1 IMPACT SIGNIFICANCE

4.1.1 In its Planning Policy Guidance *Note 16*, the Department of the Environment (DoE) advises that archaeological remains are a continually diminishing resource and ‘*should be seen as finite, and non-renewable resource, in many cases, highly fragile and vulnerable to destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed*’. It has been the intention of this study to identify the potential of the site for surviving archaeological remains, and assess the impact of the proposed development in terms of its construction details, thus allowing the advice of the DoE to be enacted upon. Assessment of impact has been achieved by the following method:

- assessing any impact from construction and the significance of the effects arising from redevelopment;
- reviewing the evidence for past impacts that may have affected the archaeological sites through historical sources and geotechnical site investigation information;
- outlining suitable stages of archaeological investigation, where possible at this stage, to mitigate the development in order to avoid, reduce or remedy adverse archaeological impacts.

4.1.1 The impact is assessed in terms of the sensitivity or importance of the site to the magnitude of change or potential scale of impact during the future redevelopment scheme. The magnitude, or scale, of an impact is often difficult to define, but is termed as substantial, moderate slight, or negligible, as shown in Table 2, below.

Scale of Impact	Description
Substantial	Significant change in environmental factors; Complete destruction of the site or feature; Change to the site or feature resulting in a fundamental change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Moderate	Significant change in environmental factors; Change to the site or feature resulting in an appreciable change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Slight	Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.

Scale of Impact	Description
Negligible	Negligible change or no material changes to the site or feature. No real change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.

Table 2: Criteria used to determine Scale of Impact

4.1.2 The interaction of the scale of impact (Table 2) and the importance of the archaeological site (Table 1) produce the impact significance. This may be calculated by using the matrix shown in Table 3 below.

Resource Value (Importance)	Scale of Impact Upon Archaeological Site			
	Substantial	Moderate	Slight	Negligible
National	Major	Major	Intermediate/Minor	Neutral
Regional/County	Major	Major/ Intermediate	Minor	Neutral
Local/Borough	Intermediate	Intermediate	Minor	Neutral
Local (low)	Intermediate / Minor	Minor	Minor/ Neutral	Neutral
Negligible	Neutral	Neutral	Neutral	Neutral

Table 3: Impact Significance Matrix

4.1.3 From the information provided by the client of the proposed construction details the vibro-piling foundations are likely to have a substantial adverse effect on below ground remains. English Heritage guidelines state that “material is forced into the ground, displacing sediment (and archaeology). As the process involves vibration, the soil adjacent to the column is considerably disturbed during the displacement process and this is likely to have a very significant impact on adjacent archaeological deposits” (English Heritage 2007, 12). The close centres of the positions of the piles would effectively destroy below ground remains or adversely effect their surviving context.

## 4.2 IMPACT ASSESSMENT

4.2.1 The potential for surviving archaeological remains has been assessed and identified in Section 3.3, and the site is considered to be of low or local archaeological significance (Section 3.3.9, above). In addition, the extent of any previous disturbance to potential buried archaeological levels is also an important factor in assessing the impact of the development. This was undertaken during the re-examination of the cartographic sources and inspection of the borehole logs (Appendix 1).

4.2.2 Made ground, varying in thickness between 1.1m to <5.9m below current ground level, was identified from the borehole data but no discernible pattern to its make up could be identified; the deposits changed between clays and gravels with mixed ash, to gravel and hardcore inclusions, suggestive of a relatively late (i.e. modern) date. Below the made ground are the alluvial deposits, comprising dense red-brown sandy-gravel. These deposits represent the level with greatest potential for buried archaeological remains relating to

the early nineteenth century (i.e. before the development of the site into railway sidings) and earlier.

- 4.2.3 In addition to the area of contamination identified in the south-east corner of the site (BH 17 and 18; Fig 2), the borehole data also found areas of contamination elsewhere across the site. Excluding the proposed car park area where there will be minimal intrusive work extending only into the made ground deposits (BH 7, 8, 9 and 19), BH 10, 12, 13, 14, 16 and 20 below the proposed foodstore all contained potential contamination. This area will see intrusive works penetrating the deeper alluvial deposits with vibro-piling to a depth of 4-6m.
- 4.2.4 BH10, 14 and 16 also showed the water table to be at the approximate depth of the top of the alluvial deposits, i.e. those of archaeological potential. Across the boreholes, the water levels appear consistent with those of the river, occurring at between 2.5 and 3m below ground level in most boreholes.
- 4.2.5 In the absence of any mitigation, the assessment would suggest that the significance of the impact will be intermediate/minor. This may be lessened following further archaeological intrusive investigation.

### 4.3 RECOMMENDATIONS

- 4.3.1 In terms of the requirement for further archaeological investigation and mitigation, it is necessary to consider only those sites that will be affected by the proposed development. Initial evaluation trenching will aim to investigate the potential for the, as yet, unknown resource. Any subsequent mitigation strategy will be based on the significance of any remains discovered; current legislation (PPG 16) draws a distinction between archaeological remains of national importance and other remains considered to be of lesser significance. Those perceived to be of national importance may require preservation *in situ*, whilst those of lesser significance may undergo preservation by record, where high local or regional significance can be demonstrated. Only one archaeological site was identified within the impact assessment that will be negatively impacted on by the proposed development, that of the railway sidings and goods sheds. Extramural features from the early post-medieval period or earlier may remain within the alluvial deposits buried beneath the made ground imported onto the site as part of the development of the railway.
- 4.3.2 Significant ground disturbance will be undertaken using vibro-piling beneath the proposed store. The remaining area is proposed car parking and will have minimal ground impact. Should any archaeological remains be present they will only be disturbed beneath the foodstore building. The disturbance in this area could be great.
- 4.3.3 Trial evaluation to determine the date of the made ground deposits and any remaining archaeological deposits below these is recommended. The deposition of the made ground may have either removed earlier deposits or significantly disturbed them.

