

NORTH PENNINES ARCHAEOLOGY LTD

Project Designs and Client Reports No. CP/548/07



**FOR
MANDALE COMMERCIAL
LTD**

**NGR NZ 3591 6766
PLANNING REF: ST/1537/04/DM
OASIS REF: northpen3-30266**

Cat Peters, BA, MLitt
North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria CA9 3PD
Tel: (01434) 382045
Fax: (01434) 382294
Mobile: 07920 105819
Email: c.peters@nparchaeology.co.uk

13th September 2007



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EXECUTIVE SUMMARY

North Pennines Archaeology Ltd (NPAL) were invited by Mandale Commercial Ltd, to undertake an archaeological watching brief at Market Dock North, Long Row, South Shields, Tyne and Wear (NGR NZ 3591 6766). The works involved a structured watching brief to observe, record and excavate any archaeological deposits from the development site. A previous Desk-Based Assessment was undertaken on the site, due to the potential for Romano-British, Medieval and Post-Medieval activity to have occurred in the area. The assessment highlighted the potential for any development to expose post medieval activity in the form of a 'Low Dock', first referenced in 1754, as well as early 20th century deposits likely to survive on site. As a result, the Tyne and Wear Specialist Conservation Team advised that a field evaluation should be undertaken prior to any groundworks occurring on the site. This consisted of one trench, excavated in the south-western part of the site, to assess the archaeological potential of areas not affected by 20th century works. A timber structure, thought to relate to the 18th century 'Low Dock' was encountered. As a result, part of the planning condition for redevelopment on site was for an archaeological watching brief to be maintained during groundworks.

The watching brief was carried out between Monday 6th August and Tuesday 11th September 2007. It was undertaken in three key stages, based on the excavation for the foundations for the three buildings to be constructed within the site. Plot 'A' was the southernmost building, the five-storey building located on the site of the 'Low Dock', first referenced in 1754; Plot 'B' was the central building, due to be adjoined to the southernmost building, and three storeys high; and Plot 'C' was the northernmost building, the two-storey office building located over the site of the 1905 'Dry Dock'.

The archaeological watching brief proved to be a good opportunity to locate, expose and record a continuing history of land-use on the site, relating to shipbuilding activity in this part of South Shields. The earliest feature in-situ was the remains of the mid 18th century dock, discovered in the southern part of the site, within Plot 'A', and the most recent feature, early 20th century dock remains which survived in a good state of preservation, which was located across much of the central portions of Plot 'B' and 'C'.

Although much of the archaeology encountered within the site was 20th century, which itself was not covered specifically by the specification for works on-site (Morrison 2007), the recent publication on the state of archaeology in the North East asserts the importance of 20th century deposits, and regrets its marginalisation in favour of earlier archaeology (Petts and Gerrard 2006). The shipping industry in particular, at the expense of more 'heroic' traditional regional industries (e.g. coalmining) is little understood, which is an oversight when the docks of the North East were of international importance (ibid).

The survival of potentially mid-18th century timber deposits within the site is of interest. It shows the potential for early deposits, deep enough not to be affected by later development, to survive in good condition, sub-surface, in this part of South Shields. In addition, as the base of the timber struts were not exposed by the observed groundworks on-site, these will survive below the depths reached on the development site, and any future developments on-site should take this into account.

ACKNOWLEDGEMENTS

North Pennines Archaeology Ltd would like to thank Mandale Commercial Ltd, for commissioning the project and Gary Swarbrick of England and Lyle, Chartered Town Planners, for his continued assistance throughout the project.

Further thanks are extended to David French, Site Manager for Mandale Construction and to Ian Wood and colleagues of Owen Pugh for all of their help with the fieldwork aspect of this project.

The archaeological watching brief was undertaken by Cat Peters and Tony Liddell. Finds analysis was undertaken by Jo Beatty, and Trish Shaw provided invaluable Environmental expertise. The report was written by Cat Peters, and the drawings were produced by Tony Liddell and Cat Peters. The project was managed by Matt Town, Senior Project Manager for NPA Ltd. The report was edited by Matt Town.

