

**An Archaeological Watching Brief at Land off Westmorland Road,
Incorporating the Former Loadman Street, Elswick, Newcastle-upon-Tyne,
Tyne and Wear**

Central National Grid Reference: NZ 2289 6345

Site Code: LMS 09

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1. NON-TECHNICAL SUMMARY

- 1.1 An archaeological monitoring and recording exercise was undertaken during elements of initial groundworks associated with the re-development of a site south of Westmorland Road, incorporating the former Loadman Street, Elswick, Newcastle-upon-Tyne. The central National Grid Reference for the site is NZ 2289 6345.
- 1.2 The archaeological investigation was commissioned by Bam Nuttall and undertaken by Pre-Construct Archaeology February-April 2009. The investigation involved monitoring bulk ground reduction in specific areas of the site during preparatory work for the development. The investigation was undertaken following a recommendation by the Tyne and Wear Archaeology Officer. The work was preceded in 2006 by a desk-based assessment of the archaeological potential of the site.
- 1.3 The site in general had potential for medieval and post-medieval remains as it lay close to the site of the medieval manor and village of Elswick. There was greater archaeological potential in two specific areas of the site: first was its westernmost portion, due to the possible presence of remains of a colliery waggonway which ran from High Pit, Elswick Colliery to the north of the site to staithe on the River Tyne and was of at least early 19th century origin, potentially earlier; second was its northern central portion which was occupied in the mid 19th century by Low Dean House, a substantial building lying west of the course of Elswick Dene.
- 1.4 The development was therefore considered to have the potential to disturb important archaeological remains of the medieval period in general and remains of the post-medieval period/early modern industrial era in specific areas of the site. Monitoring of groundworks across the entire development area was not required – the entire site had been occupied by terraced housing by the late 19th century and severe disruption of former ground levels was anticipated.
- 1.5 Machine excavation of overburden was monitored in those areas of the site with particular potential for archaeological remains. For the most part, the work recorded the remains of late 19th century terraced housing, 20th century structures and substantial dumped material from modern landscaping. However, in the northern central part of the site, the remains of a stone-lined culvert and a sandstone wall were recorded, both probably related to the 19th century Low Dean House. To the west, no remains of the colliery waggonway were encountered.

2. INTRODUCTION

2.1 General Background

- 2.1.1 This report describes the methodology and results of an archaeological monitoring and recording exercise (hereafter 'watching brief') carried out during preparatory groundworks at a large re-development site to the south of Westmorland Road, incorporating the former Loadman Street, Elswick, Newcastle-upon-Tyne (Figure 1).
- 2.1.2 The watching brief was commissioned by the principal contractor for the scheme, Bam Nuttall Limited, and undertaken February to April 2009 by Pre-Construct Archaeology Limited (PCA).
- 2.1.3 The work was undertaken following a recommendation by the Tyne and Wear Archaeology Officer (TWAO). The development had some potential to disturb important archaeological remains as identified in an archaeological desk-based assessment (DBA) of the site undertaken in 2006.¹
- 2.1.4 A Specification for the undertaking of the watching brief was issued by the TWAO.² The broad aim was to allow preservation by record of archaeological remains encountered during intrusive groundworks, with specific areas of the site identified through historic map evidence to have greater potential for remains of the post-medieval/early modern industrial era.
- 2.1.5 At the time of writing, the project archive is housed at the Northern Office of PCA, at Unit N19a, Turdsale Business Park, Durham. The completed project archive, comprising written, drawn, and photographic records will be ultimately deposited with Tyne and Wear Museums, under the site code LMS 09. The **Online Access to the Index of Archaeological Investigations (OASIS)** reference number is: preconst1-61789.

2.2 Site Location and Description

- 2.2.1 The site lies in the Elswick area, west of Newcastle city centre at central National Grid Reference NZ 2289 6345 (Figure 1). For the most part it is bounded to the north by Westmorland Road, with the north-westernmost portion bounded by the curving St. John's Road. It is bounded to the east by Brunel Terrace, to the south by Wolsingham Street (to the east) and Beaumont Street (to the west) and to the west by the north-south continuation of Beaumont Street.
- 2.2.3 Sub-rectangular in shape, the site measures c. 450m east-west by c. 110m north-south. Prior to the development, it comprised a series of open grassed areas at a variety of levels due to the landscaped, terraced nature of the ground. The grassed areas were arranged around a network of paths – Brunel Walk - the main elements of which ran east-west along parallel to Westmorland Road, linked by numerous sets of steps. A branched cul-de-sac, Westmorland Walk, led off Westmorland Road from the northern central site boundary. The western portion of the site had greater vegetation cover, mainly shrubbery, particularly along the pathways. A small playground was also present in the western half of the site, overlooked from the north by Westmorland Walk.

¹ Archaeological Research Services Limited 2006.

² Newcastle City Council 2009. The document is included as Appendix B to this report.



