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WARDELL ARMSTRONG LLP

ST. MARYS RC PRIMARY SCHOOL, 30 LINKS GARDENS, LEITH, EDINBURGH

ARCHAEOLOGICAL EXCAVATION ASSESSMENT AND DATA STRUCTURE REPORT

NOVEMBER 2016

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DATE ISSUED:	**November 2016**
JOB NUMBER:	**CP11720/16**
SITE CODE:	**STM-B**
OASIS REFERENCE:	**wardella2-262591**
GRID REFERENCE:	**Centred on NT 27750 75980**
REPORT NUMBER:	**RPT-003**

Wardell Armstrong LLP

St. Marys RC Primary School, 30 Links Garden, Leith, Edinburgh

Archaeological Excavation Assessment and Data Structure Report

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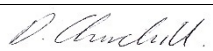	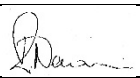	
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CONTENTS

PLATES (APPENDIX 3)

FIGURES (APPENDIX 4)

SUMMARY

In 2016 Wardell Armstrong Archaeology was commissioned by Martin Farquharson at Wardell Armstrong LLP on behalf of their client Morrison Construction to undertake an archaeological excavation at St. Marys RC primary school, 30 Links Gardens, Leith, Edinburgh (NGR NT 27750 75980). This was a result of formal planning consent being granted (Planning reference: 15/05101/FUL) with a condition attached to the decision notice (Condition 1), stipulating the need for archaeological investigation of the site prior to the development of a single storey, 2 classroom building with ancillary accommodation.

The archaeological works undertaken by Wardell Armstrong Archaeology at St Mary's primary school, consisted of an evaluation and open area excavation. The archaeological excavation was undertaken from the 3rd of May until the 8th of July 2016. A single area, 286.71m^2 was excavated in advance of the construction of the proposed development.

These investigations revealed both coffined and shrouded human burials and burial pits. A total of 81 separate internments were recorded from the excavated burial area with the human remains of 71 individuals recovered. Artefactual evidence indicates an early 17th century date for the internments. Documentary research suggests strongly that the burials related to victims of the 1645 plague outbreak in Leith.

A number of these coffined burials were disturbed by square pits, located towards the centre of the site. The purpose of the pits as yet remains unclear, but it is entirely possible that they relate to a ropery and sailcloth manufactory located to the north of the site. By the late 19th century, a wooden smallpox hospital had been established to the north of the proposed development area, and by 1905 a second north-south aligned structure to the east of the smallpox hospital had been established.

ACKNOWLEDGEMENTS

Wardell Armstrong Archaeology (WAA) thanks Morrison Construction, the client, for commissioning the project. We are grateful to Martin Farquharson and Jamie Baxter at Wardell Armstrong LLP Edinburgh Office, for all their assistance throughout the work. Thanks also to John Lawson, Curator of Archaeology at the City of Edinburgh Council, for his assistance throughout the project. Further thanks are extended to Allan Booker and John Walker of Morrison Construction for their on-site help with facilitating the project throughout the fieldwork phase.

Wardell Armstrong Archaeology are also grateful to the staff at the RCAHMS, Edinburgh for their help during this project.

The archaeological excavation was undertaken by Damion Churchill, Abby Cooper, Hayley Graham, Miranda Haigh, Jack Portwood, Sean Johnson, Rob Jones, Karolina Siara and Megan Stoakley. The report was written by Damion Churchill and the figures were produced by Adrian Bailey and Helen Phillips. Human remains assessment, zooarchaeological analysis and ecofactual assessment was compiled by Megan Stoakley and the artefacts report was compiled by Sue Thompson.

The report was edited by Dr Richard Newman, Post Excavation Manager for WAA, who also managed this project.

1 INTRODUCTION

1.1 Circumstances of the Project

1.1.1 In March 2016, Wardell Armstrong Archaeology was invited by Wardell Armstrong LLP, on behalf of their client Morrison Construction, to undertake an archaeological excavation at St. Marys RC Primary School, 30 Links Gardens, Leith, Edinburgh (centred on NGR NT 27750 75980, Figure 1). This was in advance of the proposed development of a single storey, two classroom building with ancillary accommodation at the site (Planning Application number 15/05101/FUL).

1.1.2 The site lies on the north side of Leith Links, an archaeologically sensitive area with archaeological features identified within its vicinity associated with the siege of Leith in 1559-60 and the burial of plague victims believed to be of 15th to 17th century date. Furthermore, the site is located within the former grounds of a late 19th century smallpox hospital, and to the south of the Edinburgh Ropery, which was in existence by 1804 (Ainslie, 1804).

1.1.3 The previous archaeological works undertaken at St Marys primary school, consisted of an evaluation (site code STM-A) which revealed coffined human burials indicating considerable potential for encountering significant below ground archaeology associated with the burial of human remains during the construction of the proposed development within the school grounds (Wardell Armstrong, 2016).

1.1.4 As a result of this potential at St. Marys primary school, in accordance with advice given in Scottish Planning Policy (SPP), John Lawson, Curator of Archaeology at the City of Edinburgh Council, deemed archaeological excavation necessary in order to mitigate the impact of any development at the site may have on any potential human remains, prior to the commencement of any works on site (Pers. Comm.), in line with Condition 1 of the decision notice (City of Edinburgh Council, 2015)

1.1.5 Consequently, the purpose of the archaeological excavation was to diminish the impact of the development at St. Marys RC primary school, on any archaeological remains, especially those associated with the burial of human remains, by preserving the remains by record. Moreover, the project was to and ensure that the human remains were disinterred in accordance with appropriate Scottish legislation for the disturbance and removal of human remains.

1.1.6 This report outlines the archaeological investigation undertaken on-site, the subsequent programme of post-fieldwork analysis, and the results of this scheme of

archaeological works carried out in order to meet the condition laid out in the decision notice.

2 METHODOLOGY

2.1 Written Scheme of Investigation

2.1.1 The archaeological excavation was undertaken as part of on-going archaeological works associated with the proposed development at St. Marys RC Primary School following a request on site by John Lawson, Curator of Archaeology, City of Edinburgh Council.

2.1.2 Condition 1 of the planning application decision notice (City of Edinburgh Council, 2015) required a scheme of archaeological work to be undertaken prior to the commencement of works in accordance with Structure Plan Policy 16, and national policy SPP23.

2.1.3 A Written Scheme of Investigation (WAA, 2016) was prepared for the excavation, outlining the aims and objectives of the project, and was agreed by the planning archaeologist for the City of Edinburgh Council in advance of the commencement of the fieldwork.

2.1.4 The archaeological excavation was undertaken following the Chartered Institute for Archaeologists *Standard and Guidance for Archaeological Excavation* (2014a), and in accordance with the WAA Excavation Manual (2012).

2.1.5 The fieldwork programme was followed by an assessment of the data as set out in the *Standard and Guidance for Archaeological Excavation* (CIfA 2014a) and the *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b).

2.2 The Archaeological Excavation

2.2.1 The archaeological excavation covered approximately 286.71m^2 of land in total. The purpose of the archaeological excavation was to preserve by record the buried archaeological remains on the site. This was to be done in advance to their potential destruction consequent upon the proposed development at the site.

2.2.2 In summary, the main objectives of the field investigations were:

- determine the character, date, extent and distribution of archaeological deposits and their potential significance;
- investigate and record all deposits and features of archaeological interest within the areas to be disturbed by the current development;

- disseminate the results of the fieldwork through an appropriate level of reporting.

2.2.3 The specific objectives were to:

- understand the nature of, and record, the archaeological deposits overlying the human burials;
- investigate and record the human burials;
- obtain dating evidence for the human burials;
- investigate features for potentially significant waterlogged paleoenvironmental remains;
- understand the function and record the pits considered to be contemporary with the human burials.

2.2.4 The primary research objectives of the excavation were to:

- identify the origin and date of the burials which lay outside of any known consecrated burial ground;
- understand the land use of the burial site both pre and post burial activity;
- understand the taphonomic processes and burial practices that can occur both before and after burial, as highlighted in the Scottish Archaeological Research Framework (http://www.scottishheritagehub.com/content/22-human-remains).

2.2.5 Overlying modern deposits were removed by mechanical excavator under close archaeological supervision. All potential archaeological features were cleaned by hand, investigated and recorded according to the Wardell Armstrong Archaeology standard procedure as set out in the Excavation Manual (WAA, 2014).

2.2.6 The treatment of the finds followed the *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b). All finds encountered on site were retained and returned to the office where they were identified, quantified and dated to period. A *terminus post quem* was then produced for each stratified context under the supervision of the Wardell Armstrong Archaeology Finds Officer, and the dates were used to help determine the date phases for the site. On completion of this project, the finds were cleaned and packaged.

2.3 The Archive

2.3.1 A full professional archive has been compiled in accordance with the specification, and in line with the Archaeological Archives Forum recommendations (Brown 2011)

and EAC guidelines (2014). The archive will be deposited within the RCAHMS, and made available upon request. The archive can be accessed under the unique project identifier WAA16, STM-B, CP11720.

2.3.2 A brief summary of the results of the archaeological work will be prepared and submitted for publication in the Archaeology Scotland's annual journal '*Discovery and Excavation in Scotland*' (see Appendix 2).

2.3.3 Wardell Armstrong Archaeology and City of Edinburgh Council, support the **O**nline **A**cces**S** to the **I**ndex of Archaeological Investigation**S** (**OASIS**) project. This project aims to provide an on-line index and access to the extensive and expanding body of grey literature, created as a result of developer-funded archaeological work. As a result, details of the results of this project will be made available by Wardell Armstrong Archaeology, as a part of this national project under unique identifier: **wardella2-262591**.

3 BACKGROUND

3.1 Location and Geological Context

3.1.1 Leith is a district situated to the north of the city of Edinburgh, on the coast of the Firth of Forth and, positioned at the mouth of the Water of Leith (Figure 1). Formerly a distinct and separate town, Leith is characterised by its large port, and is heavily industrialised along its coast.

3.1.2 The site, St. Marys RC primary school, is located to the south of the port area of Leith, on the north side of Leith Links, with Links Garden Lane immediately to the west of the site. The placement of the footings for the building was located in a single area within the playground of the school, east of the school building (Figure 2).

3.1.3 The solid geology of the area comprises Guillane Formation sedimentary rock of the Strathclyde Group type; predominantly sandstones, interbedded with siltstones, mudstones, limestones, ironstones, coals and seatrocks. This bedrock formed approximately 335 to 352 million years ago in the Carboniferous Period, and is overlain by Flandrian raised marine deposits, comprising sands and gravels lain up to two million years ago (BGS 2015).

3.2 Historic and Archaeological Background

3.2.1 This historical background is compiled mostly from secondary sources. Cranmore was consulted for entries within the search area (taken as an area of approximately 0.25km radius from the site boundary). Besides identifying heritage assets that may be directly or indirectly affected by the proposed development this search boundary was expected to provide sufficient data to represent the archaeological character of the area. It is intended only as a summary of historical developments around the study area. References to the Historic Environment Record (HER) are included where known.

3.2.2 ***Prehistoric:*** there is no known evidence for human prehistoric activity in the proposed development area.

3.2.3 ***Roman:*** there is no known evidence for Roman activity in the proposed development area. A Romano-British coin has been recorded 255m to the east of the site (Cranmore ID 51935).

3.2.4 ***Medieval:*** there is no direct evidence of activity in the vicinity of the proposed development during the early medieval or medieval periods. No early medieval or

medieval activity has been recorded in the immediate vicinity of the proposed development.

3.2.5 Leith was first mentioned in a Charter of David I approving the construction of the Abbey of Holyroodhouse in 1128, then it was known as Inverleith, By the 13th century, two distinctly administered halves had emerged to the settlement, north and south, with the north governed by the Abbot of Holyrood, and the south by the Lairds of Restalrig (Russell, 1922; 9). The Links area lay to the south of the southern part of Leith.

3.2.6 Leith had fortifications erected around the town in 1548. These were built under the instruction of Mary of Guise when the seat of government was moved from Edinburgh to Leith.

3.2.7 ***Post-medieval and Modern***: In the 16th century the Links area lay outside the town defences to the east. Consequently they formed an important part of siege of Leith in 1559-60 as demonstrated by contemporary accounts and a map held at Petworth House, Sussex (Campbell 1827; Steer 1961; Harris 1991). The Links have been the subject of some past archaeological research into the siege (Pollard 2008). They contain two identifiable remains formed by the besiegers, the earthworks of Somerset's and Pelham's batteries as well as below ground evidence of siege works.

3.2.8 Map regression analysis of the development site indicates that it lies in an area that was enclosed out of Leith Links by the early 19th century but may have been part of the property of Williamson and Gavins rope walk by 1822 (Thomson 1822). The development area and the existing school lie immediately to the south of this former rope walk. This rope works and later sail cloth manufactory was in existence by 1804. The reason for suggesting the area may have been utilised by the ropery is that on the 1895 1:500 Ordnance Survey map the area that now forms the eastern end of St Mary's school playground is marked as drying grounds. It is quite likely that this was for drying hemp after the fibres had been separated through retting.

3.2.9 The development is also to the south of the site of a later 19th century smallpox hospital. This hospital lies to the immediate west of an area depicted as bowling greens on Bartholomew's and Johnston's Post Office plans dating to the 1880s. The hospital first appears on Ordnance Survey maps of the later 1890s which were all based on a survey of 1894. In the 1851 a fever hospital, known as Leith Hospital, was erected in the town adjacent to South Leith Poorhouse (Marshall 1985, 19), which lay to the south of Leith Engine Works off Mill Road (OS 6" to 1 mile 1853). By the

early 1890s following repeated outbreaks of smallpox, cholera and typhus the Leith Hospital was considered inadequate for dealing with infectious diseases and in September 1893 all infectious diseases cases were banned from Leith Hospital (Marshall 1985, 24). Within weeks a smallpox epidemic had broken out and in response a wooden hospital was erected on the Links (*ibid*). This was the structure reported on in January 1894 in the *Thames Advertiser* newspaper as a wooden building, hastily constructed in response to a smallpox outbreak.

3.2.10 In June 1894 it was reported in *Hansard* that smallpox cases in Leith were being taken to hospital but that the disease was so rife in the town that the Medical officers for the Board of Health in Glasgow had warned that city's inhabitants not to go to Leith (http://hansard.millbanksystems.com/commons/1894/jun/07/small-pox-at-leith).

3.2.11 The development area impinges upon the site of a building associated with the wooden hospital that was erected between 1894 and 1905 (Ordnance Survey 25 inch to 1 mile series). There was a quoiting ground to the immediate east of this building range. This structure may also have been an insubstantial structure, and had certainly been demolished along with the wooden Smallpox Hospital by 1912 (Ordnance Survey 25 inch to 1 mile series). It is likely that the additional structure had been built by 1896 because in September of that year a permanent purpose-built fever hospital was established for Leith at East Pilton (Marshall 1985, 25).

3.2.12 By 1931 St Marys School, then known as the Links School, had been established. The development area was clear of structures at that time.

3.3 Previous Archaeological Work

3.3.1 An evaluation (STM-A) associated with the proposed development of the classroom building exposed evidence of coffined human remains conducted by Wardell Armstrong in 2016.

3.3.2 Previous to this, no archaeological work had been undertaken either in the immediate vicinity or within the proposed development area.

4 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.1 The archaeological excavation was undertaken from the 3rd of May to the 8th of July 2016. A single area, 286.71m^2 in area was excavated in the proposed development area (Figure 2). Overlying modern overburden was removed by a mechanical excavator with toothless grading bucket to reveal the underlying archaeological deposits (Plate 1) (Figure 3).

4.2 Quantification

4.2.1 A total of 460 context numbers were allocated to different stratigraphic units during the project. A total of 16 numbers were voided during the post-excavation assessment of the data, because of duplication or misinterpretation.

Contexts by Type	Numbers Issued
Cut	116
Deposit	206
Coffins	44
Skeletal Remains	78
Total	444

4.3 Phase 1 – The burial pits

4.3.1 The earliest features uncovered were a series of burial pits located towards the south and centre of the site (Figure 4). The following is a general overview of the pits and their contents. A detailed analysis of the human remains recovered from the pits is contained in Section 5.

4.3.2 The largest pit **[415]** measured 2.25m by 1.85m and was up to 0.40m deep. The pit contained four layers of interred human remains, 14 individuals in total. Each layer of internments was separated by a layer of loose yellow sand, and the pit was covered with a similar deposit, visible at a height of 4.08m aOD.

4.3.3 The earliest layer of human remains in pit **[415]** comprised three individuals, each lying broadly east to west, towards the western edge of the pit, at a maximum height of 3.95m aOD. These individuals, **482**, **483** and **484** were lain on their backs in a prone position, and although individuals **483** and **484** were positioned with their arms crossed across the chest, the northernmost, **482**, had its left arm positioned

over its head, suggesting that the body was dumped, rather than placed carefully in the burial pit (Plate 2).

4.3.4 Four individuals, **443**, **479**, **480** and **481** were observed in the next layer, and each had their hands in a position overlying part of the abdomen, apart from individual 479 who had their arms to their sides.

4.3.5 This variation was observed in the next layer of two individuals, **477** and **478**, and unlike the previous inhumations within the pit, these were positioned toward the eastern side of the pit, albeit in a similar broad east – west alignment. It was evident that the left elbow of individual **477** had been moved to accommodate a later coffin **374**, as it was resting against the south facing coffin side (Plate 3). This might suggest that the individual **477** was still fleshed when coffin **374** was interred, with only a small amount of time passing between each burial.

4.3.6 Unfortunately, the cut for the coffin **374** had heavily damaged the human remains **538** in the uppermost layer of human remains. This layer of inhumations was however as, although one individual, **442**, was buried in an east – west orientation similar to those in the lower layers on pit **[415]**, two others, **440** and **441** were buried west - east, whilst the fourth and final person **439** was buried in a north to south orientation.

4.3.7 It is probable that this last layer of inhumations in pit **[415]** were placed in a way which would maximise the number of bodies that could be placed within the pit. Skeletons **439**, **440** and **441** all appeared to have been thrown in rather than carefully placed, as with **440**, and **441**, the hands were located to the side of the body, whilst the legs of skeleton **439** were crouched towards the east. These individuals, along with skeletons **477**, **478**, **479** and **482** in the lower levels of the pit, which also displayed evidence of limbs located in a variety of positions, may indicate that these burials were not shrouded or bound at the time of burial, or if they were, it was not tightly.

4.3.8 This contrasts sharply with those that may have been bound or shrouded in the pit, as evidenced by the positioning of the hands and the closeness of the feet. This would indicate that despite being buried in the same mass grave, a variety of pre-interment rites may have been afforded to the individuals.

4.3.9 The four individuals in pit **[491]**, which had been severely cut by later features, were similarly interred, and spread over two layers, with skeletons **492**, **493** and **494**

underlying skeleton **430**, separated by a deposit of yellow sand **(492)**. The remains of the pit were visible from a height of 4.18m aOD, and measured approximately 2.84m long by 1.42m wide and up to 0.30m deep.

4.3.10 Of the three skeletons located in the lower layer in the pit, **493** and **494** were located to the south of the pit and were orientated east – west. Skeleton **493** was heavily damaged with the abdomen missing. Skeleton **494** was better preserved, although it had been affected by later coffined burial cut **[463]**, resulting in the removal of the left clavicle and scapula.

4.3.11 The head of skeleton **495** was observed to rest upon the left side of the pelvis of skeleton **494**, and orientated north – south. The individual was poorly preserved, with some elements of the ribs, arms, left leg and skull surviving *insitu*. These remains were overlain by sand deposit **(492)**, on top of which skeleton **430** was placed. Similar to individuals in pit **[415]**, the arms of Skeleton **430** were not place together across the body, suggestive of a shroud, or binding, but had the right arm extended to have the hand south of the cranium. If the body had been shrouded or bound, it was not effective as a means of keeping the limbs close to the body during deposition. Skeleton **430** was overlain by sand deposit **429**.

4.3.12 By contrast with the burial pits **[415]** and **[491]**, the four individuals inhumed in burial pit **[558]** were all uniformly lain on an east – west orientation. Observed at a height of 4.00m aOD, pit **[558]** measured up to 0.25m deep. The skeletal remains were layered directly upon each other with individuals **511** and **512** overlying **556** and **557**. The fill **(555)** of the pit comprised loose orangey yellow sand. The positioning of the remains limbs was difficult to establish, as they had been severely cut by a modern service. Despite this, they each appeared to have been placed on their backs, with the arms of skeleton **512** to their sides rather than crossed over the abdomen. Coins dating to the reign of James the VI were recovered from fill **(555)**.

4.3.13 The last burial pit containing multiple inhumations, only contained a single surviving layer of skeletons, and each were laid on an east – west orientation. Encountered at a maximum height of 3.97m aOD, pit **[516]** contained the remains of eight individuals, all lain on an east to west orientation. Each skeleton had been lain on their backs, but the exact positioning of the bodies was not possible to establish because of damage caused by consequent activity at the site. The pit measured up to 0.18m deep, 2.8m long and 2.0m wide, and its fill **(515)**, consisted of loose yellow sand.

4.3.14 The remains of a burial pit **[514]** were located to the west of pit **[516]**, and contained a poorly preserved skeleton **506** orientated east – west, and lain its back. The pit, observed at a height of 3.91m aOD, was heavily affected by subsequent activity, notably two coffined burials to the north and south of the pit, and was not fully exposed during the excavation. It is entirely possible the pit had originally contained further individuals, and these had been removed by the later post medieval burials. This activity had also had an impact on the skeletal remains, with the right arm missing, and the remains had become compressed from the overlying modern deposits. The sole fill **(507)** of the pit comprised loose light greyish yellow sand, up to 0.20m thick, and contained coins minted between 1625 and 1637, during the reign of Charles I.

4.3.15 Located towards the north east of the site, burial cut **[196]** contained a single un-coffined skeleton **221**, and was the only example on the site of an individual un-coffined burial on site. Orientated east – west, the burial measured 0.70m wide, 1.36m long and 0.15m deep. The burial was also the highest un-coffined burial identified at the site, surviving at a maximum height of 4.30m aOD. The grave had a single fill, a loose yellow sand **(197)**. Only the lower elements of skeleton **221** survived, comprised of the legs, and part of the pelvis. Some small fragments of coffin wood, and a small nail **(S.F 9)** were idenitifed approximately 0.02m below the top of the fill **(197)**, but it is likely, given the loose, shallow nature of the deposit that these may have been intrusive.

4.3.16 Un-coffined human remains were also located in two heavily disturbed graves **[458]** and **[459]**, with the former cutting the latter. Skull fragments **461** were recovered from the 0.11m thick fill **(465)** of grave cut **[459]**. The latter grave cut, **[458]** appeared to remove most of grave **[459]**, and measured 1.51m long, 0.58m wide and 0.23m deep. Observable at a height of 4.00m aOD, grave **[458]** contained skeleton **460**, positioned with the arms crossed over the thorax, and with a slight bend towards the south of the knees. Skeleton **460** was overlain by a loose mottled greyish yellow sand **(464)** which filled the entirety of grave cut **[458]**.