- 4.3.4 Any trenching undertaken would need to take into account the potential contamination, as well as the depth of trenching required to reach the undisturbed deposits, and the ground water levels. Consequently, the areas available for further archaeological investigation are in the vicinity of BH 11 and 15 (Fig 2), where alluvial deposits were identified at depths of 1.8m and 1.1m respectively (*Appendix 2*). The area around BH 12 and 13 is also a possibility, depending on the depths of investigation, as the alluvial deposits were identified at 1m-1.1m but there was also potential contamination at a deeper level.

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## ILLUSTRATIONS

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### **LIST OF FIGURES**

Figure 1: Site location

Figure 2: Plan showing extant features, including underground services and position of boreholes

Figure 3: Proposed foodstore and carpark details

Figure 4: Ordnance Survey, 1st Edition, 1865, 25" to 1 mile

Figure 5: Ordnance Survey, 2<sup>nd</sup> Edition, 1901, 25" to 1 mile

Figure 6: Ordnance Survey, 3<sup>rd</sup> Edition, 1925, 25" to 1 mile

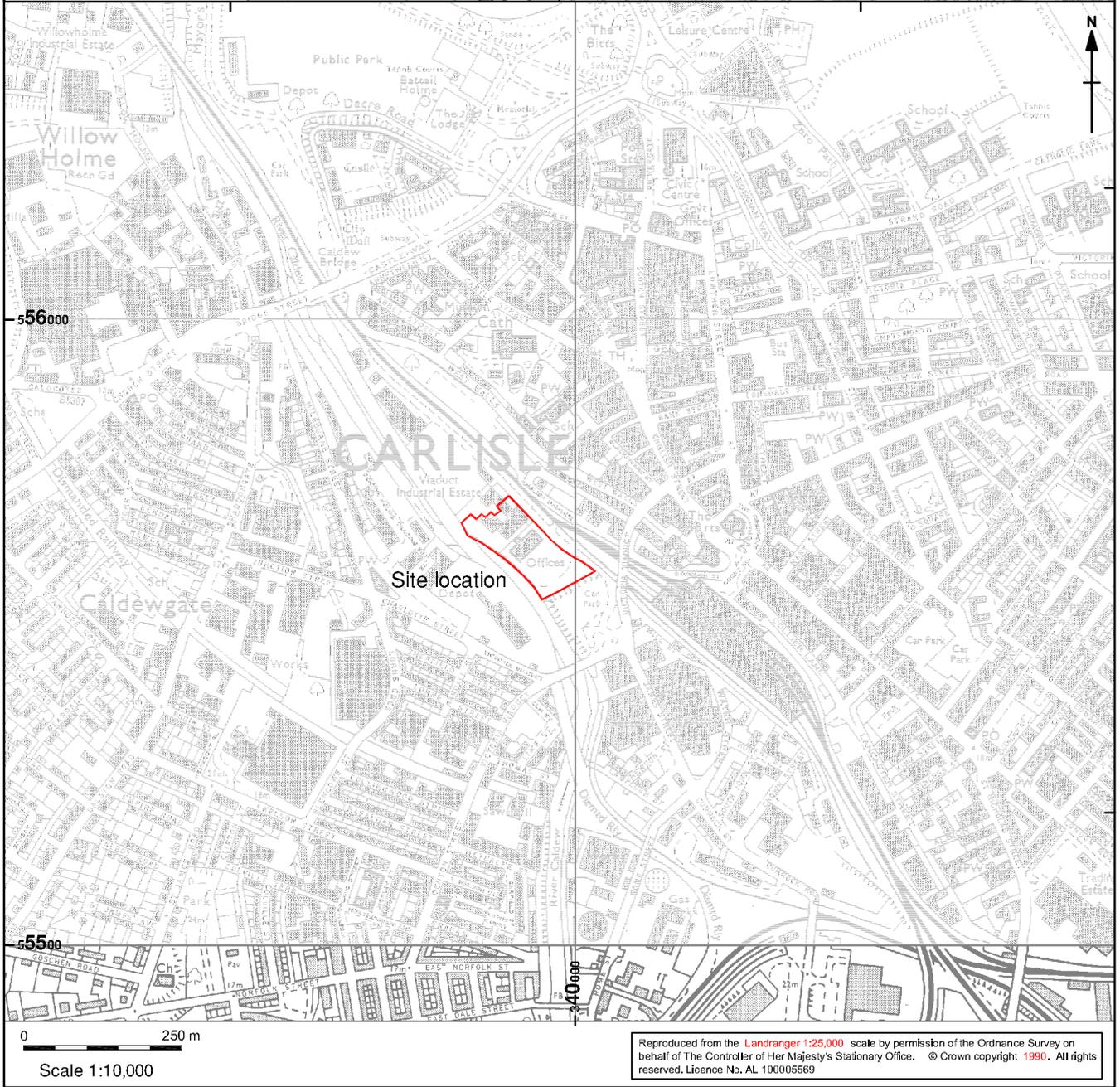
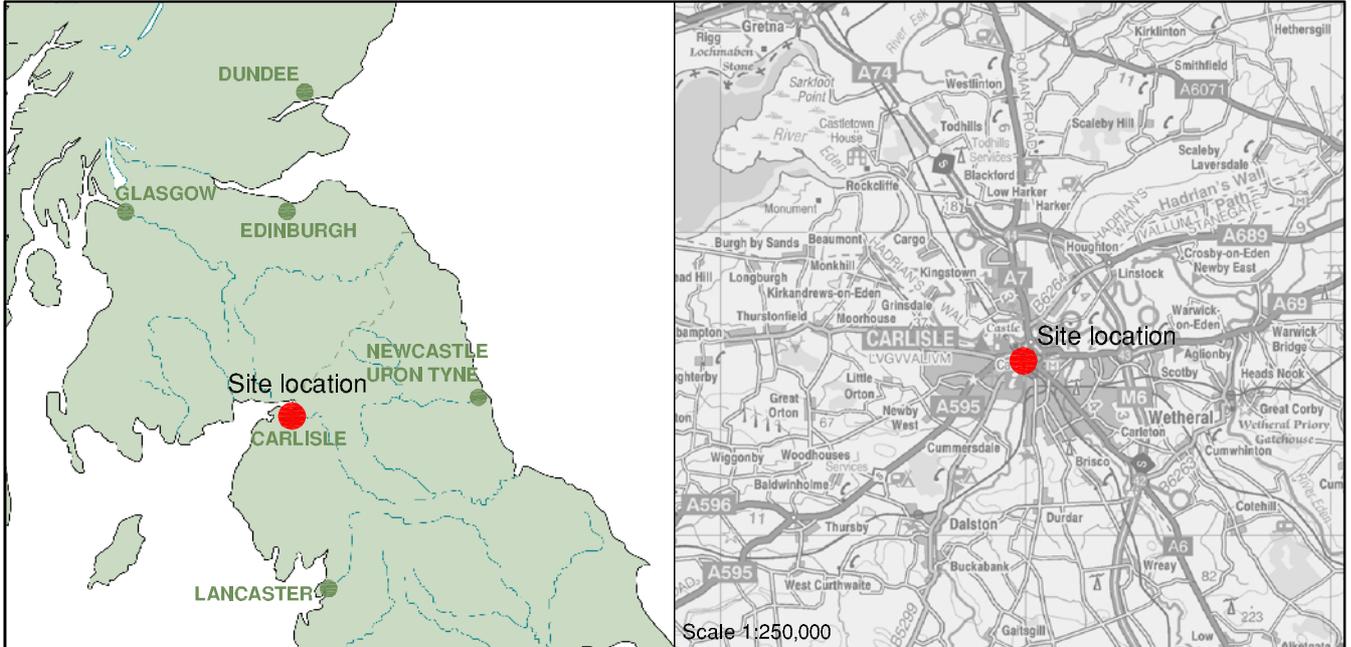