Figure 1. Site location
Scale 1:25,000

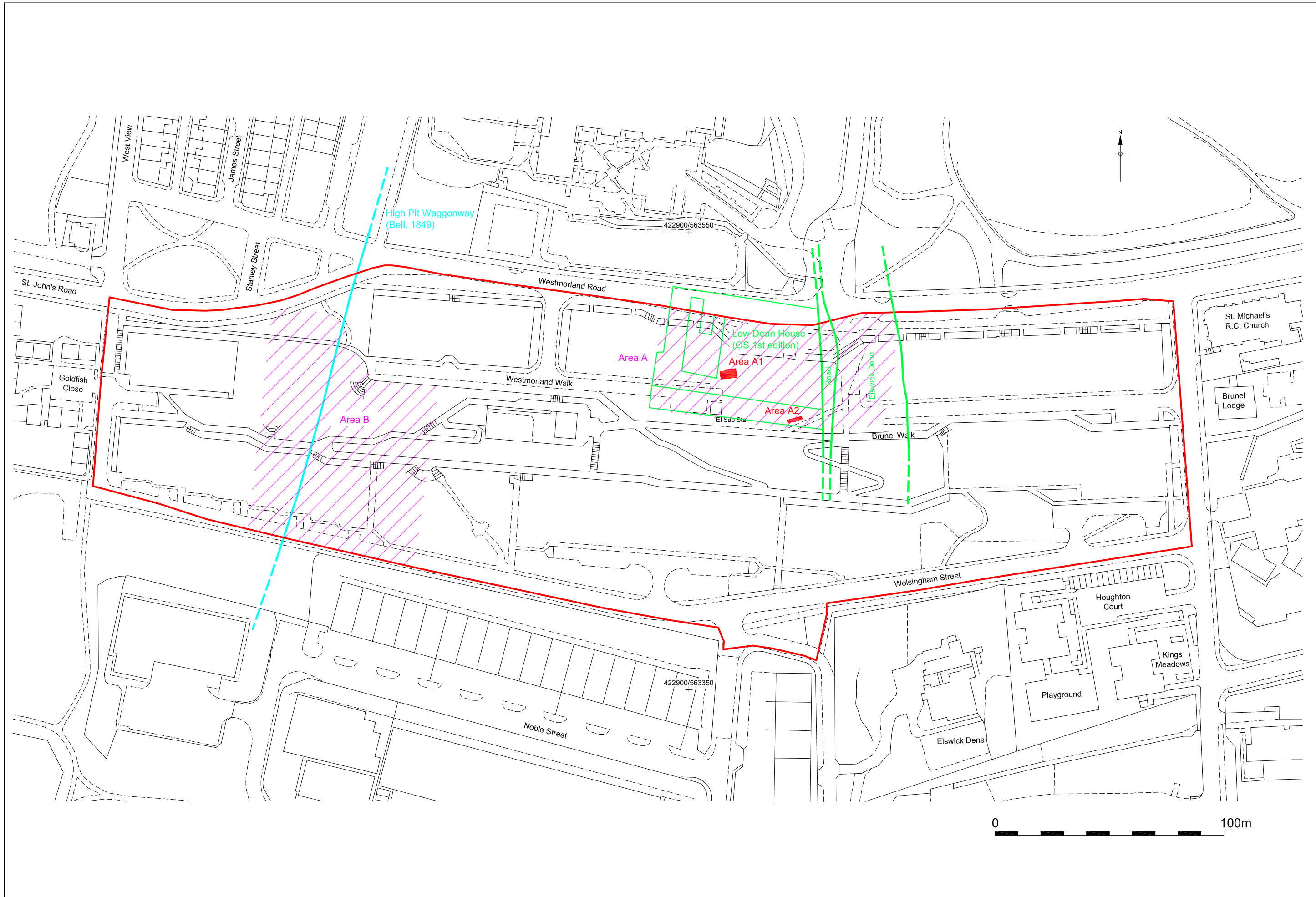


Figure 2. Site location; detail
Scale 1:1,500

2.3 Geology and Topography

- 2.3.1 The solid geology of the area is Westphalian Coal Measures. Overlying this is boulder clay and glacial drift.
- 2.3.2 The site occupies land on the lower northern valley side of the Tyne. Previously developed for housing in the late 19th century the natural topography of the site has clearly been altered by both that activity and subsequent landscaping following demolition of the buildings. The effect was of landscaped, terraced ground south of Westmorland Road and overlooking the riverside industrial area and its main through road the A695, Scotswood Road.
- 2.3.3 The variation in ground levels at the site has been previously mentioned. Road level along Westmorland Road to the north of the site was c. 63m OD, with a steep fall along the curving section of St John's Road bounding the north-western portion of the site, giving a ground level of c. 54m OD at the north-western corner of the site. Ground level along the Westmorland Walk cul-de-sac in the northern central part of the site - part of the area to be developed as an 'upper plateau' - was between c. 58-59m OD, with ground level in the playground to the south of that at c. 53.50m OD. Along the southernmost part of the site - to be developed as a 'lower plateau' - ground level was c. 46m OD to the west and c. 50m to the east, although the south-easternmost corner was a relatively elevated area at c. 53m OD.

2.4 Planning Background

- 2.4.1 The re-development scheme involves the erection of 12 single storey workshops units, 8 two storey office units and 101 associated car parking spaces, along with alterations to the site access and landscaping work, with the creation of defined upper and lower plateaus across the northern and southern parts of the site, respectively, as previously alluded to.
- 2.4.2 Government guidance regarding archaeology is contained in the document *'Planning Policy Guidance Note 16: 'Archaeology and Planning'* (PPG 16).³ At a local level, the Local Planning Authority, Newcastle City Council, implements various relevant policies with regard to cultural heritage. In particular, Policy C4 of the saved Unitary Development Plan states that *'Development that would harm sites or areas of archaeological interest and their settings will not be allowed'*. The Tyne and Wear Specialist Conservation Team, attached to the Historic Environment Section of Newcastle City Council, has responsibility for archaeological development control throughout Tyne and Wear.
- 2.4.3 The DBA compiled in 2006 established potential for important archaeological remains in specific parts of the site, particularly in its western portion along the route of a 19th century or earlier waggonway which ran down the valley side from High Pit, Elswick Colliery to the Tyne and in its northern central part, occupied in the mid 19th century by a large dwelling, Low Dean House. Across the site in general there some potential for remains of the medieval period due to its proximity to the assumed focus of the medieval manor and village of Elswick.

³ Department of the Environment 1990.

- 2.4.4 A condition (no. 26) of planning permission (granted 16 May 2008 to Priority Sites Limited, reference 2008/0406/01/DET) stated that *'No development shall take place until the developer has appointed an archaeologist to undertake a programme of observations of construction work to record items of interest and finds in accordance with a specification provided by the County Archaeologist. The condition will not be discharged until the watching brief report has been submitted to and approved by the Local Planning Authority. Reason: The site is located within an area identified as being of potential archaeological importance. The observation is required to ensure that any archaeological remains on the site can be recorded and, if necessary, emergency salvage can be undertaken in accordance with Policy C4 of the saved Unitary Development Plan'*.
- 2.4.5 The aforementioned Specification for the archaeological investigation was prepared by the TWAO. While the investigation broadly aimed to record archaeological remains exposed at the site during construction groundworks, the work was to concentrate primarily on the route of the supposed colliery waggonway and the area of Low Dean House.

2.5 Archaeological and Historical Background

Information contained within the aforementioned desk-based assessment (DBA) compiled by Archaeological Research Services Limited has been used as the basis for this section of the report. The research and writing of those responsible is fully acknowledged. Historic Environment Record (HER) numbers are included here but the DBA should be consulted for other references.

- 2.5.1 There is no archaeological evidence for activity dating to the prehistoric period within the site area itself, although evidence has been recovered from the surrounding area.
- 2.5.2 In 1873 a cist burial (HER 1375) was found on Elswick Road, just north of the site, this contained a vessel of the Early Bronze Age. There are also documented finds of prehistoric artefacts from the River Tyne, comprising a spearhead, a dagger and a rapier, all dating from the Middle to Late Bronze Age (HER 1380, 1379 and 1378). A bridle bit dating to the Iron Age was also discovered at King's Meadows, to the south-west of the site (HER 1493).
- 2.5.3 There is no archaeological evidence of Romano-British activity within the site. Hadrian's Wall follows the line of the West Road out of the city centre towards Benwell, and thus passes through the northern part of Elswick, but c. 0.9km to the north of the site.
- 2.5.4 No definite archaeological evidence for early medieval activity within the site is recorded. However, place name evidence, landscape context and documentary history suggest an early medieval origin for the settlement at Elswick. The place name Elswick incorporates the Old English *wic*, often meaning farmstead, however, due to the landscape of the area an alternative meaning of market or trading place, particularly on a river with shallow sloping foreshore, may be more likely.
- 2.5.5 Following the Norman Conquest, Elswick formed part of the barony of Bolam. The earliest documentary evidence for Elswick dates from c. 1120 AD when lands of the barony of Bolam were granted to Tyneside Priory (it is named in the charter confirming the possession of the priory granted by Richard I in 1189). There are references in the 14th century to the manor as a site including a farm and house and it is possible that the manor was located north-west of Elswick Hall as there was still a farm there in the mid 19th century.

- 2.5.6 Documentary records from the 13th century provide more information for Elswick and although these demonstrate that the area had economic problems at the time, there was clearly an established agricultural settlement - a measurement of demesne land in 1295 found 246 acres under cultivation, and listed 7 bondage tenements, 9 serfs and 7 cottages.
- 2.5.7 Documentary evidence from the 14th century records that while Tynemouth Priory received annual dues from the agricultural copyhold tenants of Elswick, they derived a greater revenue from the letting of coal mines there. The village of the common field township of Elswick occupied land that is now Elswick Park, to the north of the site.
- 2.5.8 The first mention of Elswick Colliery appears in 1330 when it is documented that the prior of Tynemouth let the colliery for £5 per year. Tynemouth exported all coal from the Newcastle area and from c. 1450 Tynemouth Priory had to struggle for possession of the Elswick mines with the burgesses of Newcastle, who eventually gained control at the Reformation in 1539, with the priory being dissolved.
- 2.5.9 Thus during the post-medieval period, Elswick was owned by the Crown. In 1554 Queen Mary granted a lease of all the mines in the township of Elswick, at the annual rent of £68. Farming, however, continued to be important in this period. Elswick remained a Royal possession through the time of the Tudors, but Charles I was forced to sell it in 1628, with much other Crown property, to Edward Ditchfield and others as trustees for the City of London, from whom the King had borrowed money. It was soon resold to Sir Ralph Jenison of Newcastle (nine-tenths) and the Ord's of Fenham (one-tenth) before the end of the 17th century. By 1680 the copyhold farms were held to form Elswick while the rest of the old township had become Westgate. All of the copyholds finally came into the possession of one man, John Hodgson of Newcastle, by the end of the 18th century.
- 2.5.10 In 1644 the pitmen of Elswick were employed by John Osborne, '*a false rebellious Scot*', to undermine the town walls. The Scots, whose headquarters under General Leven during this phase of the Civil War were at Elswick, patrolled the Tyne from an elongated island in the river called The King's Meadows, to the south of the site. The King's Meadows were dredged away by the Tyne Commissioners by 1887 - a block of flats near Brunel Terrace now bears the name.
- 2.5.11 The Hodgson family was to be the major landowner in the southern part of Elswick until their land was sold to Richard Grainger in 1839. The family enclosed new farms, pulled down the old mansion of the Jenison's, removed the remains of the medieval village and in 1810 the grandson of John Hodgson, John Hodgson III, erected a new Elswick Hall, to the north of the site. When Richard Grainger bought the hall he had a view of creating an industrial suburb at Elswick. The purchase, however, almost bankrupted him and the hall was sold *in lieu* of payment to his creditors. In the 1860s the manufacturer Christian Allhusen lived there until a group of Newcastle worthies bought the estate and passed it to the City Council for use as a public park. Elswick Park opened in 1881 and the hall was used to house the work of local sculptor John Lough. Costs eventually forced the City Council to abandon the hall and it was eventually demolished in 1980, with a swimming pool constructed on the site.

