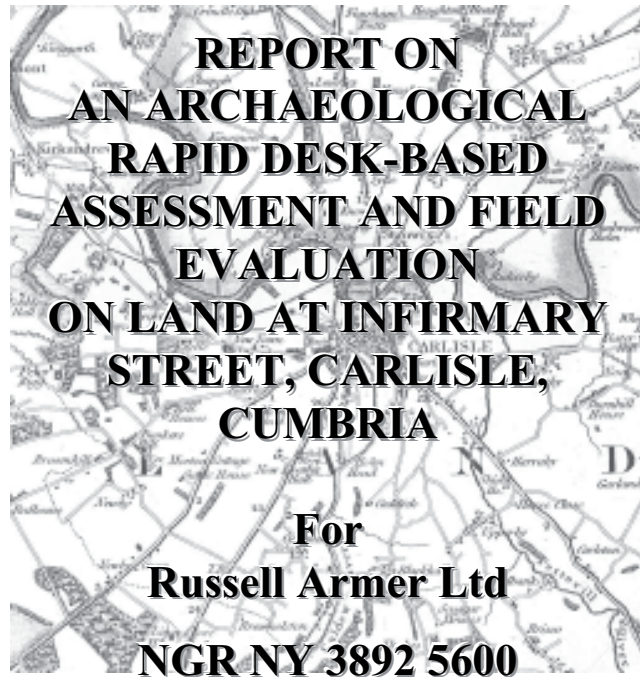

NORTH PENNINES ARCHAEOLOGY LTD

Client Report No. CP/181/07



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EXECUTIVE SUMMARY

In March 2007, North Pennines Archaeology Ltd was commissioned by SMC DTR UK Limited to undertake an archaeological desk study, site visit and field evaluation in advance of a proposed redevelopment of land situated on the east side of Infirmary Street, Carlisle, Cumbria (NGR NY 3892 5600).

The study involved the examination of all pertinent documents and cartographic sources held in the County Record Office in Carlisle, and the consultation of the Historic Environment Record (HER) of Cumbria County Council based in Kendal. The HER includes the locations and settings of Scheduled Ancient Monuments, Listed Buildings, Parks and Gardens and other, non-designated archaeological remains. In addition, a number of published sources were consulted to provide background information, including the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society and several relevant web sites including Access to Archives and Archaeological Data Services.

The desk-based assessment located 35 sites from the HER, two Listed Buildings and one Scheduled Ancient Monument within a 500m radius of the site, centred on the above grid reference. The HER sites include: examples of a late Prehistoric Settlement (Site **10**), that was extensively investigated by the Carlisle Archaeological Unit intermittently over a five year period; Roman artefact findspots (Site **11**) and found in the vicinity of Willowholme, just to the north of the present site; and Roman structures (Sites **2**, and **3**), most notably being the remnants of the city walls and the line of Hadrian's Wall and associated Vallum. A search of the Archaeological Data Service Website also provided 13 more sites within the 500m. These were mostly locations of previous excavations in the Carlisle area.

Many buildings (surviving or otherwise), relating to the industrial expansion of Carlisle in the late 18th and 19th centuries (Sites **1**, **4-7**, **9** and **12-35**) are congregated within a 500m radius of the site including Site **22**, a tannery immediately to the south of the development area. The present development area is included in the HER list as Site **25**.

Any medieval archaeology in the area under investigation is almost wholly represented by field systems, as this area lay outside the protection of the city walls and was only developed into an industrial and suburban landscape after the cessation of border disputes and Scottish raids. The most significant archaeological finds are most likely to relate to the post-medieval period, with the chance of stray finds dating anywhere from the later prehistoric period (due to the proximity of the settlement site) to the present day.

The proposed scheme of development will have a significant impact, and will probably destroy any sub-surface remains in the study location that pertain to the Carlisle Canal Saw Mills (Site **25**). The site visit noted that the surface of the area was covered with either concrete or tarmac. The outlines of the most recent buildings to have been pulled down were visible and there remains an earth bank with trees in the centre of the site. Due to the covered surface it was impossible to detect any archaeological features on the ground.

In view of the potential for archaeological remains to be present within the study area a five-trench evaluation was undertaken to determine the extent, nature and state of preservation of any such remains. The trenches measured 20m x 1.6m in order to assess 5% of the site area. These trenches were placed across the site in order to obtain an even coverage and were excavated in areas of high archaeological potential after examining the cartographic sources. The 1st OS map clearly showed the location of the saw-mill buildings and the trenches were placed to sample accordingly..

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The results of the evaluation showed evidence of the original saw-mill buildings still preserved at least in foundation levels. In two of the five trenches evidence of structures were found. In Trench 1 a brick and red sandstone structure with a paved floor was uncovered, the structure matched in alignment and size to a structure on the 1st OS from 1865 (Figure 8) and the letter head from the saw-mill depicting the buildings (Plate 4). In Trench 4, a timber upright and post-hole were uncovered with a possible floor surface, these features also lined up with the 1st OS from 1865.

The final conclusions drawn from the evaluation were that the 19th century saw-mill structures on the 1865 1st OS survey map were still in some part still preserved on the site. There was however no evidence of any earlier structures or features in the development area. Confirming that the development area as open fields until the early 19th century.

ACKNOWLEDGEMENTS

North Pennines Archaeology Ltd would like to thank Brian Smith at Russell Armer Ltd for commissioning the project and for his assistance throughout.

North Pennines Archaeology Ltd would also like to extend their thanks to: Jo Mackintosh of the Cumbria County Council Historic Environment Record (HER); Jeremy Parsons, Assistant Archaeologist, Cumbria County Council, and David Bowcock and all the staff at the Cumbria County Record Office in Carlisle for their help during this project.