4.4 Phase 2 – Coffined burials: east to west

4.4.1 A total of 34 east – west orientated coffined burials were encountered during the excavation and were observable from maximum heights of 4.3m aOD to 3.89m aOD (Figure 5). The majority of the wooden coffins were built to accommodate adult or sub adult individuals, however five coffins were observed that were likely built to

accommodate infants. The following is an account of the east – west aligned coffined burials as observed on site. A more detailed analysis of the coffins and their contents is contained in Section 5.

4.4.2 Little in the way of human remains survived within the coffins for the infants, with no material surviving in coffin **116** in burial cut **[115]**, and only teeth surviving in coffin **354** in burial cut **[352]** and coffin **401** in grave cut **[400]**.

4.4.3 A larger quantity of skeletal remains survived, albeit in a poor in the other two infant graves. Elements along the right side of the body of skeleton **271** were recovered from coffin **261**, of grave cut **[260]**, including the cranium, mandible, humerus and femur. Similarly the parts of the cranium and femur of individual **318** of coffin **300** in grave **[233]** had survived.

4.4.4 The lid of the infant coffins was missing in each instance. The base of each coffin was constructed from planks arranged along the length of the coffin, with the exception of coffin **354**. The base of this coffin comprised three planks, with the two shorter planks at the head and mid-end of the coffin arranged with the grain perpendicular to the length of the coffin.

4.4.5 Width may have been a consideration when making coffin **354**, however the widest infant coffin **300**, measuring up to 0.45m wide, still had three planks arranged along the length of the coffin. Therefore the choice to use three differing wooden planks, on different orientations to construct coffin **354** would suggest it may have been made using off cuts.

4.4.6 The quality and condition of the adult or sub-adult coffins and human remains varied considerably. Where the wood had a good quality of preservation, it was possible to identify that, with two exceptions, the coffins were assembled on the base with several wooden planks arranged crossways to the coffin length. The lids however were each constructed so the planks were lengthways along the coffin. Because of this method of construction, each coffin lid had split in the middle allowing for the ingress of the grave fills into the coffins.

4.4.7 The exceptions were coffin **237** in burial cut **253**, and coffin **407** in cut **[405]** both of which had a base constructed in the same way as the infant coffins, with the base planks placed lengthways along the coffin. The reason for this is not clear. It is possible that given the lengths of the coffins, 1.76m and 1.29m respectively, that

these coffins were not intended for adults, but rather children, negating the need for a strong base afforded by positioning the planks at 90˚ to the length of the coffin.

4.4.8 One of the best preserved burials was located towards the south of the site. The skeletal remains **389** in coffin **374** were almost complete, and in good condition (Plate 4). The coffin was notably waterlogged, which likely aided in the preservation observed. The grave cut **[372]** had observably damaged an individual **538** in burial pit **[415]**. Wooden beads (**S.F 62**) were recovered from a sample taken where the hands of the individual was likely to have been, indicating they were being held at the time of interment. The fill **(373)** overlaying coffin **374** of the grave cut had been cut by a subsequent burial **[119]**, suggesting grave **[372]** had been backfilled at the time burial cut **[119]** was dug.

4.4.9 The contrast of preservation of the contents of burial cuts **[372]** and **[119**] was immediate, with coffin **121** and skeleton **151** relatively poorly preserved (Figure 6). It appeared that the weight of the overlying grave fill **(144)** had broken through the coffin lid and filled the coffin. The weight of this material and the void present beneath coffin **121**, because of the presence of coffin **374** beneath, led the base of coffin **121** to crack and split in the middle disrupting the skeletal remains **151** within. The skeleton **151** was that of a child, but had been interred in a 2.00m long coffin built presumably for an adult. This would imply that at the time individual **151** was buried, people may have been buried in whatever coffins were available at the time of death.

4.4.10 Although each east – west orientated grave was observed to have been affected by later activity, several were observed to have been very heavily impacted upon by the later pits observed at the site. Coffins **171**, **273**, **296**, **468** and **471** of respective burial cuts **[333]**, **[272]**, **[295]**, **[466]** and **[470]** were all damaged to the extent that elements of the interred human remains were missing as a direct result of the later activity.

4.4.11 Of those, only the bases of coffins **171**, **273** and **296,** and therefore the bases of the cuts survived. Located towards the east of the site, up to 0.60m of the eastern end of coffin **468** in grave **[466]** survived containing skeletal remains **502** comprising leg and hip bones.

4.4.12 The reverse was true of the human remains **472** in coffin **471** of grave **[470]**, where the top of the grave and the lower limbs had been likely been removed by recent activity likely associated with the construction and subsequent demolition of the

preceding structure overlying the site. The remains of the burial were shallow, up to 0.09m from the top of the fill **(473)** of the coffin, to the base of the grave cut **[470]**.

4.4.13 A single possible adult grave **[544]** was left unexcavated because it was deemed possible to preserve it *insitu*, as the burial was located outside the footprint of the proposed development.

4.5 Phase 2 – Coffined burials: north to south

4.5.1 A total of nine north – south orientated burials were excavated during the course of the project and were observable from maximum heights of 4.31m aOD to 4.02m aOD (Figure 5). As with the east – west orientated burials, the majority of the wooden coffins were built to accommodate adult or sub adult individuals, however three coffins were observed that were likely built to accommodate children. There was no stratigraphic relationship between the north-south and east-west burials, so there is no reason to assume differences in the chronology of the east-west and north-south internments. The following is an account of the north – south aligned coffined burials as observed on site. A more detailed analysis of the coffins and their contents is located in Section 5.

4.5.2 The majority of the north – south orientated burials were located to the south west of the site, except burials **[450]**, **[475]** and **[496]** which were identified in the north east of the site. Of these, burials **[450]** and **[496]** accommodated child inhumations, whilst burial **[475]** contained an adult.

4.5.3 Burial cut **[450]** contained the remains of a child **453**. These remains only consisted of teeth which were contained in coffin **454**, which was very poorly preserved. Coffin **497** in grave cut **[496]** was in a similar state of preservation possibly inferring some contemporaneity (Plate 5). Another similarity between the two child burials was that the human remains **498** in coffin **497** only consisted of teeth.

4.5.4 Despite the state of preservation, the way coffin **497** was constructed was still visible, with the base consisting of a short plank, crossways to the length of the coffin, at the head, and two longer planks arranged lengthways from the middle to the foot of the coffin. This is similar in construction to coffin **354** in east – west orientated grave **[352]**.

4.5.5 The contents of adult grave cut **[475]** were in a similar poor state of preservation. The base of the coffin **488** was no longer present in places, and the remains of the individual **487** interred in the grave **[475]** were also very fragile and lifted poorly. The

foot end of the grave had been cut away by a later pit **[113]**, likely late 19th century in date. The fills in each of the three grave cuts comprised loose yellow sand.

4.5.6 Of the other six southern north – south orientated graves, four were situated almost on top of each other, whilst a single adult burial **[463]**, was situated immediately to the west, and a further burial **[122]** located to the east. When compared to the north – south orientated burials to the north, these southern burials were in a good state of preservation.

4.5.7 Burial cut **[463]** contained a 2m long coffin **446** within which skeletal remains **462** were observed. Only parts of the cranium and legs of individual **462** survived, and these had been displaced from their original locations by the loose sand fill **(447)** within the coffin, which had poured into it through the coffin's broken lid. This may suggest that the remains were de-fleshed and separate when the sand had broken through.

4.5.8 Both burial cuts **[463]** and **[337]** had cut upper fill **(429)** of burial pit **[491]**. Grave **[337]** was the earliest of a sequence of four coffined graves. Although it is possible the individuals in these graves were related, they didn't seem to be interred at the same time, as each grave was observed to cut the backfill whichever earlier grave the latter was situated over.

4.5.9 Grave cut **[337]** contained coffin **380** and the remains of adult individual **382** who had been lain in a supine position. The bone was notably soft, and although the majority of the larger elements of the skeleton had survived, they were poorly preserved, and certain bones were crushed or displaced by the sand fill **(381)** of the coffin. The lid of the coffin was overlain by a further sand deposit **(379)**

4.5.10 This deposit was cut by burial cut **[336]**, which contained another coffin **339** and adult individual **351**. The coffin measured 2.11m in length, and interestingly the skeletal remains **351** within were lain partially crouched, laying on their left side, rather than supine, which is how every other coffined individual has been positioned. It is possible that the individual was too small for the coffin, and some movement of the body had occurred during the burial of the coffin.

4.5.11 Of the human remains **351**, they were relatively well preserved, but soft and fragile, with some observable damage to the bones in the thorax area of the body. The fill **(346)** overlying the remains within the coffin **339** comprised friable fine grained yellow-grey sand. This had broken through the coffin lid, although likely when the

bone was still fleshed, as no bone had been observed to be displaced. This was overlain by a further fine sand **(340)**.

4.5.12 This sand was cut by a grave **[203]** for a child, containing the remains of a 1.39m long coffin **204** and individual **210**. The bone had survived better than other infant/children, suggesting the individual may have been older and the bone better developed than the others. The coffin **204** had also been constructed in a similar way to those coffins which had contained adults, with short planks at the base, crossways to the length of the coffin.

4.5.13 A thin deposit **(222)** of light greyish yellow sand was observed to underlie coffin **204**, possibly inferring that the grave had been open for a short period before the coffin was placed in the grave. The fill of the coffin comprised friable mottled yellow-brown sand **(205)**. This was cut by the final grave in the sequence **[149]**.

4.5.14 Measured at up to 2.04m long, grave cut **[149]** contained coffin **147** and the remains of an adult **166**. The coffin was 2.0m in length, and had been visibly "squeezed" at the foot end of the coffin by the weight of the sand either side. This might suggest that the coffin lid had remained sealed for a period, and had not been split by the weight of the overlying sand fill of the grave.

4.5.15 The human remains **166** were poorly preserved, very fragile and eroded. Situated in a supine position, the individual appeared to have their arms lain across the lower part of their abdomen. The coffin **147** was filled with loose light greyish yellow sand **(148)**. This sand had a notably darker hue close to the coffin wood, an indication of the degradation of the wood.

4.5.16 Grave **[122]**, an individual burial to the east of the aforementioned sequence of grave cuts, measured 2.04m long, 0.59m wide and was orientated north-south. It contained coffin **123** which was in poor condition, with the eastern edge of the coffin cut away by later pit **[325]** and the lid was missing. The construction of the coffin was similar construction to the rest of the adult coffins across site, with the base consisting of short planks arranged crossways to the orientation of the length of the grave.

4.5.17 Skeleton **127** within coffin **123** was similarly in a poor condition, with little of the abdomen surviving. The fill of the coffin **123** comprised soft mixed yellow and brown fine grained sand **(126)**. The fill of the grave cut was a similar loose sand **(124)**, although it appeared less mix, being only yellow in colour.

4.5.18 These last three burial cuts; **[122]**, **[203]** and **[149]** were distinguished from the other north-south burials, as they were interred on an inverted orientation to those others of their group. The head end was located towards the southern end of the site, whereas the feet were to the north. The precise purpose and meaning of this deviation is unclear, and practical considerations not evident in the archaeological evidence cannot be dismissed. These maybe as simple as the physical space in which to position the graves, or the competency of those burying the deceased. It is possible however, that the inversion of these individuals, may have had more significant connotations for those burying the deceased.

4.6 Phase 3 – Mid 19th to late 19th/early 20th century

4.6.1 This phase of archaeology was characterised by the cutting of pits (Figure 7). Those pits observed to the south were found to be largely square or rectangular and laid out as, and confined within a rectangular area. This is suggestive of deliberate planning and indicates that that these pits relate to an organised and structured activity.

4.6.2 Observable at a height of 4.06m aOD, the largest of these pits **[285]**, measured 6m long, 1.15m wide, and up to 0.45m deep. Like each other pit in this area, it had vertical sides, with a sharp break of slope leading to a flat base.

4.6.3 The fill of this pit **[285]** was almost exactly the same as each other pit, and comprised fairly compact greyish black organic sandy silt **(286)**. The uniform nature of the fills, might suggest that the pits were backfilled broadly at the same time, and that they had been backfilled very quickly after they had been opened. A couple of the pits, such as **[267]** and **[303]** contained a small quantity of slumped material in their bases suggesting that they had been left open, albeit for a brief period of time.

4.6.4 A number of pits, such as **[230]** and **[291]** had an upper fill of similar soft mixed sandy silt and clay, with inclusions such as charcoal flecks, shells, and pottery present (Plate 6). These deposits may have previously been a single layer which had sunk into the tops of each pit. Evidence of this was observed to the east of pit **[291]**, where a number of pits were sealed by an overlying layer, of loose light to mid brown sand. **(294)**.

4.6.5 Samples were taken from these pits and they have produced archaeobotanical remains which await analysis. The dating of these pits, their organised nature and their location to the immediate west of an area marked as drying grounds in the

later 19th century is suggestive of the pits having an industrial function associated with the ropery. As an hypothesis these pits seem likely to be 19th century retting pits for separating hemp fibres to be used in rope making. The sand matrix of the pit sides would suggest that they may have been wood lined, though no evidence for this was forthcoming. Retting pits were filled with water and as the pits at St Mary's were cut to the level of the water table they did retain water despite their sandy bases. If these pits were retting pits then the archaeobotanical remains should contain evidence of *Cannabis Sativa* (Greary *et al* 2005).

4.6.6 The features in the northern end of the site were much more varied in nature and exhibited a far less organised pattern, and were likely to be rubbish or waste pits. A number of these features cut layer **(378)**, containing late 19th to early 20th century pottery, and had been overlain by layer **(145)** which contained early 20th century pottery. As such it is possible that these disturbances maybe associated with the construction of the smallpox hospital in the late 19th century.

4.6.7 A sondage was excavated through layer **(378)** (Figure 7). A burial cut **[561]** was observed to underlie layer **(378)**, and was only visible in section (Figure 9). As the burial didn't extend into the site, and wouldn't be impacted upon by the development, it was left in-situ. No human remains were observed within the coffin **562**, in the burial cut **[561]**, which was wooden, and appeared to be 0.34m wide, have a flat base and vertical sides. As with the other burials on site, the coffin lid had broken, and allowed loose yellow sand **(563)** to fill the coffin chamber.

4.7 Phase 4 – Late 19th to Early 20th century remains onwards

4.7.1 It is likely that deposits **(100)**, **(145)**, **(235)**, **(252)**, **(268)** and **(294)** represent layers lain in the late 19th to early 20th century (Figure 8). These were largely observed to overlie the pit features in Phase 3. Notably, of these deposits, a soft greyish brown silty sand **(268)** was observed to overlie squared pits **[291]** and **[303]**, located towards the centre of the site. Soft dark brown sandy silt **(100)** appeared to have been naturally deposited, and was located towards the southernmost limit of the site (Figure 9 and 10). It contained animal bone, shell and pottery suggestive of a domestic assemblage (Plate 7). Visible at a height of 4.20m aOD, the deposit was the thickest of these layers and measured up to 0.56m thick.

4.7.2 The other deposits may represent some form of levelling deposits, possibly associated with the use of the smallpox hospital. A possible former hedgerow **[132]** cuts layer **[145]** in the north east of the site (Figure 10), inferring that the site limits

may have been located within the grounds of the hospital, rather than within the footprint of the building. These layers were observed to have been either cut or overlain by modern intrusions and deposits, likely associated with the demolition of the smallpox hospital, and the construction of the school in the early 20th century. The lack of evidence for the building known to have been on the site in the very early 20th century may be a result of that building's possible ephemeral nature.

5 HUMAN REMAINS & THE CEMETERY DEMOGRAPHIC PROFILE

5.1.1 ***Summary:*** Archaeological investigations in 2016 undertaken on land at St Mary's Primary School in Leith, Edinburgh uncovered part of a well-used burial ground containing coffined burials, shrouded burials and burial pits. These burials stratigraphically pre-date the mid-19th century and are associated with artefacts of the earlier 17th century. Some disarticulated human remains were recovered. Excavation techniques were conducted by hand. No sieving was carried out on-site, although sieving of the deposits was carried out during post-excavation processing. Samples were taken from all areas of the body but due to the poor preservation, more general samples had to be taken.

5.1.2 The preservation of the skeletal remains was very poor in the main, largely because of the waterlogged burial environment (Bello *et al* 2005, 37) and post internment disturbance. Many parts of the skeleton were missing, surviving bones were at best soft and friable and at worst little more than bone shaped stains in sand.

5.1.3 The aim of this report is to establish biological profiles for the individuals recovered from the excavation. A rapid skeletal assessment was performed and methods used in the post-excavation analysis are described in detail below. The human remains were recorded according to standards by Brickley (2004) (Brickley & McKinley 2004) and by standards for recording and coding articulated human remains (Buikstra & Ubelaker 1994, 9). A brief quantification summary of the recovered human remains is shown in Table 1 along with other cemetery demographic profile information such as burial alignment and associated grave goods. Details of the results are held in the archive.

5.1.4 Other cemetery demographic information is also included in this report, including the grave goods (small finds), coffin wood, radiocarbon analysis, strontium analysis and conservation data.

5.1.5 It should be noted that all funerary-related artefacts, including coins, combs and beads, are discussed in this section.

5.2 Methods

5.2.1 ***Erosion.*** The degree of erosion to the bone was recorded using Brickley & McKinley's (2004, 16, **Figure 7.1 - 7**) grading system.

5.2.2 ***Age Determination.*** The determination of age in adult skeletons can be established using a number of methodologies, including sternal rib-end morphology (Işcan *et al*

1986), cranial suture closure (Perizonius 1984), auricular surface morphology (Lovejoy *et al* 1985), pubic symphysial morphology (McKern & Stewart 1957) (Brooks & Suchey 1990) (Todd 1920) and dental attrition (Brothwell 1981, 72; Lovejoy *et al* 1985a; Gustafson & Koch 1974; Anderson *et al* 1976; White & Folkens 2005). The determination of age in non-adult skeletal remains can be determined via limb bone metric analysis, dental eruption stages and epiphyseal fusion stages using standards published in Scheuer & Black (2004, 2000) and Schaefer *et al* (2009).

5.2.3 Because of the poor preservation of the human remains, analysis of age determination had to be reliant on dental attrition for both adults and non-adults.

5.2.4 ***Sex Determination.*** For sex determination of adult skeletons, the pelvis and skull are primarily examined as these skeletal elements are the most sexually dimorphic between the sexes (White & Folkens 2000, 362). If the cranium and pelves are present, sexually dimorphic cranial and pelvic traits in adults can be scored using various reference sources, including standards from Buikstra & Ubelaker (1994), Brothwell (1981), Ubelaker (1989), Mays (1998) and Lovejoy *et al* (1985b). Where appropriate, the determination of sex via the examination of the trochlea (distal humerus) was used (Rogers 1999). Sex determination can also be established using metric data published in Bass (1987; 1995).

5.2.5 Because of the poor preservation of the human remains, the determination of sex had to be reliant on metric analysis of limb bones (particularly the femur) as well as sexually dimorphic traits of the crania.

5.2.6 Cranial measurements (Howells 1973), cranial non-metric traits (Berry & Berry 1967; Brothwell 1981) and post-cranial non-metric traits (Finnegan 1978; Brothwell 1981, 90-95) were taken where appropriate.

5.2.7 ***Metric Recording.*** Limb bone measurements were taken where appropriate. Stature regression equations for heights were used where appropriate and equations from Trotter & Gleser (1958) and Trotter (1970) (In: Ubelaker 1989, 61) were used.

5.2.8 Where possible, muscle marker attachment sites were observed and scored using Hawkey and Merbs (1995, 326).

5.2.9 Dental conditions such as calculus and hypoplastic lines were noted and recorded using van Beek (1983) and Brothwell (1981). Pathologies were observed and recorded using Brothwell (1981) and Roberts & Manchester (2010).