- 2.5.12 Elswick was completely transformed in the second half of the 19th century as a result of the rapid growth of industry in the area. From 1839 the extension of the railway from Carlisle via Scotswood Railway Bridge through Low Elswick to Newcastle brought change, but the greatest change was inaugurated from 1847 by William Armstrong's purchase of five and a half acres in south-west Elswick to manufacture hydraulic machinery. Armstrong's Elswick and Scotswood Works formed the most important heavy engineering complex in the region in the late 19th century, with the works by then extending further than a mile along the river bank. After 1855 the focus of the works shifted towards the manufacture of armaments and in 1883 a military shipyard was added to the works. The population of Elswick increased from 301 to 3,539 between 1801 and 1851, and by 1901 it had escalated to 59,165. In 1861 Elswick was included in Newcastle as the ninth ward with three representatives on the council.
- 2.5.13 J.T.W. Bell's map of the coalfields from 1849 shows a colliery waggonway running down the valley side through the western portion of the site. F. Graham's collation of early 19th century estate maps reproduced in the DBA indicates that the portion of the site through which this route ran was 'Middle Cow Close'. Beyond the site on Bell's map, the waggonway continued to the north to 'High Pit', which later became a core working of Elswick Colliery, while to the south it continued to staithes on the Tyne opposite The King's Meadows, with a short branch to another pit, Beaumont Pit, just to the south of the site - this working was in use from at least as early as 1819.⁴ Just within the southern boundary of the site, the waggonway cut through a terrace of housing, fronting onto a road running west-east. The remainder of the site is shown as undeveloped fields, with the wooded corridor of Elswick Dene in evidence roughly centrally - through this presumably ran a minor tributary of the Tyne.
- 2.5.14 The Ordnance Survey 1st edition map from c. 1860 shows 'Low Dean House' (HER 6315) and its grounds within the northern boundary of the site. To the north of the site is another house with an almost identical form, 'Dean House', with a branching road running up the valley side to serve these properties and, slightly to the north-east, Elswick Hall. The road skirted the western side of Elswick Dene. The High Pit waggonway was evidently out of use by the time this map was surveyed although its route is preserved within the site as a field boundary and to the north as a narrow road or path.
- 2.5.15 During the second half of the 19th century, and especially in the 1880s, the area of the site was completely developed for terraced housing as a defined street grid was enforced along the valley side. The Ordnance Survey 2nd edition map from 1898 shows Hamsterley Road as the predecessor of Westmorland Road and Beaumont Street and Wolsingham Street both in place along the southern boundary of the site. To the east was Brunel Terrace and to the west was Glue House Lane.

⁴ The Durham Mining Museum website (www.dmm2.org.uk) contains an 'Account of Strata sunk through Beaumont Pit, Elswick, near Newcastle-on-Tyne. March 4th 1819'.

- 2.5.16 Within the site, this substantial development saw the demise of Low Dean House and the wooded corridor of the dene itself. A series of parallel streets, Stanley Street, Loadman Street, Strickland Street, George Road (this developed version of the route which skirted Elswick Dene on the 1st edition), Choppington Street and Budle Street, crossed the site linking Hamsterley Road with Beaumont Street/Wolsingham Street. Wylam Road and Marsden Street formed a T-junction in the central portion of the site. To the south-west, the former Beaumont Pit was by then named simply Elswick Colliery. To the north of Hamsterley Road was St Joseph's House - a home for the aged - set within extensive grounds where Dean House had formerly stood - and Elswick Park, with Elswick Hall by then a museum.
- 2.5.17 Elswick's dependency on industry had serious repercussions when the depression arrived in the 1930s. The Second World War brought temporary prosperity but post-war modernisation proved impractical and employment continued to drop. By the 1960s the old Elswick had disappeared, with many families housed in high rise flats or further afield on estates. In the 1970s the late Victorian streets within the site were demolished and Armstrong's Elswick Works (which had been sold to Vickers in 1928) were demolished in the 1980s. By 1981 more houses were built upon the site although by 1991 some of these had been demolished, with the remainder removed subsequently.

2.6 Aims and Objectives

- 2.6.1 In broad terms, the aim of the archaeological investigation was to examine and record archaeological remains exposed as a result of development groundworks at the site.
- 2.6.2 Specific objectives, as identified in the Specification, were: firstly, to record any evidence, in terms of trackbed deposits, drainage ditches or palisades, for the waggonway of High Pit, Elswick Colliery which from the early 19th century, possibly earlier, ran southwards through the western part of the site; secondly, to record any evidence of Low Dean House, a substantial 19th century residence which stood just within the northern central site boundary.
- 2.6.3 '*Shared Visions: The North-East Regional Research Framework for the Historic Environment*' (NERRF),⁵ highlights the importance of research as a vital element of development-led archaeological work and identifies the following key priority within the research agenda for the post-medieval (PM) period that is of direct relevance to this project:

PM2. Early railways:

Ongoing research needs to recognise the role of the North East in the development of the early railways, with several key areas of investigation having been identified.

Investigations should focus on the early waggonways and pre-locomotive hauled lines, whilst also recognising the potential archaeological importance of terminals, and specifically the development of coal staithes. Existing landscape features along the course of known early waggonways require survey, which if possible, should include railway formations, track beds and gradients.

The routes of early railways should be plotted on the HERs of the region, through archival research on early documentary and cartographic sources.

⁵ Petts and Gerrard 2006.

3. ARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork

- 3.1.1 The watching brief at the site off Westmorland Road, incorporating the former Loadman Street, was undertaken in accordance with the Specification compiled by the TWAO and in accordance with the relevant standard and guidance document of the Institute for Archaeologists (IfA).⁶ PCA is an IfA-Registered Organisation (RO 23).
- 3.1.2 In line with the recommendation of the Specification, preliminary construction groundworks were monitored only within the area formerly occupied by Low Dean House (Area A) and within the area of the route of the colliery waggonway (Area B). Area A covered c. 4,000 m² and Area B covered c. 6,000 m² (Figure 2). Within Area A, two small areas (Area A1 and Area A2) were hand cleaned to facilitate the examination of archaeological features of note. Area A1 was located close to the north-eastern corner of the Westmorland Walk cul-de-sac, while Area A2 was located c. 30m to the south-east, close to the Brunel Walk. Ground reduction was undertaken using a 360° tracked excavator, fitted with a toothless bucket and loading spoil into tipper lorries.
- 3.1.3 Archaeological deposits revealed during the groundworks were recorded using the 'single context recording' method on *pro forma* 'Context Recording Sheets'. Features were planned at a scale of 1:20 and sections drawn at a scale of 1:10. A photographic record of significant exposures was compiled and photographs of the overall archaeological operation mounted were also taken. Heights above Ordnance Datum were recorded using an automatic dumpy level, using fixed survey points as Temporary Bench Marks, these being shown on a survey plan provided by Bam Nuttall.

3.2 Post-excavation

- 3.2.1 The stratigraphic data for the project is represented by the written, drawn and photographic records. In total, 19 archaeological contexts were defined during the watching brief (Appendix A). Post-excavation work involved checking and collating site records. A written summary of the archaeological sequence was then compiled, as described below.
- 3.2.2 No artefactual or organic material was recovered and no bulk samples for palaeoenvironmental remains were collected during the watching brief.
- 3.2.3 The complete Site Archive, in this case comprising written, drawn and photographic records (including all material generated electronically during post-excavation) will be packaged for long-term curation. No material was recovered that required specialist stabilisation or an assessment of potential for conservation research. In preparing the Site Archive for deposition, all relevant standards and guidelines documents referenced in the Archaeological Archives Forum guidelines document⁷ will be adhered to, in particular a well-established United Kingdom Institute for Conservation (UKIC) document⁸ and a forthcoming IfA publication.⁹

⁶ IfA, 1999.

⁷ Brown 2007.

⁸ Walker, UKIC 1990.

⁹ IfA forthcoming.

3.2.4 At the time of deposition of the Site Archive, the depositional requirements of the receiving body, in this case Tyne and Wear Museums, Arbeia Roman Fort and Museum, Baring Street, South Shields, will be met in full.