1 INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 South Tyneside Borough Council has granted planning permission for offices (4590 sq.m) and associated works at Market Dock, Long Row, South Shields (Planning Ref. ST/1537/04/DM). The development site, centred on NZ 3591 6766, is within an area of high archaeological potential. It has always been assumed that a Roman port would once have served the supply base at the nearby Roman fort of *Arbeia*. The exact location is not known, although the vicinity of Mill Dam seems likely. Mill Dam was also the focus of the medieval town, and evidence for activity of this date has previously been found to survive northwards from Mill Dam as far as the development site. Industrial archaeology is also of significance to development on-site, as Low Dock, first referenced in 1754, occupied the southern part of the present site, and although it was demolished in 1900 by Brigham and Cowan, who constructed a large graving dock across the site, a recent evaluation (Peters and Liddell 2007) by North Pennines Archaeology revealed a timber structure, possibly relating to this 18th century dock. Furthermore, early 20th century archaeological deposits are likely to survive on site, relating to Brigham and Cowan's dock, known to have opened in 1905 after they bought the development site and surrounding area by 1900.
- 1.1.2 Reclamation works are known to have been efficiently carried out on the site after 1996 by Tyne and Wear Development Corporation, though the depth and extent of these works has never been made explicit. The construction of the graving dock by Brigham and Cowan will also have affected the archaeological potential of the site. However, the graving dock did not cover the entirety of the site, and recent works (op. cit) has encountered archaeology surviving within the development site. As a result, a watching brief was recommended to be undertaken on all groundworks, in the first instance, carried out in conjunction with the approved development (Morrison 2007).
- 1.1.3 North Pennines Archaeology Ltd (NPAL) were invited by Mandale Commercial Ltd, to undertake the required archaeological watching brief. All groundworks associated with the development had to be excavated under a full watching brief condition. The objective of this watching brief was to obtain an adequate record of any archaeological deposits or finds, which were disturbed or exposed by work associated with the development. All stages of the archaeological work were undertaken following approved statutory guidelines (e.g. IFA 2002) and professional standards.
- 1.1.4 This report comprises the results of the archaeological work programme, namely: the archaeological monitoring of the groundworks associated with the development.

2 METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 No project design was required. All works were undertaken in accordance with a specification prepared by the Tyne and Wear Specialist Conservation Team (Morrison 2007). This was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists (IFA), and generally accepted best practice.

2.2 THE WATCHING BRIEF

- 2.2.1 The archaeological monitoring and supervision of groundworks associated with the development commenced on Monday 6th August 2007. The works involved a structured watching brief to observe, record and excavate any archaeological deposits from the development site. A full written, drawn and photographic record of all features encountered was taken, in accordance with the specification (Morrison 2007, 3).

2.3 ARCHIVE

- 2.3.1 A full professional archive has been compiled in accordance with the project design, and with current UKIC (1990) and English Heritage guidelines (1991). The archive will be deposited within an appropriate repository and a copy of the report given to the County Historic Environment Record, at Jesmond, Newcastle, where viewing will be available on request. The archive can be accessed under the unique project identifier NPA07, MDN-B, CP548/07.
- 2.3.2 North Pennines Archaeology and the Tyne and Wear Specialist Conservation Team support the Online Access to the Index of Archaeological Investigations (OASIS) project. This project aims to provide an online index and access to the extensive and expanding body of grey literature created as a result of developer-funded archaeological fieldwork. As a result, details of the results of this study will be made available by North Pennines Archaeology, as a part of this national project.

3 BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The development site lies within an urban context on the frontage of the eastern bank of the River Tyne at Market Dock North, Long Row, South Shields, Tyne and Wear (NGR NZ 3591 6766). It consists of a vacant plot of scrubland, previously developed, comprising made-up ground with a recent growth of grasses and weeds.
- 3.1.2 The natural subsoil of the area consists of a glacial drift of brown boulder clay, the Lodgement Till. This survives up to 12m in thickness and dips down towards the River Tyne. Included within the boulder clay are lenses of sand and gravel that may have been deposited by streams in-between the successive glacial periods when the clay was deposited (Hurst 2006, 6).

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 specific to the study area. A full historical background of the development site has already been undertaken (Peters 2007).
- 3.2.2 The earliest deposits that may be encountered within the development during the watching brief date to the Romano-British period. A Roman port has been speculated to have once existed in the area, which once supplied the fort of Arbeia, although its exact whereabouts are unknown. Richmond (1934) suggested it may have been in the Mill Dam environs. There is a chance that it may have existed within the development site.
- 3.2.3 The establishment of St. Hilda's Church and religious community was to the west of the Roman settlement centred on *Arbeia*, towards the Riverfront, and this part of South Shields is thought to have formed the nucleus of the medieval settlement. There is therefore the potential for medieval settlement to have extended to within the development area.
- 3.2.4 During the 18th and 19th centuries, this area of the South Shields riverfront became the focus for an expanding industrial boom. The Low Dock, first referenced in 1759 (Flagg 1979, 27-44) is known to have existed in the southern part of the development site. An evaluation undertaken by North Pennines Archaeology in July 2007 located a timber structure, in the known area of this dock, so traces are known to exist within the development site (Fig 2). Early 19th century mapping has shown a significant number of small warehouse-style industrial buildings fronting the Tyne within the development site, with further buildings behind. Traces of these may survive within the development site.
- 3.2.5 Brigham and Cowan bought the premises, including the development site, and constructed a large graving dock running north-west from the Tyne frontage across the