Nicola Gaskell undertook the desk-based assessment. Frank Giocco conducted the site visit. Joanne Beaty carried out the evaluation, assisted by Kevin Mounsey and Cat Peters. A grateful thanks to Alan James for metal detecting the site and assisting with research. Nicola Gaskell and Joanne Beaty wrote the report, and the drawings were produced by Cat Peters. Frank Giocco, Technical Director for North Pennines Archaeology Limited managed the project and Matt Town, Senior Project Officer for NPAL, edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Cumbria County Council's Historic Environment Service (CCCHES) were consulted by Russell Armer Ltd, regarding a planning application submitted for a proposed scheme of land redevelopment. The site is located on the west side of Infirmary Street in Carlisle, Cumbria (NGR NY 3892 5600) (Fig 1). The development will involve the construction of an apartment block. The land was formerly the location of a saw-mill and timber yard, which dated to the middle and latter half of the 19th century; these have since been removed. The proposed work would destroy any archaeological remains that may be present within the development footprint. Consequently, CCCHES advised that a programme of archaeological works would be necessary prior to the proposed development. North Pennines Archaeology Ltd (NPAL) were commissioned by Russell Armer Ltd, to undertake the required archaeological desk-based assessment of the general area around the saw mill site, a site visit within the development area itself and a targeted evaluation of the land.
- 1.1.2 The desk-based assessment comprised a search of both published and unpublished records held by the Historic Environment Record (HER) in Kendal, the Cumbria County Record Office in Carlisle (CRO(C)), and the archives and library held by North Pennines Archaeology Ltd as well as relevant web sites. The principal objective of this assessment is to undertake sufficient work in order to identify and characterise the archaeological constraints associated with the development area, in order to assess the archaeological and historical potential of the development site.
- 1.1.3 The field evaluation phase of the project was designed to assess the presence or absence of any archaeological features, and their nature, extent, state of preservation and content.
- 1.1.4 This report sets out the results of the work in the form of a short document outlining the findings, followed by a statement of the archaeological potential of the area, an assessment of the impact of the proposed development, and recommendations for further work.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design was submitted by North Pennines Archaeology Ltd in response to a request by Russell Armer Ltd for an archaeological desk-based assessment, site visit and associated field evaluation of the study area, in accordance with a brief prepared by CCCHES. Following acceptance of the project design, North Pennines Archaeology Ltd was commissioned by the client to undertake the work. The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists (IFA, 1994), and generally accepted best practice.

2.2 DESK-BASED ASSESSMENT

2.2.1 Several sources of information were consulted, in accordance with the project brief and project design. The study area consisted of a 1km radius centred on the proposed development area. The principal sources of information were the Historic Environment Record (HER), maps and secondary sources.

2.2.2 ***Historic Environment Record (HER):*** the HER in Kendal, a database of archaeological sites within the county, was accessed. This was in order to obtain information on the location of all designated sites and areas of historic interest and any other, non-designated sites within the study area, which included monuments, findspots, Listed Buildings and Conservation Areas. A brief record including grid reference and description was obtained for the various sites within the study area, and was examined in depth. Aerial photographs of the area were also studied.

2.2.3 ***County Record Office (Carlisle):*** the County Record Office in Carlisle (CRO(C)) were visited to consult documents specific to the study area. Historic maps of the study area, including surveys, Tithes and Enclosure Maps, Acts of Parliament and early Ordnance Survey maps, were examined. A search was made for any relevant historical documentation, particularly regarding the use of the area, drawing on the knowledge of the archivists. Several secondary sources and relevant websites were also consulted.

2.2.4 ***Archaeological Data Services:*** the website is hosted by the University of York, and is part of the Arts and Humanities Data Service (ads.ahds.ac.uk/). The search through ADS returned a total of 20 sites within a 500m radius of the given grid reference, seven of these sites were repeated on the HER search.

2.2.5 ***North Pennines Archaeology Ltd (NPAL):*** various publications and unpublished reports on excavations and other work in the region are held within the North Pennines Archaeology library and any undeposited archives of the sites themselves were examined. This was in order to enhance and augment the data obtained from a search of the appropriate repositories.

2.3 SITE VISIT

2.3.1 The site was visited in order to assess the survival, nature, extent and potential significance of any upstanding archaeological remains on the site, to determine any constraints to archaeological site survival, and to provide a detailed assessment of area of archaeological potential.

2.4 ARCHAEOLOGICAL FIELD EVALUATION

2.4.1 The field evaluation consisted of the excavation of 5 linear trial trenches, measuring 20m x 1.6m, providing a 5% sample of an area 3825m² (Figure 11). This was in order to produce a predictive model of surviving archaeological remains detailing zones of relevant importance against known development proposals.

2.4.2 In summary, the main objectives of the excavation were:

- to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these were they are observed;
- to establish the character of those features in terms of cuts, soil matrices and interfaces;
- to recover artefactual material, especially that useful for dating purposes;
- to recover paleoenvironmental material where it survives in order to understand site and landscape formation processes.

2.4.3 Each trench was mechanically excavated by a 12 ton tracked excavator equipped with a toothless ditching/grading bucket, under archaeological supervision, to the natural substrate. Each trench was then manually cleaned and any putative archaeological features investigated.

2.4.4 Photography was undertaken using Canon EOS 100 and EOS 300V Single Lens Reflex (SLR) cameras. A photographic record was made using digital photography, 200 ISO Colour Print and Colour Slide film.

2.4.5 All work was undertaken in accordance with the Institute of Field Archaeologists Standards and Guidance for Archaeological Field Evaluations (IFA 1994).

2.5 ARCHIVE

2.5.1 A full professional archive has been compiled in accordance with the project design, and in accordance with current English Heritage guidelines (1991). The paper and digital archive will be deposited in the Cumbria Record Office, Carlisle. The archive can be accessed under the unique project identifier NPA 07 INF-A.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The proposed development area is located immediately to the west of the former Carlisle Canal, in the northwest part of Carlisle known as Willowholme. The eastern extent of the site is bounded by Infirmary Street which leads to the Cumberland Infirmary while to the south is a new housing development called Canal Court. The modern encroachment of buildings and structures from the centre of Carlisle occurred in the post-medieval period with the industrial revolution. The area of Caldewgate and Willowholme is characterised by a mix of industrial buildings and housing areas, which reflects the initial unplanned expansion from the western city limits.
- 3.1.2 The broader area to the north and west of Carlisle is known as the Solway Basin and is a broad lowland plain landscape. The Solway Basin is open and exposed to the prevailing southwesterly winds and tree cover is limited. This area is characterised by dairy cattle grazing on fields of improved pasture, which are variously defined by drainage ditches, small streams, low wind-sheared hedgerows and stone-faced hedgebanks or 'kests' (Countryside Commission 1998).
- 3.1.3 Carlisle and the Solway Basin are underlain mainly by mudstones and sandstones of Permo-Triassic age ('New Red Sandstone'). The most important sandstone formation, the St. Bees Sandstone, has been much quarried for use as building stone in and around Carlisle. To the west of Carlisle poorly exposed Liassic mudstones and limestones, of Jurassic age, overlie the Permo-Triassic rocks (Countryside Commission 1998).
- 3.1.4 Presently, the development area is an open area, surrounded on all four sides, with access from Infirmary Road into the western side of the site. Concrete and tarmac form the surface and the major feature of the area is a tree and earth bank that lies in a north south orientation across the middle of the site.