5.3 Results

5.3.1 A summary of quantification totals of the human remains is presented in Table 1 below.

Skeleton No	Cut No	Coffin No	Finds	<E> Nos.	Alignment	Condition	Age category (Adult / Non-adult)	Refined Age	Sex	Height (cm & foot/inches)	Measurements (mm) (Cranial)	Pathologies (bone)	Pathologies (dentition)
133	132	-	-	-	Disarticulated in deposit	Poor (Grade 4)	Adult?	-	-	-	-	-	-
144	119	-	-	-	Disarticulated in deposit	Poor (Grade 4)	?	-	-	-	-	-	-
127	122	123	SFs 1-7 & 69, Fe nails <5>	5, 10, 11, 12, 13, 15	N-S	Very poor (Grade 4-5)	Adult	40+ yrs	?	165-79-169.15 (5ft5-5ft6)	-	Periosteal bone infection - occipital fragment	Caries on occlusal surface of LMM2, slight calculus
150	141	142	None	16, 20, 28, 29	E-W	Very poor (Grade 4-5)	Adult	-	?F	-	-	-	-
151	119	121	SF 8, Fe nail	7	E-W	Very poor (Grade 4-5)	Non-adult	10-12 yrs	?	-	-	-	-
165	164	-	-		Disarticulated in deposit	Poor (Grade 4)	Adult	-	-	-	-	-	-
166	149	147	SFs 68 & 73, Fe nails	21, 22, 23, 24	N-S	Very poor (Grade 4-5)	Adult	-	?	143.02-149.05 (4ft8-4ft10)	-	Porotic hyperostosis on cranium, kidney stone <22>	Slight calculus, linear enamel hypoplasia on 4 teeth
210	203	204	None	33, 34, 35, 36	N-S	Very poor (Grade 4-5)	Non-adult	6 yrs	?	-	-	-	Linear enamel hypoplasia on 3 teeth
221	196	-	SF 9, Fe nail	41, 42, 43, 44	E-W	Very poor (Grade 4-5)	Adult	-	?	175.13-179.21 (5ft7-5ft8)	-	Pronounced *Linea aspera* & platymeria (occupation-related?)	-
271	260	261	None	50, 52, 53	E-W	Very poor (Grade 4-5)	Non-adult	2-3 yrs	?	-	-	-	-
279	234	240	None	48, 56, 57, 58, 89	E-W	Very poor (Grade 4)	Adult	20-30 yrs	?M	179.25 (5ft8)	-	-	Hypoplastic lines on 10 max teeth, large caries on RM2, slight calculus on 6 teeth; mandible: slight calculus on all dentition, hypoplastic lines on 3 teeth
284	253	237	None	49, 60, 61, 62	E-W	Poor (Grade 4)	Adult	25-35 yrs	?M	-	-	Exotoses on cost-clav lig; porotic hyperostosis on cranial vault	Periodontal disease on mandible, slight calculus on 15 teeth; hypoplastic lines on 9 teeth including mand incisors, max PMs and max canine
306	305	-	None	-	-	Poor (Grade 4)	Adult	-	-	-	-	-	-
310	303	-	None	-	-	Poor (Grade 4)	Adult	-	-	-	-	-	-
318	233	300	None	75, 76, 77, 78	E-W	Very poor (Grade 5)	Non-adult	4 yrs	?	-	-	-	Hypoplastic lines on all max incisors plus 2 mandibular incisors
351	336	339	None	81, 82, 83, 84, 85	N-S	Very poor (Grade 5)	Adult	17-25 yrs	?	-	-	-	-
356	352	354	None	100, 101, 102, 103, 104	E-W	Moderate to good (Grade 2)	Non-adult	18 mths - 3 yrs	?	-	-	Body non-existent	24 teeth; notches on occlusal incisors (normal variant), possible LEH on incisors (possibly weaning deficiency)
361	329	330	None	105, 106, 107, 108, 109, 110, 111	E-W	Very poor (Grade 5)	Adult	25-35 yrs	?	162.78-167.31 (5ft3-5ft4)	-	-	Slight calculus on M2, linear enamel hypoplasia exhibited on 4 teeth
365	363	364	SFs 10 & 11, Fe nails	99, 118, 119, 120, 121	E-W	Moderate to poor (Grade 3-4)	Adult	50+ yrs	M	183.57 (6ft)	-	Healed fracture to R clavicular shaft; osteophytic formation on lumbar spinous processes, large MSM at site of *Biceps brachii* (occupation or DJD?), acetabular pitting (DJD?), destructive lesion in posterior navicular - gout?, R patella - osteophyte formation	Heavy calculus & periodontal disease on mand teeth, large caries on occlusal surface of RM1; heavy calculus on max M2 and canine
382	337	380	None	93, 94, 95, 96, 97, 98	N-S	Poor (Grade 4)	Adult	25-35 yrs	?	-	-	Hyatid casing (tapeworm)	Mandibular dentition: all present and correct; moderate calculus on incisors, slight calculus on canines & molars; hypoplastic lines on 2 incisors, both

													canines and PM1s
389	372	374	SF 62 wooden rosary beads <117>	88, 91, 116, 117	E-W	Moderate to good (Grades 2-4)	Adult	27-35 yrs	M	181.53 (5ft11)	-	Grade 1 osteophytic lipping on 5 thoracic, 2 lumbar & 2 cervical vertebrae; very high percentage of Schmorl's Nodes on thoracic vertebrae – largely on inferior surface but 4 thoracic vertebrae display Schmorl's Nodes on both surfaces; Large depression at site of Deltoid on L humerus – possible soft tissue injury; wormian bones; had a physically tough life yet a nice burial - why?	Hypoplastic lines on all incisors and PM1; Maxillary dentition: all except LM3; slight to moderate calculus on incisors, no caries, minor periodontal disease. Mandibular dentition: all except M3s; slight calculus, no caries, minor periodontal disease; individual would have had an overbite
396	391	392	None	134, 136, 137	E-W	Very poor (grade 5)	Adult	33-45 yrs	?M	-	-	-	Slight calculus on 5 max teeth
397	367	369	None	122, 123, 124, 126	E-W	Poor (grade 4)	Adult	20-29 yrs	F	-	-	Wormian bones, tumour on R mastoid process – mastoid osteoma (benign)	Very slight calculus, minor periodontal disease - teeth in quite good condition
399	383	398	None	115	E-W	Very poor (Grade 5)	Adult	50-60 yrs	F	-	-	None observed - bone preservation too poor	AMTL on tiny mandible; no dentition; likely quite an elderly individual
402	400	401	None	133	E-W	Moderate (3)	Non-adult	18 months - 2 yrs	-	-	-	None	None
409	417	394	None	126, 127, 128, 129, 130	E-W	Poor to moderate (Grade 3-4)	Adult	42-45 yrs	F	157.84cm (5ft2)	-	None observed	Max PM2 & M2; mandibular dentition: hypoplastic lines on 5 teeth (incisors & canine); slight calculus on molars and incisors; heavy calculus on max teeth
411	405	407	None	132	E-W	Very poor to mod (Grade 4-5)	Non-adult	10-12 yrs	-	-	-	-	Hypoplastic lines evident on all max incisors, 2 mand incisors & max L canine
422	413	423	None	140, 141, 142, 143, 150	E-W	Poor to moderate (Grade 3-4)	Adult	30-35 yrs	F	160.31cm (5ft3)	-	Potential kidney stone, hyatid cyst (tapeworm); potential destructive lesion on posterior surface of T10 vert - beginnings of TB??; heavy exotoses at both *Biceps brachii* site on radii	Slight calculus on 7 max teeth and 4 mand teeth, some AMTL at site RM1 (mand)
430	491 [pit]	-	SFs 12 & 13: iron key plus 3 coins in corrosion	151, 152, 153, 154	N-S	Poor (Grade 4)	Adult	45-55 yrs	?M	-	-	None observed	Extensive periodontal disease on mandibular dentition, slight calculus on 4 max & 3 mand teeth, very heavy wear
432	426	424	None	147, 148, 149	E-W	Poor (grade 4-5)	Adult	18-22 yrs	?F	147.96cm (4ft10)	-	Mandibular torus present	Very slight calculus on mandibular dentition (teeth include all L side teeth from LI1
435	433	434	None	167, 175, 176, 177, 178, 179, 180, 181, 182, 183	E-W	Poor to moderate (Grade 3-4)	Adult	45-55 yrs	M	183.57cm (6ft)	-	None observed	Heavy calculus on max teeth, heavy calculus on mandibular teeth, caries on max and mand M2
438	418	420	None	144, 145, 146	E-W	Very poor (Grade 5)	Adult	24-30 yrs	?F	152.90-158.33cm (5ft - 5ft2)	-	Scurvy on cranium?? Very thick cranial vault, very thin cortical bone	Linear enamel hypoplasia on 7 mand teeth
439	415 [pit]	-	None	164, 165, 166	N-S	Very poor (Grade 4-5)	Subadult /adult	16-20 yrs	?	145.49-151.37 (4ft7-4ft9)	-	None observed	Linear enamel hypoplasia on mand incisors; deciduous max & molars present
440	415 [pit]	-	None	156, 157	E-W (cranium at east end)	Very poor (Grade 5)	Adult	-	?	151.05-159.37cm (4ft11-5ft2)	-	None observed	None
441	415 [pit]	-	SF 60 wooden bead <60>	158, 159, 160, 161	E-W (cranium at east end)	Moderate (Grade 3)	Subadult	15-17 yrs	?	-	-	Lesions & pitting in 3 C vert - possibly infection,	None

442	415 [pit]	-	None	162, 163	E-W	Moderate (Grade 3)	Adult	44-47 yrs	?M	161.79cm (5ft3)	-	Periosteal infection on lateral distal R humerus, slight osteophytes on thoracic vertebrae, Schmorl's Nodes on 3 T vert	Slight to moderate calculus on molars, caries on LPM2 (max), periodontal disease evident on mandible; very heavy wear on mandibular canines & incisors (posterior / lingual)
443	415 [pit]	-	Leather from torso	235, 236, 237, 238	E-W	Moderate (Grade 3)	Adult	45 yrs+	?M	-	-	None observed	AMTL on mandible, caries on PM2 (left mandibular),
449 & 529 (cranium)	516 [pit]	-	None	-	E-W	Moderate (Grade 3)	Adult	45-55 yrs	?M	-	ZZ: 44.64	Heavy *Linea aspera* & *Soleal line* MSM on both fems & tibs	Heavy calculus evident on: mand incisors, all premolars and R canine; Abscess on mand L M1; caries on L mand M1; heavy calculus on all left maxillary dentition; periodontal disease evident on both maxillary & mandibular dentition
453	450	454	SF 14 (Fe nail)	172	N-S	Moderate to good (Grade 1)	Non-adult	4 - 6 yrs	?	-	-	None observed	Linear enamel hypoplasia on 2 incisors
460	458	-	None	185, 186, 187, 188, 189	E-W	Poor (Grade 4)	Adult	18-22 yrs	?	-	-	None observed	None - no calculus, no caries, no AMTL
461	459	-	None	191	-	Poor (Grade 4)	Non-adult	6-7 yrs	-	-	-	None observed	None
462	463	446	None	168, 169, 170, 171	N-S	Poor (Grade 4)	Adult	40-50 yrs	?F	-	-	None observed	Caries on M2, heavy calculus on mand teeth, slight calculus on max teeth
472	470	471	None	192, 193, 194, 195, 196, 197	E-W	Very Poor (Grade 5)	Adult	45-55 yrs	?	-	-	None observed	None
477	415 [pit]	-	None	202, 203, 204, 205, 206, 207	E-W	Poor to moderate (Grade 3-4)	Adult	40-50 yrs	?F	160.31cm (5ft3)	-	Fusion of acetabulum & L prox fem head	Moderate calculus on 8 teeth, slight calculus on 6 max teeth, LEH on 3 incisors
478	415 [pit]	-	None	221, 222, 223	NE-SW in pit	Moderate (Grade 3)	Adult	40-45 yrs	?F	160.13cm (5ft3)	-	Schmorl's Node on T9, lesion in T10	Moderate calculus on all mand molars; LEH on 2 mand incisors
479	415 [pit]	-	None	243, 244, 245, 246, 247	E-W	Very poor (Grade 5)	Non-adult	14-16 yrs	?	-	-	-	Very healthy teeth
480	415 [pit]	-	None	239, 240, 241	E-W	Poor (Grade 4-5)	Adult	24-30 yrs	?M	-	-	Destructive lesion in glenoid fossa portion - tuberculosis??	Moderate calculus on max molars (x3)
481	415 [pit]	-	Leather; SF 70 stopper for leather costrel; SF 66 wood pommel top	248, 249	E-W	Poor (Grade 4)	Non-adult	11-12 yrs	-	-	-	None observed	Note: eruption of left mandibular PM1 not quite complete (complete eruption is by 13 yrs)
482	415 [pit]	-	SF 41 leather & woollen shroud material; SFs 43 & 44 leather shoes/boots with wooden soles; SF 61 wooden beads <265>	260, 264, 265, 266	SW-NE in pit	Moderate/poor (Grade 4)	Adult	30-40 yrs	F??	147.96cm (4ft10)	-	Lesion on external cranial vault, possible PH??	Heavy calculus on mandibular dentition; periodontal disease
483	415 [pit]	-	SF 42 pin from R scap; SF 63 wood lice comb; woollen shroud material	261, 262, 263	SW-NE in pit	Moderate (Grade 3)	Adult	24-25 yrs	F	152.30cm (4ft11)	-	Matching bony nodules on conoid tubercules (clavicles): natural bone formation (clavicle not fused, under 26 yrs; wear on R max molars = 24-30 yrs; evidence of shroud on virtually all bones	Heavy wear on all dentition, slight calculus on mandibular dentition; evidence of periodontal disease on both maxillar and mandibular dentition
484	415 [pit]	-	Woollen shroud material <258>	257, 258, 259	SW-NE in pit	Moderate (Grade 3)	Adult	20-24yrs	F?	149.9cm (4ft11)	-	Medial squatting facet on L talus	AMTL on mandibular L M1; moderate calculus on mandibular teeth;
485	455	457	None	216, 217, 218, 220	E-W	Very poor (Grade 4-5)	Non-adult	c.13 yrs	?	-	-	None observed	-

487	475	488	None	198, 199, 208, 209, 210, 211	N-S	Poor (Grade 4)	Adult	35-45 yrs	?	-	-	None observed	Moderate calculus on mand molars
493	491 [pit]	-	Shroud material	227, 228, 229, 242	E-W in pit	Poor (Grade 4)	Adult	30-35 yrs	F	157.84cm (5ft2) L femur = 420mm;	-	Lesions on cranial vault possibly associated with iron deficiency anaemia - either dietary or through parasitic infection	Moderate calculus on M1, M2 & L PM1 (mand); caries on max L M2; slight calculus on left mand PM2, moderate calculus on L mand canine
494	491 [pit]	-	Shroud material; SF 71 Copper alloy brooch	224, 225, 226	Roughly E-W in pit	Moderate to poor (Grade 3-4)	Adult	35-40 yrs	?F	157.23cm (5ft1); Left tibia = 330mm & left fem prox head = 42.77mm Ø	-	No pathologies observed except dental	Heavy calculus on mand M1 & L PM1; moderate calculus on mand PM1 & LI1
495	491 [pit]	-	Shroud material	212, 213, 214	N-S	Poor (Grade 4)	Subadult/adult	16-20 yrs	?M	-	-	None observed, bone too poorly preserved	None
498	496	497	None	250	N-S	Good (dentition only)	Non-adult	12 - 24 months (2 yrs)	-	-	-	-	Possible linear enamel hypoplasia on mandibular incisors; possible weaning deficiency / malnutrition
501	486	489	None	233, 234	E-W	Very poor (Grades 4-5)	Adult	-	?M	179.21cm (5ft10)	-	None observed, bone too poorly preserved	No dentition
502	466	468	None	174	E-W	Moderate to poor (Grades 3-4)	Adult	-	M	R femur L: 470mm; R fem prox hd: 45.61mm, L fem prox hd: 46.08mm; Height = 174.57cm (5ft8)	-	None observed, bone too poorly preserved	No dentition
506	514	-	SFs 15-40: 25 silver coins dating to Charles I 1637-1642; leather purse / corded fragments plus partial clasp; SF 58 Fe tack/hobnail; also woollen shroud material from <255>	253, 254, 255, 256	E-W	Very poor (Grade 5)	Adult	20-24 yrs	?	-	-	None	Linear enamel hypoplasia on 4 maxillary teeth and on mand M1 & both canines; no calculus
508	486 ?	-	None		Disarticulated, no orientation	Poor (Grade 4)	Non-adult	<19 yrs	?	-	-	No pathologies observed	No dentition
511	558	-	None	E-W	-	Poor (Grade 4)	Adult	-	?F	L Fem L = 390mm; 150.43cm (4ft11)	-	Possible periosteal infection on R tibia	No dentition
512	558	-	SF 64 wood lice comb & coins dating to James VI (florins 1567-1625); SFs 48 - 55 - this group includes Fe handle & leather cord-purse fragments; leather/coarse fabric shroud material	311, 312, 313, 314	E-W	Poor (Grade 4)	Adult	-	?M	R tibia L = 380mm: 173.89cm (5ft8)	-	Hyatid casing (tapeworm) in <312>; wormian bones; heavy exostoses on lateral distal R hum - is this a soft tissue injury?	No dentition
517	516	-	None	268	E-W	Poor (Grade 4)	Non-adult	-	-	-	-	-	No dentition

518 (legs) & 531 (cranium)	516 [pit]	-	None	269	E-W	Poor (Grade 4)	Adult	18-22 yrs	M	Left tib = 400mm; 183.57cm (6ft)	RB^1: 27.93; ZZ 38.01; H_1: 28.25	None observed	Heavy calculus on mandibular incisors, canines & both PM1s; moderate to heavy calculus on maxillary incisors, canines, PM1s & PM2s; linear enamel hypoplasia on mandibular and maxillary incisors
519 (legs) & cranium (532)	516 [pit]	-	None	270	E-W	Poor (Grade 4)	Adult	17-22 yrs	M	Right tib = 420mm, 183.33cm (6ft)	-	Wormian bones	Linear enamel hypoplasia on max incisors, both canines & L PM1; minor calculus on all mand incisors
520 (Femur) & 530 (cranium)	516	-	None	271	E-W	Poor (Grade 4)	Non-adult	6-7 yrs	-	-	-	Lesions on parietal possibly associated with scurvy	Linear enamel hypoplasia on maxillary incisors
525	522	524	SF 65, <294>, wooden bead, woollen shroud material from <294>	290, 291, 292, 293, 294	E-W	Poor	Adult	40-45 yrs	M	Fem hd: 47.54mm; no height	Gonion: 67^O; RB^1: 33; ML: 110; ZZ: 44; GoGo: 90; Gnathion: 56; Infradental: 53.11; H_1: 32.89; Mentale (L): 75.7; Mentale (R): 73.5	Mandibular torus present	Moderate calculus on mandibular incisors, canines & PMs; heavy calculus on L M1 & M2 (mandibular); large caries on R M1 (mesial);
527 & 535 (legs)	516 [pit]	-	None	272, 303, 305, 306, 307	E-W	Poor (Grade 4)	Non-adult	5-7 yrs	-	-	-	-	Linear enamel hypoplasia on 2 deciduous mand incisors & both permanent mand M1s (not quite erupted
528 & 534 (legs)	516 [pit]	-	SF 45 Fe attached to bone	273, 303, 308, 309	E-W	Poor (Grade 4-5)	Non-adult/Subadult	12-15 yrs	-	-	-	No pathologies observed	Slight calculus on 5 mand dentition; pronounced mesial marginal ridge on upper L canine; linear enamel hypoplasia on max canines, max incisors, mand M1s & three mand incisors
538	415	-	-	-	Disarticulated, no orientation (located N of coffin (374)	Moderate (Grade 3)	Adult	-	F	Fem hd: 40.17mm	-	No pathologies observed	No dentition
550	536	540	SFs 46 & 47 Fe coffin nails	281, 282, 283, 284	E-W	Very poor (Grade 5)	Adult	45-55+ yrs	?	R tib L = 400mm (177.53-183.57cm 5ft8-6ft)	-	No pathologies observed	Slight calculus on max incisors
551	541	542	None	295, 296, 297, 298	E-W	Very poor (Grade 5)	Adult	-	?F	L Fem L = 320mm, 133.14-139.77cm (4ft3-4ft5)	-	-	-
552	548	547	None	299, 300, 301, 302, 304	E-W	Very poor (Grade 5)	Adult	-	?	L fem L = 410mm & R tib L = 330mm, H = 156.06-160.33cm (5ft1-5ft2)	-	-	Linear enamel hypoplasia on 5 mand teeth
556	558	-	-	320	NW-SE	Moderate-poor (Grade 4)	Adult	<30 yrs	F	L fem = 450mm, L tib = 340mm; H = 163.01cm (5ft4)		No pathologies observed	No dentition
557	558	-	SF 56 coin?	-	E-W	Poor (Grade 4)	Adult	50+ yrs	F?	-	-	No pathologies observed	No dentition

Table 1: Quantification of human skeletal remains by skeleton number

5.3.2 A total of 81 individuals were interred at the site, including 71 articulated human skeletons available for analysis (Table 1), five sets of disarticulated human remains (**133**) (**144**) (**165**) (**306**) (**310**), three coffins with no human remains, coffins (**116**) (**171**) and (**273**), and two coffins that were not excavated on-site.

5.3.3 ***Preservation***. The preservation of the human skeletal remains was very poor in the main; the waterlogged burial environment had a detrimental impact on the human remains, damaging all aspects of the bone. The damage caused to the cortical bone surfaces had a negative impact on sex determination, age-at-death analyses, stature estimation and examinations for pathological conditions; symptoms of a wide range of diseases (including metabolic diseases such as scurvy and rickets) manifest themselves on the cortical bone surface and it is highly likely that biographical profile data will have been lost due to taphonomic reasons. Virtually all of the human bone was graded Very Poor (5) to Poor (4). In contrast, the dentition (of both adult and non-adult individuals) had survived remarkably well.

5.3.4 ***Age-at-death***. Because of the poor preservation of the human remains, individuals were primarily separated into adult and non-adult categories. Age determination was further defined once primary age categories were established (Tables 1 & 2). Coffins (**116**) (**171**) and (**273**) with no human remains have been included in Tables 2 and 3.

Age	**Count**
Adult	54
Non-adult	19
Non-adult/Sub-adult	1
Sub-adult	1
Sub-adult/adult	2
Unidentified	2
TOTAL	**79**

Table 2: General age categories

5.3.5 Adults represent 68.3% of the cemetery population while non-adults (including the sub-adult category) represent 31.7% of the population. Young adults (20-35 years) are the largest age group at 25.3%, closely followed by Middle Adults (18.9%), Unidentified (22.7%) and Children (3-12 years) (11.3%). Adolescents make up 8.8% of the assemblage and Infants make up 7.5%. Old Adults make up 5% of the assemblage each. There were no foetal individuals.

5.3.6 It is worth noting that almost a fifth of the cemetery population could not be assigned an age; this was a consequence of poor bone preservation and in some

circumstances the destruction / absence of certain anatomical elements because of the burial environment. The counts and percentages of certain age groups would very likely change, thus the figures for each age group are the minimum number that could be confidently identified.

Age	Count
Ft: Foetal (<birth)	0 (0%)
I: Infant (b – 3 years)	6 (7.5%)
C: Children (3 – 12 years)	9 (11.3%)
AO: Adolescents (12-20 years)	7 (8.8%)
YAD: Young Adults (20-35 years)	20 (25.3%)
MAD: Middle Adults (35-50 years)	15 (18.9%)
OAD: Old Adults (50+ years)	4 (5.06%)
Unidentified	18 (22.7%)
TOTAL	**79**

Table 3: Refined Ages of Cemetery Population

5.3.7 ***Sex Determination.*** The determination of sex was only carried out on adult skeletons; sex determination of non-adult skeletons is virtually impossible due to rapid skeletal growth and osteon re-modelling. Tentative analysis of sex determination could be carried out on some sub-adults.

5.3.8 Sex determination for adults were assigned five categories as per guidelines in Buikstra & Ubelaker (1994): 'F' (female), '?F' (possibly female), '?' (unidentified), '?M' (possibly male) and 'M' (male) (Table 4). When pooled, division of the sexes appears fairly equal; female and possibly female individuals comprise 33.8% of the total adult population and male and possibly male individuals comprise 30.4% of the total adult population. Over a third of the adult population could not be assigned a sex.

Sex	Count
F (female)	8 (13.5%)
?F (possibly female)	12 (20.3%)
? (Unidentifiable)	21 (35.5%)
?M (possibly male)	12 (20.3%)
M (male)	6 (10.1%)
TOTAL	**59**

Table 4: Quantification of Biological Sex for Adult Individuals

5.3.9 ***Stature Estimation & Post-cranial Metrics.*** Stature estimation and limb bone metric analysis could only be conducted on adult skeletons, as the non-adult skeletons were

too poorly preserved. In certain instances, metric measurements such as the diameter of the proximal femoral head could provide a tentative sex for an individual. It should be noted that some of the limb bone measurements were taken in-situ and from the primary technical drawings.

Stature	Stature range	Mean height
F & F?	133.14-160.31cm	146.72cm (4ft9)
Unidentifiable	143.02-179.21cm	161.11cm (5ft3)
M & ?M	161.79-183.57cm	172.68cm (5ft7)

Table 5: Stature estimation ranges for male and female adults

5.3.10 ***Cranial Metrics.*** Metric data could only be gathered for three individuals (**525**) (**529**) (**531**) because of the poor preservation of the bone (Table 1). Cranial metric data was taken using cranial spreading calipers, digital calipers and a mandibulometer. Measurements that were taken include the foremen mentalia breadth (ZZ), minimum ramus breadth (RB'), symphyseal height (H_1), maximum projective mandibular length (ML), Gnathion, Infradentale, Mentale and the angle of the Gonion.

5.3.11 The cranial metric data gathered from this assemblage is of little osteoarchaeological significance and does not add pertinent information to the biological profiles of the three individuals.