site on a south-easterly alignment. Although this must have disturbed pre-existing archaeological traces, those areas not directly affected by this development maintain the potential for earlier deposits to survive. Evidence for the early 20th century dock, which opened in 1905, may also still survive subsurface.

- 3.2.6 Brigham and Cowan's dock was partially filled-in and furnished with paving slabs and seating areas to remind people of the industrial past of the area, and opened in 1970. Unfortunately these paving slabs were stolen, so the dock was subsequently completely backfilled.
- 3.2.7 Recent reclamation works are known to have been undertaken within the development site after 1996, though the true extent of this is not known, and recent archaeological investigations have shown archaeology to survive within the development site, despite these recent disturbances.

4 WATCHING BRIEF RESULTS

4.1 THE ARCHAEOLOGICAL WATCHING BRIEF

- 4.1.1 The watching brief was carried out between Monday 6th August and Tuesday 11th September 2007. It was undertaken in three key stages, based on the excavation for the foundations for the three buildings to be constructed within the site. Plot 'A' was the southernmost building, the five-storey building located on the site of the 'Low Dock', first referenced in 1754; Plot 'B' was the central building, due to be adjoined to the southernmost building, and three storeys high; and Plot 'C' was the northernmost building, the two-storey office building located over the site of the 1905 'Dry Dock'.
- 4.1.2 **Plot 'C':** groundworks on Plot 'C' involved the excavation of the complete footprint of the building with an additional 1.5m surround to provide a buffer for the foundations of the building. The excavated area was thus an irregular shape, measuring at its maximums, 42.5m in length and 20m in width. The total depth reached was 3.505m below the final floor level, which was 4.0m above sea level, thus making the final level of the depth of the excavation lying at 0.495m above sea level.
- 4.1.3 The earliest deposit encountered within Plot 'C', was of a mid to dark brown loose loam with up to 40% inclusions of ceramic building material, timber, rubble and concrete and the bottom of this deposit was not reached. Above this was a thin band of grey hardcore of 0.3m thickness which underlay a light yellowy sandy deposit of 0.2m depth. Overlying this was a light to mid grey-brown loose deposit with occasional inclusions of brick and ceramic building material infill. This deposit survived to a thickness of 1m, over which lay 0.5m of yellow or light brown deposit of sandy material consisting of at least 50% gravel and stone of the same colour. These deposits were observed surviving between two concrete structures; one, the westernmost, ran on a north-west to south-east alignment across the south western part of Plot 'C', and the other, the easternmost, ran on a similar alignment within the extreme north-eastern corner of Plot 'C', located about 20m to the north-east of the first. The western concrete structure had two metal rings attached to its north-eastern face, 2m apart towards the top of the structure (Plates 1 and 2). The deposits located to the west of the western concrete structure consisted of the same mid to dark brown loose loam with up to 40% inclusions of ceramic building material, timber, rubble and concrete as was located as the lowest deposit between the concrete structures, overlain by a light to mid grey-brown loose deposit with occasional inclusions of brick and ceramic building material infill. This deposit survived to a thickness of 1m. A coin from the reign of King George V was found within this early deposit, between the two structures towards the south of Plot 'C' (Plate 3). Post-excavation analysis showed that it was a one-penny piece, dated 1915.
- 4.1.4 **Plot 'B':** groundworks on Plot 'B' involved the excavation of the complete footprint of the building with an additional 1.5m surround to provide a buffer for the foundations of the building. The excavated area was thus an irregular shape, measuring at its maximums, 45m in length and 24m in width. The total depth reached was 3.505m below the final floor level, which was 4.0m above sea level, thus making the final level of the depth of the dig lying at 0.495m above sea level.