3.2 HISTORICAL BACKGROUND

- 3.2.1 **Introduction:** this historical background is compiled mostly from secondary sources, and is intended only as a brief summary of historical developments around the study area.
- 3.2.2 **Place-name Evidence:** During the Roman period the fort and accompanying *vicus* settlement were known as *Luguvalium*. Following the Roman withdrawal the area was called *Caer-luel* - fort or city of the king. Norman - French influence later added a silent 's', from which the modern day spelling of Carlisle derives (Ferguson 1892).
- 3.2.3 **Prehistoric:** during the Iron Age (approximately 800 BC to AD 43), the impression nationwide is of a major expansion in population as evidenced by an abundance of settlement sites. In Cumbria, however, settlement sites and burials attributable to the Iron Age are hard to identify. There may have been certain elements of the pre-Roman native population that were encouraged to settle in the vicinity of roads and forts built

- by the Romans in order to supply food, including cereals, for the garrisons (Blake 1959).
- 3.2.4 One such example though has been located less than 500m to the northwest of the present development site (Site 10). Between 1992 and 1997 several excavations were conducted at the New Cumberland Infirmary site, behind the 1830 building, and uncovered five roundhouses that formed part of an unenclosed settlement thought to be, by typological dating, of late Pre-Roman Iron Age date. Later, a multi-phase settlement comprising rectilinear buildings and associated yards enclosed by palisades and ditches was established. Most of the activity appears to have been located within an area bounded to the north and south by a pair of parallel north-west/south-east ditches (Reeves and Zant 2001).
- 3.2.5 Recovery of ceramic material and an unworn *Denarius* of the Emperor Domitian (AD 81-96), suggests occupation in the early Roman period, probably during the late 1st to 2nd centuries AD. If the roundhouses did date to the immediate pre-Roman Iron Age, it is possible that there came from this site evidence of the 'Romanisation' of a native settlement, with roundhouses being replaced by 'Roman-style' rectilinear structures (summarised in Reeves and Zant 2001).
- 3.2.6 **Romano-British:** the Roman advance on the northwest during the 70s and 80s AD may have been launched from bases in the northwest Midlands such as Wroxeter and Little Chester, proceeding north via the valleys of the Eden and Lune. By 72 AD the earliest timber fort was constructed at Carlisle (Philpott 2004), and was possibly centred on the present Castle Green. Two phases of this fort are known to have existed from excavation, but the limitations of the excavated area failed to delineate the boundaries, alignment and layout of the structure. A ditch excavated in Annetwell Street (Site 48) possibly forms the northern boundary of the fort in its first phase. This fort precedes the later, much richer, Roman town of *Luguvalium*, and was post dated by another fort across the River Eden in the Stanwix area (Giecco 2004). It has for some time been assumed that Carlisle was the Civitas-capital of the local *Carvetii* tribe, and the results of recent excavations have added strength to this assumption (Edwards and Shotton 2005). A milestone found recently at Langwathby, approximately 10 miles south east of Carlisle, was discovered complete with its inscription that mentions the *Civitas Carvetiorum*. Interestingly, this milestone also describes **LVG** or *Luguvalium* and **XVIII** (18), which clearly states that its distance has been measured from Carlisle (in Roman miles) (*ibid*).
- 3.2.7 By about AD 200 Carlisle seems to have maintained quite a high status, and it continued to flourish, with a large number of houses, shops, administrative and other public buildings, until the end of the Roman occupation around AD 400. The Roman town extended from the site of the Medieval castle, along West Walls and present day Lowther Street to the Victorian Citadel (Site 3). Present day London Road (the A6) has been the principal road to London since the Roman period, and it is along this road that the Roman cemetery extended. Present day Warwick Road (formerly Henry Street) is traditionally considered to have been the eastern route from the historic city (Town 2005).
- 3.2.8 **Medieval:** In Cumbria, once the Roman administration ended in 410AD, the native Britons gradually reverted to their own autonomy but settling Angles had begun to

enter eastern Cumbria by the seventh century AD (Crowe 1984). Carlisle was visited by St Cuthbert and the Queen of Northumbria in 685 and is recorded in two versions of *Lives of the Saint*. The Venerable Bede in his version of St Cuthbert's Life, written in or about 721, records '*He came to the town of Lugubalia, which the English people corruptly call Luel, to speak to the queen who had arranged to await the issue of the war there in her sister's monastery* (Site 42). *On the next day, while the citizens were conducting him to see the walls of the city and a marvellously constructed fountain of Roman workmanship...*' (McCarthy 2002). A reference from the Anglo-Saxon Chronicle, which was compiled on the orders of King Alfred the Great in approximately AD 890 states that '*Carleil or Lugubalia was the same city, which, like others in those parts, was destroyed by the Pagan Danes 200 years before and remained deserted until that time*' (Garmonsway 1986).

- 3.2.9 In the post-Conquest (1066) period what is now modern day Cumbria remained outside of Norman control until Cumberland was added as a province to the English Kingdom in 1092 by William II, the second son of the Conqueror, after forcing King Malcolm III of Scotland to pay homage to him in 1091. In 1093 William began construction of Carlisle Castle in timber and this stood until 1122 when Henry I (William's younger brother), ordered a stone castle to be erected. However, in 1135 Carlisle was granted to the Scots as part of a wider political deal between England and Scotland, but Henry II re-established English control by 1157 (McCarthy 1990). Scottish kings continued to lay claim to many parts of Northern England throughout the 12th century and in 1173 William the Lion attempted to take the town (*op cit*).
- 3.2.10 During the 13th century Carlisle saw an extended period of peace after the Scottish siege of 1216, as the city benefited from increased trade with Scotland, after a Papal Decree declaring that Northumberland and Cumberland were part of England (McCarthy 1990). The ever-present threat of war however, also had a negative effect on the city. Developing suburbs beyond the city walls were abandoned during times of war, due to defence strategies or destruction by the raiding Scots. The city of the period suffered from a series of damaging fires and outbreaks of plague. The city survived on local trade, much of it associated with the agriculture of the area such as wool and leatherworking. Apart from this there seems to have been little evidence of economic support by other methods, although the City's population was retained (McCord & Thompson 1998).
- 3.2.11 Towards the end of the 15th century the population was growing and the defences were repaired and strengthened. The cathedral of St Mary was constructed, with the bishopric and associated clergy and friars also aiding the economic strength of the city (McCord & Thompson 1998). Accounts of St Cuthbert's church, in the city, begun in 1603, summarise the condition of the city at that time. They state '*Carlisle then fell, from being one of the most important garrison towns in the kingdom, to a mere country town without commerce or manufacturers*' (Ferguson 1883).
- 3.2.12 **Post Medieval and Modern:** Following the union of the English and Scottish Crowns with the accession of James I to the English throne in 1603, a programme of pacification of the borderlands began. This saw a modernisation of tenureships of great benefit to northern landowners and a breakdown of the traditional forms of Border service (Spence 1984). This process of modernisation led to the undertaking of two

detailed surveys of the Socage or manorial lands of Carlisle, by Thomas Johnson in 1608 and Aaron Rathbone in 1611 (*ibid*).