5.3.12 ***Pathologies (bone).*** Several pathological conditions were observed and recorded on both adult and non-adult skeletons, including instances of metabolic disease, trauma, joint diseases and infectious diseases. Metabolic disease in the form of porotic hyperostosis caused by iron deficiency anaemia was observed in four adults (**166**) (**284**) (**482**) and (**493**). Iron deficiency anaemia can be caused by numerous factors, including injuries, dietary deficiency and by parasitic infection (Roberts & Manchester 2010, 230). It is usually the latter two factors that cause iron deficiency anaemia; interestingly, hyatid cyst tapeworm cases were recorded from thorax and pelvic samples from three other individuals (**382**) (**422**) (**512**). Although the tapeworm cases were from different individuals, it would appear that parasitic infection could have been causing some instances of iron deficiency anaemia in this cemetery population.

5.3.13 Symptoms of scurvy were observed in the crania from two individuals, a young child (**520**) and a young adult woman (**438**). This disease is brought about by vitamin C deficiency; the cement surface in the blood vessels is defective and causes

individuals to haemorrhage into the soft tissues, bones (particularly the jaw) and joints (*ibid,* 235).

5.3.14 A possible instance of gouty arthritis was observed in a tarsel bone of one older adult male (**365**). The disease is characterised by a high level of blood uric acid caused by an excess of uric acid production; urate crystals appear in the synovial fluids of joints and lead to inflammation and erosion of cartilage and bone (*ibid*, 162). The joints affected are mainly the feet, hands, wrists, elbows and knees, causing immobility in the weight-bearing limbs (*ibid*). It is worth noting that the only instance of trauma that was observed was a healed fracture to the right clavicle of the same individual (**365**), possibly caused by a crushing injury or a fall.

5.3.15 Several periosteal bone infections were observed and recorded; evidence of new periosteal bone was present on the skull of individual (**127**) and new periosteal bone was observed on the humerus of individual (**442**). Skeleton (**511**), a young female adult, had new periosteal bone on the right tibia. Periostitis is a non-specific inflammation caused by ulcers or injuries; the condition manifests as fine pitting, longitudinal striations and eventually new growth in the form of plaque formations (Roberts & Manchester 2010, 172).

5.3.16 Symptoms of tuberculosis in the form of destructive lesions on thoracic vertebrae and on the scapular glenoid fossa were observed in two individuals, a female adult (**422**) and a young male adult (**480**). Tuberculosis is a bacterial infection (*Mycobacterium tuberculosis*) which primarily affects the lungs, although it also affects the glands, nervous system and bones. The bacteria target particular bones, including vertebrae (known as Pott's Disease), the sacrum and pelvis. A severe case of spinal tuberculosis can result in the collapse (kyphosis) of the spine caused by the destruction of the vertebral bodies (*ibid,* 189).

5.3.17 A mastoid osteoma (benign tumour) was observed in a young female adult (**397**).

5.3.18 Degenerative joint disease (osteoarthritis) was observed in the spinous processes and vertebral bodies of two individuals, both of which are male adults (**365**) and (**389**). There would have been a higher prevalence of osteoarthritis but this analysis was hindered by poor preservation of the bone and the paucity / destruction of the vertebrae because of the waterlogged burial environment.

5.3.19 Pronounced musculo-skeletal markers ('MSM') were observed and recorded in several individuals, including adult (**221**) and adult males (**365**), (**389**), (**422**) and

(**449/529**). Heavy exotoses were recorded on the femora, tibiae and radii; platymeria (unusual broadening / flattening of the femur) was observed in adult (**221**), which was possibly caused by squatting or from repeated physical strain on the weight-bearing limbs during childhood and early adolescence (Brothwell 1981, 88). These heavy MSM exotoses may be occupation-related and that these individuals had physically demanding lives.

5.3.20 Schmorl's Nodes were recorded in several individuals, including adult males (**389**), (**442**) and adult female (**478**). Schmorl's Nodes are associated with the degeneration of the intervertebral discs; the disc contents exert pressure onto the vertebral bodies, causing small, regular, oval lesions/herniations in the superior and inferior vertebral bodies (Roberts & Manchester 2010, 140). According to Waldron (2009, 45), Schmorl's Nodes are more common in individuals who participate in heavy, physical / manual work, imposing greater stress on the lower spine. It is of interest to note that adult male (**389**) had a very high prevalence of Schmorl's Nodes (and also a soft-tissue injury), which is unusual given his age (27-35 years) and his high-status burial. It is also of interest to note that he was buried with wooden rosary beads (SF **62**). It is evident that individual (**389**) had a physically demanding life yet had a high-status burial, which raises questions regarding his occupation, nationality / ethnicity and his religious status.

5.3.21 A medial squatting facet was observed on the talus on a young female adult (**484**) and was likely caused by activities involving long periods of squatting (Brothwell 1981, 90).

5.3.22 Kidney stones (*nephrolithiasis*) were recovered from pelvic and thorax samples from adult (**166**) and adult female (**422**). Waste products in the blood can form crystals that collect inside the kidneys and eventually turn into stones. They tend to form if the individual is not drinking enough fluids.

5.3.23 *Pathologies (dentition).* Several dental pathological conditions were observed; the prevalence of caries (cavities) on the whole was low for this cemetery population and were observed in adult (**127**), adult males (**365**) (**435**), (**449**/**529**) and adult females (**462**) (**493**).

5.3.24 Dental calculus was observed in almost half of the cemetery population (30/74); dental calculus comprises mineralised plaque which accumulates at the base of a living plaque deposit (Hillson 2002, 255-6). All of the calculus observed in this assemblage comprises supra-gingival calculus, which is defined as calculus attached

primarily to the cervical crown as a ring / band marking the gingival margin (*ibid*). Dental calculus is largely caused by two factors, which include poor oral hygiene and carbohydrate consumption (*ibid,* 259). Periodontal disease was observed in five individuals.

5.3.25 Of interest is the unusually high percentage of individuals with linear enamel hypoplasia. Twenty-two individuals (15 adults, seven non-adults) had hypoplastic lines visible on the mandibular and maxillary dentition, located primarily on the incisors and canines. Such developmental defects in the tooth are formed in response to growth arrest in the immature individual, the predominant causes of which are believed to include periods of physiological trauma, including illness, nutritional stress e.g. famine, or a possible weaning deficiency (Larsen 1997, 45).

5.3.26 Ante-mortem tooth loss was observed in three individuals, including an elderly female adult (**399**), a middle-aged adult male (**443**) and a young female adult (**484**).

5.3.27 ***Ancestry***. Preliminary examination of the crania revealed largely Caucasoid traits. All of the crania exhibited receding malar bones, narrow nasal apertures, narrow and triangular palates as well as a more curved maxilla-malar suture (Ubelaker 1989, 119-120). Metopic sutures were not observed in this assemblage.

5.3.28 ***Non-metric traits.*** Wormian bones were observed on the crania of a young female adult (**397**) and a young male adult (**519**, **532**). Wormian bones are extra sutural bones of the cranium; several authors argue that the formation of wormian bones are dependent on genetics whilst others argue that the underlying cause are environmental (stress) factors (Brothwell 1981, 93). A slight mandibular torus was observed in adult male (**525**).

5.3.29 ***Radiocarbon Analysis.*** Eight samples of human bone were sent to the Chrono Centre, Belfast, for radiocarbon analysis. Samples were taken from skeletons (**166**), (**365**), (**389**), (**435**), (**409**), (**462**), (**482**) and (**512**). Recent correspondence with the Chrono Centre revealed that all eight samples had failed the initial nitrogen test because poor preservation of the human remains. Radiocarbon analysis will instead focus on the coffin wood.

5.3.30 ***Strontium Samples.*** Seven samples of human teeth (including mandibular and maxillary M1s and M2s) were sent to the University of Durham for strontium isotope analysis. Samples were taken from skeletons (**389**), (**430**), (**481**), (**483**), (**487**), (**494**) and (**506**). The samples specifically targeted individuals with associated grave goods.

Skeletons (**389**), (**487**) and (**506**) were single coffined and un-coffined burials while skeletons (**430**) and (**494**) originated from plague pit [**491**] and skeletons (**481**) and (**483**) originated from plague pit [**415**]. It should be noted that although skeleton (**389**) was a single coffined burial, the coffin was located within burial pit [**415**]. For future research purposes, the strontium results will be useful in determining ideologies surrounding the nationality / ethnicity of the cemetery population (ScARF 2012, 67). The results will be ready for December 2016.

5.3.31 ***Grave Goods (Table 7).*** A small but significant assemblage of grave goods was recovered with some of the human skeletons. Of high significance was the recovery of two sets of coins; young adult (**506**) was buried with 25 coins dating to the reign of Charles I (1625-1649) which were contained within a corded purse (SFs **15**-**40**) (Plate 8). An iron hobnail (SF **58**) from a shoe or boot was also recovered from skeleton (**506**). Male adult (**512**) was buried with coins (including florins) dating to the reign of James VI (1567-1625) contained within a leather-corded purse. Skeleton (**512**) also had a wooden lice comb (SF **64**) and an iron (knife?) handle.

5.3.32 A young adult female (skeleton (**483**)) who was interred in burial pit [**415**] had a number of artefacts, including a wooden lice comb (SF **63**, Plate 9) as well as a shroud pin (SF **42**), leather boots (SFs **43** & **44**) plus a number of wooden rosary beads (SF **61**).

5.3.33 Several other individuals had wooden rosary beads, including young male adult (**389**) (SF **62**), subadult (**441**) and middle-aged male adult (**525**). A stopper for a leather costrel (SF **70**) and a wooden pommel top (SF **66**) were recovered from a child aged 11-12 years who was interred in burial pit [**415**]. A copper alloy brooch (SF **71**) was recovered from a 35-40 year-old female adult (**494**) in burial pit [**491**]. An iron key and three coins (SFs **12** & **13**) were recovered from a 45-55 year-old male adult (**430**) who was interred in the same burial pit [**491**].

5.3.34 Shroud material in the form of coarse woollen blankets and leather were recovered from skeletons (**443**), (**481**), (**482**), (**483**), (**484**), (**493**), (**494**), (**495**), (**506**), (**512**) and (**525**). All of the skeletons with shroud material were recovered from burial pits [**415**] [**491**] and [**558**] with the exception of (**506**) and (**525**).

5.3.35 All metal finds are currently with Karen Barker (Conservator at Bowes Museum) for cleaning and conservation. X-rays have been taken of all metal finds. All of the organic small finds have been sent to AOC Archaeology for cleaning and conservation.

5.3.36 ***Coffin Furniture.*** The coffin furniture recovered from the burials comprises iron nails. All of the nails are in poor to moderate condition and display evidence of rust corrosion. Small find numbers include SFs **1**-**11**, **13**, **45**-**47**, **59**, **67**-**69** and **72**-**73**.

5.3.37 ***Coffin Wood.*** A total of 43 wooden coffins were excavated during the archaeological investigations. The coffin wood was generally in good to very good condition.

5.3.38 All coffin wood was recorded, quantified, measured, weighed and photographed. Only the best preserved samples from each coffin were retained for analysis. Records of the retained and discarded coffin wood are available in the archive.

5.3.39 All of the coffins were made in a simple plank construction; sides and lids tended to be single planks and the bases comprised multiple slats arranged horizontally and averaged eight in number per adult coffin. The non-adult coffin bases tended to be single planks. No decoration or engravings were evident on any of the coffins. Coffin furniture fittings such as plates or handles were not evident and the only fittings recorded were large iron nails. Tool-marks were evident on several coffins.

5.3.40 Preliminary analysis of the coffins has revealed that the wood is highly likely to be Elm (*Ulmus minor var.)* (*Pers. Comm.* Stoakley 2016).

5.3.41 The retained coffin wood is currently with AOC Archaeology; Dr Anne Crone has recommended dendrochronological analysis as well as a specialist report to include method of manufacture and species identification.

5.3.42 ***Discussion.*** Several points for discussion and interpretation can be drawn from the preliminary analyses. Adults represent a greater proportion of the cemetery population and the sexes appear evenly split. It is of interest to note that the two age groups that were the most affected were children (3-12 yrs) and young adults (20-35 yrs); this is a potential future research question for the UPD (updated project design).

5.3.43 The human remains with associated finds (Table 7) are of high archaeological significance; further analysis and illustration should certainly be conducted on the grave goods and their analysis tied in with the biographical profiles of the individuals. Of particular interest is young male adult (**389**) who had a high-status burial and was interred with rosary beads but who also had a high prevalence of pathological conditions. Strontium isotope analysis targeted individuals with grave goods, including skeleton (**389**) thus these results may provide clues as to occupation status, religious status and ethnicity.

5.3.44 All of the burials are almost certainly associated with the Plague of 1645 (see below, even though the plague bacteria (*Yersinia pestis*) does not manifest skeletal pathology. The recovery of the finds, including two sets of coins dating to the reigns of James VI and Charles I, place these burials in this period (early to mid-17th century). Plague did not target a specific demographic group and that would appear to be consistent with this cemetery population; it was a case of burying the deceased as quickly as possible.

5.3.45 The high prevalence of linear enamel hypoplasia in this cemetery population is of high osteoarchaeological significance and further analysis is warranted.

5.3.46 The east-west and north-south aligned burials may represent different religious beliefs; further analysis and research should be conducted on this.

5.3.47 Further analysis and research is certainly necessary on the individuals in the burial pits (including analysis of body position in the pits); it is possible that individuals in pit [**491**] represent a family group and there appear to be similarly-aged groups of individuals in pit [**415**], possibly representing family members (Table 6). Pit [**516**] is unusual; the pit contains two young male adults and three children who are aligned east-west in the pit with the adults at the northern-most end and the children at the southern-most end. This may be significant and further research for comparative examples is necessary.

Pit	Sk. No.	Biological Profile
415	439	Adolescent/Adult 16-20 yrs
	440	Adult
	441	Adolescent 15-17 yrs
	442	Male adult 44-47 yrs
	443	Male adult 45+ yrs
	477	Female adult 40-50 yrs
	478	Female adult 40-50 yrs
	479	Adolescent 14-16 yrs
	480	Male adult 24-30 yrs
	481	Child 11-12 yrs
	482	Female adult 30-40 yrs
	483	Female adult 24-25 yrs
	484	Female adult 20-24 yrs
491	430	Male adult 45-55 yrs
	493	Female adult 30-35 yrs

	494	Female adult 35-45 yrs
	495	Adolescent 16-20 yrs
516	518 & 531	Male adult 18-22 yrs
	519 & 532	Male adult 17-22 yrs
	520 & 530	Child 6-7 yrs
	527 & 535	Child 5-7 yrs
	528 & 534	Child/Adolescent 12-15 yrs
558	511	Female adult
	512	Male adult

Table 6: Biological profiles for individuals interred in plague pits

SF No	Context	Material	Qty	Date	Comments
1	126	Fe	1	PM	Coffin nail
2	126	Fe	1	PM	Coffin nail
3	123	Fe	1	PM	Coffin nail
4	123	Fe	1	PM	Coffin nail
5	123	Fe	1	PM	Coffin nail
6	123	Fe	1	PM	Coffin nail
7	123	Fe	1	PM	Coffin nail
8	121	Fe	1	PM	Coffin nail
9	197	Fe	1	PM	Coffin nail
10	362	Fe	1	PM	Coffin nail
11	362	Fe	1	PM	Coffin nail
12	429	Fe	1	PM	Key
13	429	CuA	3	PM	Coins
14	451	Fe	1	PM	Coffin nail
15	506	Ag	1	PM	Charles I 20p coin, 1637-42, Sk(507)
16	506	Ag	1	PM	Coin Sk(507)
17	506	Ag	1	PM	Coin Sk(507)
18 & 19	506	Ag	2	PM	Coins stuck together Sk(507)
20	506	Ag	1	PM	Coin Sk(507)
21	506	Ag	1	PM	Coin Sk(507)
22 - 24	506	Ag	4	PM	3 x coins & purse clasp
25-28	506	Ag	4	PM	Coins stuck together Sk(507)
29	506	Ag	1	PM	Coin - thistle Sk(507)
30-39	506	Ag	10	PM	Coins stuck together Sk(507)
40	506	Leather	5+	PM	Purse fragments
41	513	Leather	1	PM	Boot/shoe fragments Sk(482)
42	513	CuA	1	PM	Pin from R scap Sk(483)
43	513	Leather & wood	1	PM	Shoe with wooden sole Sk(482)
44	513	Leather & wood	1	PM	Shoe with wooden sole Sk(482)
45	534	Fe & bone	1	PM	Fe attached to bone

46	539	Fe	1	PM	Coffin nail
47	539	Fe	1	PM	Coffin nail
48	555	Fe & Ag	4	PM	Fe handle and coins Sk(512)
49	555	Leather	1	PM	From purse
50	555	Ag	1	PM	Coin Sk(512)
51	555	Ag	1	PM	Coin Sk(512)
52	555	Ag	1	PM	Coin Sk(512)
53	555	Ag	1	PM	Coin Sk(512)
54	555	Ag	1	PM	Coin Sk(512)
55	555	Leather	1	PM	Purse fragments
56	**VOID**	**VOID**	**VOID**	**VOID**	**VOID**
57	555	Ag	1	PM	Coin <49>
58	506	Fe	1	PM	Hobnail / tack Sk(507)
59	Sk(201)	Fe	1	PM	Coffin nail
60	441	Wood	1	PM	Bead <161>
61	Sk(482)	Wood	11	PM	Beads <265>
62	388	Wood	6	PM	Beads <117>
63	Sk(483)	Wood	1	PM	Comb
64	Sk(512)	Wood	1	PM	Comb
65	523	Wood	1	PM	Bead <294>
66	481	Wood	1	PM	Object <248>
67	148	Fe	1	PM	Nail <24>
68	147	Fe	2+	PM	Nails
69	126	Fe	2+	PM	Nails <5>
70	Sk(481)	Leather/wood	1	PM	Stopper for leather costrel (?)
71	494	CuA	1	PM	Brooch
72	273	Fe	1	PM	Nail
73	147	Fe	1	PM	Nail

Table 7: Quantification of Small Finds, including Grave Goods

5.3.48 ***Research Potential.*** The human remains assemblage and associated funerary artefacts are of very high archaeological and osteoarchaeological significance. Further research and analysis is required on a number of demographic and biological factors, including pathological conditions, grave goods, coffin wood, burial alignment and plague pit demographic analysis. Further research would also be recommended on the non-adult burials; according to ScARF (2012, 46), infant life and death has consistently been overlooked in Scottish excavation data thus further research on these burials would be highly beneficial. A future publication / monograph will provide a full and comprehensive narrative to the site and will put this burial ground in context in relation to the Plague of Leith and Edinburgh in 1645.

6 FINDS

6.1 Introduction

6.1.1 A total of 729 artefacts, weighing 18,544g, were recovered during the archaeological excavation (Table 1). The artefacts were largely in good condition, with little evidence of post depositional damage.

6.1.2 All finds were dealt with according to the recommendations made by Watkinson & Neal (1998) and to the Chartered Institute for Archaeologists (CIfA) Standard & Guidance for the collection, documentation, conservation and research of archaeological materials (2014b). All artefacts have been assessed according to material type and conforming to the deposition guidelines recommended by Brown (2011), EAC (2014), RCAHMS and Edinburgh Museum.

6.1.3 The material archive has been assessed for its local, regional and national potential and for its potential to contribute to the relevant research frameworks.

6.1.4 Finds assessment was compiled by Sue Thompson.

6.1.5 It should be noted that all finds associated with the burials are quantified, recorded and discussed in Section 5 (Human Remains). This includes two sets of coins in purses, wooden lice combs, rosary beads and iron nails.

6.1.6 Quantification of finds is available in Table 9.

6.2 Ceramics

6.2.1 A total of 483 sherds of pottery, weighing 3,397g, were recovered from 57 deposits (Table 9). The sherds are generally in good condition.

6.2.2 ***Late Medieval.*** A total of ten sherds of late medieval ceramics, weighing 298g, were recovered, from six deposits (Table 9).

6.2.3 The fabrics are finer than the earlier Scottish gritty wares, and comprise Scottish Post Medieval Oxidised Ware (SPMOW) and Scottish Post Medieval Reduced Ware (SPMRW), dating from the late 15th into the mid-18th century (Haggerty 2013). The fragments are body sherds, all which are glazed externally; without any diagnostic sherds, it is not possible to identify vessel types. A single fragment of glazed medieval floor tile was also recovered from (**100**).

6.2.4 No further analysis is necessary on this assemblage.

6.2.5 ***Post Medieval.*** A total of 373 sherds of post-medieval pottery, weighing 3.029g, were recovered from 56 deposits during the archaeological excavation (Table 9). Fabric types include refined white earthenware and Transfer Print, as well as coarse red and buff earthenwares. Vessel types include large storage jars and pancheons, teapots, cups, saucers, plates, bowls and flower pots - typical of domestic assemblages. Of note was a single tin-glazed earthenware fragment and occasional salt-glazed stoneware sherds.

6.2.6 The majority of the post-medieval pottery assemblage dates to the 19th - 20th century, with the exception of the tin-glazed earthenware and salt-glazed stoneware sherds, which date to the 17th -18th century.

6.2.7 No further analysis is warranted on this assemblage.

6.3 Clay Pipe

6.3.1 A total of 29 fragments of clay tobacco pipe stem was recovered from 21 contexts during the archaeological watching brief, weighing 101g (Table 9). A measurements of the internal stem diameter was taken and compared to Binford's Pipestem Chronology table (Table 7) in order to provide an approximate date range.

6.3.2 The internal stem diameters measure between 2mm and 3mm, giving approximate dates of 1650 -1750 for these artefacts (Table 8). The complete pipe bowl recovered from (**133**) is probably 19th century.

6.3.3 No further analysis is warranted.

Stem-Hole Ø (in/XX)	Conversion (mm) 1 inch = 25.4mm 1/64 (inch) = 0.4mm	Dates
9/64	9 x 0.4mm = 3.6	1590 – 1620
8/64	8 x 0.4mm = 3.2	1620 – 1650
7/64	7 x 0.4mm = 2.8	1650 – 1680
6/64	6 x 0.4mm = 2.4	1680 – 1720
5/64	5 x 0.4mm = 2	1720 – 1750
4/64	4 x 0.4mm = 1.6	1750 - 1800

Table 8: Binford's Pipestem Chronology (Kipfer 2008, 8)

6.4 Ceramic Building Material

6.4.1 A total 96 fragments of late post-medieval to modern ceramic building material, weighing 9,524g, were recovered from 32 deposits during the excavation (Table 9).

6.4.2 The fragments comprised partial brick and roof tile fragments in a hard, mid-orange fabric. The artefacts are plain, and no decoration or manufacturing stamps are visible on any of the fragments, with the exception of two half brick fragments with a white fabric. Each has a partial makers stamp from the Whitehill Brickworks, which was based in Rosewell, Edinburgh from the 1890's to 1950's (www.scottishbrickhistory.co.uk/whitehill).

6.4.3 No further analysis is warranted on this assemblage.

6.5 Glass

6.5.1 A total of 96 fragments of post-medieval bottle glass, weighing 1,345g, were recovered (Table 9). The shards are in moderate to good condition. The assemblage comprises 19th – 20th century wine / beer bottle glass, including bases, necks and body shards, and occasional window glass fragments.