- 4.1.5 The earliest deposit recorded from Plot 'B' was a mid to dark brown loose loam with up to 40% inclusions of ceramic building material, timber, rubble and concrete, identical to that located in Plot 'C'. This deposit was consistent across the eastern part of the site below a light to mid grey-brown loose deposit with occasional inclusions of brick and ceramic building material infill, of a 1m thickness. A concrete structure was encountered 0.9m in thickness, on a north-west to south-east alignment, running from the centre of the northern extreme of the excavation in Plot 'B', to the south-eastern corner of the plot. It was better preserved at the northern end, where a concrete footing and associated chains was attached to it (Plates 4 and 5). Towards the south-east corner of the excavation in Plot 'B', and just at the western extreme of the excavation was a series of three steel girders, two of which remained vertical, with the central one leaning eastwards (Plates 6 and 7). The two upright structures were 2m apart, and they appeared to represent a discrete structure rather than circumstantial backfill.
- 4.1.6 **Plot 'A':** groundworks on Plot 'A' involved the excavation of the complete footprint of the building with an additional 1.5m surround to provide a buffer for the foundations of the building. As Plot 'A' was so close to Plot 'B', the corridor in between was also excavated for ease of machine operations, thus Plot 'A' was not distinctly separate from Plot 'B'. The location of Plot 'A' is depicted in Figure 1, and it measured, at its maximums, 30m in length and 22m in width. The total depth reached was 0.495m above sea level, the same as the previous plots, although the final floor level for this building is due to be lower. The plot was excavated, largely, on a south-west to north-east alignment, so as to allow vehicular exit from the plot, once excavated.
- 4.1.7 The earliest feature encountered appeared to be a timber structure, which was located within the southern half of Plot 'A' on the western side, on a west to east alignment. It was 0.7m thick and survived a distance of 14m in to a height of between 1.2m and 2m above the foundation level of the excavation (Fig 7). A second timber structure ran from the end of the first, heading north for 6m. This was only visible at the very base of the excavated area, so a true account of its form and function was not possible. Halfway along the first timber structure, a timber feature ran southwards for 1.5m and east for 4m. The timber structure was constructed from a series of timber uprights varying in width from 0.25m to 0.4m. A metal bolt was observed in the western part of the north face of the structure, perhaps indicative of repairs, as no others were observed. Horizontal timbers were also located at this edge, suggesting additional support was needed at this side. Adjoining the timber structure, to the south, was a concrete structure, running the width of Plot 'A' on a west to east alignment, of varying widths between 2.5m and 2m, the thicker part nearest the river. The soil deposits in Plot 'A' consisted of a mixed stony backfill, with ash and sand inclusions observed to formation level.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

- 5.1.1 The features encountered in Plot 'C' and Plot 'B' were consistent with known previous activity in the area. The concrete structures, the eastern and western recorded in Plot 'C', and the structure recorded in Plot 'B', once plotted and aligned, are consistent with the known location of Brigham and Cowan's 'Dry Dock', which officially opened in 1905. Its location in relation to the areas monitored by the watching brief can be seen in Fig 5. The concrete footing and associated chains seen to the west of the eastern dock wall, within Plot 'B' (Fig 6) may have been a footing for heavy machinery needed to build and repair ships, docked in the 'Dry Dock'. The steel girders located in the south-western part of Plot 'B' could have represented Brigham and Cowan's dockyard buildings, and their location ties in with the L-shaped building shown on Third Edition Ordnance Survey Mapping (Fig 5).
- 5.1.2 The deposits encountered within Plots 'C' and 'B' are also consistent with known activity within the development site. The earliest deposit, the mid to dark brown loose loam with up to 40% inclusions of ceramic building material, timber, rubble and concrete, is consistent with deliberate levelling of the site once Brigham and Cowan had finished with the premises, probably during the 1970s. The presence of a 1915 coin and building debris within the backfill in the 'Dry Dock' is suggestive of a comprehensive removal of surviving material extant on site at that time, and a deliberate re-use of that material as backfill to fill in the dock itself. The overlying thin band of grey hardcore of 0.3m thickness and light yellowy sandy deposit of 0.2m depth which overlay that, which were seen within the infilled dock, are consistent with the known 1970s intentions for the area. The hardcore layer would have formed a level surface for the paving slabs to have lain with the sandy layer, and this presumably dates to the 1970s when the area was intended as a leisure space for sitting and admiring the views and historical use of the site. The subsequent theft of the paving, led to further infilling of the dock, represented by the light to mid grey-brown loose deposit with occasional inclusions of brick and ceramic building material infill, of a 1m thickness. Thus the latter deposit is a late 20th century backfill deposit, thus explaining its similarity to that seen in the areas not within the 'Dry Dock' itself, to the west of the western dock wall in Plots 'C' and 'B', which may be the levelling and reclamation carried out by the Tyne and Wear Development Corporation in or after 1997. The sandy gravel dolomite surface of 0.5m is certainly consistent with this modern activity, and corresponds with the known depth of modern material to level the surface (Robinson Environmental Ltd 2003, 16).
- 5.1.3 The deposits encountered within Plot 'A', namely the timber structure and adjoining concrete structure, may relate to activity in the development site prior to Brigham and Cowan's purchasing of the site in 1900. The First and Second Editions of the Ordnance Survey Mapping (Figs 3 and 4), dating to 1855 and 1898, show a 'Low Dock' in this area of the site. The Desk Based Assessment undertaken of the site (Peters 2007) revealed documentary evidence for a dock in this area in 1754, and the subsequent evaluation (Liddell and Peters 2007) revealed similar timber features, thought to have