- 3.2.13 The end of the 18th saw the collapse and disrepair of the Medieval city walls, probably aided in part by the last siege at Carlisle that occurred in December 1745 when the Duke of Cumberland, acting on behalf of the Crown launched cannon fire towards the city walls and castle from the Willowholme area of Carlisle, in an attempt to obtain the surrender of the followers of the Pretender, Prince Charles. The 18th century in general was a period of stagnation for Carlisle. For ease of commerce and traffic the entrances to the city had to be widened and the walls repaired. The Scotch Gate, north and east walls were removed sometime before 1811, this then allowing the thoroughfares to be widened (Perriam 1992). Previously it had been noted that *'the gates were formerly shut at 10 o'clock at night and opened at five in the morning'* (Universal British Directory 1790).
- 3.2.14 The first major encouragement to the development of industrial enterprises in Carlisle came with the construction of the turnpike road between Carlisle and Newcastle in the mid-18th century (Hutchinson 1794). The road, now known as the Military Road, was largely built by General Wade, primarily to facilitate the movement of troops and carriages between the two cities but it also meant that goods which had previously been transported by pack-horse could now be moved by large carts (Newman 2005). Transport links were still poor, however, and goods had to be brought in either along the inadequate roads from the south, or to the ports on the Solway and then transferred by road. The nearest berth was at Burgh Marsh, five miles below Carlisle near the mouth of the River Eden, but it was unreliable because of the tides and the narrow channel (Ramshaw 1997). In 1807 a public meeting formed a committee to *'promote a canal from Carlisle to the sea'*. A meeting later that year resolved to ask engineer Thomas Telford to examine the reports of the proposed routes, although it was not until 1819 that an Act of Parliament was obtained for the construction of the canal. In 1822 the Carlisle Journal newspaper recorded the first commercial use of the canal (*ibid*).
- 3.2.15 The basin of the canal is immediately to the east of the present development site and the site itself formed part of the canal yard. On the 1841 Tithe Map and Award for Caldewgate Township, the plot is numbered as 309 and written as being owned by the Carlisle Canal Company with the company also being the occupier. However, returning to a trade directory of 1828 a James Birrell is recorded as being a timber merchant in Canal Wharf (Pigot 1828), although it may not be the exact same location as the site being considered by this investigation – there was more than one timber yard. Six years later Thomas Gill is noted as a timber merchant in the Canal Basin (Site 7) (Pigot 1834), but in 1836 Ellwood Brockbank leased an acre of ground to the west of the canal basin for a saw mill and timber yard (Ramshaw 1997 in Newman 2005). In 1847 he was still a timber merchant in the Canal Basin (Mannix and Whellan 1847) and a newspaper report three years later reconfirms it in a report about a carriage accident he was involved in (Carlisle Patriot 1850). Also in December 1850 it appears as though Mr Brockbank came into dispute with the Canal Company. He had apparently given notice to quit the yard and then refused to remove his stock of machinery and wood from the land. The Canal Company wrote to him several times on this matter over a period of four months. The Company eventually offered him £80 for the steam engine

and other machinery. Mr Brockbank refused and so the Company said that he could remove the same, under the supervision of the Canal Engineer Mr Boyd, otherwise the equipment would be sold for whatever it would bring (Ramshaw 1997). In the 1851 census he is still labelled as a Saw Miller in the Canal Basin, indicating that he at least remained for that period during his problems with the canal company.

- 3.2.16 By 1853 the profitability of the canal had waned so much that plans were drawn and executed to convert it into the Port Carlisle Railway, which ran until the 1960's. The Carlisle Canal Saw Mill is known to have been run by R & JR Creighton in 1901, however on 24th August 1929 an extensive fire caused £25,000 worth of damage. It is not thought to have recovered from this incident.

4. ASSESSMENT RESULTS

4.1 INTRODUCTION

4.1.1 The assessment results are based on primary documents, most notably maps, and on the secondary sources used in *Section 3.2*. The results are presented according to the archive from which they were consulted. There is one sites recorded by the HER located within the development area itself, which is the location of a former saw mill (Site **25**). Extra information was gathered for another **34** HER records located in an immediate study area, defined as a 500m radius centred on the site. A full list of the sites identified by the assessment is given in *Section 4.2*. A list of a further **2** Listed Buildings is also provided in that section.

4.2 HISTORIC ENVIRONMENT RECORD (HER)

- 4.2.1 **HER:** There were **35** HER records within the study area, which is defined as a 500m radius around the site (Figure 2). One of the sites will be directly affected by the development, and that is Site **25**, the site of the Carlisle Canal Saw Mills themselves. The sites from the HER are summarised in Appendix 1.
- 4.2.2 **Listed Buildings:** the listed building records show **4** buildings within a 500m radius of the proposed development site, two of which were repeated in the HER list (Figure 2). The nearest is the Cumberland Infirmary (Site **1**), situated approximately 250 metres away on the other side of the road. The buildings are also summarised in Appendix 1.
- 4.2.3 **Archaeological Data Service Web Site:** ADS listed 20 sites within a 500m radius of the proposed development area, and seven of these were repeated in other searches. The sites that were added to the HER index include the site of a nunnery, formed in Carlisle in approximately AD 685 (Site **42**) and the location of prehistoric ploughmarks on Annetwell Street discovered during excavation in the 1970's (Site **44**). The 13 new sites are listed as Sites **38-50** in Appendix 1.

4.3 CUMBRIA RECORD OFFICES (CARLISLE)

4.3.1 The Cumbria Record Office in Carlisle (CRO(C)) was consulted to collate maps for regression analysis of the study area. Information from primary and secondary sources, including archaeological or historical journals, has been incorporated into the historic background (*Section 3.2*).

4.4 CARTOGRAPHIC SOURCES

- 4.4.1 As part of the documentary search at the Cumbria Record Office in Carlisle (CRO(C)), an in-depth scan of the early maps for Carlisle was undertaken. A cartographic date range of between 1610 and 1925 was obtained. The development area will now be discussed with reference to these early sources, noting any changes to the development area within this period.
- 4.4.2 **Speed's Plan of Carlisle, c1610 (NPAL Library Sources):** the earliest available source for Carlisle is a copy of Speed's plan of the city from the early 17th century. The layout of the city wall's is clearly defined as is the bridge over the River Caldew that leads

west out of the city. The present development area would be just to the north of the bridge and on the west side of the river. The area is represented by open land.