6.5.2 Of note are several examples of molten glass fragments which may indicate glass working near the site.

6.5.3 No further analysis is warranted on this assemblage.

6.6 Metal

6.6.1 A total of nine fragments of iron, weighing 182g, were recovered during the monitoring (Table 9). The artefacts are in poor condition and display heavy rust corrosion on all surfaces.

6.6.2 The iron artefacts comprise miscellaneous fragments and hand-made nails of post-medieval to modern date.

6.6.3 Three fragments of lead window came weighing 11g were recovered from (278). They have traces of white paint on one side and are probably 19th century in date.

6.6.4 No further analysis is warranted on the iron assemblage.

6.7 Slag

6.7.1 A total of eight fragments of a blue glassy slag weighing 3756g were recovered from six deposits (Table 8). The slag is potentially waste from an iron blast furnace (*Pers. Comm.* O'Meara 2016; hist-met.org).

6.7.2 No further analysis is warranted on this assemblage.

6.8 Stone

6.8.1 Three stone artefacts were recovered weighing 194g (Table 8). They comprise a possible engraved sandstone slab/tile fragment, and two potential worked tool fragments, one of flint and the other chert or similar.

6.8.2 No further analysis is warranted on this assemblage.

6.9 Statement of Potential

6.9.1 In general, the overall significance of the finds assemblage is low, with the exception of the medieval pottery, and the potential glass working waste which is of archaeological interest on a local level.

6.9.2 The finds were retained with the archive.

Context	Material	Qty	Wgt(g)	Date	Comments
100	CBM	9	775	19th-20th Cent	Tile frags x 8, brick frag x 1
100	CBM	1	122	Med	Glazed floor tile
102	CBM	1	334	19th-20th Cent	Brick frag
118	CBM	4	1886	19th-20th Cent	Brick Frag - 'WHITE…' x 1, Roof tile frags x 3
140	CBM	1	4	19th-20th Cent	Tile frags
145	CBM	2	137	19th-20th Cent	Tile frags
145	CBM	3	100	19th-20th Cent	Tile frags
155	CBM	1	2116	20th Cent	Brick Frag x 1 '.....EHILL'
155	CBM	1	1621	19th-20th Cent	Brick Frag - No frog or makers stamp
156	CBM	2	44	19th-20th Cent	Brick frags
160	CBM	1	31	19th-20th Cent	Brick frag
167	CBM	3	110	19th-20th Cent	Tiles frags
168	CBM	2	16	19th-20th Cent	Brick frags
168	CBM	9	103	19th-20th Cent	Brick frags x 8, tile frag x 1
173	CBM	3	170	19th-20th Cent	Brick Frags
176	CBM	1	176	19th-20th Cent	Glazed Pipe
176	CBM	1	62	19th-20th Cent	Brick frags
212	CBM	1	56	19th-20th Cent	Brick frag
228	CBM	1	107	19th-20th Cent	Tile frag
232	CBM	2	209	19th-20th Cent	Brick frag x 1, tile frag x 1
235	CBM	4	171	19th-20th Cent	Brick frags
235	CBM	1	2	19th-20th Cent	Brick frag
235	CBM	1	24	19th-20th Cent	Brick frag
239	CBM	1	47	19th-20th Cent	Tile frag
247	CBM	4	40	19th-20th Cent	Brick frag x 3, tile frag x 1
255	CBM	7	188	19th-20th Cent	Brick frag

256	CBM	2	66	19th-20th Cent	Tile frags
275	CBM	2	19	19th-20th Cent	Brick frags
283	CBM	1	60	19th-20th Cent	Tile frag
293	CBM	5	73	19th-20th Cent	Brick frags
294	CBM	5	77	19th-20th Cent	Brick frags
304	CBM	1	21	19th-20th Cent	Tile frag
307	CBM	1	175	19th-20th Cent	Brick Frag
310	CBM	2	50	19th-20th Cent	Brick frags
312	CBM	1	12	19th-20th Cent	Brick frag
323	CBM	1	128	19th-20th Cent	Brick
342	CBM	2	36	19th-20th Cent	Brick frags
345	CBM	1	57	19th-20th Cent	Tile frag
376	CBM	2	7	19th-20th Cent	Brick frag x 1, tile frag x 1
U/S	CBM	3	92	19th-20th Cent	Tile frags
100	Ceramic	3	58	Late med?	Internal yellow and green decorated platter x 2. 1 x base - burnt
102	Ceramic	2	6	19th Cent	Flowerpot x 1, white earthenware x 1
105	Ceramic	6	63	18th-19th Cent	Red earthenware x 1, white earthenware, transfer printed x 3 , Buff earthenware x 1
114	Ceramic	3	24	19th Cent	White earthenware x 2, Red earthenware x 1
129	Ceramic	4	20	19th Cent	White earthenware, transfer printed x 2. Glazed red earthenware x 1
131	Ceramic	6	188	19th Cent	Stoneware jar x 1, glazed red earthenware x 1, white earthenware x 4
132	Ceramic	15	182	19th Cent	White earthenware, transfer x 1, Stoneware x 1, Red earthenware x 6
133	Ceramic	2	37	20th Cent	Bottle Tops. LEITCH Edinburgh, JAMES DUNBAR Edinburgh
133	Ceramic	1	102	19th-20th Cent	Buff earthenware - Belfield and Co pottery
134	Ceramic	5	61	19th Cent	White earthenware x 2, Red earthenware x 2, black basaltware x 1
140	Ceramic	1	1	19th Cent	Glazed red earthenware
145	Ceramic	2	29	Med	Dull green external glaze. Rim sherd x 1. Reduced fabric
145	Ceramic	1	47	19th Cent	Stoneware jar
145	Ceramic	9	62	19th Cent	White earthenware, transfer printed x 2, Red earthenware x 3
145	Ceramic	12	189	17th-19th Cent	Red earthenware x 10, stoneware x 2, including Rhenish? Bottle
145	Ceramic	54	240	19th Cent	White earthenware, transfer printed x 19
156	Ceramic	16	64	19th Cent	White earthenware, Transfer printed x 5, Red earthenware x 2
156	Ceramic	12	44	19th Cent	White earthenware, transfer printed x 2, Red earthenware x 7
160	Ceramic	1	1	19th Cent	White earthenware
165	Ceramic	9	33	19th Cent	White earthenware - Pot lid '…AIMES & CO…'
165	Ceramic	21	114	19th Cent	White earthenware, transfer printed x 4, Red earthenware x 3
167	Ceramic	6	21	19th Cent	White earthenware, transfer printed x 2, Red earthenware x 2
168	Ceramic	13	41	19th Cent	White earthenware, transfer printed x 1, Red earthenware x 7
173	Ceramic	3	17	19th Cent	White earthenware, transfer printed x 1
176	Ceramic	6	39	19th Cent	White earthenware, transfer printed x 1, Red earthenware x 2

183	Ceramic	11	59	18th-19th Cent	Red earthenware x 4, white earthenware x 6, white stoneware x 1
186	Ceramic	1	2	18th-19th Cent	Slipware
192	Ceramic	1	4	19th Cent	Transfer printed
198	Ceramic	1	2	19th Cent	Red earthenware
212	Ceramic	2	46	Med	Conjoining sherds. Dull olive green external glaze. Reduced fabric
212	Ceramic	4	19	19th Cent	White earthenware, transfer printed x 2, Red earthenware x 1
215	Ceramic	1	1	19th Cent	White earthenware
217	Ceramic	1	10	19th -20th Cent	Stoneware jar
218	Ceramic	2	8	19th Cent	Transferware x 1, teapot frag x 1
220	Ceramic	12	114	19th Cent	Refined white earthenware x 7, Glazed red earthenware x 4, Flowerpot x 1
228	Ceramic	1	1	19th Cent	White earthenware
232	Ceramic	17	87	19th Cent	White earthenware, transfer printed x 3, Red earthenware x 3
235	Ceramic	1	57	Med	External olive glaze. Light grey fabric, Internal ridges
235	Ceramic	6	35	19th Cent	White earthenware, transfer printed x 3, Flowerpot x 1
235	Ceramic	1	5	19th Cent	White earthenware
235	Ceramic	10	134	19th Cent	White earthenware, transfer printed x 2, scalloped edge x 1, Red earthenware x 1
235	Ceramic	4	25	18th-19th Cent	Transfer printed x 1, tin-glazed earthenware x 1, white stoneware x 1, Red earthenware x 1
239	Ceramic	2	30	19th Cent	Red earthenware x 1, stoneware x 1
247	Ceramic	19	66	18th-19th Cent	Red earthenware x 4, white earthenware x 7 , stoneware x 2, tin-glazed earthenware x 1, transfer printed x 5
250	Ceramic	1	14	Post Med	Bottle Top - LEITCH LTD EDINBURGH RILEY
250	Ceramic	1	1	19th Cent	Transfer printed
255	Ceramic	8	27	19th Cent	White earthenware x 4, red earthenware x 4
256	Ceramic	3	11	19th Cent	Red earthenware x 2, transfer printed x 1
259	Ceramic	1	2	19th Cent	White earthenware
268	Ceramic	2	5	19th Cent	White earthenware
270	Ceramic	2	4	19th Cent	White earthenware, transfer printed x 1
275	Ceramic	11	38	19th Cent	White earthenware, Transfer printed x 2. Glazed red earthenware x 2
278	Ceramic	12	62	18th-19th Cent	White earthenware x 7, Red earthenware x 6, White stoneware x 1
281	Ceramic	2	6	19th Cent	White earthenware x 1, stoneware x 1
283	Ceramic	10	30	19th Cent	White earthenware, transfer printed x 3, Red earthenware x 1, Stoneware x 1
288	Ceramic	2	7	19th Cent	White earthenware x 1, Red earthenware x 1
293	Ceramic	7	35	19th Cent	White earthenware. Transferware x 4
294	Ceramic	27	151	19th Cent	White earthenware, transfer printed x 3, spongeware x 1, Red earthenware x 7
304	Ceramic	1	3	Med	External flaking glaze. White fabric
304	Ceramic	2	18	19th Cent	Transfer printed x 1, Stoneware x 1
307	Ceramic	7	28	19th Cent	White earthenware, spongeware x 2, Red earthenware x 1
310	Ceramic	2	6	19th Cent	White earthenware
310	Ceramic	7	18	19th Cent	White earthenware, transfer printed x 3
315	Ceramic	5	11	19th Cent	White earthenware, Transfer printed x 1 - Spode
317	Ceramic	1	10	19th Cent	Transfer printed

319	Ceramic	2	12	19th Cent	Transfer printed x 2
321	Ceramic	2	62	19th Cent	White earthenware x 1, Red unglazed earthenware x 1
323	Ceramic	17	196	19th Cent	White earthenware, transfer printed x 6, scalloped edge x 1, Stoneware x 2, Red earthenware x 3
334	Ceramic	1	3	19th Cent	White earthenware
342	Ceramic	14	68	19th Cent	White earthenware, transfer printed x 3, Red earthenware x 4
345	Ceramic	1	3	19th Cent	Transferware x 1
348	Ceramic	4	14	19th Cent	White earthenware, transfer printed x 2, Buff earthenware x 1
350	Ceramic	4	19	19th Cent	White earthenware, transfer printed x 2, Buff earthenware x 1
358	Ceramic	9	73	19th Cent	White earthenware, transfer printed x 1, Red earthenware x 2, stoneware x 1
376	Ceramic	3	12	19th Cent	White earthenware x 2, Red earthenware x 1
378	Ceramic	5	12	19th Cent	White earthenware, scalloped x1, red earthenware x 1
378	Ceramic	1	105	Med	Buff Fabric, splashes of glaze. Base
U/S	Ceramic	3	6	19th Cent	White earthenware
102	Clay Pipe	1	2	Post Med	Stem
118	Clay Pipe	1	1	Post Med	Stem
133	Clay Pipe	2	32	Post Med	Complete 'knobbly' bowl x 1. Stem x 1 - stamped 'D.WILS…', '…MY.FIFE'
145	Clay Pipe	1	5	Post Med	Stem
145	Clay Pipe	1	4	Post Med	Stem
156	Clay Pipe	1	6	Post Med	Stem
168	Clay Pipe	1	4	Post Med	Stem - stamped at tip
176	Clay Pipe	1	1	Post Med	Stem
183	Clay Pipe	1	5	Post Med	Stem
185	Clay Pipe	1	2	Post Med	Bowl frag
198	Clay Pipe	1	2	Post Med	Stem
220	Clay Pipe	1	2	Post Med	Stem
232	Clay Pipe	2	7	Post Med	Stem x 1, Bowl frag x 1
235	Clay Pipe	1	4	Post Med	Stem
256	Clay Pipe	1	3	Post Med	Stem
275	Clay Pipe	4	7	Post Med	Stem x 3, Bowl frag x 1. stamped 'DUNCAN' , 'LEITH'
294	Clay Pipe	1	1	Post Med	Stem
304	Clay Pipe	1	1	Post Med	Stem
310	Clay Pipe	1	3	Post Med	Stem
315	Clay Pipe	1	1	Post Med	Stem - poss shaping to end
323	Clay Pipe	1	2	Post Med	Stem
350	Clay Pipe	1	3	Post Med	Stem
U/S	Clay Pipe	2	3	Post Med	Stem. Yellow glaze x 1
133	Cu Alloy	1	3	Post Med	Coin - Farthing 1911-1925
100	Glass	1	25	Post Med	Square green bottle base
102	Glass	1	6	Post Med	Green bottle
129	Glass	1	1	Post Med	Button - White glass 4 central holes
131	Glass	1	4	Post Med	Green bottle

145	Glass	1	5		Green glass droplet - waste?
145	Glass	8	207	Post Med	6 x bottle, 1 x window, 1 x waste. Clear and green
145	Glass	4	128	Post Med	Clear bottle x 2, green bottle x 2
145	Glass	10	85	Post Med	Green bottle x 5, clear bottle x 2, clear window x 2, green waste x 1
156	Glass	1	135	Post Med	Green bottle base
156	Glass	2	3	Post Med	Clear bottle x 1, clear waste x 1
165	Glass	6	63	Post Med	2 x clear bottle, 3 x green bottle, 1 x blue waste?
167	Glass	2	3	Post Med	Clear
168	Glass	2	10	Post Med	Green bottle x 1, clear window x 1
176	Glass	1	1	Post Med	Green bottle
178	Glass	3	41	Post Med	Green bottle
183	Glass	4	20	Post Med	Clear x 2, waste x 2?
198	Glass	1	108	Post Med	Green bottle base
212	Glass	2	11	Post Med	Green bottle x 1, clear bottle x 1
220	Glass	3	31	Post Med	Green bottle x 2, clear bottle x 1
232	Glass	6	43	Post Med	Clear x 4, green waste x 2
235	Glass	3	32	Post Med	Clear x 1, green x 2
235	Glass	1	3		Blue glassy slag?
245	Glass	1	1	Post Med	Button - White domed glass
245	Glass	1	13	Post Med	Clear bottle base
247	Glass	5	24	Post Med	Clear x 2, green x 3
250	Glass	2	4	Post Med	Clear window and bottle
270	Glass	7	112	Post Med	Clear bottle x 5, green bottle x 2
272	Glass	1	51	Post Med	Waste frag
275	Glass	1	2	Post Med	Clear window
281	Glass	1	65	Post Med	Clear bottle rim
283	Glass	1	6	Post Med	Clear bottle
307	Glass	1	2	Post Med	Clear window
310	Glass	1	6	Post Med	Green bottle frag
312	Glass	1	1	Post Med	Green bottle
323	Glass	4	39	Post Med	Green bottle x 3, clear window x 1
334	Glass	1	2		Green glass droplet - waste?
345	Glass	2	39	Post Med	Clear bottle frags
348	Glass	1	2	Post Med	Clear window
U/S	Glass	1	11	Post Med	Green bottle rim - uneven
102	Metal - Fe	1	5		Nail
129	Metal - Fe	2	14		Handmade nail x 2
131	Metal - Fe	1	16		Heavily corroded
205	Metal - Fe	1	5		Heavily corroded nail
272	Metal - Fe	1	81		Corroded iron
310	Metal - Fe	2	40		Handmade nail x 2
345	Metal - Fe	1	21		Handmade nail
278	Metal - Pb	3	11	Post Med	Window came

100	Mortar	1	21		Lime mortar
114	Slag	1	3221		
133	Slag	1	13		Blue glassy slag
145	Slag	2	431		Blue glassy slag
168	Slag	1	46		
170	Slag	1	17		Blue glassy slag
315	Slag	1	26		
342	Slag	1	12		Blue glassy slag
100	Stone	1	152		Sandstone fragment - possible engraved surface?
315	Stone	1	8		Worked flint?
378	Stone	1	34		Worked?
Total		**729**	**18,544**		

Table 9: Quantification of finds

7 ECOFACTUAL AND ZOOARCHAEOLOGICAL ASSESSMENT

7.1 Introduction

7.1.1 A total of 321 samples were taken during the archaeological excavation. The vast bulk of the samples were soil collected from areas of the human skeleton. Soil samples from human remains were wet-sieved through a 250mm fine mesh to ensure maximum recovery of human bone and artefacts.

7.1.2 A total of 26 soil samples (Table 10) comprise material suitable for archaeobotanical analysis. The samples were soaked in water to disaggregate the sediment and then processed in a Sīrāf style flotation tank and collected in a geological sieve. The heavy residue was air-dried and sorted by eye for any material that may aid our understanding of the deposit.

7.1.3 It is recommended that these flots are available for analysis at publication stage and that a full report should be commissioned. Flots highlighted in yellow relate to deposits from the later 19th century pits speculated to be retting pits. Analysis of these flots may assist in defining the use of these pits.

<E> No	Context No	Type of Sample	Flot (g)	Flot No	CPR?
2	100	Bulk	317	-	Y
4	105	Bulk	38	1	Y
4	105	Bulk	61	2	Y
6	125	Bulk	4	1	Y
8	125	Bulk	6	1	Y
14	148	Bulk	23	1	Y
14	148	Bulk	3	2	Y
18	161	Bulk	6	1	Y
20	158	Bulk	19	1	Y
26	176	Bulk	8	1	Y
30	206	Bulk	10	1	Y
30	206	Bulk	51	2	Y
44	232	Bulk	5	1	Y
44	232	Bulk	37	2	Y
46	241	Bulk	3	1	Y
48	259	Bulk	1	1	Y
74	301	Bulk	1	1	Y
80	292	Bulk	3	1	Y
80	292	Bulk	12	2	Y
86	346	Bulk	1	1	Y
86	346	Bulk	4	2	Y
87	371	Bulk	2	2	Y
88	373	Bulk	1	1	Y
88	373	Bulk	1	2	Y
92	381	Bulk	1	1	Y
99	366	Bulk	16	2	Y
100	355	Bulk	2	1	Y

112	398	Bulk	1	1	Y
114	390	Bulk	2	1	Y
198	476	Bulk	1	2	Y
230	492	Bulk	1	1	Y
304	553	Bulk	1	1	Y
310	555	Bulk	1	1	Y
310	555	Bulk	11	2	Y

Table 10: Ecofactual Remains

7.2 Zooarchaeology & Shell

7.2.1 A total of 382 ecofactual remains, weighing 17,625g, were recovered during the excavation (Table 11). This includes a total of 223 animal bones and a total of 159 shells.

7.2.2 The condition of the animal bone and shell range from moderate to very good.

7.2.3 The shells recovered from the excavation include oysters, mussels, limpets, bivalves and gastropods.

7.2.4 Guidelines adhered to for zooarchaeological analysis include '*Animal Bones & Archaeology: Guidelines for Best Practice*' (Historic England 2014) plus reference material from Schmid (1972), Serjeantson (1996) and Hillson (1992).

7.2.5 A minimum of 29 animals are represented in this assemblage. This includes a minimum of three horses (*Equus caballus*), 11 cows (*Bos Taurus*), 14 domestic sheep (*Ovis aries*), one pig (*Sus scrofa*) and an unidentified small mammal from deposit (**100**).

7.2.6 The vast majority of the bones originate from adult animals, although lamb bones were evident in deposits (**100**) and (**145**).

7.2.7 Butchery marks were evident on several cow and sheep bones, with chop-marks visible on ribs, tibiae, scapulae and humerae.

7.2.8 Pathology was evident on cow vertebrae recovered from deposit (**100**), including ostephytic formation on the vertebral body and two cervical vertebrae were fused together.

7.2.9 The animal bones recovered from the excavation represent a domestic assemblage with a heavy reliance on cows and sheep. It is likely that the animal bone and shell assemblages date to the late post-medieval to early modern period.

7.2.10 No further analysis is warranted on the animal bone and shell assemblages.

Context	Material	Qty	Wgt (g)	Date	Comments
100	Animal Bone	77	11311	PM-Mod	Cow metacarpal x 3, phalange, pelvic frag, 2 rib frags (butchery on 1), humerus (2), tib, radius x 2, scap, butchery on vertebrae, cow molar, 3 vert (osteophytes on 1, 2 vert fused together), 2 phalanges, 6 cow pelves, ulna, tibia (butchery on proximal), MNI 2 sheep – adult humerus & radius & juvenile metacarpal frag; small mammal rib; Horse tib x 3, horse humerus
102	Animal Bone	1	38	PM-Mod	Sheep tibia
118	Animal Bone	1	10	PM-Mod	Pig incisor
129	Animal Bone	1	29	PM-Mod	Cow scapula
131	Animal Bone	22	1706	PM-Mod	MNI 2 cows, 1 x horse (radius); butchery marks to cow scap, cow distal femur & cow T vert
133	Animal Bone	4	73	PM-Mod	Sheep: butchery evident on 3 bones
145	Animal Bone	13	149	PM-Mod	Sheep, not fully adult; Juvenile sheep metacarpal, small fragments
156	Animal Bone	1	3	PM-Mod	Sheep rib fragment
165	Animal Bone	1	5	PM-Mod	Calcined bone, not identifiable
168	Animal Bone	1	4	PM-Mod	Rib fragment (sheep?)
170	Animal Bone	2	4	PM-Mod	Cow incisor, rib fragment
176	Animal Bone	1	3	PM-Mod	Sheep? Rib
180	Animal Bone	2	5	PM-Mod	Sheep phalange, rib fragment
183	Animal Bone	83	1129	PM-Mod	Almost an entire sheep skeleton, not fully adult, missing cranium, phalanges & 1 metatarsel
212	Animal Bone	2	5	PM-Mod	Not identifiable
220	Animal Bone	1	15	PM-Mod	Cow rib fragment
235	Animal Bone	3	23	PM-Mod	Sheep rib fragments; Sheep proximal humerus, butchery evident
239	Animal Bone	1	83	PM-Mod	Cow astralagus
247	Animal Bone	2	13	PM-Mod	Cow rib fragments
278	Animal Bone	1	8	PM-Mod	Cow molar
319	Animal Bone	1	5	PM-Mod	Shaft fragment
342	Animal Bone	1	3	PM-Mod	Rib fragment (sheep?)
u/s	Animal Bone	1	1	PM-Mod	Distal femur portion, lamb
100	Shell	20	911	PM	Oysters

105	Shell	1	5	PM	Oyster
129	Shell	6	238	PM	Oysters
133	Shell	2	182	PM	Oysters
145	Shell	19	227	PM	Oysters
156	Shell	20	49	PM	Oyster, winkles, water snails
165	Shell	7	55	PM	Oysters, limpet
167	Shell	2	18	PM	Oyster
168	Shell	3	13	PM	Oysters
176	Shell	2	7	PM	Oyster
212	Shell	2	15	PM	Limpet, oyster frag
220	Shell	1	7	PM	Oyster
232	Shell	2	8	PM	Oysters
235	Shell	47	1001	PM	Oyster
255	Shell	9	47	PM	Oysters, bivalves
256	Shell	6	43	PM	Oyster
268	Shell	1	91	PM	Oyster
275	Shell	2	5	PM-Mod	Oyster
278	Shell	1	2	PM	Oysters
293	Shell	1	37	PM	Oyster
307	Shell	5	39	PM	Mussel fragments, oysters
TOTAL		382	17625		

Table 11: Quantification of ecofactual remains

8 CONCLUSIONS

8.1 Summary of the evidence

8.1.1 During the archaeological mitigation at St. Marys RC primary school, the excavation of a single area measuring 286.71m was undertaken

8.1.2 The earliest phase of archaeological activity on the site was the interment of individuals within burial pits. Coins recovered from the fills of these two of these pits, [514] and [558] date to the reigns of King James the VI (1567 - 1625) and King Charles I (1625 – 1649), with coins minted between 1637 and 1642 recovered from the latter.