4. RESULTS: THE ARCHAEOLOGICAL SEQUENCE

4.1 Phase 1: Natural Sub-stratum

- 4.1.1 Across Area 1 the boulder clay sub-stratum, [118], was observed to be firm mid greyish brown clay with occasional large sub-rounded stones and very occasional boulders. This deposit generally appeared at c. 58.20m OD, but was anywhere between c. 0.60m and c. 2.0m below the existing ground surface, due to variations in the extent of previous landscaping.
- 4.1.2 Across Area B, natural boulder clay was generally observed between 0.5m and 2.0m below the existing ground level, this variation again due to the extent of previous landscaping.

4.2 Phase 2: 19th Century

- 4.2.1 In Area A1, part of a stone-lined culvert, [111], was recorded within a linear construction cut, [112], which ran in a NW-SE direction (Figures 3, 5 and 6). The construction cut was exposed for a length of 6.40m, although cut through by a north-south aligned modern concrete footing, and was 1.25m wide and 0.55m deep. It had straight, near vertical sides and a flat base. The base of the construction cut was recorded at a height of c. 57.62m OD.
- 4.2.3 Culvert [111] consisted of roughly hewn sandstone blocks forming the base and sides of the structure. It was typically 0.85m wide and 0.50m deep, The individual blocks ranged from 90mm x 80mm x 40mm up to 480mm x 300mm x 180mm in size. The smaller blocks had generally been used to form the base of the structure. A light brownish yellow lime mortar had been used to bond the stones together.
- 4.2.4 A series of squared sandstone slabs, [109], had been used to cap the culvert, although this was very disturbed to the north-west. The individual slabs ranged in size from 200mm x 180mm x 150mm up to 880mm x 370mm x 250mm. No bonding material was present along this capping, which was recorded at a height of c. 58.15m OD. The backfill, [110], of construction cut [112] comprised loose light greyish brown sandy silt clay with occasional inclusions of small sub-angular and sub-rounded stones.
- 4.2.5 The culvert is interpreted as being associated with Low Dean House, which occupied this part of the site in the mid 19th century. It would have run away from the eastern side of the house, towards the line of Elswick Dene. Such features are commonly found on sites of the later post-medieval period in the North-East and were usually related to drainage.
- 4.2.6 In Area A2, part of an east-west aligned stone wall, [107], was recorded (Figures 4 and 7). It was housed within a linear construction cut, [108], which was exposed for a length of 6.40m and which measured c. 0.90m wide, with the wall itself being c. 0.75m wide. The wall was recorded at a height of c. 57.50m OD, this c. 0.45m below the existing ground surface. At least two courses of the wall survived, with occasional small, thin slabs of grey slate noted as levellers between the courses, these comprising roughly squared blocks of sandstone ranging from 210mm x 260mm to 1070mm x 300mm in size. The bonding material was a light brownish yellow lime mortar. The backfill, [106], of the construction cut was a compact, dark brown clay silt with occasional inclusions of small sub-angular and sub-rounded stones.

- 4.2.7 Partially overlying the wall construction cut on the south side of the structure was a layer of loose mid brownish yellow sand, [105], up to 0.10m thick. This was the bedding for a robust floor or yard surface, [103], comprising stone slabs, with one concrete slab, [102], this probably a repair. Only a small area of the original surface could be exposed, with the full dimensions of only one slab visible, this measuring 0.82m x 0.65m. A stone drain, [104], appeared to be an integral feature in the surface. It was observed for a length of 0.64m running north-south and had a maximum width of 0.20m.
- 4.2.8 The wall and associated surface are also interpreted as being associated with Low Dean House. The location and alignment of the wall correspond closely with the southern boundary of narrow rectangular plot of land on the south side of the grounds of the house on the Ordnance Survey 1st edition map. This is likely to have been an extension of the formal garden of the dwelling and may have been the location of, for example, a garden hothouse.

4.3 Phase 3: Modern

- 4.3.1 Across Area B, extensive sub-surface remains of late 19th century and modern brick buildings survived up to 1m below existing ground level and often cutting into natural boulder clay. These later structures are likely related to the development of the site for housing in the 1970s.
- 4.3.2 An extensive concrete slab, [114], supported by a series of concrete footings (e.g. footing [115] as previously described), these with an average width of c. 1.0m, was exposed across much of the western half of Area A. The slab extended at least 20m east-west by 14m north-south and was bounded to the north by an east-west aligned pathway, [113], this c. 3.90m wide. Consisting of concrete paving slabs, the pathway abutted the existing northern boundary wall of the site. These structures are likely related to housing development at the site in the 1970s.
- 4.3.3 An extensive dump deposit, [101], overlay the concrete slab, extending beyond its limits to cover the majority of Area A. It comprised compact mid reddish brown clayey silt with large patches of silty clay throughout and had frequent inclusions of brick rubble and moderate inclusions of wood, glass and plastic. It had an average thickness of c. 1.0m, although its thickness varied greatly due to previous landscaping and also due to deep intrusions presumably caused by the removal of previous structures on the site. The maximum recorded depth of this modern ground consolidation and levelling dump was 1.80m.
- 4.3.4 The uppermost deposit removed across much of Areas A and B was a firm topsoil, [100], with its vegetated upper surface forming existing lawned areas as work commenced (Figure 8). It had an average thickness of 0.40m and moderate inclusions of brick rubble and occasional large lumps of yellowish brown clay were noted throughout.