- 4.4.3 ***Ogilby's Plan showing Carlisle, c1675 (NPAL Library Sources):*** the next available source is a copy of Ogilby's Plan route from London to Carlisle (Figure 4). It is a rather basic depiction of the city, showing the main thoroughfares and the city walls that were still standing at this time. It does, however, include the route west out of the city along what is now presumably Caldewgate, as the River Calder is shown as is a crossing over it, unfortunately it is at this point that Ogilby ended his drawing of Carlisle and its environs, just to the east of where the present site is on the west side of the Calder.
- 4.4.4 ***Smith's Plan of Carlisle, c1746 (NPAL Library Sources):*** Smith's plan of Carlisle (Figure 5) is ascribed to as being completed the year after the final siege at Carlisle Castle, indeed it shows the English Gun Batteries placed on the hillslopes that the Cumberland Infirmary now occupies. Parham Beck is shown as is Cauda Gate, (Caldewgate), the main road west out of the city. The development site is depicted as open grass land with occasional trees spaced across the area.
- 4.4.5 ***Greenwood's Plan of Carlisle, c1823 (NPAL Library Sources):*** The next available map is 77 years later than Smith's (Figure 6). By this time the canal basin has been constructed, although there are no distinguishable buildings that could be attributed to the saw mill site. Port Road is more clearly defined, and the area to the south, outside of the city walls is expanding with more roads and buildings.
- 4.4.6 ***Tithe Map for the Township of Caldewgate, 1841(CRO(C)):*** This map shows very clearly the newly built Cumberland Infirmary to the northwest of saw mill and timber yard (Figure 7). A building is now visible within the defined boundaries of the current development area. Access appears to be from Port Road although there is no clear track or path to it. It is broadly rectangular in shape and aligned longitudinally northwest-southeast.
- 4.4.7 ***First Edition Ordnance Survey Map, 1865 – 25" to 1 mile:*** the First Edition Ordnance Survey map, (Figure 8), shows on the location of the present development area several buildings. All of these are set back from Infirmary Road and the area is labelled as Canal Saw Mill and Timber Yard. The buildings now are roughly aligned southwest-northeast and appear to be approached from the southwest by a small road or path that extends off Infirmary Road. The area is larger on the map than at present, more recent developments have encroached on the fringes of the old timber yard. The canal has by this point, been converted into a railway.
- 4.4.8 ***Second Edition Ordnance Survey Map, 1899 – 25" to 1 mile:*** the Second Edition Ordnance Survey map (Figure 9) shows more divisions to the plot of land known as the timber yard than in the 1865 map. There are still buildings that fall within the present development boundary but they appear to be different both in size and shape to those depicted on the First Edition, although they are still aligned in the same direction and there also appears to be fewer of them, perhaps an indication of the changes that were occurring there.
- 4.4.9 ***Third Edition Ordnance Survey Map, 1925 – 25" to 1 mile:*** the Third Edition Ordnance Survey map (Figure 10) shows the same divisions in the plots of land as the previous map, but again the size, shape and number of the buildings appear to have

changed in the 24 year gap. It does appear as though the size of the business being run from the site may have decreased as the buildings appear smaller. Most noticeably it is no longer labelled as a timber yard.

4.5 ARCHAEOLOGICAL INVESTIGATIONS

- 4.5.1 There has been no previous archaeological work undertaken within the study area. However, extensive archaeological work has been undertaken in Carlisle, with several studies in the vicinity of the present site.
- 4.5.2 Throughout the 1990's Carlisle Archaeology Limited (formerly Carlisle Archaeological Unit) undertook a series of archaeological investigations at the Cumberland Infirmary site in advance of redevelopment. Open area excavations took place in 1992 and 1997, yet despite the 5-year gap the excavated areas were contiguous and formed, in effect, one large site covering approximately 3900m² (Reeves and Zant 2001). This work uncovered the remains of Site **10**.
- 4.5.3 In April 2003 North Pennines Heritage Trust conducted a field evaluation on land to the southeast of the present site on commercial premises adjacent to Viaduct Estate. It included the excavation of a single linear trench although the results showed no evidence of any significant archaeological activity within the area impacted by the development (Crompton and Miller 2003).
- 4.5.4 In 2004 North Pennines Archaeology Ltd undertook an archaeological field evaluation at Willowholme Industrial Estate, less than 500m to the northeast of the present site. A single northeast-southwest oriented trench was excavated that crossed the line of Hadrian's Wall, however, the evaluation uncovered no features or datable artefacts of archaeological interest (Jones 2004).

5. SITE VISIT

5.1 INTRODUCTION

- 5.1.1 The site was visited on the 12th of March 2007, in order to complete a walkover survey of the area with the purpose of relating the existing landscape to research findings. The development area is bounded on the western side by Infirmary Street, on the northern side by a bank of earth with trees, on the eastern side by a bank topped with steel fencing and on the southern side by a hedge behind which are the new houses of Canal Court. Most of the interior of the site is covered with either tarmac or concrete. The eastern part of the site was being used as a car park. The western side of the area was covered with concrete and retains some of the outlines of the buildings that stood previously. Before any evaluation took place it is difficult to ascertain whether the eastern side has been built up of if the western side has been graded down as there was a difference in height between them. The division is marked with a line of trees bounded by concrete blocks and access steps.
- 5.1.2 Although not visible under the concrete, mention was made of a mains gas pipe that runs along the western edge of the site. This was avoided during the evaluation stage. No archaeological features were identified from the investigation of the surface during the site visit.

5.2 RESULTS

- 5.2.1 Any archaeological remains were impossible to see because of the concrete and tarmac surface across the development area. The rapid inspection noted that the earth bank with trees in the centre of the site was to be avoided when the evaluation took place. The presence of the gas main pipe also meant that none of the trenches were to be placed in this area on grounds of health and safety.

6. EVALUATION RESULTS

6.1 INTRODUCTION

6.1.1 The evaluation consisted of the excavation of five linear trenches, measuring 20m x 1.6m each. The trenches were machine stripped of the concrete and tarmac down to the natural substrate, under archaeological supervision. The trenches were subsequently cleaned by hand in order to see any features of archaeological interest that may have been cut into the natural clay substrate. All trench locations are depicted in Figure 11. Where no features of archaeological interest were located, a trench record sheet was compiled.

6.2 TRENCH 1

6.2.1 The trench was 20m long by 1.6m wide; the maximum depth of the trench was 1.20m. The trench was orientated north-south at south east site boundary. The natural substrate was observed at 1.20m at the southern end of the trench (Plate 3 and 4).

6.2.2 The tarmac ground surface (**100**) was machine stripped to reveal a thick layer 0.20m of dark grey sub-base (**102**), which overlaid a layer 0.05m thick of yellow sand used for levelling (**103**). Sealed beneath (**103**) was layer 0.25m thick of dark grey/brown silty clay mix (**106**); there were no inclusions or finds recovered from this layer. The natural clay substrate (**101**) was sealed beneath (**106**). The site was on a natural slope which had previously been called Primrose Hill (1st Ed OS) and this meant the natural substrate was deeper at the southern edge of the site with the incline of the hill. At the southern end of the trench the remains of a building thought to be connected with the saw mill was uncovered (Plates 5, 6, 7 and 8). The corner was located at the south-east edge of the trench leading off to the south-west at an angle. The building was a mix of sandstone and brick wall (**109**), with a cracked stone flagged floor (**110**). In the south-east corner of the building was a gap in the floor possibly for a post-hole or drain. When investigated it revealed a slag, cinder and clinker layer (**111**) beneath the floor to a depth of 0.73m straight onto the natural substrate.