8.1.3 These burial pits were cut by later coffined burials, with the majority of the burials buried on an east – west alignment, with others, fewer in number, interred on a north south alignment. The precise meaning of this is unclear, but the difference in orientation may infer different phases of burials, but without any stratigraphic relationship between the two sets of burials this cannot presently be ascertained. No dating evidence was recovered from the coffin fills. At the time of writing, human remains and coffin remains from the burial pits and both orientation of coffin burials have been sent for radiocarbon dating and strontium analysis in order to better understand the reason for the variation in burial type.

8.2 Discussion

8.2.1 Historically, the burials are likely to be associated with the plague mentioned in the Extracts from the Records of the Burgh of Edinburgh, 1642 to 1655 (Woods, 1938). These records give an account of the last great plague to occur in Edinburgh and Leith which took place in 1645. The coinage recovered from the burial pits would indicate an association, with the later coins of Charles I having only been minted up to eight years prior to the onset of the plague.

8.2.2 The extracts give an account of an outbreak of bubonic plague, indicating that the plague was already underway by the middle of March 1645 (1938; 63). The plague had subsided by the beginning of the following year, with the absent councilors ordered to return to Edinburgh by February 1646 (1938; 82). No detail of how individual victims were buried were included in these extracts, although it should be noted that grave-makers were only appointed in the beginning of June 1645.

8.2.3 Campbell in 1827 refers to minutes in the books of South Leith Church sessions for further details of the plague, noting that 2421 people had died in South Leith, with a

further 160 in Restalrig and 155 in Craigend (1827; 145). Campbell puts the number of deaths into perspective by estimating the population of Leith to be between 4000 – 5000 at the time of the plague (*ibid*; 146). Campbell points to human remains being encountered in the vicinity of the Links as evidence that the church-yard of South Leith became too small to contain the numbers of dead. In particular, the construction of the foundations of Wellington Place, and improvements in Constitution Street were referenced as places where human remains were encountered (*ibid*).

8.2.4 The details of the precise forms of the burials were never detailed within Campbell's account of the history of Leith. The South Leith Records (Robertson, 1911) contain a contemporary account of the 1645 plague, as written by the session clerk, Mr David Aldinstone who wrote the notes of the South Leith church meetings. Aldinstone noted on the 8th of July 1645 that some of the people who had succumbed to the plague have been left unburied (1911; 60). Up until that date, it would appear that some victims were being buried in coffins, as well as plague pits. This is inferred from his note, on the same day, that no one is to be buried in a coffin that cannot pay for it.

8.2.5 This may explain why plague pits had been cut by later coffined burials, as there was a potential mix of burial methods during the plague. It should be noted though, that this is in contrast to Russell's account of the plague written in 1922, where he comments that after the first few weeks of the plague, the dead were so numerous, that the digging of individual graves was impossible. The current excavations appear to contradict this as where there is a stratigraphic relationship the coffin burials appear to post-date the burial pits.

8.2.6 Measures for cleansing the town of Leith of plague were undertaken by the inhabitants during 1645. This lead to disease victims being moved out of the town into temporary camps in Wester Links, adjacent to South Leith Church, and Easter Links (Robertson, 1911; 55), beside the Boothacre at Seafield. Russell (1922) asserts that those who died at the Boothacre plague camp were buried on the "Links near Seafield". This is likely to be the historical context for the presence of the human remains at St Marys which lies within the Seafield area.

8.2.7 One of the most intriguing aspects of the burials were the finds associated with the internments. Grave goods are generally not a feature of Christian burials and the recovery of artefacts indicates that the dead were buried fully clothed with personal

items about their bodies and money. That not inconsiderable sums were in the purses of two individuals suggests that the bodies were not rifled, indicating either an unusual level of honesty and respect on behalf of those doing the burying or fear of the diseased corpse. That money had not been removed by others and that some of the corpses appear to have been fully clothed may suggest that some of the victims died suddenly and perhaps outside the domestic environment rather than experiencing a lingering death at home. Such a death may be consistent with some victims dying from plague that had become septicemic, though no evidence of sepsis has been noted on the skeletal pathology.

8.2.8 The pathological evidence suggests that many of the plague victims buried in this part of Seafield in the mid-17th century had lives characterized by poverty and toil, with nutritional deficiencies and skeletal evidence of hard, heavy work. This chimes with the historical evidence which indicates that south Leith was the poorer of the two parts of Leith.

8.2.9 Another interesting feature was the recovery of rosary beads. These suggest that some of the buried victims were Catholic in their religious affiliation. The inhabitants of the parish of South Leith had signed the Covenant in 1638. Covenanters were supporter of the Presbyterian faction in Scotland and sworn opposers of 'popery' and it would not have been easy to be Catholic in Leith in the 1640s. The presence of Catholics may be indicative of foreigners, given Leith's importance as a port.

8.2.10 The majority of Christian burials are orientated east-west and there is no obvious reason why some of the burials at Seafield were orientated north-south. There is no stratigraphic relationship between the east-west and north-south burials, nor any distinctive associated datable artefacts, so at present it is assumed that both sets of burials relate to the same period of burial activity. Graves do not appear to have been marked because earlier burials are disturbed by later internments. Where this happened the evidence is suggestive of the disturbance being fairly soon after the initial burial as the apparent functional articulation of the skeleton of the earlier corpse suggests it was fleshed and remained integral. Consequently, it seems reasonable to conclude that burial happened over a short period of time and the historical record indicates that this would have been during the course of the 1645 plague and most likely in the summer and autumn of that year.

8.2.11 The burials at St. Mary's primary schools had been disturbed by later activity on the site. These appear to date from the mid-19th to the early 20th century. Of these, the

squared pits towards the centre of the site may have been associated with retting hemp for the nearby sailworks and ropery, located to the north of the site which was in existence from the early 19th to early 20th century. No evidence was recovered from the squared pits which would associate them with the adjacent smallpox hospital, and the ceramics recovered from the pits may suggest they were backfilled prior to the construction of the building associated with the smallpox hospital, built between 1894 and 1905. The site appears to be situated within the footprint of this north-south aligned building, but no evidence of the building survived within the excavation area, perhaps an indication that it was an ephemeral structure. The burials are also disturbed by deposits and cuts to the north, which were possibly associated with the construction of the small pox hospital and associated buildings in the late 19th century, and the primary school which replaced it in the early 20th century.

8.2.12 The excavations at Leith have the potential to address a number of research themes highlighted by ScARF, in particular 'Reformations', 'People and Things' and 'People and Place' (2012, 5-6). The burials from Leith have the potential to examine issues of religious affiliation, sense of self, production and consumption of personal objects and the character and use of burial places. As a burial ground, however, the remains from Leith can most useful address issues relating to the body and the modern person. "The treatment of the body after death, and its commemoration, are important sources of evidence for understanding how the modern self was constructed" (ScARF 2012, 45). The issues of infant death is highlighted as an area that has often been overlooked and marginalised in Scotland (ScARF 2012, 46) and the Leith burials have the potential to address this issue.

8.2.13 In conclusion the site consists of burials cut into sand which are probably of a single phase relating to the plague of 1645. Later in the 19th century the site may have been used for industrial purposes related to the nearby rope works. In 1893-4 a wooden smallpox hospital was erected to the north of the site and before 1905 another structure at right angles to the smallpox hospital, and associated with it, was built across the site but left no definable archaeological imprint. These hospital structures had been removed by 1912 and by the 1930s St Mary's RC Primary School had been built and the site was sealed under its playground.

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APPENDIX 1: CONTEXT REGISTER

Context Number	Context Type	Description
100	Deposit	Waterlain Deposit
101	Cut	Cut of possible robbed wall
102	Deposit	Fill of robbing cut [101]
103	Deposit	Fill of robbing cut [101]
104	Cut	Cut of possible robbed out wall
105	Deposit	Fill of robbing cut [104]
106	Deposit	Fill of robbing cut [104]
107	Deposit	Fill of robbing cut [104]
108	Deposit	Buried topsoil ?
109	Geology	Natural substrate
110	Deposit	Coarse overburden
111	Deposit	Yellow sand layer
112	Deposit	Mid-brown silty sand
113	Cut	Cut of rubble filled pit
114	Deposit	Fill of pit [113]
115	Cut	Cut of coffined burial
116	Coffin	Coffin within burial cut [115]
117	Cut	Cut of probable pit
118	Deposit	Fill of probable pit [117]
119	Cut	Cut of burial
120	Deposit	Fill of burial cut [119]

Context Number	Context Type	Description
121	Coffin	Coffin within burial cut [119]
122	Cut	Cut of coffined burial
123	Coffin	Coffin within burial cut [122]
124	VOID	VOID
125	Deposit	Fill within coffin (116)
126	Deposit	Fill within coffin (123)
127	Remains	Human remains within coffin (123)
128	Cut	Cut of possible boundary feature
129	Deposit	Fill of [128]
130	Cut	Cut of pit
131	Deposit	Fill of pit [130]
132	Cut	Cut of pit
133	Deposit	Fill of pit [132]
134	Deposit	Fill of pit [132]
135	Deposit	Fill of pit [132]
136	Deposit	Fill of pit [138]
137	Deposit	Fill of pit [138]
138	Cut	Cut of possible pit
139	VOID	VOID
140	Deposit	Upper fill of burial cut [433]
141	Cut	Cut of coffined burial
142	Coffin	Coffin within burial cut [141]
143	Deposit	Uppermost fill of burial cut [141]
144	Deposit	Fill overlying human remains within coffin (142)
145	Deposit	Mixed black deposit in N end of site
146	Deposit	Backfill of burial cut [115]
147	Coffin	Coffin within burial cut [149]
148	Deposit	Fill of coffin (147)
149	Cut	Cut of coffined burial
150	Remains	Human remains within coffin (142)
151	Remains	Human remains within coffin (121)
152	Cut	Cut of pit
153	Deposit	Fill of pit
154	Cut	Cut of pit
155	Deposit	Fill of pit [154]
156	Deposit	Fill of pit [157]
157	Cut	Cut of pit
158	Deposit	Fill of coffin (142)
159	Cut	Cut of pit
160	Deposit	Fill of pit [159]

Context Number	Context Type	Description
161	Deposit	Fill of cut [119]
162	Cut	Cut of pit
163	Deposit	Fill of pit [162]
164	Cut	Cut of hedgerow
165	Deposit	Fill of hedgerow [164]
166	Remains	Human remains within coffin (147)
167	Deposit	Fill of pit [157]
168	Deposit	Fill of pit [157]
169	Cut	Cut of possible pit
170	Deposit	Fill of pit [169]
171	Coffin	Coffin remains in footprint of evaluation trench
172	Cut	Cut of pit
173	Deposit	Upper fill of pit [172]
174	VOID	VOID
175	VOID	VOID
176	Deposit	Lower fill of pit [172]
177	Cut	Cut of linear
178	Deposit	Fill of linear [177]
179	Cut	Cut of pit
180	Deposit	Upper fill of pit [179]
181	Cut	Cut of pit
182	Deposit	Upper fill of pit [181]
183	Deposit	Lower fill of pit [179]
184	Deposit	Redeposited natural in linear [177]
185	Cut	Cut of pit
186	Deposit	Fill of pit [185]
187	Cut	Cut of pit
188	Deposit	Fill of pit [187]
189	Cut	Cut of pit
190	Deposit	Fill of pit [189]
191	Cut	Cut of pit
192	Deposit	Fill of pit [191]
193	VOID	VOID
194	Deposit	Fill of pit [191]
195	Deposit	Lower fill of [181]
196	Cut	Cut of burial
197	Deposit	Fill of burial cut [196]
198	Deposit	Fill of pit [199]
199	Cut	Cut of pit
200	Cut	Cut of possible pit

Context Number	Context Type	Description
201	Deposit	Fill of possible pit [200]
202	Deposit	Fill of burial cut [149]
203	Cut	Cut of coffined burial
204	Coffin	Coffin within burial cut [203]
205	Deposit	Fill of coffin (204)
206	Deposit	Fill of pit [181]
207	Deposit	Fill of pit [181]
208	VOID	VOID
209	VOID	VOID
210	Remains	Human remains within coffin (204)
211	Cut	Cut of pit
212	Deposit	Fill of pit [211]
213	VOID	VOID
214	Cut	Cut of pit
215	Deposit	Fill of pit [214]
216	Cut	Cut of pit
217	Deposit	Upper fill of pit [216]
218	Deposit	Lower fill of pit [216]
219	Deposit	Fill of pit [199]
220	Deposit	Spread
221	Remains	Human remains within burial cut [196]
222	Deposit	Fill of burial cut [203]
223	Cut	Cut of pit
224	Deposit	Fill of pit [223]
225	Cut	Cut of pit
226	Deposit	Fill of pit [225]
227	Cut	Cut of pit
228	Deposit	Upper fill of pit [227]
229	Deposit	Lower fill of pit [227]
230	Cut	Cut of pit
231	Deposit	Upper fill of pit [230]
232	Deposit	Lower fill of pit [230]
233	Cut	Cut of burial
234	Cut	Cut of burial
235	Deposit	Layer above pit [285]
236	Deposit	Fill of burial cut [253]
237	Coffin	Coffin within burial cut [253]
238	Cut	Cut of pit
239	Deposit	Fill of pit [238]
240	Coffin	Coffin within burial cut [234]

Context Number	Context Type	Description
241	Deposit	Fill of burial cut [234]
242	Cut	Cut of pit
243	Deposit	Fill of pit [242]
244	Cut	Cut of possible pit
245	Deposit	Fill of linear [244]
246	Cut	Cut of pit
247	Deposit	Fill of pit [246]
248	Deposit	Fill of coffin (237)
249	VOID	VOID
250	Deposit	Upper fill of pit [238]
251	Deposit	Fill of coffin (240)
252	Deposit	Deposit cut by burial [122]
253	Cut	Cut of coffined burial
254	Cut	Cut of pit
255	Deposit	Lower fill of pit [254]
256	Deposit	Upper fill of pit [254]
257	Cut	Cut of pit
258	Deposit	Fill of pit [257]
259	Deposit	Fill of coffin (237)
260	Cut	Cut of coffined burial
261	Coffin	Coffin within burial cut [260]
262	Deposit	Fill of coffin (261)
263	Coffin	Coffin stain at base of pit [244]
264	Deposit	Deposit underlaying pit [266]
265	Deposit	Deposit underlaying pit [267]
266	Cut	Cut of pit
267	Cut	Cut of pit
268	Deposit	Layer containing shell
269	Cut	Cut of pit
270	Deposit	Fill of pit [269]
271	Remains	Human remains within coffin (261)
272	Cut	Cut of coffined burial
273	Coffin	Coffin within burial cut [272]
274	Deposit	Fill of burial cut [272]
275	Deposit	Fill of pit [254]
276	Deposit	Fill of pit [254]
277	Deposit	Fill of pit [254]
278	Deposit	Fill of pit [254]
279	Remains	Human remains within coffin (240)
280	Cut	Cut of pit

Context Number	Context Type	Description
281	Deposit	Fill of pit [280]
282	Cut	Cut of pit
283	Deposit	Fill of pit [282]
284	Remains	Human remains within coffin (237)
285	Cut	Cut of pit
286	Deposit	Fill of pit [285]
287	Cut	Cut of pit
288	Deposit	Fill of pit [287]
289	Cut	Cut of pit
290	Deposit	Fill of pit [289]
291	Cut	Cut of pit
292	Deposit	Upper fill of pit [291]
293	Deposit	Lower fill of pit [291]
294	Deposit	Spread in E end of site
295	Cut	Cut of coffined burial
296	Coffin	Coffin within burial cut [295]
297	Deposit	Fill of burial cut [295]
298	Cut	Cut of pit
299	Deposit	Fill of pit [298]
300	Coffin	Coffin within burial cut [233]
301	Deposit	Fill of coffin (300)
302	Deposit	Fill of burial cut [233]
303	Cut	Cut of pit
304	Deposit	Uppermost fill of pit [303]
305	Cut	Cut of pit
306	Deposit	Upper fill of pit [305]
307	Deposit	Lower fill of pit [305]
308	Remains	Human remains within coffin (296)
309	Deposit	Fill of pit [303]
310	Deposit	Fill of pit [303]
311	Deposit	Mixed fill in [305]
312	Deposit	Mixed deposit below (294)
313	Cut	Cut of pit
314	Cut	Cut of pit
315	Deposit	Fill of pit [314]
316	Cut	Cut of pit
317	Deposit	Fill of pit [316]
318	Remains	Human remains within (300)
319	Deposit	Slumped material in W edge of pit [303]
320	Cut	Cut of pit

Context Number	Context Type	Description
321	Deposit	Fill of pit [320]
322	Cut	Cut of pit
323	Deposit	Fill of pit [322]
324	Deposit	Fill of [320]
325	Cut	Cut of pit
326	Deposit	Upper fill of pit [325]
327	Deposit	Fill of pit [325]
328	Deposit	Lower fill of [325]
329	Cut	Cut of coffined burial
330	Coffin	Coffin within burial cut [329]
331	Deposit	Fill of burial cut [329]
332	Cut	Cut of pit
333	Cut	Cut of coffined burial
334	Deposit	Fill of pit [332]
335	Deposit	Fill of pit [332]
336	Cut	Cut of coffined burial
337	Cut	Cut of coffined burial
338	Deposit	Slumped material in N side of [314]
339	Coffin	Coffin within burial cut [336]
340	Deposit	Fill of burial cut [336]
341	Cut	Cut of pit
342	Deposit	Fill of pit [341]
343	Deposit	Fill of pit [341]
344	Cut	Cut of pit
345	Deposit	Fill of pit [344]
346	Deposit	Deposit within coffin (339)
347	Cut	Cut of pit
348	Deposit	Fill of pit [347]
349	Cut	Cut of pit
350	Deposit	Fill of pit [349]
351	Remains	Human remains within coffin (339)
352	Cut	Cut of coffined burial
353	Deposit	Upper fill of burial [352]
354	Coffin	Coffin within burial cut [352]
355	Deposit	Fill in coffin (354)
356	Remains	Human remains within coffin (354)
357	Cut	Cut of pit
358	Deposit	Fill of pit [357]
359	Cut	Cut of pit
360	Deposit	Fill of pit [359]

Context Number	Context Type	Description
361	Remains	Human remains within coffin (330)
362	Deposit	Backfill of burial cut [363]
363	Cut	Cut of coffined burial
364	Coffin	Coffin within burial cut [363]
365	Remains	Human remains within coffin (364)
366	Deposit	Fill within coffin (364)
367	Cut	Cut of coffined burial
368	Deposit	Fill of burial cut [367]
369	Coffin	Coffin within burial cut [367]
370	Coffin	Coffin within burial cut [387]
371	Deposit	Fill of coffin (370)
372	Cut	Cut of coffined burial
373	Deposit	Upper fill of burial cut [372]
374	Coffin	Coffin within burial cut [372]
375	Cut	Cut of pit
376	Deposit	Fill of pit [375]
377	Deposit	Fill in coffin (374)
378	Deposit	Mixed deposit in NW part of site
379	Deposit	Fill of burial cut overlying coffin (380)
380	Coffin	Coffin within burial cut [337]
381	Deposit	Fill of coffin (380)
382	Remains	Human remains within coffin (380)
383	Cut	Cut of coffined burial
384	Deposit	Upper fill of burial cut [383]
385	Deposit	Upper fill of coffin (330)
386	Remains	Human remains within coffin (370)
387	Cut	Cut of burial
388	Deposit	Fill of coffin (374)
389	Remains	Human remains within coffin (374)
390	Deposit	Lower fill of burial cut [383]
391	Cut	Cut of coffined burial
392	Coffin	Coffin within burial cut [391]
393	Deposit	Fill of coffin (392)
394	Coffin	Coffin within burial cut [417]
395	Deposit	Fill of coffin (394)
396	Remains	Human remains within coffin (392)
397	Remains	Human remains within coffin (369)
398	Coffin	Coffin within burial cut [383]
399	Remains	Human remains within coffin (398)
400	Cut	Cut of coffined burial

Context Number	Context Type	Description
401	Coffin	Coffin within burial cut [400]
402	Remains	Human remains within coffin (401)
403	Deposit	Fill of coffin (401)
404	Deposit	Upper fill of burial cut [400]
405	Cut	Cut of coffined burial
406	Deposit	Fill of burial cut [405]
407	Coffin	Coffin within burial cut [405]
408	Deposit	Lower fill of coffin (394)
409	Remains	Human remains within coffin (394)
410	Deposit	Modern stake through burial [405]
411	Remains	Human remains within coffin (407)
412	Deposit	Fill of coffin (407)
413	Cut	Cut of burial
414	Deposit	Upper fill of burial cut [413]
415	Cut	Cut of burial pit
416	Deposit	Fill of burial pit [415]
417	Cut	Cut of coffined burial
418	Cut	Cut of coffined burial
419	Deposit	Fill of burial cut [418]
420	Coffin	Coffin within burial cut [418]
421	Deposit	Lower fill of burial cut [413]
422	Remains	Human remains within coffin (423)
423	Coffin	Coffin within burial cut [413]
424	Coffin	Coffin within burial cut [426]
425	Deposit	Upper fill in coffin (424)
426	Cut	Cut of coffined burial
427	VOID	VOID
428	VOID	VOID
429	Deposit	Upper fill of pit [491]
430	Remains	Human remains within pit [491]
431	Deposit	Fill in coffin (420)
432	Remains	Human remains within coffin (424)
433	Cut	Cut of coffined burial
434	Coffin	Coffin within burial cut [433]
435	Remains	Human remains within coffin (434)
436	Deposit	Fill within coffin (434)
437	Deposit	Fill of burial cut [433]
438	Remains	Human remains within coffin (420)
439	Remains	Human remains within burial pit [415]
440	Remains	Human remains within burial pit [415]