been part of this timber dock. The 13m west to east stretch of the timber structure does relate to the site of the dock, seen in Figs 3 and 4. The presence of a bolt and horizontal structures at the western end (Fig 7) could be evidence for repairs, or greater support for the part of the dock adjoining the River Tyne. The presence of concrete to the south of the timber structure could also relate to the need for repairs or strengthening over time. Documentary evidence (Peters 2007) suggests that the 'Low Dock' remained in use at least until 1887, and probably until Brigham and Cowan bought the site in 1900. The deposit of mixed stony backfill, with ash and sand inclusions observed to formation level, must be an early 20th century deposit (c. 1900), dumped by Brigham and Cowan upon ownership of the area, to level the site prior to their construction of Dockyard Buildings within this area of the development site (Fig 5).

- 5.1.4 The archaeological watching brief carried out on the site proved to be a good opportunity to locate, expose and record a continuing history of land-use on the site, relating to shipbuilding activity in this part of South Shields. The earliest feature in-situ was the remains of the mid 18th century dock, and the most recent feature, the remains of the early 20th century dock, which survived in good condition.

5.2 RECOMMENDATIONS

- 5.2.1 Although much of the archaeology encountered within the site was 20th century, which itself was not covered specifically by the specification for works on-site (Morrison 2007), the recent publication on the state of archaeology in the North East asserts the importance of 20th century deposits, and regrets its marginalisation in favour of earlier archaeology (Petts and Gerrard 2006). The shipping industry in particular, at the expense of more 'heroic' traditional regional industries (e.g. coalmining) is little understood, which is an oversight when the docks of the North East were of international importance (ibid). As such, this project has proved an invaluable chance to record and assess early 20th century dockyard deposits in the region, and further opportunities for more concise and coherent studies should be undertaken on similar sites in the future. Further archaeological works in the vicinity should make use of the previously unknown archive, held at Tyne Dock, some illustrations from which have been included in this report and Figs 8a and b for prosperity. These are unfortunately, undated, although a search of this archive was not part of the scope of this project.
- 5.2.2 The survival of potentially mid-18th century timber deposits within the site is of interest. It shows the potential for early deposits, deep enough not to be affected by later development, to survive in good condition, sub-surface, in this part of South Shields. In addition, as the base of the timber struts were not exposed by the observed groundworks on-site, which incidentally meant that environmental sampling was not worthwhile, these will survive below the depths reached on the development site, and any future developments on-site should take this into account.
- 5.2.3 As this report comprises the recommendations for archaeological recording of the developments relating to groundworks at Market Dock North, and forms a third and final stage of archaeological works within the development site, no further work is necessary. However, due to the continuing high archaeological potential of the area, any further development in the locality should be subjected to a programme of archaeological investigation.

6 BIBLIOGRAPHY

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APPENDIX 1: FIGURES

APPENDIX 2: PLATES



Plate 1: Eastern Concrete Structure from north-west



Plate 2: Eastern Concrete Structure from south-east



Plate 3: King George V penny, 1915

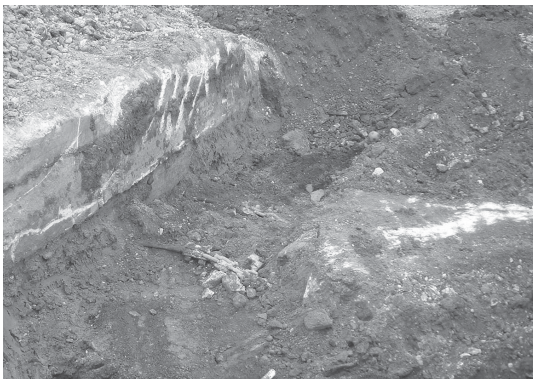


Plate 4: Concrete Footing and Chains from north-west



Plate 5: Concrete Footing and Chain from west



Plate 6: Steel Girders from north-east



Plate 7: Steel Girders from south-east



Plate 8: Western part of North Facing Section of Timber Structure