Figure 1: Site location

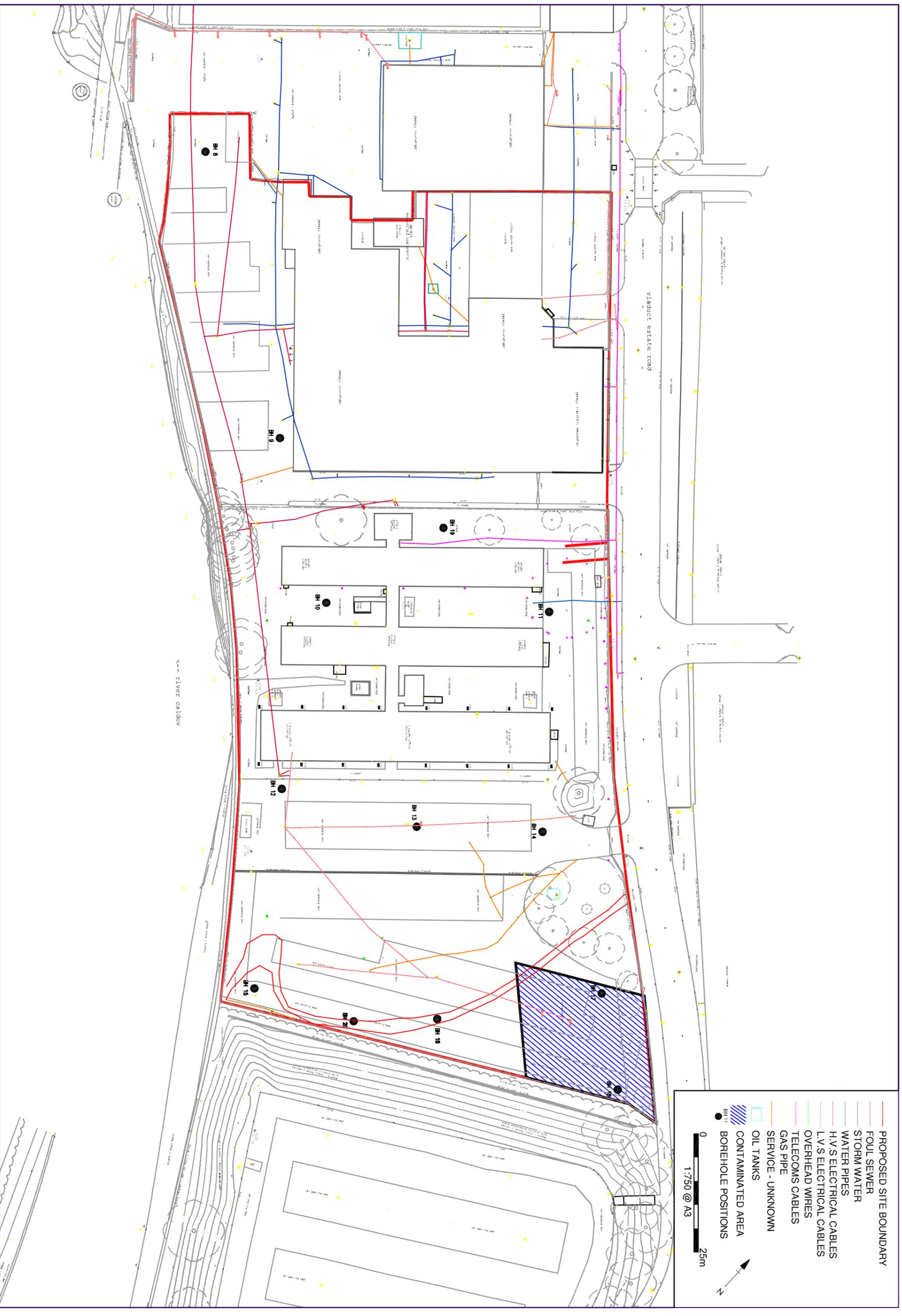


Figure 2: Plan showing extant features, including underground services and position of boreholes