6.3 TRENCH 2

6.3.1 The trench was 20m long by 1.6m wide; the maximum depth of the trench was 1.20m. The trench was orientated north-south and was parallel to Trench 1 at the north-east edge of site. The natural substrate was observed at 1.20m at the southern end of trench (Plate 9).

6.3.2 The tarmac ground surface (**100**) was machine stripped to reveal a thick layer 0.20m of dark grey sub-base (**102**). This overlay a layer, 0.05m thick of yellow sand (**103**) used for levelling the surface. Sealed beneath (**103**) was a dark grey silty clay with a strong chemical odour possibly from creosote used by the saw mill. This overlay the orangey brown clay natural substrate with small stone inclusions (**101**). Similar to Trench 1,

the natural ground surface was on a natural incline, which made the trench deeper at the southern end. No archaeological features were observed in this trench.

6.4 TRENCH 3

6.4.1 The trench was 20m long by 1.6m wide; the maximum depth of the trench was 1.50m. The trench was orientated north-south on the south-west boundary of the site. The natural substrate was observed at 1.50m at the southern end of the trench (Plate 10).

6.4.2 The concrete ground surface (113) was machine stripped to reveal a thick layer of slag, clinker and grey stone sub-base (114). Sealed beneath (114) was a layer of orangey grey re-deposited natural (115). This overlay a dark grey silt with a chemical odour (116), which in turn sealed the natural orangey brown clay natural substrate (119). Cut into the natural substrate was a post-medieval ceramic field drain [117] and (118). At the southern end of the trench was a modern brick wall (120). The wall survived to 11 courses in height and was resting on a concrete base. The depth of the wall was 1.3m below the concrete ground surface and the wall sat on the natural substrate. A sondage was excavated in the southern end of the trench to locate the depth of the natural substrate to 1.5m. The natural substrate was on a incline with the shallow end of the trench to the north and the deep end to the south.

6.5 TRENCH 4

6.5.1 The trench was 20m long by 1.6m wide; the maximum depth of the trench was 1.27m. The trench was oriented north-south mid site. The natural substrate was observed at 1.27m (Plate 11).

6.5.2 The concrete ground surface (113), 0.10m deep was machine-stripped to reveal a thick layer, 0.15m deep of slag, clinker and grey stone sub-base (114). Sealed beneath (114) was a layer, 0.20m deep of orangey grey re-deposited natural (115). This overlay 0.37m of dark grey silty clay (121) which was similar to (116) in Trench 3. Abutting (121) was a thin layer 0.10m of black and dark grey silty clay with fragments of timber inclusions, also with a strong creosote odour (122). This black layer matched in plan the timber uprights [123] and (124)(Plates 12 and 13) that were removed during machining. From the layout of the trench it appeared that the timber uprights (124) were the supporting posts for a building connected to the timber yard, which was on the 1865 1st ED OS map and the black silt layer (122) could possibly have been the floor surface for some sort of wood treating shed associated with the saw mill (Plate 14).. The floor surface (122) and the dark grey silty clay (121) were both sitting on the natural clay substrate.

6.6 TRENCH 5

6.6.1 The trench was 20m long by 1.6m wide; the maximum depth of the trench was 0.86m. The trench was orientated east-west at the western boundary of the site. The natural substrate was observed at 0.86m.

- 6.6.2 The 0.20m concrete surface **(113)**, was 0.20m deep and machine-stripped to reveal a concrete foundation also recorded as **(113)** as it appeared to be part of the same phase of building. A modern salt-glazed water pipe ran the length of the trench encased in concrete. Both the concrete foundation and concrete floor surface were sitting on the natural clay substrate. No archaeological features were observed in this trench (Plates 15 and 16).

7. FINDS AND ENVIRONMENTAL DATA

7.1 FINDS

7.1.1 FINDS TABLE (TABLE 1)

Context	Trench	Material	Quantity	Weight (kg)	Period
U/S	1	Fe	28	1.618	Post medieval
U/S	1	clay pipe	1	0.002	Post medieval
U/S	1	pottery	1	0.003	Post medieval
U/S	1	metal	3	0.025	Post medieval
U/S	1	pottery	1	0.008	Post medieval
110	1	pottery	1	0.002	Post medieval
112	1	pottery	1	0.013	Post medieval
111	1	slag	5	0.356	Post-medieval
111	1	slate	3	0.052	Post-medieval
107	1	slag	1	0.133	Post-medieval
107	1	pottery	1	0.006	Medieval
107	1	clay pipe	1	0.005	Post medieval
U/S	2	Fe	15	0.33	Post medieval
U/S	2	pottery	2	0.023	Post medieval
U/S	2	clay pipe	1	0.004	Post medieval
U/S	2	Al	2	0.006	Post medieval
cleaning	3	Fe	3	0.088	Post medieval
cleaning	3	Pb	2	0.016	Post-medieval
cleaning	3	slag	1	0.092	Post-medieval
cleaning	4	Pb	1	0.064	Post-medieval
cleaning	4	pottery	4	0.023	Post medieval
cleaning	4	clay pipe	1	0.003	Post medieval
cleaning	4	blue bottle glass sherds	14	0.028	Post medieval
cleaning	4	metal	4	0.006	Post medieval
cleaning	4	slag	1	0.017	Post-medieval
cleaning	4	Fe	1	0.002	Post medieval

7.1.2 There were very few finds recovered from Infirmary Street, Carlisle. Of the finds recovered there was one sherd of greenglaze medieval pottery dating from around the 13th to 14th century. The sherd was recovered from the wall cut [107] in Trench 1, along with a clay pipe stem and a fragment of slag both from the post-medieval period. The medieval pottery appears to be an accidental find rather than part of a medieval feature as the building was built in the early 19th century.

7.1.3 The finds recovered from the remaining trenches tended to be metal objects such as iron nails or lead fragments; these are in keeping with an industrial rather than domestic site. The post-medieval pottery sherds recovered were of a date in keeping with the saw-mill being of 19th to 20th century date, but were too few to suggest habitation on the site.