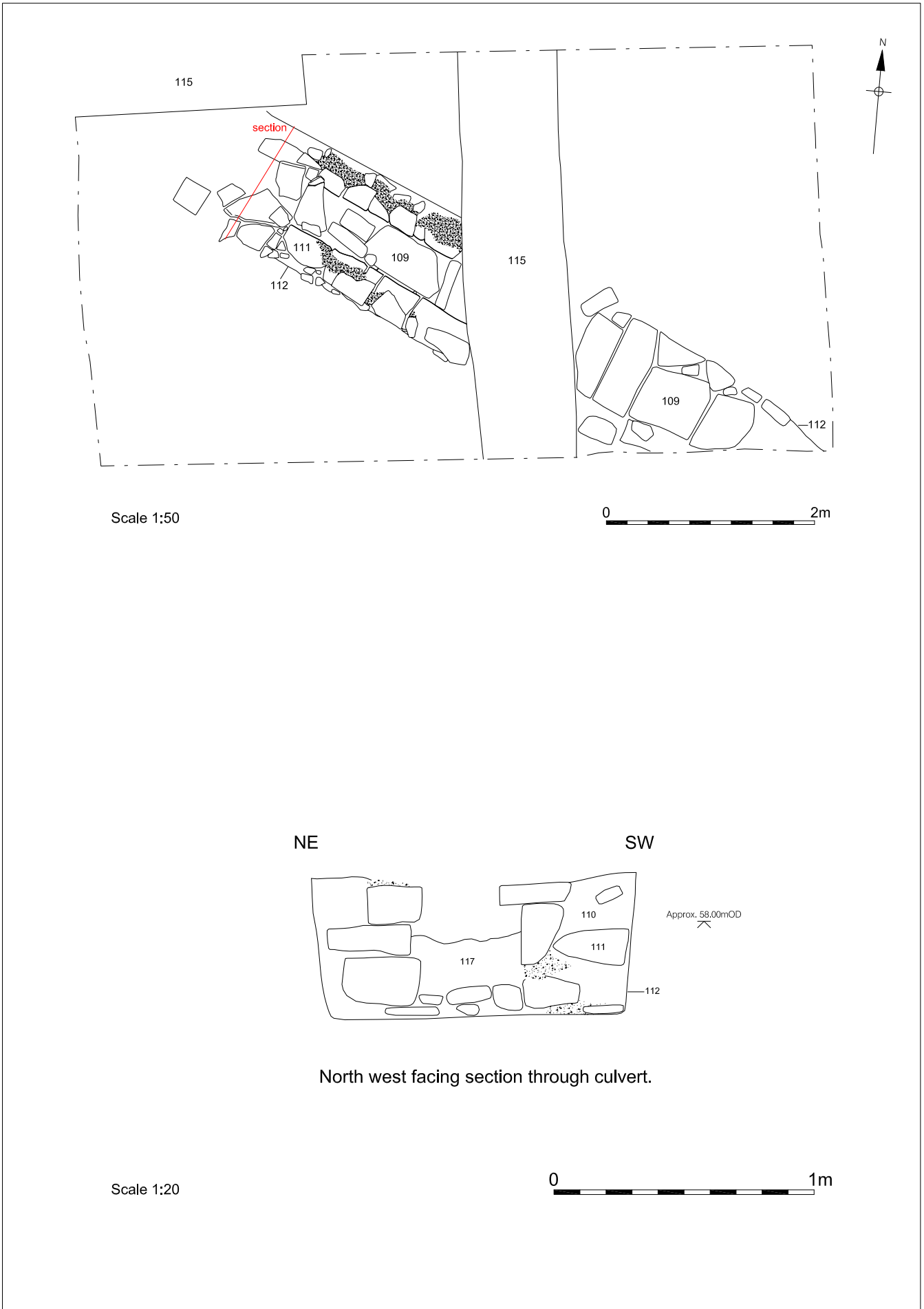


Figure 3. Area A1, plan and section

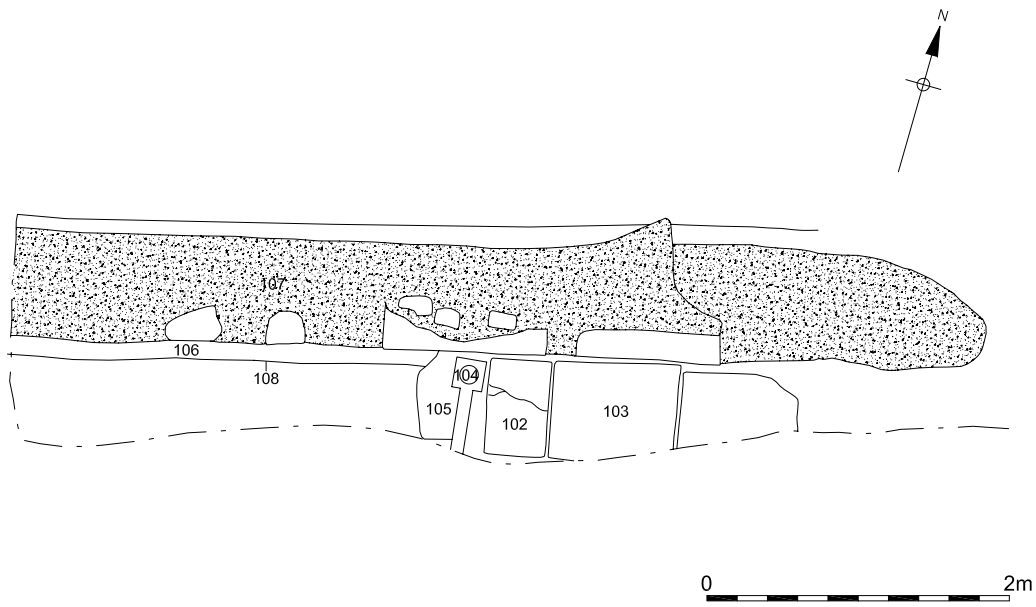


Figure 4. Area A2, plan
Scale 1:50



Figure 5. Culvert [111], looking south-east (*1m scale*).



Figure 6. Culvert [111], with capping [109], looking north-west (*1m scale*).



Figure 7. Wall [107] and surface [103], looking south (1m scale).



Figure 8. Machining Area A, looking south-east.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

- 5.1.1 Area A contained limited archaeological remains of note, namely a stone-lined drainage culvert and a probably yard or floor surface and associated drain, all likely related to Low Dean House without actually being part of the house structure.
- 5.1.2 No features or deposits of archaeological interest were observed in Area B, where previous development has severely impacted on former archaeological levels. No evidence of the former colliery waggonway was recorded.
- 5.1.3 No evidence was recorded for medieval activity at the site.

5.2 Recommendations

- 5.2.1 No further work is required on the information recovered during the watching brief, with the Site Archive, including this report, being the permanent record of the archaeological remains encountered.

6. REFERENCES

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7. **ACKNOWLEDGEMENTS AND CREDITS**

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PCA Credits

Fieldwork: Amy Roberts

Report: Amy Roberts and Robin Taylor-Wilson

Project Management: Robin Taylor-Wilson

CAD: Adrian Bailey

**APPENDIX A
CONTEXT INDEX**

Context	Area	Phase	Type 1	Type 2	Interpretation
100	A	3	Deposit	Layer	Topsoil
101	A	3	Deposit	Layer	Demolition dump
102	A	2	Masonry	Structure	Concrete paving stone
103	A	2	Masonry	Structure	Stone surface paving
104	A	2	Masonry	Structure	Stone drain
105	A	2	Deposit	Layer	Sand bedding layer for paving [103]
106	A	2	Deposit	Fill	Backfill of construction cut [108]
107	A	2	Masonry	Structure	Stone wall
108	A	2	Cut	Linear	Construction cut for wall [107]
109	A	2	Masonry	Structure	Stone capping of culvert [111]
110	A	2	Deposit	Fill	Backfill of construction cut [112]
111	A	2	Masonry	Structure	Stone culvert
112	A	2	Cut	Linear	Construction cut for culvert [111]
113	A	3	Masonry	Structure	Concrete paving on pathway
114	A	3	Masonry	Structure	Concrete floor slab
115	A	3	Masonry	Structure	Concrete footings for pathway [113] and slab [114]
116	A	3	Cut	Linear	Construction cut for footings [115]
117	A	3	Deposit	Layer	Demolition dump - infills culvert [111]
118	A	1	Deposit	Layer	Natural clay

APPENDIX B
PROJECT SPECIFICATION

Specification for an Archaeological Watching Brief at Loadman Street, Elswick, Newcastle upon Tyne

Introduction

Planning permission has been granted for the erection of 12 single storey workshop units and 8 x 2 storey office units with 101 associated car parking spaces, alterations to site access and associated landscape works on southern part of site, and recontouring of northern part of site.

The only known archaeological features within the site are two late nineteenth century chapels and Low Dean House, shown on Ordnance Survey first edition map of c1850.

However the site lies to the south-west of the site of Elswick Hall, which is likely to have been the location of the medieval manor and village of Elswick. There is therefore the possibility that medieval or post medieval archaeological remains could be present.

Elswick manor was probably given to Tynemouth Priory as early as 1120, it was certainly in their possession in 1189, and the manor was one of ten listed in 1292. The demesne lands and customary services were itemised in 1295, and there are references in the C14 to the manor as a site, i.e. a farm, and house. It is possible, though not certain, that the manor was located NW of Elswick Hall, on the S side of Elswick Road, opposite the S end of Mill Lane. There was still a farm here in the mid C19.

Among the C14 leases by Tynemouth Priory is one of the quarry: "The quarry of Elstewyk next the manor is demised to Robert de Neuton to hold from Christmas (1337) till the same feast in the next year, paying therefor 30s ... or 3 little mill stones for the mill and 5s as it shall best please the lord and his servants to receive. And he shall have in the aforesaid quarry only 4 workmen, and he shall give for a way from the quarry to the water of Tyne 40d". The 1st ed. OS map shows several quarries on the north side of Elswick Road, and one just west of the supposed site of the manor. At that time there was a straight route from the quarry at least as far south as what is now Scotswood Road.

In 1337 the prior and monks of Tynemouth were attacked and besieged in their house at Elswick by men from Newcastle. Many years later, 1575/6, a lease of Elswick tithes refers to "the castle in Elswick lately belonging to Tynemouth". This is the only known reference to a fortification here. A tower (cf. Benwell, also belonging to the priory) seems much more likely than a castle. Since the priory had the manor of Elswick it seems reasonable to suppose that the tower, if it did in fact exist, would have served as the living accommodation of the manor. Dodds then suggests that, as the tower had probably been incorporated in the old hall (date? medieval or later?) at Elswick, it was destroyed when the old hall was demolished and replaced by a new one in the early C19. There is a lot of supposition here.

Men were digging for coal on Elswick moor as early as 1293. In 1330 the Prior and Convent of Tynemouth granted a formal lease of the coal mines at Elswick for £5; in the 1378 priory rental the coal pits with way and staiths were let for £40. In the 1530s Christopher Mitford had leases of the Elswick pits, with liberty to take timber

from Elswick woods for shoring, and maintaining staiths and houses, plus way leave and staith leave. The mines next went to the Anderson family, and though the rent reached £68 in 1578 it had fallen to £20 in 1608 "by reason of the decay of the mine". No precise location is known. IN the 19th century most but not all the Elswick pits were fairly close to the Tyne.