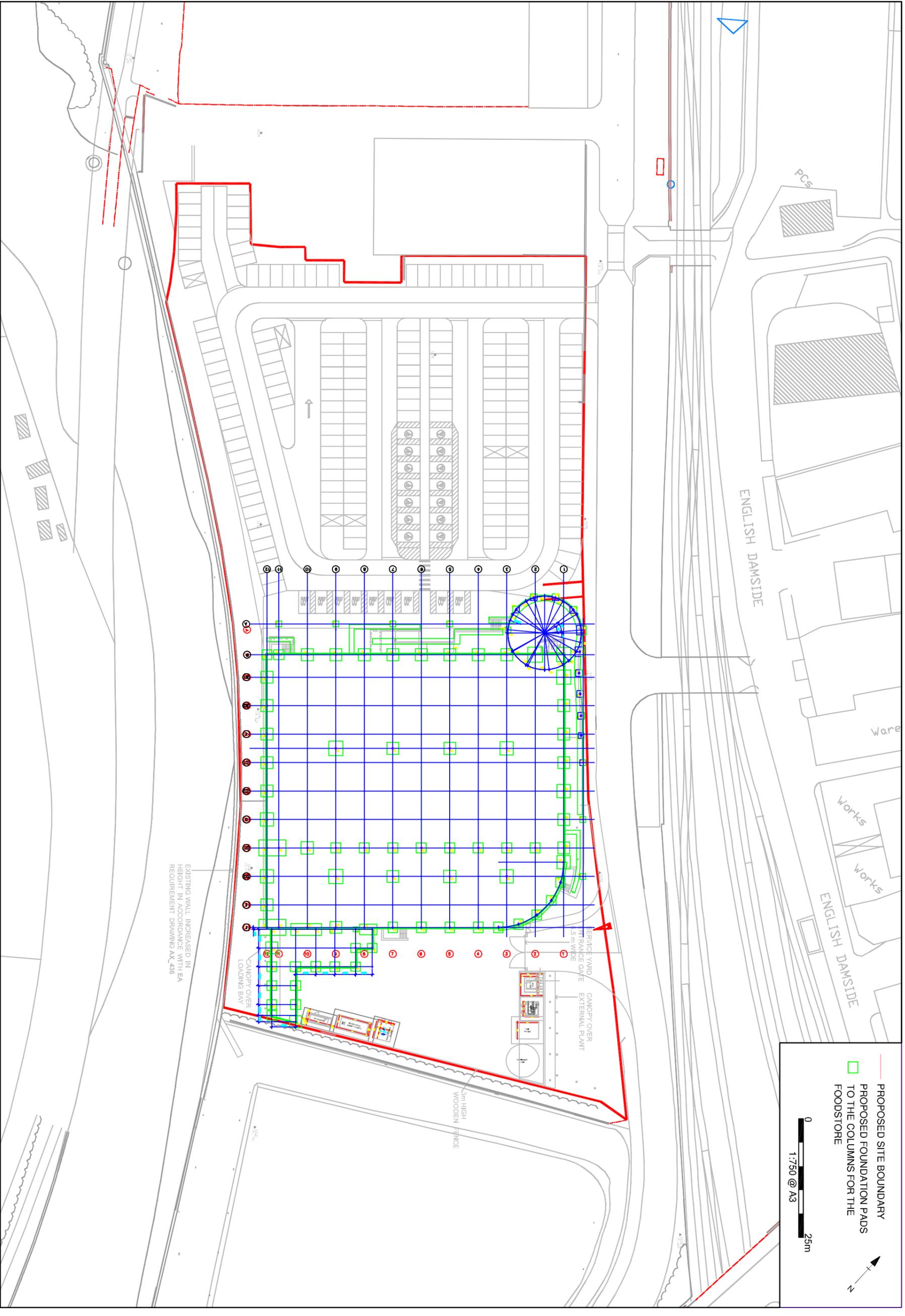


Figure 3: Proposed foodstore and carpark details

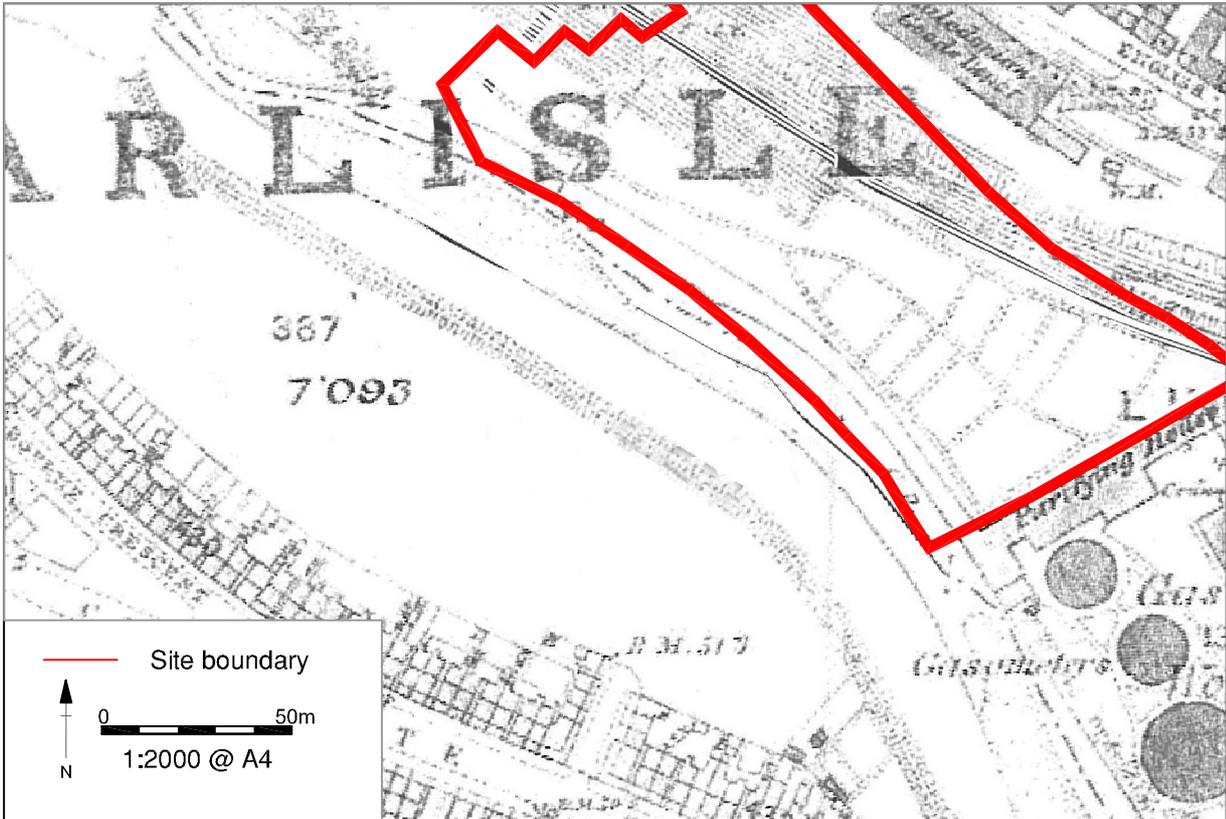


Figure 4: Ordnance Survey, 1st Edition, 1865, 25" to 1 mile

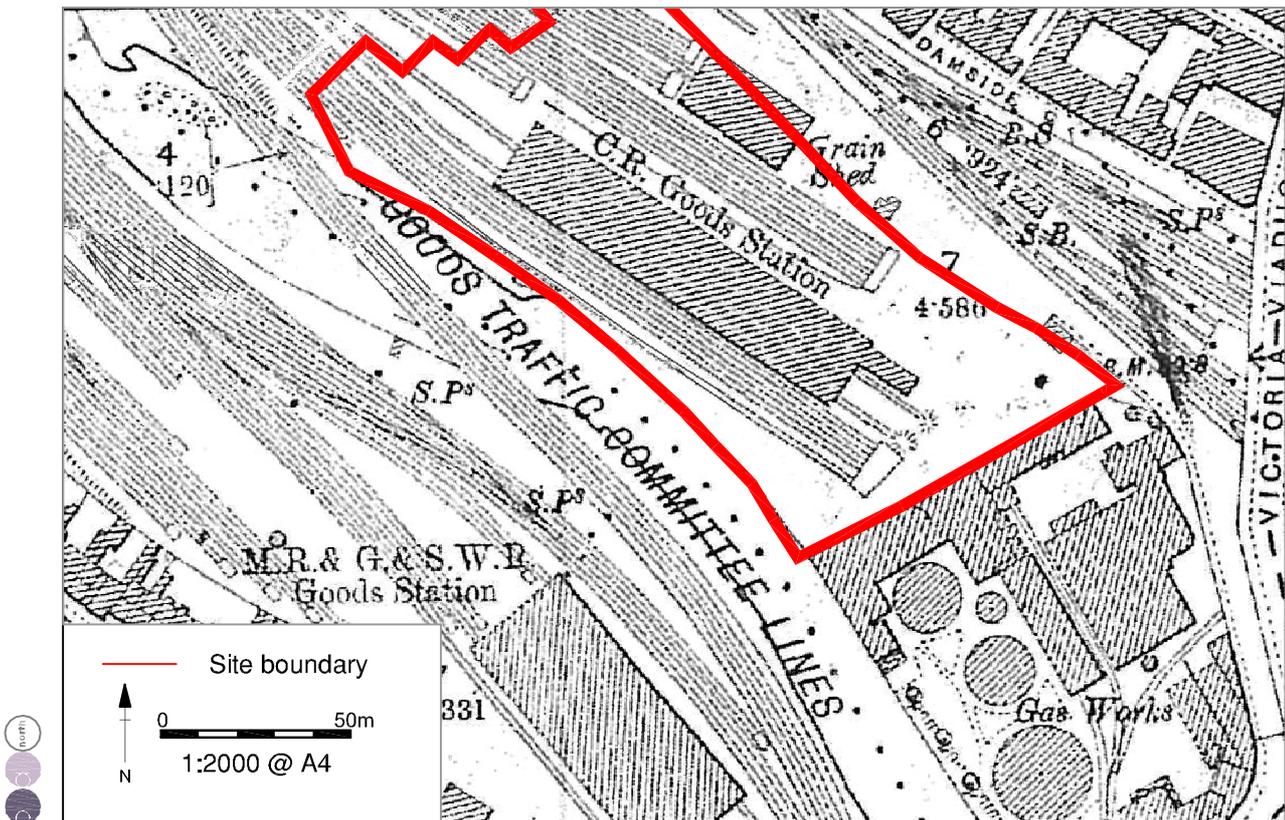


Figure 5: Ordnance Survey, 2nd Edition, 1901, 25" to 1 mile

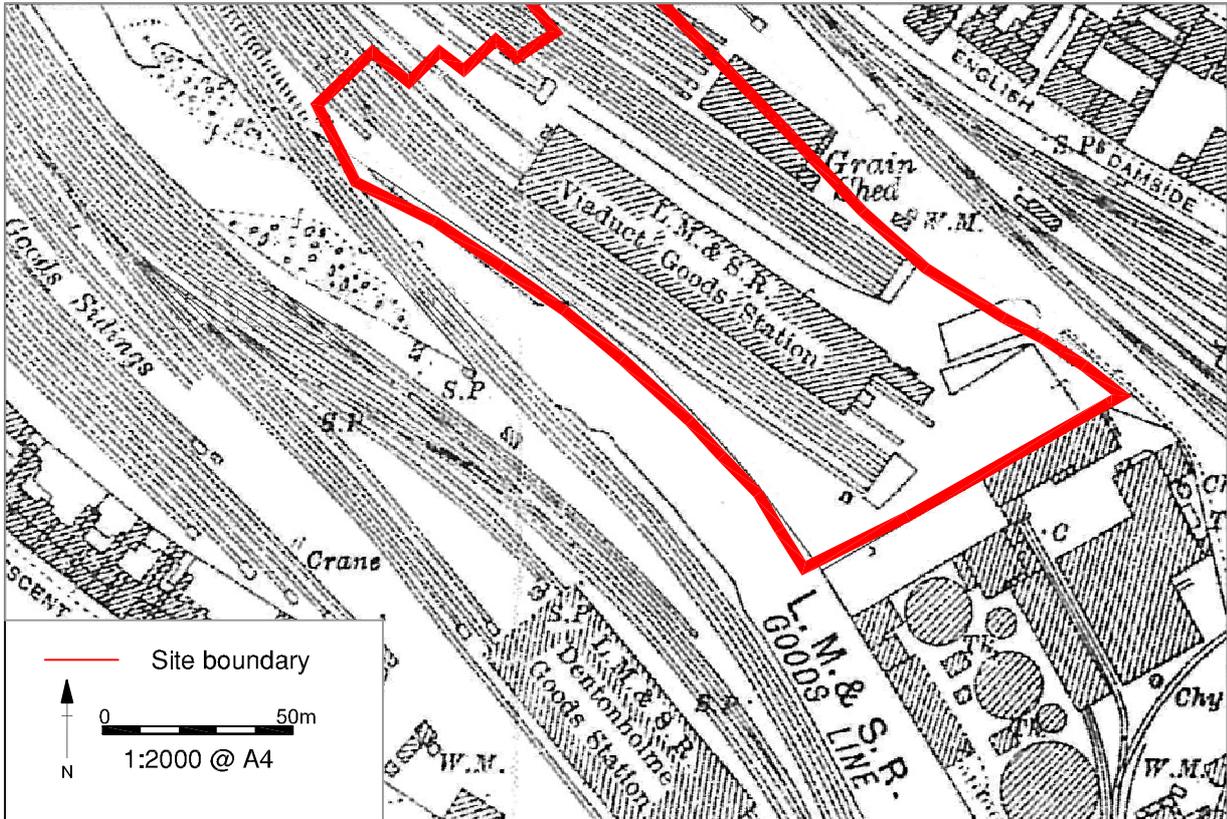


Figure 6: Ordnance Survey, 1st Edition, 1925, 25" to 1 mile

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## APPENDIX 1: CCCHES EVALUATION PROJECT BRIEF

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### 1. SITE DESCRIPTION AND SUMMARY

**Site:** Viaduct Estate Road, Carlisle

**Grid Reference:** NY 3995 5560

**Planning Application No.:** 1/05/1333

**Area of Development:** 1.34 hectares

Detailed proposals and tenders are invited from appropriately resourced, qualified and experienced archaeological contractors to undertake the archaeological project outlined by this Brief and to produce a report on that work. The work should be under the direct management of either an Associate or Member of the Institute of Field Archaeologists, or equivalent. Any response to this Brief should follow IFA Standard and Guidance for Archaeological Field Evaluations, 2001. No fieldwork may commence until approval of a specification has been issued by the County Historic Environment Service.