7.2 ENVIRONMENTAL AND BONE DATA

- 7.2.1 *Introduction – Environmental remains:* in the area excavated 1 context was considered worth sampling. The sample came from a deposit below a sandstone floor. The whole earth sample was selected for processing in order to assess the environmental potential. This will help provide further information as to the depositional processes involved in the formation of the material. The methodology employed required that the whole earth samples be broken down and split into their various different components. This was achieved by a combination of water washing and flotation. The recovered remains can then be assessed for content.
- 7.2.2 Flotation separates the organic, floating fraction of the sample from the heavier mineral and finds content of sands, silts, clays, stones, artefacts and waterlogged material. Heavy soil and sediment content measuring less than 1mm falls through the retentive mesh to settle on the bottom of the tank. Flotation produces a ‘flot’ and a ‘residue’ for examination, whilst the heavier sediment retained in the tank is discarded. The method relies purely on the variation in density of the recovered material to separate it from the soil matrix, allowing for the recovery of ecofacts and artefacts from the whole earth sample.
- 7.2.3 The retent, like the residue from wet sieving, will contain any larger items of bone, or artefacts. The flot or floating fraction will generally contain organic material such as plant matter, fine bones, cloth, leather and insect remains. A rapid scan at this stage will allow further recommendations to be made as to the potential for further study by entomologists or palaeobotanists, with a view to retrieving vital economic information from the samples. Favourable preservation conditions can lead to the retrieval of organic remains that may produce a valuable suite of information in respect of the depositional environment of the material, which may include anthropogenic activity, seasonality and climate and elements of the economy.
- 7.2.4 The contents of the samples are listed below in Tables 2 and 3.

SAMPLE NUMBER	CONTEXT NUMBER	SAMPLE SIZE (litres)	FLOT SIZE (cm ³)	RETENT SIZE (cm ³)
1	111	10	6000	300

Table2 Details of samples and contexts

DETAILS		RETENT FRACTION										LIGHT FRACTION											
Context	Context type	Sample number	Root material	Clinker	Cinders	Burnt bone	Brick	Gravel	Stones	Insects	Charred wood	Root material	Charred wheat	Charred oats	Charred barley	Vicia	Chenopodium	Raspberry	Brassica	Dogwood	Metal droplets	Clinker	Brick
111	Dep	1	0	1	2	0	1	1	1	0	1	0	0	0	0	1	0	0	0	0	1	3	1

Table 3 Contents of flot and retent residues from sample

KEY TO TABLES: Dep=deposit. Contents assessed by scale of richness 0 to 3. 0 = not present, 1 = present, 2 = common, 3 = abundant

- 7.2.5 **SAMPLE 1 (CONTEXT 111):** this sample was from a deposit of dark brown/black cindery material with inclusions of orange clay or brick fragments. The deposit lay beneath a sandstone floor. The retent was made up of stones and gravel with no organic matter present. The other inclusions were clinker, cinders and brick fragments. The flot contained only one seed of the *Vicia* species. Other material present was clinker, with also small amounts of brick fragments, metal droplets and charred wood.
- 7.2.6 **DISCUSSION:** the flot samples recovered yielded one seed of the *Vicia* species and there was very little other organic matter present at all, only charred wood. The dating of these contexts from the finds was mainly Post-Medieval with a fragment of Medieval pottery in one context.
- 7.2.7 The presence of the metal droplets indicates there was some metalworking in or around the area as these are from the smithing hearth process. When the iron is hammered after removal from the fire tiny fragments of hot metal break off. If these are still hot enough to form into a sphere as they fall they will harden in that state. Other material struck off would take the form of hammer scale and be recovered as such. The droplets then indicate the metal was still molten when it was struck off.
- 7.2.8 **DATING:** there is enough charred organic material for a radiocarbon date to be done but there is enough evidence available to date the site by typology.
- 7.2.9 **CONCLUSION AND RECOMMENDATIONS:** the sample recovered from Infirmary Street was mainly industrial waste and had very little organic matter in it. It is thought that its main purpose was as a levelling layer for the sandstone slabs. The potential for further information being gained from the examination of this material is limited and so it is recommended that no further work be done.
- 7.2.10 **VERTEBRATE REMAINS:** no bone was recovered from the site probably due to acidic conditions of the matrix.
- 7.2.11 **MOLLUSC REMAINS:** no mollusc remains were recovered from the site.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 ARCHAEOLOGICAL POTENTIAL

- 8.1.1 The potential for prehistoric archaeology is moderate. There was certainly prehistoric activity in the area, evidenced by the settlement site investigated at the Cumberland Infirmary, relating to the Iron Age (Site 10). The potential for Roman archaeology is thought to be also moderate, considering the close proximity of the Roman fort, vicus settlement, town walls and Hadrian's Wall and Vallum (Sites 2, 3 and 11). There remained the potential within the parameters of the evaluation to uncover un-stratified objects or even features of Roman date.
- 8.1.2 The development area is outside and to the west of the medieval core of Carlisle, and as such the potential for medieval remains is moderate to low, as anything that did remain from the medieval period is likely to have been disturbed or removed by later activities, such as the construction of the canal and associated buildings, including the sawmill and timber yard.
- 8.1.3 The post-medieval archaeology of the development area showed the greatest potential, relating to the former industrial processes that took place there. Although the walkover survey did not identify any surviving remains on the site, there is still the potential for sub-surface remains to survive. This was confirmed in the evaluation, as Trench 1 uncovered walls and floor relating to the mill. The proposed development of this area will therefore have a considerable effect through direct interventions into the ground, probably disturbing any extant remains.

8.2 RECOMMENDATIONS

- 8.2.1 On the evidence presented above, and from the evaluation of the site informed by the historical sources, it can be concluded that further work could be carried out to establish the extents and preservation of the sandstone and brick structure recorded in Trench 1 (Plate 4). The historical evidence shows the saw-mill was built in the 1830's in the Canal Basin area. The archaeological evidence shows that the structures relating to some extent still survive.

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APPENDIX 1 – TABLE OF HER SITES

Site No.	Source	Name	Type	Period	NGR
1	HER 5060 LB HER 25653	Cumberland Infirmary, Carlisle	Building	Post Medieval	NY 38820 56080
2	HER 5782 SAM 2819	Hadrian's Wall and Vallum	Earthwork and Structure	Roman	NY 22100 62600
3	HER 6682	Carlisle Roman Town Walls	Site of Defences	Roman	NY 39000 56000
4	HER 10036	North British Railway, Carlisle & Silloth Branch	Dismantled Railway – Route of	Post Medieval	NY 15000 51370
5	HER 10201	Willowholme Varnish Works	Site of Building	Post Medieval	NY 38640 56390
6	HER 12430	North British Railway, Edinburgh and Carlisle	Dismantled Railway – Route of	Post Medieval	NY 37620 70000
7	HER 13502	Carlisle Canal Basin	Position of	Post Medieval	NY 39060 56020
8	HER 13662	Carlisle Power Station Trial Trenching	Site of	Roman	NY 38750 56460
9	HER 13667	Carlisle Sewage Treatment Works	Site of	Post Medieval	NY 38890 56460
10	HER 15239	Cumberland Infirmary Settlement Site	Site of	Prehistoric	NY 38550 56150
11	HER 17963	Samian Find, Willowholme, Carlisle	Site of	Roman	NY 38850 56450
12	HER 19707	Harness Mount Find, Willowholme, Carlisle	Site of	Post Medieval	NY 39000 56000
13	HER 40959	Trinity Church, Church Street, Carlisle	Site of	Post Medieval	NY 39184 55840
14	HER 40968	Carlisle Tram System Depot	Roofed Building	Early 20 th Century	NY 41025 55025
15	HER 40982	Wesleyan Methodist Chapel, Caldewgate	Roofed Building	Post Medieval	NY 39268 55845
16	HER 40993	Strathclyde Home for Incurables, Wigton Road	Site of	Post Medieval	NY 38778 55491