Staiths were included in the £40 rent to Tynemouth Priory for their coal pits and way in Elswick in 1378. In his lease of the Elswick pits of 1530 Christopher Mitford had liberty to take timber to maintain the staiths, and staith leave was included in 1538. No precise location is known; they were presumably sited somewhere on the bank of the Tyne within Elswick.

Elswick village was perhaps also given to Tynemouth Priory as early as 1120; named in the confirmation charter of 1189. 16 tenants in 1294 tallage; 6 paid lay subsidy of 1296. 30-31 Henry VIII there were 7 free tenants, 10 copyholders, and the numbers were much the same in 1608. By 1747 all 10 copyholds belonged to John Hodgson, and it was his grandson John who built Elswick Hall in the early C19, demolished in 1970s. A map of 1780 shows 2 rows of houses on either side of a S continuation of Mill Lane, a road which no longer exists but which once ran down the W side of Elswick Park. By 1839, however, the houses had gone and their sites had apparently been absorbed into the park. A farm, with assorted buildings, survived in the SE angle of Elswick Road and the onetime lane. In 1839 Richard Grainger bought Elswick Hall from John Hodgson Hinde with the view of creating an industrial suburb at Elswick with quality residential accomodation. There was rented terraced housing in Benwell and he named the streets after his thirteen children. There are some surviving large villas at Grainger Park and Bentinck Road, and Graingerville South on the West Road is listed, but the project as a whole was a failure, it almost bankrupted Grainger and he began selling the land off to repay his creditors only after a few years. William Armstrong bought the land along the riverfront in 1848 for his Elswick Works.

Originally the Elswick estate was held by the Jennison family, who made their first purchase of land there in 1640. Sir Ralph Jennison, a successful Newcastle merchant, continued to add to his holdings during the Protectorate, buying up several of the surrounding farms. The subsequently-enlarged estate was sold by his great-grandson, who preferred to live at Walworth Castle in Durham. The purchaser was John Hodgson, an affluent cloth merchant, and a considerable colliery owner along the banks of the Tyne. His father had settled in Newcastle in 1671, the family having originated from Brough in Westmorland. The purchaser's grandson, John Hodgson III, commissioned the rebuilding of Elswick Hall in 1803, the year of his marriage to Sarah Huntley. The father and son partnership William and John Stokoe of Newcastle were chosen as architects. John Hodgson died in 1820, leaving Elswick to his son, another John, an MP for Newcastle and enthusiastic supporter of the development of the city. He sold the estate in 1839 to Richard Grainger, who made it his home for a short time. Grainger paid £114,100 for the Hall - it was the single largest purchase he had made. Grainger planned to create an industrial suburb at Elswick with quality residential accomodation. The purchase almost bankrupted him and it was sold in lieu of payment to his creditors. In the 1860s the manufacturer Christian Allhusen lived there. Eventually the estate came back on the market for sale as building plots. The sale never went ahead as a number of Newcastle worthies banded together and bought the estate, passing it to the City Council for use as a public park. Elswick Park was opened to the public in 1881. For some years the house was used to display the work of the local sculptor J.G. Lough (1798-1876), designer of the Stephenson monument in Newcastle. Later, however, rising running

costs forced the Council to abandon the Hall and it was eventually demolished about 1980 and a swimming pool constructed on the site.

In 1878 Elswick Hall was purchased by the Corporation to display sculpture by John Graham Lough and Matthew Noble. Mr. A.M. Fowler laid out an ornamental lake, croquet lawn, walks, lodges and other features. In 1981 a swimming pool was built in the park. Tomlinson said that this park had much larger and older trees than Leazes Park. It had a lake, bowling green, rockery, a terrace in front of the aviaries, with a fine granite drinking fountain erected by subscription in 1881, in recognition of Joseph Cowen, Thomas Forster, Thomas Gray, T. Hodgkin, William Smith and William H. Stephenson, who had been instrumental in procuring the park for the people of Newcastle.

To the north-east of the site is St. John's Cemetery, which is a Registered Historic Park.

An archaeological desk based assessment has been produced (Archaeological Research Services Ltd, June 2006). This report must be consulted by the appointed archaeologist. A copy is held by the HER.

The report concludes that:

- the site was within agricultural use in the medieval period.
- A map of c. 1645 reproduced by Frank Graham in 1984 shows the location of copyhold farms which were owned by John Hodgson of Newcastle by the end of the 18th century. The study area sits approximately in the area of Bartram's Farm (fig. 3 in the DBA).
- There is a trackway (possibly a waggonway) leading from Low Elswick Lane to High Pit on Mill Lane present on a 19th century map reproduced by Frank Garaham (fig. 12 in the DBA).
- Low Dean House was built between 1849 and 1859 and was demolished by 1898
- The site also included the site of two chapels (shown OS second edition of 1898) and a Gospel Hall.
- However the construction of nineteenth century terraced housing which was built to serve the workers of Elswick Shipyard, is likely to have truncated or destroyed archaeological remains.

In accordance with the recommendations of the desk based assessment, site preparation work and ground disturbing work such as the excavation of foundation and service trenching must therefore be monitored by an archaeologist as a Watching Brief, in order that any archaeological remains can be recorded.

This is a big development site. The watching brief should concentrate primarily on the line of the supposed waggonway (to look for the trackbed and drainage ditches or palisades) and on Low Dean House.

The watching brief must be carried out by a suitably qualified and experienced archaeological organisation.

All work must be carried out in compliance with the codes of practice of the Institute of Field Archaeologists and must follow the IFA Standard and Guidance for Watching Briefs (revised 2001).

The work will record, excavate and environmentally sample (if necessary) any archaeological deposits of importance found on the plot. The purpose of this brief is to obtain tenders for this work. The report must be the definitive record for deposition in the Tyne and Wear HER.

A toothless bucket will be used on the plant employed on site to reduce damage to archaeological remains.

The North-East Regional Research Framework for the Historic Environment (2006) notes the importance of research as a vital element of development-led archaeological work. It sets out key research priorities for all periods of the past allowing commercial contractors to demonstrate how their fieldwork relates to wider regional and national priorities for the study of archaeology and the historic environment. The aim of NERRF is to ensure that all fieldwork is carried out in a secure research context and that commercial contractors ensure that their investigations ask the right questions.

The commissioning client will provide plans indicating the location of the proposed work.

Notification

The County Archaeologist needs to know when archaeological fieldwork is taking place in Tyne and Wear so that he can inform the local planning authority and can visit the site to monitor the work in progress. The Archaeological Contractor must therefore inform the County Archaeologist of the start and end dates of the Watching Brief. He must also keep the County Archaeologist informed as to progress on the site. The CA must be informed of the degree of archaeological survival. The Client will give the County Archaeologist reasonable access to the development to undertake monitoring.

The tasks

1 A construction timetable has yet to be agreed. Tenders for the Watching Brief should therefore be a cost per day including overheads such as travel costs and equipment. Contingency costs will be provided for environmental sampling and scientific dating per sample and for finds analysis. Any variation on the agreed timetable will be notified by the client, who will give a minimum of 48 hours notice of a change on the days of site attendance. Close liaison between the parties involved will be needed to co-ordinate this element of the work.

2 The work involves undertaking a structured watching brief to observe and record any archaeological deposits and finds from this locality. The absence of deposits and finds must be recorded as negative evidence. **The Watching Brief will not aim to hinder the construction programme, however should archaeological remains be found, the appointed archaeologist must be allowed sufficient time to fully record (by photograph and scale plan and section), excavate and environmentally sample (if necessary) the archaeological deposits.** Within the course of the Watching Brief, it may be possible to record sections through the stratigraphy exposed during the construction work.

General Conditions

All staff employed by the Archaeological Contractor shall be professional field archaeologists with appropriate skills and experience to undertake work to the highest professional standards.

The Archaeological Contractor must maintain a Site Diary for the benefit of the Client, with full details of Site Staff present, duration of time on site, etc. and contact with third parties.

The Archaeological Contractor must be able to provide written proof that the necessary levels of Insurance Cover are in place.

Environmental Sampling and Scientific Dating

Scientific investigations should be undertaken in a manner consistent with "The Management of Archaeological Projects", English Heritage 1991 and with "Archaeological Science at PPG16 Interventions: Best Practice for Curators and Commissioning Archaeologists", English Heritage, 2003.