Context Number	Context Type	Description
441	Remains	Human remains within burial pit [415]
442	Remains	Human remains within burial pit [415]
443	Remains	Human remains within burial pit [415]
444	Cut	Cut of pit
445	Deposit	Fill of pit [444]
446	Coffin	Coffin within burial cut [463]
447	Deposit	Fill within coffin (446)
448	Deposit	Fill of burial pit [516] – same as (515)
449	Remains	Human remains in (448)
450	Cut	Cut of burial
451	Deposit	Fill of burial cut [450]
452	VOID	VOID
453	Remains	Human remains within coffin (454)
454	Coffin	Coffin within burial cut [450]
455	Cut	Cut of coffined burial
456	Deposit	Fill of coffin (457)
457	Coffin	Coffin within burial cut [455]
458	Cut	Cut of burial
459	Cut	Cut of burial
460	Remains	Human remains within burial [458]
461	Remains	Human remains within burial [459]
462	Remains	Human remains within coffin (446)
463	Cut	Cut of coffined burial
464	Deposit	Deposit overlying human remains (460)
465	Deposit	Deposit overlying human remains (461)
466	Cut	Cut of coffined burial
467	Deposit	Uppermost fill of burial cut [466]
468	Coffin	Coffin within burial cut [466]
469	Deposit	Upper fill of coffin (457)
470	Cut	Cut of coffined burial
471	Coffin	Coffin within burial cut [470]
472	Remains	Human remains within coffin (471)
473	Deposit	Fill of coffin (471)
474	VOID	VOID
475	Cut	Cut of burial
476	Deposit	Upper fill of burial [475]
477	Remains	Human remains within burial pit [415]
478	Remains	Human remains within burial pit [415]
479	Remains	Human remains within burial pit [415]
480	Remains	Human remains within burial pit [415]

Context Number	Context Type	Description
481	Remains	Human remains within burial pit [415]
482	Remains	Human remains within burial pit [415]
483	Remains	Human remains within burial pit [415]
484	Remains	Human remains within burial pit [415]
485	Remains	Human remains within coffin (457)
486	Cut	Cut of coffined burial
487	Remains	Human remains within coffin (488)
488	Coffin	Coffin within burial cut [475]
489	Coffin	Coffin within burial cut [486]
490	Deposit	Fill of burial cut [486]
491	Cut	Cut of burial pit
492	Deposit	Fill of pit [491]
493	Remains	Human remains within pit [491]
494	Remains	Human remains within pit [491]
495	Remains	Human remains within pit [491]
496	Cut	Cut of coffined burial
497	Coffin	Coffin within burial pit [496]
498	Remains	Human remains within coffin (497)
499	Deposit	Fill of coffin (497)
500	VOID	VOID
501	Remains	Human remains within coffin (489)
502	Remains	Human remains within coffin (468)
503	VOID	VOID
504	Deposit	Fill of coffin (468)
505	Deposit	Fill of coffin (489)
506	Remains	Human remains within burial [514]
507	Deposit	Fill in burial cut [514]
508	Deposit	Mixed deposit W from modern service
509	Deposit	Fill of burial pit [415]
510	Deposit	Fill of burial pit [415]
511	Remains	Human remains in burial pit 558
512	Remains	Human remains in burial pit 558
513	Deposit	Fill of burial pit [415]
514	Cut	Cut of burial
515	Deposit	Fill of burial pit [516]
516	Cut	Cut of burial pit
517	Remains	Human remains within burial pit [516]
518	Remains	Human remains within burial pit [516]
519	Remains	Human remains within burial pit [516]
520	Remains	Human remains within burial pit [516]

Context Number	Context Type	Description
521	Deposit	Fill of burial pit [516] – same as (515)
522	Cut	Cut of coffined burial
523	Deposit	Fill of burial cut [522]
524	Coffin	Coffin within burial cut [522]
525	Remains	Human remains within coffin (524)
526	Deposit	Upper fill of burial cut [522]
527	Remains	Human remains within burial pit [516]
528	Remains	Human remains within burial pit [516]
529	Remains	Human remains within burial pit [516]
530	Remains	Human remains within burial pit [516]
531	Remains	Human remains within burial pit [516]
532	Remains	Human remains within burial pit [516]
533	Deposit	Fill of burial pit [516] – same as (515)
534	Remains	Human remains within burial pit [516]
535	Remains	Human remains within burial pit [516]
536	Cut	Cut of coffined burial
537	Deposit	Upper fill of burial [536]
538	Remains	Human remains within burial pit [415]
539	Deposit	Lower fill of burial [536]
540	Coffin	Coffin within burial cut [536]
541	Cut	Cut of coffined burial
542	Coffin	Coffin within burial cut [541]
543	Deposit	Fill of coffin (542)
544	Cut	Cut of coffined burial
545	Coffin	Coffin within burial cut [544]
546	Deposit	Fill above coffin (545)
547	Coffin	Coffin within burial cut [548]
548	Cut	Cut of coffined burial
549	Deposit	Fill of coffin (547)
550	Remains	Human remains within coffin (540)
551	Remains	Human remains within coffin (542)
552	Remains	Human remains within coffin (547)
553	Deposit	Fill of coffin (547)
554	VOID	VOID
555	Deposit	Fill of burial pit [558]
556	Remains	Human remains within burial pit [558]
557	Remains	Human remains within burial pit [558]
558	Cut	Cut of burial pit
559	Deposit	Fill of pit [266]
560	Deposit	Fill of pit [267]

Context Number	Context Type	Description
561	Cut	Cut of coffined burial
562	Coffin	Coffin within burial cut [561]
563	Fill	Fill of coffin 562

APPENDIX 2: DES ENTRY

During the archaeological mitigation at St. Marys RC primary school, the excavation of a single area measuring 286.71m was undertaken to accommodate the development of a single storey, 2 classroom building with ancillary accommodation at the site (Planning Application number 15/05101/FUL). The purpose of the excavation was to negate the impact of the development upon archaeological remains at St. Marys RC primary school by preserving the remains by record.

The excavation revealed a large burial ground containing coffined and uncoffined burials plus four plague pits. A total of 81 individuals were interred at the site; 68% comprise adults and 32% comprise non-adults. Grave goods included two wooden lice combs, several wooden rosary beads, a key, leather shoes and two sets of coins; these were recovered from pits [514] and [558] and date to the reigns of King James the VI (1567 - 1625) and King Charles I (1625 – 1649), with coins minted between 1637 and 1642 recovered of the latter.

These burial pits were cut by later coffined burials, with the majority of the burials buried on an east – west alignment, with fewer interred on a north south alignment. The precise meaning of this is unclear, but the difference in orientation may infer different phases of burials.

Historically, the burials may be associated with the plague mentioned in the Extracts from the Records of the Burgh of Edinburgh, 1642 to 1655 (Volume 9, 1938). These records give an account of the last great plague to occur in Edinburgh which took place in 1645. This coinage recovered from the burial pits would indicate an association, with the later coins of Charles I having only been minted up to eight years prior to the onset of the plague

APPENDIX 3: PLATES

Plate 1 – An overview of the site prior to excavation, looking north east, 2x1m scale

*Plate 2 – Individuals **482** and **483** within pit **[415]**, looking north west, 1x0.4m scale*

*Plate 3 – Detail of the elbow of skeleton **477** resting against coffin **379**, looking north*

*Plate 4 – Showing skeleton **389** in coffin **[374]***

*Plate 5 – Mid-excavation view of burial **[496]** showing coffin lid **497***

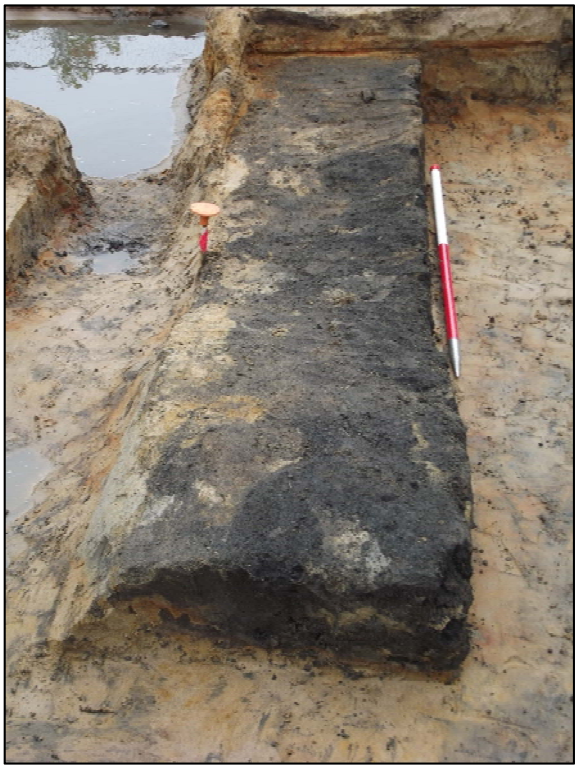

*Plate 6 – Mid excavation view showing deposit **293** in cut **[291]***

*Plate 7 – Showing deposit **100***

*Plate 8 – Twenty-pence piece, Charles I, 1637-42; with young adult (**506**)*

*Plate 9 – SF **63**, wooden lice comb from young female adult (**483**)*

APPENDIX 4: FIGURES

PROJECT:	Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh
SCALE:	1:25,000 at A4
REPORT No:	CP11720
CLIENT:	Wardell Armstrong LLP
DRAWN BY:	AB
CHECKED BY:	AB
DATE:	December 2016

KEY:

Site location

wardell armstrong archaeology

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Figure 1: Site location.

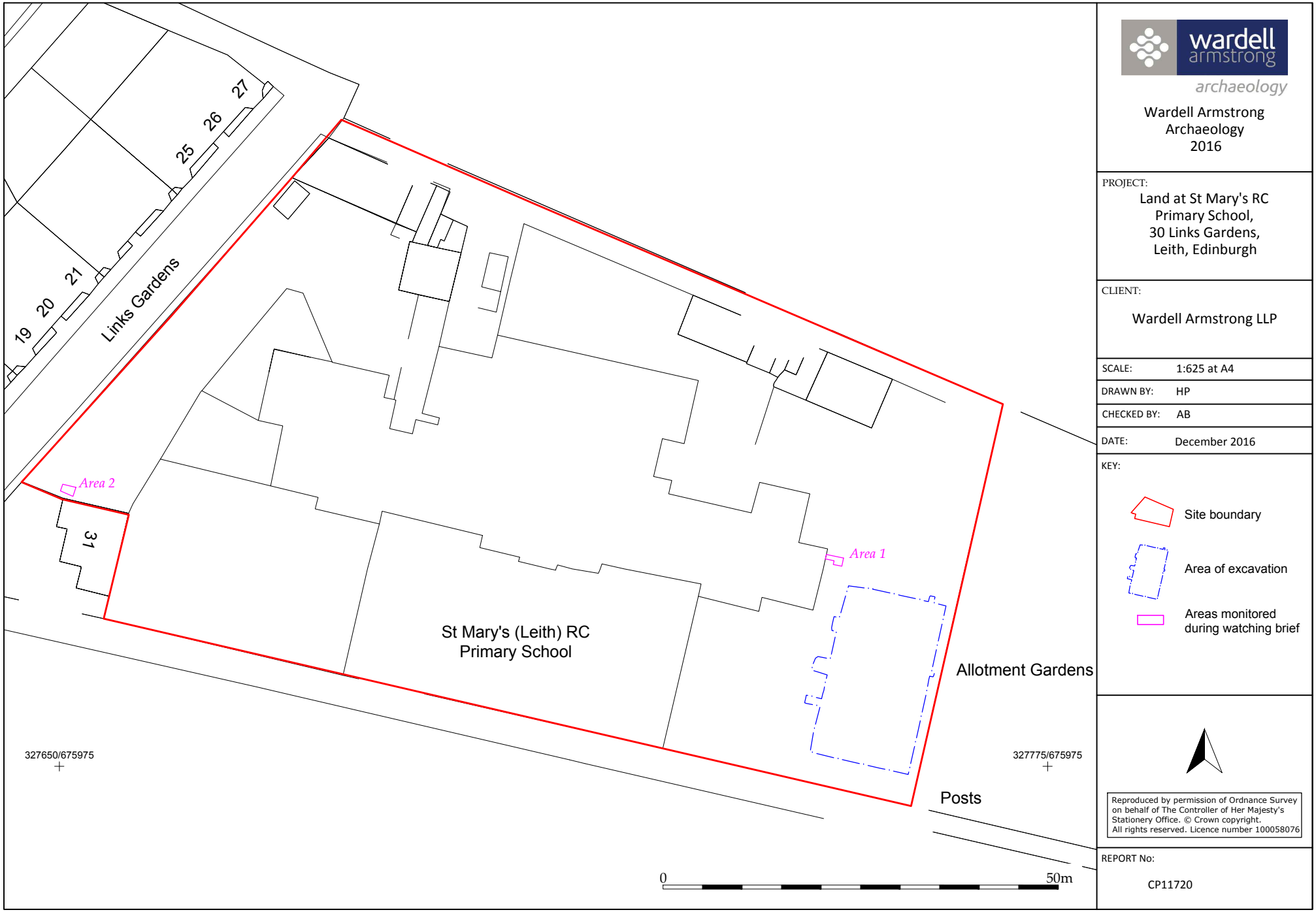
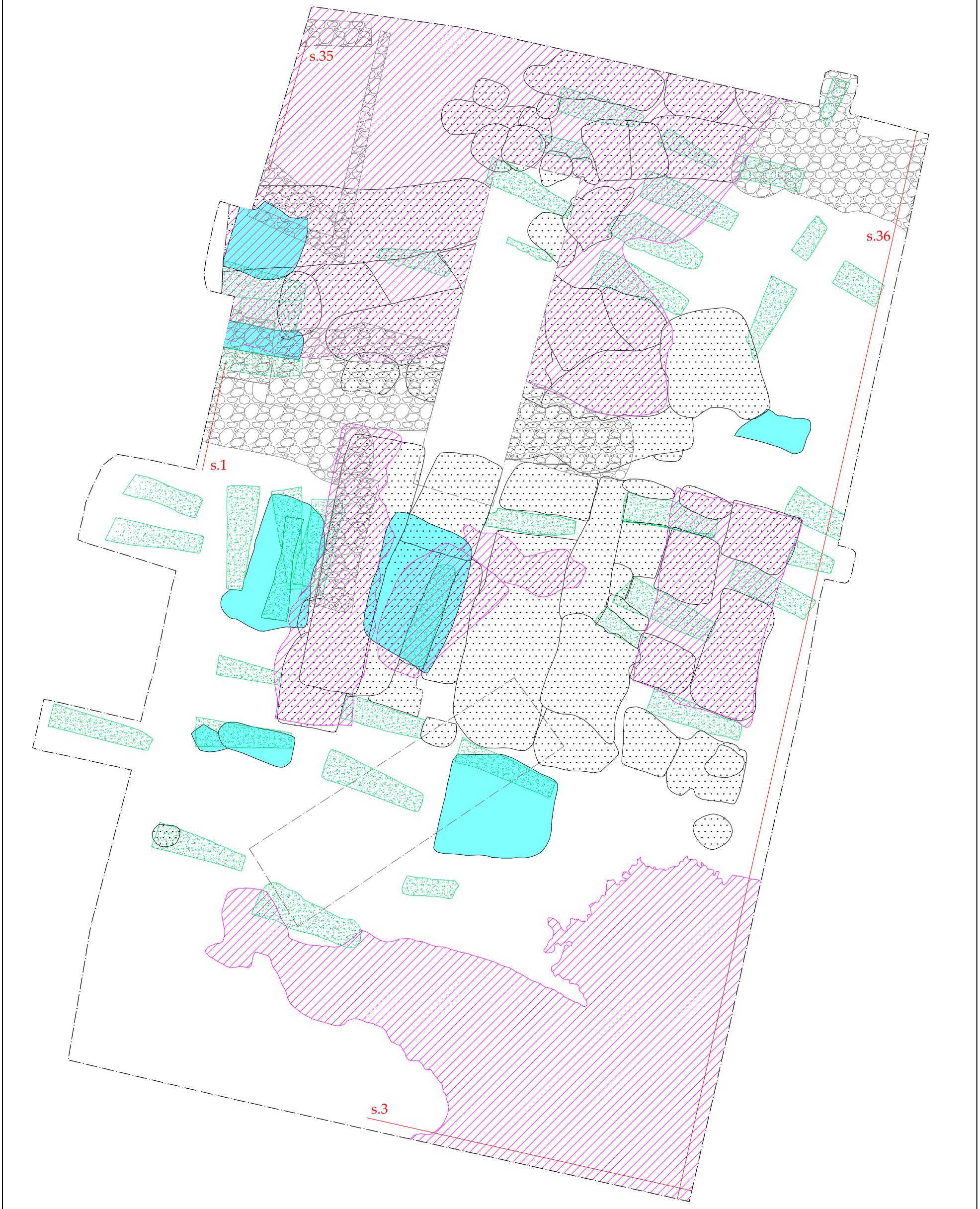


Figure 2: Location of excavation area.



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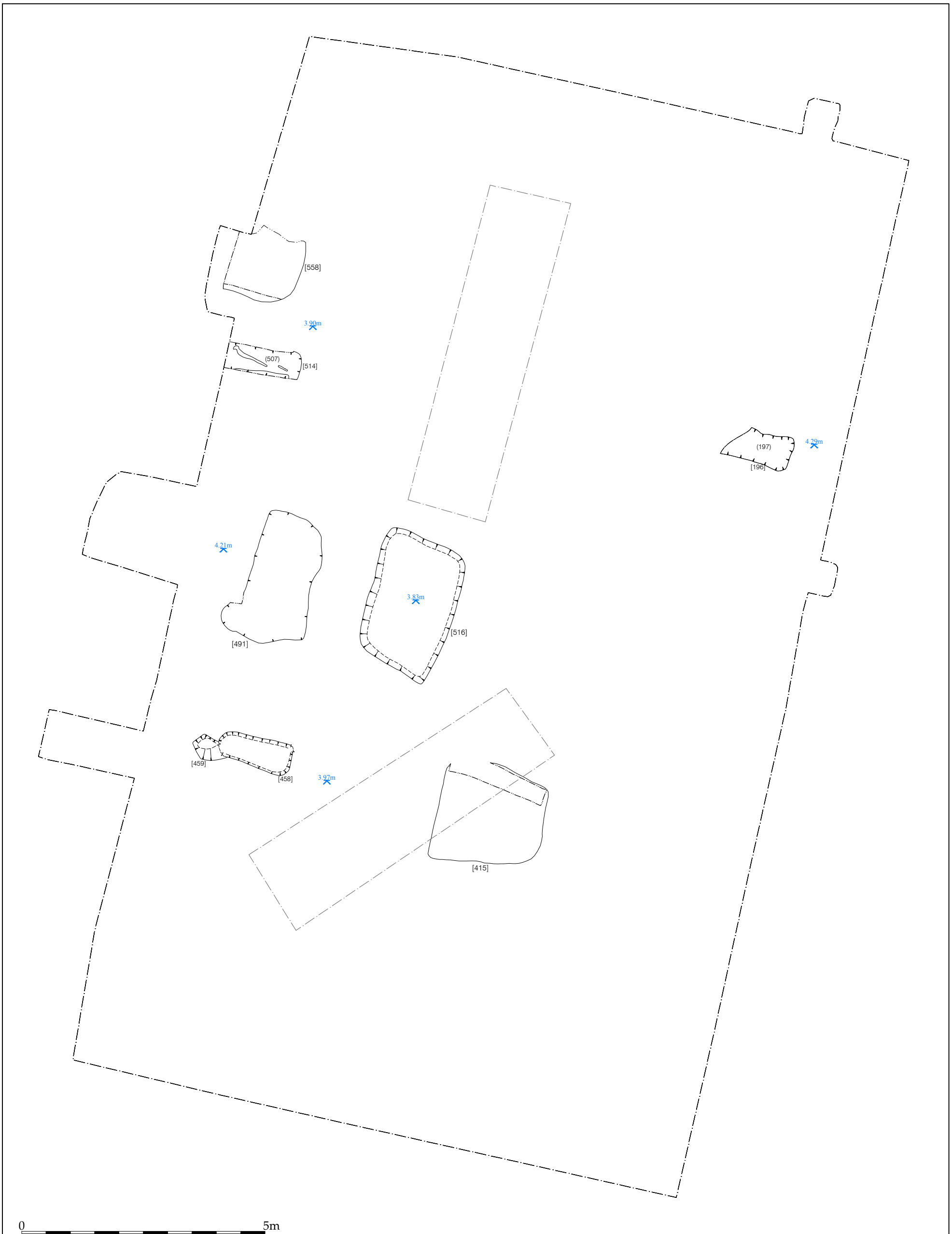
Archaeology
2016

PROJECT:	Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh
CLIENT:	Wardell Armstrong LLP
SCALE:	1:75 at A3
DRAWN BY:	HP/AB
CHECKED BY:	AB
DATE:	December 2016
REPORT No:	CP11720

KEY:

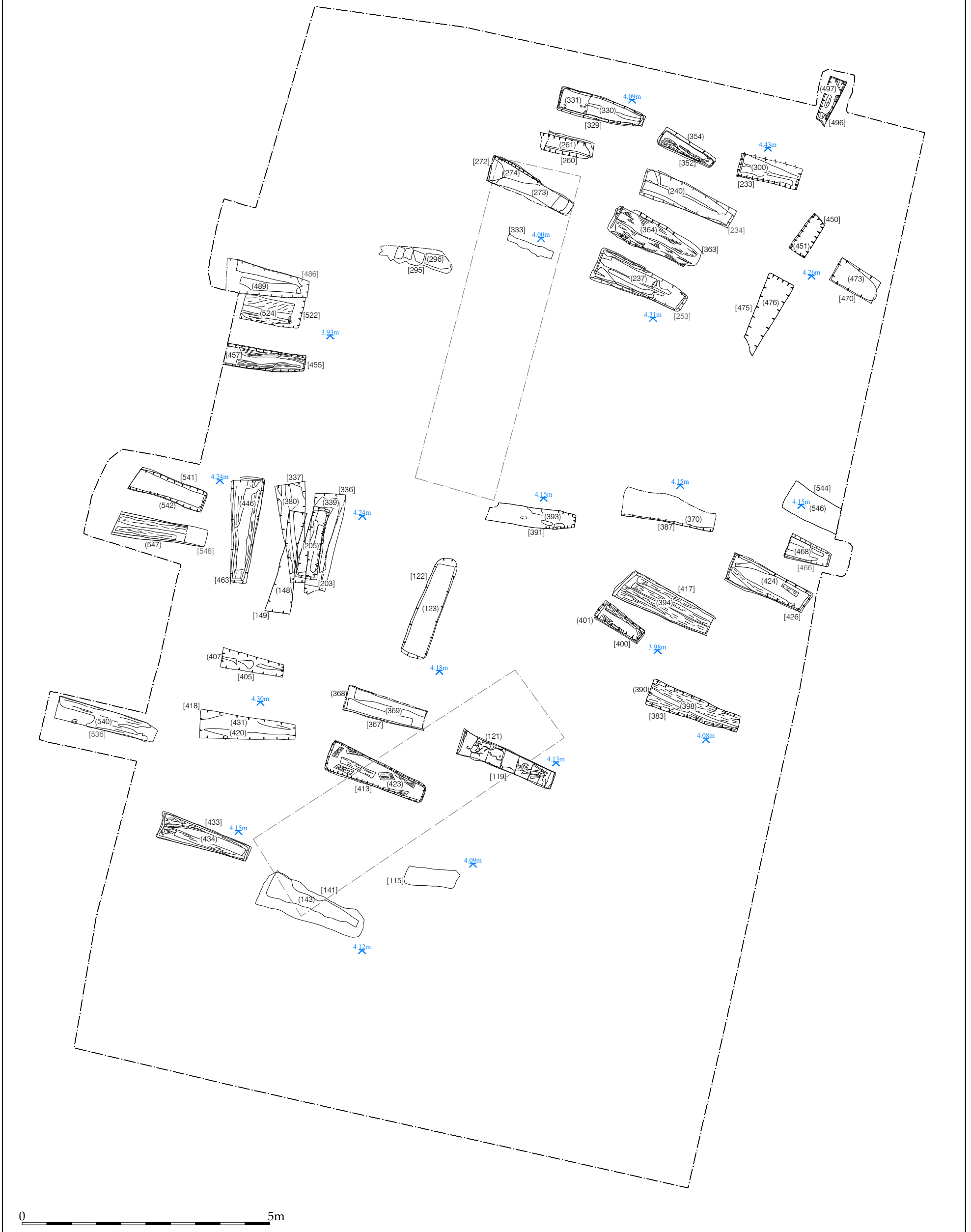
- Modern
- Phase 4
- Phase 3
- Phase 2
- Phase 1
- Limit of excavation
- Position of evaluation trenches

Figure 3: Phased plan of all features.