Site No.	Source	Name	Type	Period	NGR
17	HER 40994	St Bede's Church, Silloth Street	Roofed Building	Post Medieval	NY 39196 55778
18	HER 41003	Newcastle and Carlisle Railway, Canal Branch	Railway Structure	Post Medieval	NY 40250 55126
19	HER 41006	Custom House, Canal Station, Carlisle	Site of	Post Medieval	NY 38992 56132
20	HER 41014	Canal Goods Station, Carlisle	Site of	Post Medieval	NY 39060 56082
21	HER 41015	Bonded Warehouse, Canal Basin, Carlisle	Site of	Post Medieval	NY 39097 56066
22	HER 41016	Tannery, Canal Bank, Port Road, Carlisle	Site of	Post Medieval	NY 38924 55939
23	HER 41017	Carr's Biscuit Factory, Caldcoates, Carlisle	Roofed Building	Post Medieval	NY 39225 55949
24	HER 41018 LB HER 25652	Crozier Lodge Fever Hospital, Carlisle	Roofed Building	Post Medieval	NY 38670 56132
25	HER 41019	Canal Saw Mills, Byron Street, Carlisle	Site of	Post Medieval	NY 38944 56009
26	HER 41024	Morton Street Bakery, Caldewgate, Carlisle	Site of	Post Medieval	NY 39312 55865
27	HER 41042	Ashley Street Schools, Caldewgate, Carlisle	Roofed Building	Post Medieval	NY 39037 55814
28	HER 41052	Bonded Warehouse, Canal Basin, Carlisle	Site of	Post Medieval	NY 39078 56006
29	HER 41053	Alexandra Steam Saw Mills, Carlisle	Site of	Post Medieval	NY 39167 56182
30	HER 41055	Reading Room, Wigton Road, Carlisle	Site of	Post Medieval	NY 39257 55847
31	HER 41063	Holy Trinity Schools, Carlisle	Site of	Post Medieval	NY 39135 55887
32	HER 41064	Queen's Brewery, Caldewgate, Carlisle	Site of	Post Medieval	NY 39369 55993
33	HER 41078	Willowholme Leat, Carlisle	Site of	Post Medieval	NY 39097 56367
34	HER 42026	Caledonian Railway, Port Carlisle Branch, Carlisle	Railway Structure	Post Medieval	NY 39084 56580

Site No.	Source	Name	Type	Period	NGR
35	HER 42027	Donald's Printfields, Willowholme, Carlisle	Site of	Post Medieval	NY 39271 56127
36	LB HER 25524	The Pheasant Inn, Caldewgate (South Side)	Grade II	Post Medieval	NY 39338 55896
37	LB HER 25611	Entrance Gate Piers and wall to east of Cumberland Infirmary, Carlisle	Grade II	Post Medieval	NY 38871 56081
38	EHNMR 1030520	Castle Subway / Castle Green	Town Defences	Roman & Medieval	NY 39000 56000
39	EHNMR 1172932	Tullie House Lift Shaft	Site of	Roman	NY 39000 56000
40	EHNMR 1179651	Bitts Park	Park Area	Roman	NY 39000 56000
41	NMR- NATINV 10624	Sculptured Stone of Mercury	Findspot	Roman	NY 39000 56000
42	NMR- NATINV 1266930	Nunnery	Site of	Medieval	NY 39000 56000
43	EHNMR 628438	Overwater School	Site of	Medieval	NY 39000 56000
44	EHNMR 628440	Annetwell Street / Tullie House Extension	Site of	Prehistoric	NY 39000 56000
45	EHNMR 645695	Tullie House Garden (Luguvalium)	Site of	Roman	NY 39000 56000
46	EHNMR 645978	Carlisle City	Site of (excavations)	Roman	NY 39000 56000
47	EHNMR 646251	32-40 Castle Street	Site of (excavations)	Roman & Medieval	NY 39000 56000
48	EHNMR 646252	Annetwell Street	Site of	Roman & Medieval	NY 39000 56000
49	EHNMR 652310	Bowling Green Edenside	Site	Uncertain	NY 39000 56000
50	EHNMR 652311	Carlisle Cricket Club, Edenside	Site	Uncertain	NY 39000 56000

APPENDIX 2 – FIGURES

APPENDIX 3 - PLATES



Plate 1: Looking South West across the site towards Newtown Road.



Plate 2: Looking South to Canal Court, showing the tree bank at the edge of the site.

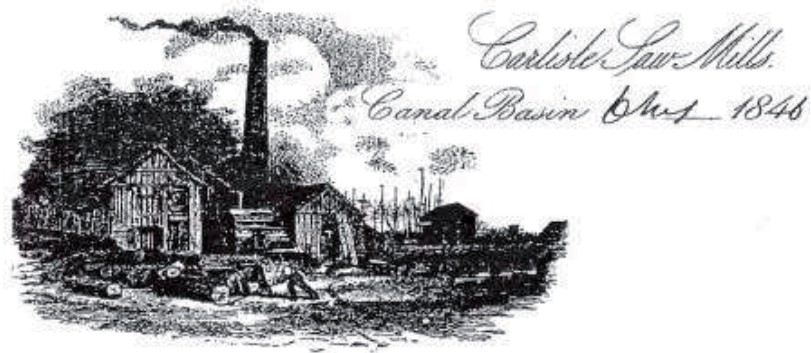


Plate 3: Carlisle Saw Mills, Canal Basin letterhead from 1846



Plate 3: Looking North showing Trench 1.



Plate 4: Looking North showing a close up of the building.



Plate 5: The building looking South.



Plate 6: Showing the building from above.



Plate 7: Showing (111) beneath the floor in Trench 1



Plate 8: Showing the wall cut [107] in Trench 1



Plate 9: Looking North showing Trench 2.



Plate 10: Looking North showing Trench 3.



Plate 11: Looking North showing Trench 4.



Plate 12: Looking North showing [123]
and (124).



Plate 13: Showing the timber upright removed
by machine.



Plate 14: Trench 4 section showing (121)



Plate 15: Looking West showing Trench 5.



Plate 16: Showing (113) and (119) in section