### 2. PLANNING BACKGROUND

- 2.1 Cumbria County Council's Historic Environment Service (CCCHES) has been consulted by Carlisle City Council regarding a planning application for the erection of a foodstore and associated parking at Viaduct Estate Road, Carlisle.
- 2.2 The site has been the subject of an archaeological desk-based assessment (Lancaster University Archaeological Unit, 2000, *Lower Viaduct Estate, Carlisle, Cumbria*, unpublished report) which indicates that the proposed scheme lies in an area of some archaeological potential.
- 2.3 Because of the high archaeological potential of the site, a condition has been placed on planning consent requiring a scheme of archaeological work to be undertaken at the site. The first phase of this work will be an archaeological evaluation to assess the nature and potential of the site. This Brief deals solely with this phase.
- 2.4 This advice is in accordance with guidance given in Planning Policy Guidance note 16 (Archaeology and Planning) and with local, sub-regional and regional planning policy.

### 3. ARCHAEOLOGICAL BACKGROUND

- 3.1 An archaeological desk-based assessment of the site has been undertaken (Lancaster University Archaeological Unit, 2000, *Lower Viaduct Estate, Carlisle, Cumbria*, unpublished report) and this brief must be read in conjunction with that report.
- 3.2 The site lies close to the Roman fort and vicus and just outside the walls of the medieval town.
- 3.3 A building is shown within, or close to, the site on a plan of Carlisle dated 1794 and further buildings are shown nearby on Wood's map of 1821. These may have been related to the printfields that were established on the site in the later 18<sup>th</sup> century as part of Lamb Scott Forster & Co printworks. By 1900 the vicinity had become a focus for industrial activity and a railway goods station and grain shed had been built on the site.

#### **4. SCOPE OF THE PROJECT**

##### *4.1 Objectives*

4.1.1 The evaluation should aim to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. An adequate representative sample of all areas where archaeological remains are potentially threatened should be studied.

##### *4.2 Work Required*

4.2.1 A visual inspection of the site. This should include a walkover of the site noting any surface features of potential archaeological interest, areas of potentially significant disturbance, and hazards and constraints to undertaking further archaeological work on site (including the siting of live services, Tree Preservation Orders and public footpaths).

4.2.2 The excavation of a series of linear trial trenches to adequately sample the threatened available area, and the investigation and recording of deposits and features of archaeological interest identified within those trenches. All features must be investigated and recorded unless otherwise agreed with the County Historic Environment Service. Demonstrably modern overburden can be removed by machine, but subsequent cleaning and investigation must be by hand. A minimum sample of 5% of the total site area should be investigated.

4.2.3 The evaluation should provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. An impact assessment should also be provided, wherever possible.

4.2.4 The following analyses should form part of the evaluation, as appropriate. If any of these areas of analysis are not considered viable or appropriate, their exclusion should be justified in the subsequent report.

- A suitably qualified specialist should assess the environmental potential of the site through the examination of suitable deposits, including: (1) soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features, and; (2) the retrieval of plant macrofossils, insect, molluscs and pollen from waterlogged deposits.
- Advice is to be sought from a suitably qualified specialist in faunal remains on the potential of sites for producing bones of fish and small mammals. If there is potential, a sieving programme should be undertaken. Faunal remains, collected by hand and sieved, are to be assessed and analysed, if appropriate.
- The advice from a suitably qualified soil scientist should be sought on whether a soil micromorphological study or any other analytical techniques will enhance understanding site formation processes of the site, including the amount of truncation to buried deposits and the preservation of deposits within negative features. If so, analysis should be undertaken.

#### **5. SPECIFICATION**

5.1 Before the project commences a project proposal must be submitted to, and approved by, the County Historic Environment Service.

5.2 Proposals to meet this Brief should take the form of a detailed specification prepared in accordance with the recommendations of *The Management of Archaeological Projects*, 2<sup>nd</sup> ed. 1991, and must include:

- ❖ A description of the excavation sampling strategy and recording system to be used
- ❖ A description of the finds and environmental sampling strategies to be used
- ❖ A description of the post excavation and reporting work that will be undertaken

- ❖ Details of key project staff, including the names of the project manager, site supervisor, finds and environmental specialists and any other specialist sub-contractors to be employed
  - ❖ Details of on site staffing, expressed in terms of person days
  - ❖ A projected timetable for all site work and post excavation work
  - ❖ The proposed locations of the trial trenches
- 5.3 Any significant variations to the proposal must be agreed by the County Historic Environment Service in advance.