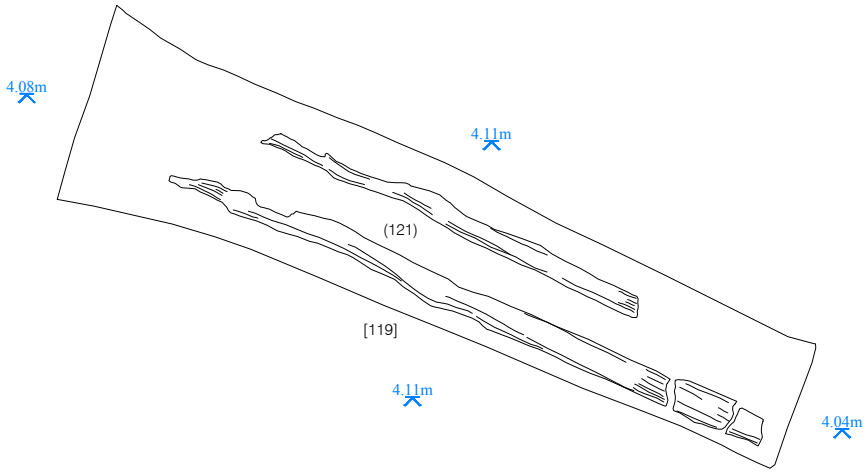
wardell armstrong archaeology Wardell Armstrong Archaeology 2016	PROJECT: Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh CLIENT: Wardell Armstrong LLP SCALE: 1:75 at A3 DRAWN BY: HP CHECKED BY: AB DATE: December 2016 REPORT No: CP11720	KEY: (101) Context numbers Limit of excavation 4.00m Height mAOD Position of evaluation trenches	

Figure 4: Phase 1 plan; un-coffined burials.



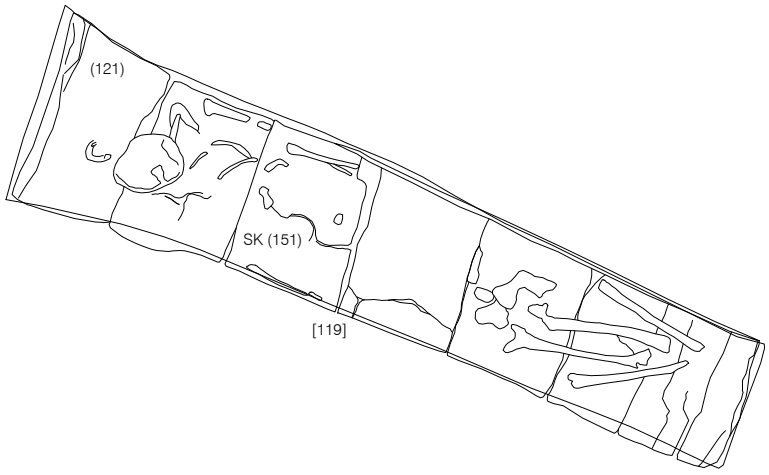
wardell armstrong archaeology Wardell Armstrong Archaeology 2016	PROJECT: Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh CLIENT: Wardell Armstrong LLP SCALE: 1:75 at A3 DRAWN BY: HP CHECKED BY: AB DATE: December 2016 REPORT No: CP11720	KEY: (101) Context numbers Limit of excavation 4.00m Height mAOD Position of evaluation trenches	

Figure 5: Phase 2 plan; coffined burials.



Pre-excavation plan of Burial [119]

0 1m



Post-excavation plan of Burial [119]

0 1m

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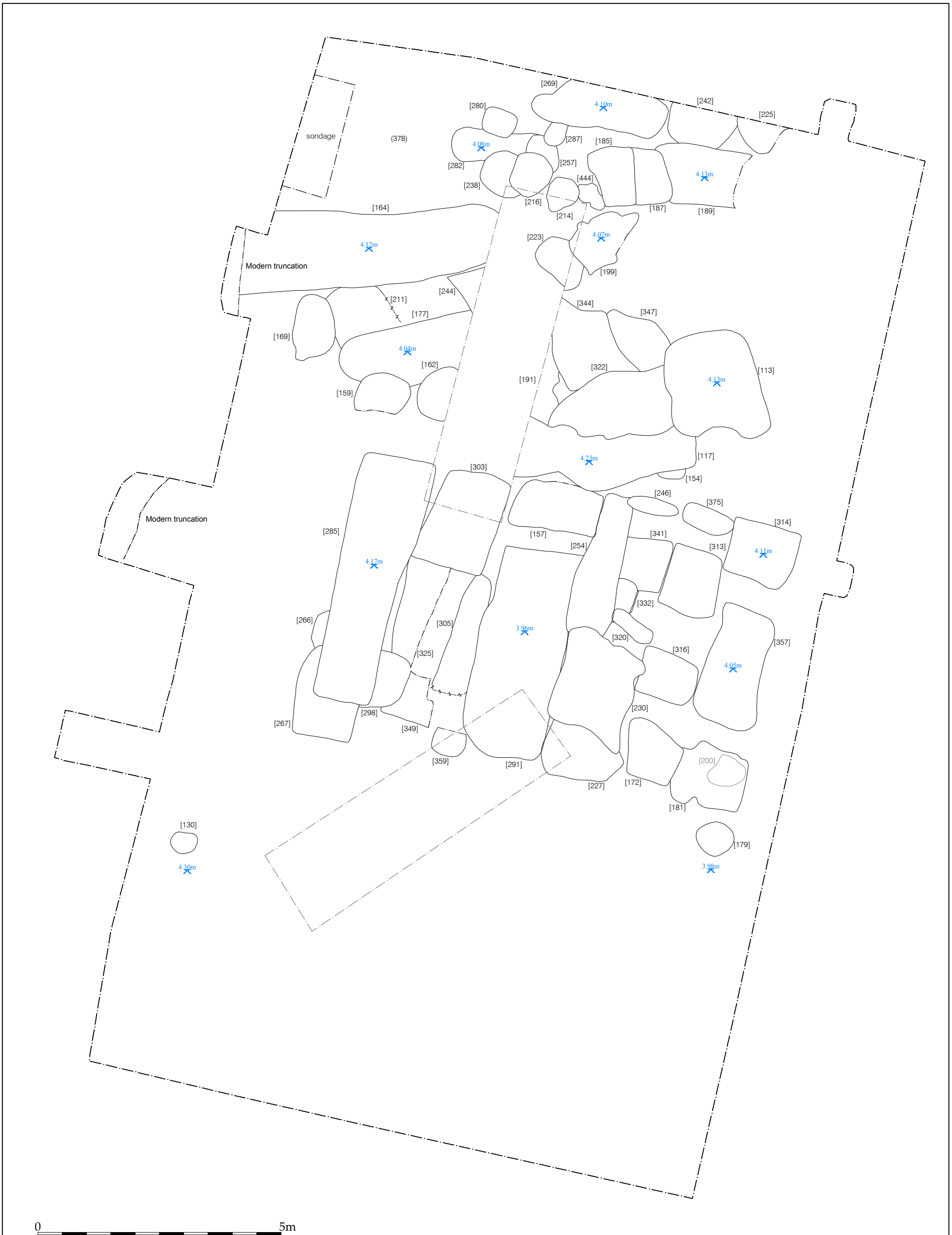
PROJECT:	Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh
CLIENT:	Wardell Armstrong LLP
SCALE:	1:20 at A4
DRAWN BY:	HP
CHECKED BY:	AB
DATE:	December 2016
REPORT No:	CP11720

KEY:

(101) Context numbers

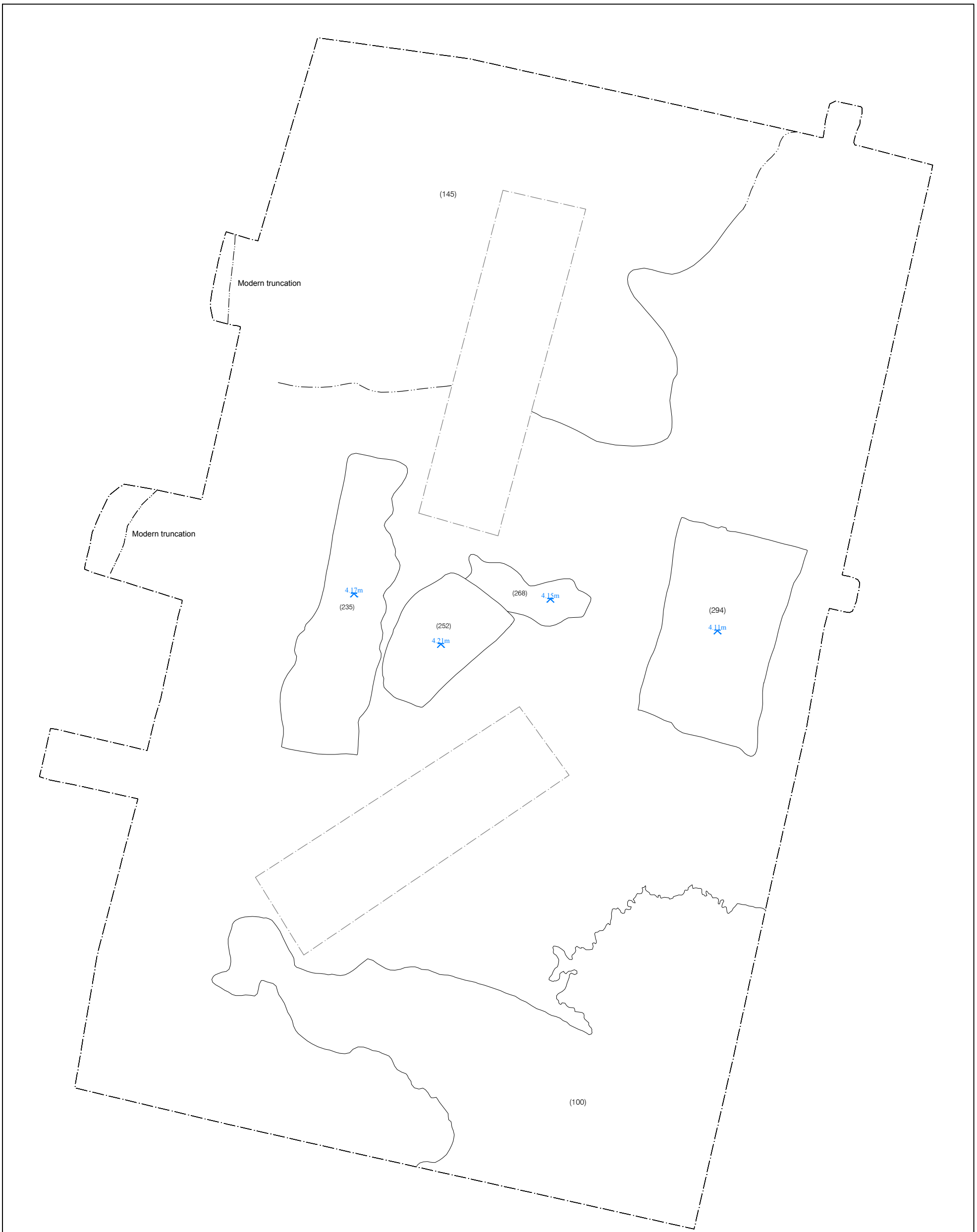
4.00m Height mAOD

Figure 6: Detailed plan of Burial [119].



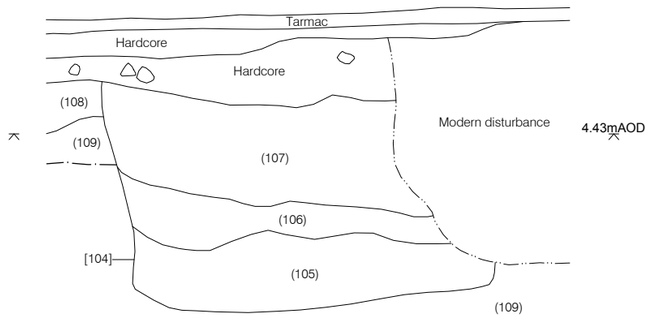
wardell armstrong archaeology Wardell Armstrong Archaeology 2016	PROJECT: Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh CLIENT: Wardell Armstrong LLP SCALE: 1:75 at A3 DRAWN BY: HP CHECKED BY: AB DATE: December 2016 REPORT No: CP11720	KEY: (101) Context numbers Limit of excavation 4.00m Height mAOD Position of evaluation trenches	

Figure 7: Phase 3 plan; later post-medieval activity.

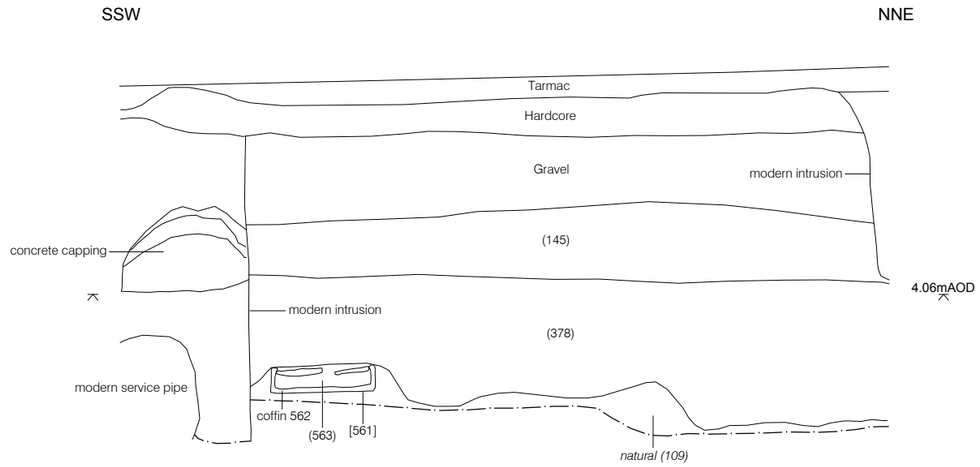


wardell armstrong archaeology Wardell Armstrong Archaeology 2016	PROJECT: Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh CLIENT: Wardell Armstrong LLP SCALE: 1:75 at A3 DRAWN BY: HP CHECKED BY: AB DATE: December 2016 REPORT No: CP11720	KEY: (101) Context numbers Limit of excavation 4.00m Height mAOD Position of evaluation trenches	

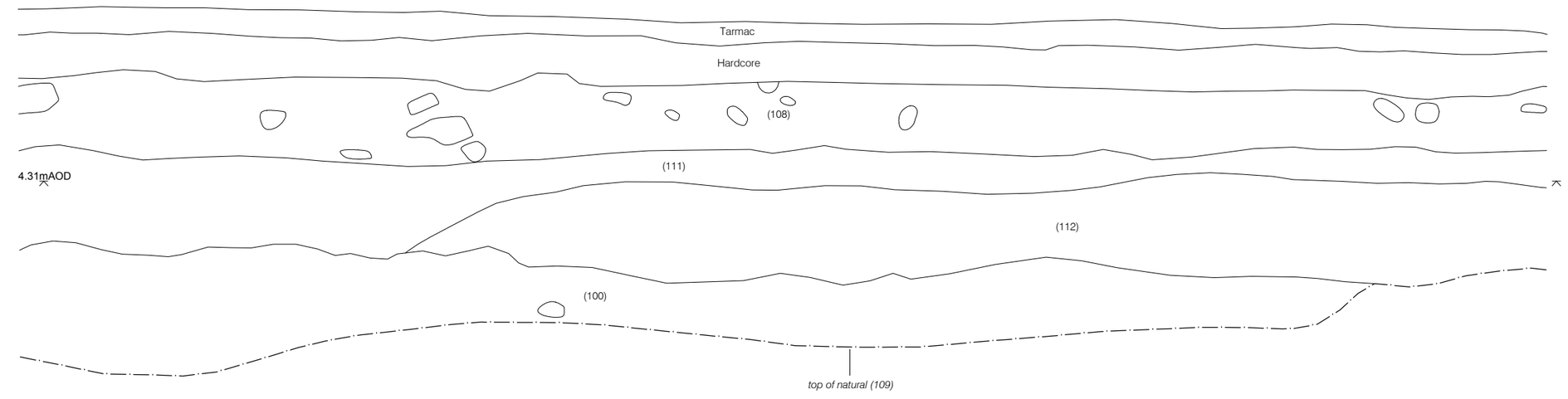
Figure 8: Phase 4 plan; late 18th- to early 19th-century deposits.



Section 1. ESE facing section; western limit of excavation.



Section 35. ESE facing section; western limit of excavation.



Section 3. NNE facing section; southern limit of excavation.

0 1m

Figure 9: Sections showing western and southern limit of excavation.

wardell armstrong archaeology

Wardell Armstrong Archaeology 2016

PROJECT:

Land at St Mary's RC Primary School, 30 Links Gardens, Leith, Edinburgh

CLIENT:

Wardell Armstrong LLP

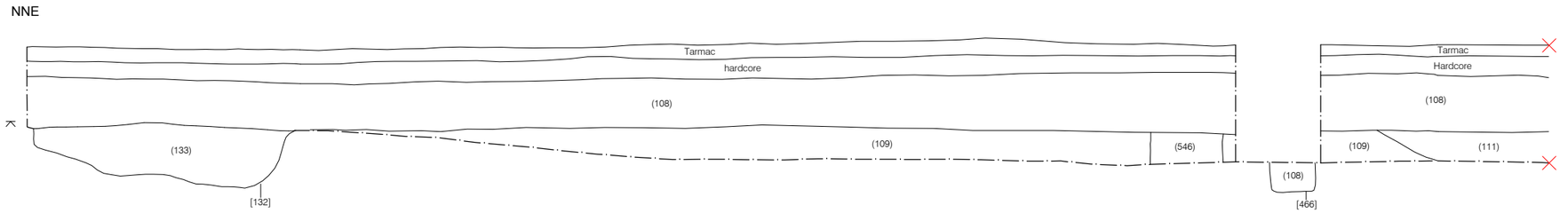
SCALE:	1:20 at A3
DRAWN BY:	HP
CHECKED BY:	AB
DATE:	December 2016

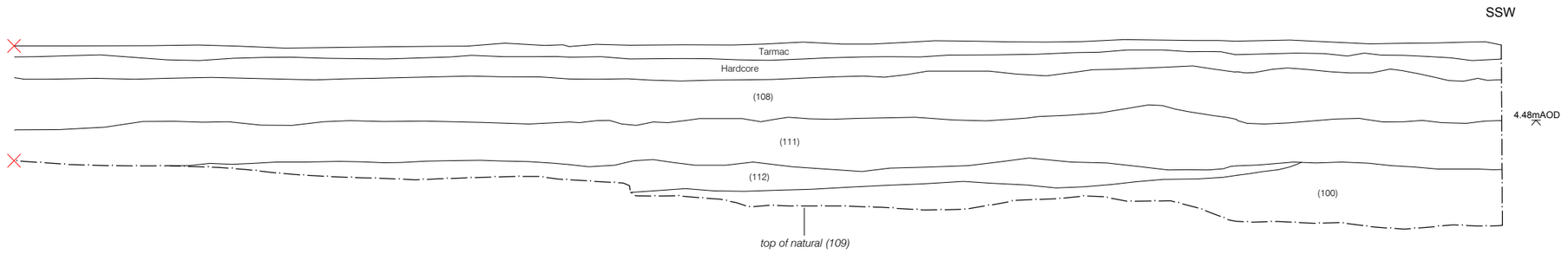
KEY:

(101) Context number
Height mAOD
Limit of excavation

REPORT No:

CP11720





Section 23. WNW facing section; eastern limit of excavation.

wardell armstrong archaeology

Wardell Armstrong
Archaeology
2016

PROJECT:
Land at St Mary's RC
Primary School,
30 Links Gardens,
Leith, Edinburgh

CLIENT:
Wardell Armstrong LLP

SCALE:	1:40 at A3
DRAWN BY:	HP/AB
CHECKED BY:	AB
DATE:	December 2016

KEY:

(101) Context number
Height mAOD
Limit of excavation

REPORT No:
CP11720

Figure 10: Section showing eastern limit of excavation.

APPENDIX 5: COMMUNITY ENGAGEMENT PROGRAMME

Over the course of the archaeological excavation at St Mary's RC Primary School in Leith, WALLP staff delivered an outreach and education programme to staff and pupils at the school. The programme involved giving talks to schoolchildren aged 5-9 years of age and their teachers, in which the pupils were shown the site and after a short presentation, the children could ask questions. The pupils visited the site weekly throughout the course of the excavation.

Whilst dealing with coffined human burials requires sensitivity and professionalism, any initial concerns for how the children would cope were allayed quickly; the children seemed to engage fully with the archaeologists and were enthusiastic throughout. The staff and teachers found the talks useful and informative. Megan Stoakley also contributed to the school's website by dictating some information to one teacher. In addition to on-site visits the project was videoed as it progressed and a copy of the video archive will be given to the school in 2017 as a record of the work undertaken.

Aside from the presentation of the excavation to the school pupils and staff, information was provided to the general public through site notices located adjacent to public access areas that provided updates of the excavation's progress. On Saturday 19th November at the regional archaeological conference held at Queen Margaret's University a presentation of the results of the excavations was given by Dr Richard Newman (Project Manager) to an audience of interested members of the public and members of the local archaeological community. As a consequence of that presentation Richard Newman has been asked to give a presentation in 2017 to the Leith Local History Society.

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