Aims of environmental sampling – to determine the abundance/concentration of the material within the features and how well the material is preserved, to characterise the resource (the site) and each phase, to determine the significance of the material and its group value, what crop processing activities took place on the site? What does this tell us about the nature of the site? Is there any evidence for changes in the farming practice through time? How did people use this landscape? Can we place certain activities at certain locations within the site? Function and date of individual features such as pits, hearths etc. Are the charred assemblages the result of ritual deposition or rubbish? Is the charcoal the result of domestic or industrial fuel?

Advice on the sampling strategy for environmental samples and samples for scientific dating etc. must be sought from Jacqui Huntley, English Heritage Regional Advisor for Archaeological Science (0191 3341137 or 07713 400387) **before** the evaluation begins. The sampling strategy should include a reasoned justification for selection of deposits for sampling.

Deposits should be sampled for retrieval and assessment of the preservation conditions and potential for analysis of biological remains (English Heritage 2002). Flotation samples and samples taken for coarse-mesh sieving from dry deposits should be processed at the time of fieldwork wherever possible. Sieving recovers fish, amphibian, small bird and mammal bone, small parts of adult mammals and young infused bones which may be under-represented otherwise. However it is noted that clay soils in this region make sieving difficult. Discuss the potential for sieving with Regional Advisor for Archaeological Science.

Environmental samples (bulk soil samples of 30 litres volume, to be sub-sampled at a later stage) will be collected by the excavator from suitable (i.e. uncontaminated) deposits. It is suggested that a large number of samples be collected during evaluation from which a selection of the most suitable (uncontaminated) can be processed. All tenders will give a price for the full analysis, report production and publication per sample.

Deposits will be assessed for their potential for radiocarbon, archaeomagnetic (guidance is available in the Centre for Archaeology Guideline on Archaeometallurgy 2001) and Optically Stimulated Luminescence dating. Timbers will be assessed for their potential for dendrochronology dating. Sampling should follow procedures in "Dendrochronology: guidelines on producing and interpreting dendrochronological dates", Hillam, 1998. All tenders will quote the price of these techniques per sample.

The following information should be provided with the environmental samples to be processed – brief account of nature and history of the site, aims and objectives of the project, summary of archaeological results, context types and stratigraphic relationships, phase and dating information, sampling and processing methods, sample locations, preservation conditions, residuality/contamination etc.

Laboratory processing of samples shall only be undertaken if deposits are found to be reasonably well dated, or linked to recognisable features and from contexts the derivation of which can be understood with a degree of confidence.

A range of features, and all phases of activity, need to be sampled for charred plant remains and charcoal. Aceramic features should not be avoided as the plant remains from these features may help to date them. Deep features should be sampled in spits to pick up changes over time. Part, or all of each of the contexts should be processed. In general samples should be processed in their entirety. All flots should be scanned, and some of the residues.

Pollen samples can be taken from features such as lakes, ponds, palaeochannels, estuaries, saltmarshes, mires, alluvium and colluvium, and from waterlogged layers in wells, ditches and latrines etc. Substances such as honey, beer or food residues can be detected in vessels. Activities such as threshing, crop processing and the retting of flax can be identified. When taken on site, pollen samples should overlap. Your regional science advisor can advise on the type of corer or auger which would be most appropriate for your site. Samples need to be wrapped in clingfilm and kept dark and cool. Make a description of the sediments in which the pollen was found, and send this with the sample to be assessed.

Coastal or estuary sites (even those which are now well drained) are suitable for sampling for foraminifera. Diatoms can also be found on marine sites, but also in urban settings (sewers, wells, drains, ditches etc). They only survive in waterlogged conditions. These aquatic microfossils are used as proxy indicators of the former aquatic ecological conditions on site, changes in sea levels and temperature, salinity, PH and pollution. Forams are taken from cores, monolith tins or bulk samples. Diatoms are cut from monolith tins or cores or taken as spot samples.

Insects, which are useful as palaeoenvironmental indicators, survive best in waterlogged deposits such as palaeochannels and wells. They can provide information on climate change and landscape reconstruction as some species are adapted to particular temperatures, habitats or even particular trees. Certain insects can indicate the function of a feature or building (eg. Weevils, which were introduced by the Romans, often indicate granary sites, parasites will indicate the presence of particular animals such as sheep or horse, latrine flies survive in the mineral deposits in latrines, or in the daub of medieval buildings etc). Samples need to be sealed (eg. in a plastic box).

Where there is evidence for industrial activity, macroscopic technological residues should be collected by hand. Separate samples should be collected for micro-slugs (hammer-scale and spherical droplets). Guidance is available in the English Heritage "Archaeometallurgy" guidelines, 2001.

Buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Procedures and techniques in the English Heritage document "Environmental Archaeology", 2002 and "Geoarchaeology", 2004 should be followed.

Sampling strategies for wooden structures should follow the methodologies presented in "Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood" R. Brunning, 1996. If timbers are likely to be present on your site, contact a wood specialist beforehand. Pre-excavation planning – determine questions to ask, agree on a sampling strategy, allocate reasonable time and budget. Soil samples should be taken of the sediments surrounding the timber. Keep the timbers wet! Record them asap on-site – plan, photograph, record the size and orientation of the wood (radial, tangential, transverse), any toolmarks, joints, presence of bark, insect damage, recent breaks, and if another piece of wood was on top of or below the piece sampled. Both vertical and horizontal positioning of wattling must be recorded. Wood samples can provide information on woodland management such as medieval coppicing, type of taxa (native or foreign), conversion technology (how the wood was turned into planks), building techniques and type of tools used.

Waterlogged organic materials should be dealt with following recommendations in "Guidelines for the care of waterlogged archaeological leather", English Heritage and Archaeological Leather Group 1995.

Animal Bone

Animal bone can explore themes such as hunting and fowling, fishing, plant use and trade, seasonality, diet, age structures, farrowing areas, species ratios, local environment.

Animal bone assemblages should be assessed by a recognised specialist.

The specialist will need to know a brief account of the nature and history of the site, an account of the purpose, methods (details of sampling) for recovery of animal bones, and the main aims and results of the excavation, details of any specific questions that the excavator wants the animal bone specialist to consider, information about other relevant finds from the excavation (e.g. bone tools, fishing equipment, weaving equipment), specific information about each context that has produced significant quantities of animal bone (recovery method, phase, context type, position in relation to major structures, contamination by more recent material, some indication of the amount of bone (by weight or by container size). See "Ancient Monuments Laboratory Advisory Note, "Assessment of animal bone collections from excavations", Sebastian Payne, 1991 and "The Assessment of a collection of animal bones", S. Davis, n.d., Ancient Monuments Laboratory.

Human Remains

Human remains must be treated with care, dignity and respect.

Excavators must comply with the relevant legislation (essentially the Burial Act 1857) and local environmental health concerns. If found, human remains must be left in-situ, covered and protected. The archaeological contractor will be responsible for informing the police, coroner and County Archaeologist. If it is agreed that removal of the remains is essential, the archaeological contractor will apply for a licence from the Home Office and their regulations must be complied with.

Site inspection by a recognised osteologist is desirable for isolated burials and essential for cemeteries. The remains will be recorded in-situ and subsequently lifted, washed in water (without additives). They will be marked and packed to standards compatible with "Excavation and post-excavation treatment of cremated and inhumed human remains", McKinley and Roberts, 1993. After excavation, the remains will be subject to specialist assessment.

Analysis of the osteological material should take place according to published guidelines "Human Remains from Archaeological Sites, Guidelines for producing assessment documents and analytical reports, English Heritage, 2002.

Some of the potential benefits from the study of human skeletons – demography, growth profiles, patterns of disease, genetic relationships, activity patterns, diet, burial practices, human evolution. New scientific techniques available include DNA and stable isotope analyses.

The final placing of the remains after scientific study and analysis will be agreed beforehand.

Further guidance is available in:

"Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England", The Church of England and English Heritage, 2005 (www.english-heritage.org.uk/upload/pdf/16602_HumanRemains1.pdf)
"Church Archaeology: its care and management", Council for the Care of Churches, 1999

The Advisory Panel on the Archaeology of Christian burials in England can provide free well-informed advice with consideration of relevant religious, ethical, legal, archaeological and scientific issues. Panel's website:
<http://www.britarch.ac.uk/churches/humanremains/index.html>
or email the secretary simon.mays@english-heritage.org.uk

Treasure

Defined as:

- Any metallic object, other than a coin, provided that at least 10% by weight of metal is precious metal and that is at least 300 years old when found
- Any group of two or more metallic objects of any composition of prehistoric date that come from the same find
- All coins from the same find provided that they are at least 300 years old when found, but if the coins contain less than 10% gold or silver there must be at least ten
- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure
- Any object that would previously have been treasure trove, but does not fall within the specific categories given above. Only objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown will come into this category

If anything is found which could be Treasure, under the Treasure Act 1996, it is a legal requirement to report it to the local coroner within 14 days of discovery. The Archaeological Contractor must comply with the procedures set out in The Treasure Act 1996. Any treasure must be reported to the coroner and to The Portable Antiquities Scheme Finds Liaison Officer, Rob Collins (0191 2225076 or Robert.Collins@newcastle.ac.uk) who can provide guidance on the Treasure Act procedures.