## 6. REPORTING AND PUBLICATION

- 6.1 The archaeological work should result in a report, this should include as a minimum:
- ❖ A site location plan, related to the national grid
  - ❖ A front cover/frontispiece which includes the planning application number and the national grid reference of the site
  - ❖ The dates on which the fieldwork was undertaken
  - ❖ A concise, non-technical summary of the results
  - ❖ An explanation of any agreed variations to the brief, including justification for any analyses not undertaken (see 4.2.4)
  - ❖ A description of the methodology employed, work undertaken and the results obtained
  - ❖ Plans and sections at an appropriate scale showing the location and position of deposits and finds located
  - ❖ A list of, and dates for, any finds recovered and a description and interpretation of the deposits identified
  - ❖ A description of any environmental or other specialist work undertaken and the results obtained
- 6.2 Three copies of the report should be deposited with the County Historic Environment Record within two months of completion of fieldwork. This will be on the understanding that the report will be made available as a public document through the County Historic Environment Record.
- 6.3 The results of the evaluation will need to be made available for inclusion in a summary report to a suitable regional or national archaeological publication if further archaeological fieldwork is expected.
- 6.4 Recommendations concerning any subsequent mitigation strategies and/or further archaeological work following the results of the field evaluation should **not** be included in the report. Such recommendations are welcomed by the County Historic Environment Service, and may be outlined in a separate communication.
- 6.5 Cumbria HER is taking part in the Online Access to Index of Archaeological Investigations (OASIS) project. The online OASIS form at <http://ads.ahds.ac.uk/project/oasis> must therefore also be completed as part of the project. Information on projects undertaken in Cumbria will be made available through the above website, unless otherwise agreed.

## 7. THE ARCHIVE

- 7.1 An archive must be prepared in accordance with the recommendations in Brown, DH, 2007, *Archaeological Archives A Guide To Best Practice In Creation, Compilation, Transfer and Curation*, Archaeological Archives Forum. Arrangements must be made for its long term storage and deposition with an appropriate repository. A copy shall also be offered to the National Monuments Record.
- 7.2 The landowner should be encouraged to transfer the ownership of finds to a local or relevant specialist museum. In this case Tullie House Museum is the most likely repository. The

museum's requirements for the transfer and storage of finds should be discussed before the project commences.

- 7.3 The County Historic Environment Service must be notified of the arrangements made.

## 8. PROJECT MONITORING

- 8.1 One weeks notice must be given to the County Historic Environment Service prior to the commencement of fieldwork.
- 8.2 Fieldwork will be monitored by the Historic Environment Officer on behalf of the local planning authority.

## 9. FURTHER REQUIREMENTS

- 9.1 It is the archaeological contractor's responsibility to establish safe working practices in terms of current health and safety legislation, to ensure site access and to obtain notification of hazards (eg. services, contaminated ground, etc.). **The County Historic Environment Service bears no responsibility for the inclusion or exclusion of such information within this Brief or subsequent specification.**
- 9.2 All aspects of the evaluation shall be conducted in accordance with the Institute of Field Archaeologist's *Code of Conduct* and the IFA's *Standard and Guidance for Archaeological Field Evaluations*.
- 9.3 Human remains must be left *in situ*, covered and protected when discovered. No further investigation should normally be permitted beyond that necessary to establish the date and character of the burial, and the County Historic Environment Service and the local Coroner must be informed immediately. If removal is essential, it can only take place under appropriate Department for Constitutional Affairs and environmental health regulations.
- 9.4 The involvement of the County Historic Environment Service should be acknowledged in any report or publication generated by this project.

## 10. FURTHER INFORMATION

For further information regarding this brief, contact

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## APPENDIX 2: BOREHOLE INFORMATION

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### APPENDIX 3: HER INFORMATION

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**Site Name** Carlisle City Walls  
**NGR** SD 3967 5598  
**HER no** 5058  
**Site Type** Building  
**Period** Medieval  
**Source** HER  
**Description** Sections of medieval walled city, that had traces of town ditch on the open space in front. Excavations in 1979 exposed and identified parts of the wall foundations and a ramp leading to the English Gate. The site lies in close proximity to the development site, to the north-west.

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**Site Name** Abbey Street  
**NGR** SD 3970 5800  
**HER no** 6415  
**Site Type** Frontier defences  
**Period** Roman, Medieval  
**Sources** HER  
**Description** An area of the Roman and medieval town of Carlisle. The site includes the remains of the Roman fort, the ramparts, extramural structures, buildings of the later Roman town and remains of the medieval town. There is known to be a considerable depth of surviving deposits. The site lies to the north-west of the development site.

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**Site Name** Carlisle Cathedral  
**NGR** SD 3990 5593  
**Site Type** Building  
**HER no** 5309  
**Period** Roman, Medieval, Post-medieval  
**Source** Cartographic resources used in this study  
**Description** Carlisle Cathedral, associated buildings and precinct. The site was within the Roman town and excavations to the west of the present cathedral revealed both Roman and pre-Norman activity in this area. An Augustinian Priory was founded on this site in 1122, and became a Cathedral Priory in 1133 before the Dissolution in 1540. Excavations in the 1970-1980s established that there were well-preserved Roman and medieval/post-medieval deposits. The site lies to the north of the development site.

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**Site Name** Coin Findspot, English Damside  
**NGR** SD 3996 5570  
**HER no** 18938  
**Site Type** Roman  
**Source** HER  
**Description** A coin found in English Damside, but the precise location is unknown. It was a Domitianic Denarius (AD 94). The site lies to the north-east of the development

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**Site Name** English Damside  
**NGR** SD 4000 5567  
**HER no** 18983  
**Site Type** Fulling mill  
**Period** Post-medieval  
**Source** HER  
**Description** The site of Carlisle's 'first factory'. It was a woollen mill run by the Gulicker Brothers from 1724 until 1740 when they went bankrupt. It included dying works, weaving sheds and looms. The site lies to the east of the development site.

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