Finds Processing and Storage

Finds shall be recorded and processed in accordance with the IFA Guidelines for Finds Work

Finds will be assessed by an experienced finds specialist.

The Archaeological Contractor will process and catalogue the finds in accordance with Museum and Galleries Commissions Guidelines (1992) and the UKIC Conservation Guidelines, and arrange for the long term disposal of the objects on behalf of the Client. A catalogue of finds and a record of discard policies, will be lodged with the finds for ease of curation.

Assessment should include x-radiography of all iron objects (after initial screening to exclude recent debris) and a selection of non-ferrous artefacts (including all coins). Refer to "Guidelines on the x-radiography of archaeological metalwork, English Heritage, 2006.

If necessary, pottery sherds and bricks should be recommended for Thermoluminescence dating.

Finds processing, storage and conservation methods must be broadly in line with current practice, as exemplified by the IFA "Standard and guidance for the collection, documentation, conservation and research of archaeological materials", 2001. Finds should be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication "First Aid for Finds" (Watkinson and Neal 1998). Proposals for ultimate storage of finds should follow the UKIC publication "Guidelines for the Preparation of Excavation Archives for Long-term Storage" (Walker 1990). Details of methodologies may be requested from the Archaeological Contractor.

Other useful guidance – “A Strategy for the Care and Investigation of Finds”, English Heritage, 2003, “Finds and Conservation Training Package”, English Heritage, 2003.

All objects must be stored in appropriate materials and conditions to ensure minimal deterioration. Advice can be sought from Jacqui Huntley of English Heritage (0191 3341137 or 07713 400387) where necessary.

The report

The production of Site Archives and Finds Analysis will be undertaken according to English Heritage Guidelines (Managing Archaeological Projects 2nd Edition).

The archaeological contractor will provide a report of archaeological operations, including:

- a site location plan and grid reference
- brief description of recording procedures
- plans and sections of stratigraphy recorded (if practical)
- report on the finds (if any)
- environmental report (if relevant)
- colour photographs of the site and any significant archaeological features/finds
- a summary of the results of the work
- copy of this specification

The report will form an addition to the *Short Reports* files in the Tyne and Wear Historic Environment Record.

7 Three bound and collated paper copies of the report need to be submitted:

- one for the commissioning client
- one for the planning authority (Newcastle City Council) – to be submitted formally by the developer both as a hard copy and pdf on CD with the appropriate fee.
- and one for deposition in the County HER at the address below. A digital copy of the report on CD is also required by the HER, in a plastic case and not attached to the report.

The report and CD for the HER must be sent by the archaeological consultant or their client directly to the address below. If the report is sent via the planning department, every page of the report will be stamped with the planning application number which ruins the illustrations. The HER is also often sent a photocopy instead of a bound colour original which is unacceptable.

Site Archive

The archive should be a record of every aspect of an archaeological project – the aims and methods, information and objects collected, results of analysis, research, interpretation and publication. It must be as complete as possible, including all relevant documents, records, data and objects {Brown, 2007, 1}.

The site archive (records and materials recovered) should be prepared in accordance with Managing Archaeological Projects, Second Edition, 5.4 and appendix 3 (HBMC 1991), “Archaeological documentary archives” IFA Paper No. 1, “Archaeological Archives – creation, preparation, transfer and curation” Archaeological Archives Forum etc., Guidelines for the Preparation of Excavation

Archives for Long Term Storage (UKIC 1990) and "Archaeological Archives – A guide to best practice in creation, compilation, transfer and curation" by Duncan H. Brown, Archaeological Archives Forum, July 2007.

Documentary Archive

The documentary archive comprises all records made during the archaeological project, including those in hard copy and digital form.

This should include written records, indexing, ordering, quantification and checking for consistency of all original context sheets, object records, bulk find records, sample records, skeleton records, photographic records (including negatives, prints, transparencies and x-radiographs), drawing records, drawings, level books, site note-books, spot-dating records and conservation records, publication drafts, published work, publication drawings and photographs etc.

A summary account of the context record, prepared by the supervising archaeologist, should be included.

All paper-based material must at all times be stored in conditions that minimise the risk of damage, deterioration, loss or theft.

Do not fold documents

Do not use self-adhesive labels or adhesive or tape of any kind

High quality paper (low-acid) and permanent writing materials must be used.

Original drawings on film must be made with a hard pencil, at least 4H.

Do not ink over original pencil drawings.

Use polyester based film for drawings (lasts longer than plastic).

Store documents in acid-free, dust-proof cardboard boxes

Store documents flat

All documents must be marked with the project identifier (e.g. site code) and/or the museum accession number.

All types of record must use a consistent terminology and format.

Use non-metal fastenings, and packaging and binding materials that ensure the longevity of documents.

Copies of reports and appropriate drafts, with associated illustrative material, must be submitted for inclusion with the archive.

Material Archive

The material archive comprises all objects (artefacts, building materials or environmental remains) and associated samples of contextual materials or objects.

All artefacts and ecofacts retained from the site must be packed in appropriate materials.

All finds must be cleaned as appropriate to ensure their long-term survival

All metal objects retained with the archive must be recorded by x-radiograph (except gold or lead alloys or lead alloys with a high lead content and objects too thick to be x-rayed effectively e.t.c.)

All finds must be marked or labelled with the project and context identifiers and where relevant the small-finds number

Use tie-on rot-proof labels where necessary

Bulk finds of the same material type, from the same context, may be packed together in stable paper or polythene bags

Mark all bags on the outside with site and context identifiers and the material type and include a polyethylene label marked with the same information

Use permanent ink on bags and labels

Sensitive finds must be supported, where appropriate, on inert plastic foam or acid-free tissue paper. It is not advisable to wrap objects in tissue as the unwrapping could cause damage.

The archive will be placed in a suitable form in the appropriate museum (typically Museum of Antiquities for Newcastle and Tyne and Wear Museums for the rest of Tyne and Wear (check with these institutions) with the landowner's permission.

A letter will be sent to the County Archaeology Officer within six months of the report having been submitted, confirming where the archive has been deposited.

Monitoring

The Archaeological Contractor will inform the County Archaeologist of the start and end dates of the Watching Brief to enable the County Archaeologist to monitor the work in progress. The Client will give the County Archaeologist reasonable access to the development to undertake monitoring.

OASIS

The Tyne and Wear County Archaeologist supports the Online Access to the Index of Archaeological Investigations (OASIS) project. This project aims to provide an online index/access to the large and growing body of archaeological grey literature, created as a result of developer-funded fieldwork.

The archaeological contractor is therefore required to register with OASIS and to complete the online OASIS form for their watching brief at <http://www.oasis.ac.uk/>. Please ensure that tenders for this work takes into account the time needed to complete the form.

Once the OASIS record has been completed and signed off by the HER and NMR the information will be incorporated into the English Heritage Excavation Index, hosted online by the Archaeology Data Service.

The ultimate aim of OASIS is for an online virtual library of grey literature to be built up, linked to the index. The unit therefore has the option of uploading their grey literature report as part of their OASIS record, as a Microsoft Word document, rich text format, pdf or html format. The grey literature report will only be mounted by the ADS if both the unit and the HER give their agreement. The grey literature report will be made available through a library catalogue facility.

Please ensure that you and your client understand this procedure. If you choose to upload your grey literature report please ensure that your client agrees to this in writing to the HER at the address below.

For general enquiries about the OASIS project aims and the use of the form please contact: Mark Barratt at the National Monuments Record (tel. 01793 414600 or oasis@english-heritage.org.uk). For enquiries of a technical nature please contact: Catherine Hardman at the Archaeology Data Service (tel. 01904 433954 or oasis@ads.ahds.ac.uk). Or contact the Tyne and Wear Archaeology Officer at the address below.

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