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**DALSTON PAROCHIAL CHURCH COUNCIL**

**ST. MICHAELS CHURCH,  
DALSTON,  
CUMBRIA**

**ARCHAEOLOGICAL EVALUATION REPORT**

**JANUARY 2019**

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**Dalston Parochial Church Council**  
**St. Michaels Church, Dalston, Cumbria**  
**Archaeological Evaluation Report**

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DESK BASED ASSESSMENTS  
ARCHAEOLOGICAL EVALUATION  
ARCHAEOLOGICAL EXCAVATION  
GEOPHYSICAL SURVEY  
TOPOGRAPHIC AND LANDSCAPE SURVEY  
HISTORIC BUILDING RECORDING  
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## **SUMMARY**

Wardell Armstrong LLP (WA) was commissioned by Dalston Parochial Church Council, to undertake an archaeological evaluation by trial trenching at St. Michaels Church, Dalston, Cumbria, (NGR: NY 36941 50174). The evaluation was required as a condition of planning consent. The evaluation was undertaken in accordance with a written scheme of investigation (WSI) produced in response to advice given by Jeremy Parsons, Historic Environment Officer at Cumbria County Council (WA 2017a).

The archaeological work was undertaken over seven days between the 11<sup>th</sup> and the 19<sup>th</sup> September 2018 and comprised the excavation of three trenches. The trenches formed a 12% sample of the proposed development area. The investigation revealed a mixed layer of disturbed human remains along with one possible articulated burial, revealed at a depth of 0.9m. The investigation also identified the remains of associated burial shrouds and possible coffin remains.

The proposed development on the site would have a significant impact on any further likely remains located outside of the trial trenches.

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## **ACKNOWLEDGEMENTS**

Wardell Armstrong LLP (WA) thanks the client, Dalston Parochial Church Council, for commissioning the project, and for all their assistance throughout the work. Also, WA thank Jeremy Parsons, Historic Environment Officer, at Cumbria County Council for his assistance.

The evaluation was supervised by Ed Johnson who was assisted by Megan Stoakley and Kimberly Colman. The report was written by Ed Johnson and Megan Stoakley. The figures were produced by Helen Phillips. The finds assessment was undertaken by Megan Stoakley. The project was managed by Dave Jackson who also edited the report.

## **1 INTRODUCTION**

### **1.1 Project Circumstances and Planning Background**

1.1.1 In September 2018, Wardell Armstrong LLP (WA) undertook an archaeological evaluation at St. Michaels Church, Dalston, Cumbria (Figure 1) (NGR: NY 36941 50174). It was commissioned by Dalston Parochial Church Council who intend to construct an extension to the existing church building for which a planning consent has been applied.

1.1.2 The proposed development is situated within the existing graveyard and is associated with the standing grade II\* listed church, the heritage significance of which may be affected by the application.

### **1.2 Project Documentation**

1.2.1 The project conforms to a brief prepared in consultation with Jeremy Parsons, Historic Environment Officer at Cumbria County Council. A WSI (WA 2017a) was then produced to provide a specific methodology based on the brief for a programme of archaeological trial trench evaluation. This was approved by the archaeological planning advisor prior to the fieldwork taking place. This is in line with government advice as set out in Section 12 of the National Planning Policy Framework (MHCLG 2018).

1.2.2 This report outlines the work undertaken on site, the subsequent programme of post-fieldwork analysis, and the results of this scheme of archaeological evaluation.

## 2 METHODOLOGY

### 2.1 Standards and guidance

2.1.1 The archaeological evaluation was undertaken following the Chartered Institute for Archaeologists *Standard and Guidance for archaeological field evaluation* (2014a), and in accordance with the WA fieldwork manual (2017).

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

### 2.2 Documentary Research

2.2.1 An archaeological heritage impact assessment was prepared by WA (2017c), which set out the archaeological and historical background of the site and provided an assessment of the significance of all known and potential heritage assets up to 0.5km from the area of investigation.

### 2.3 The Field Evaluation

2.3.1 The evaluation comprised the excavation of three trenches. The largest trench measured 5m in length by 1.6m in width, whilst the other two trenches measured 1.6m<sup>2</sup>. The general aims of these investigations were:

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

2.3.2 Deposits considered not to be significant were removed by a 360° tracked mechanical excavator with a toothless ditching bucket, under close archaeological supervision. The trial trenches were subsequently cleaned by hand. All possible features were inspected, and selected deposits were excavated by hand to retrieve artefactual



material and environmental samples. Once completed all features were recorded according to the WA standard procedure as set out in the Excavation Manual (WA 2017b).

- 2.3.3 On completion, the evaluation trenches were reinstated by replacing the excavated material.
- 2.3.4 A full professional archive has been compiled in accordance with the project specification, and the Archaeological Archives Forum recommendations (Brown 2011). The archive will be deposited with Tullie House Museum, with copies of the report sent to the County HER, available upon request. The archive can be accessed under the unique project identifier **WAA18 CL12053 DCC/A**.
- 2.3.5 Wardell Armstrong LLP supports the **Online Access to the Index of Archaeological Investigations (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 WA as a part of this national project. The OASIS reference for the project is: wardella2-340334.

### 3 BACKGROUND

#### 3.1 Location and Geological Context

- 3.1.1 The proposed development site is situated within the graveyard of St. Michaels Church, Dalston, with the associated church located immediately to the south. The B5299 runs to the north and west of the site and connects Dalston to Carlisle. Dalston itself lies approximately 7km to the south west of Carlisle. The area of investigation lies at a height of *c45m* aOD (above Ordnance Datum) with the ground laying roughly flat before dropping to the east where the site meets the river Caldew.
- 3.1.2 The site is approximately 115m<sup>2</sup> in size and is rectangular in shape. At present the site comprises an area of graveyard to the north of St. Michaels Church.
- 3.1.3 The geology in the vicinity consists of sandstone of the Sherwood Sandstone Group, a sedimentary bedrock formed approximately 237 to 272 million years ago in the Triassic and Permian Period (BGS 2019). The superficial deposits comprise sand and gravel from River Terrace deposits, formed up to 3 million years ago in the Quaternary Period (BGS 2019).

#### 3.2 Historical and Archaeological Background

- 3.2.1 A heritage impact assessment was produced to assess the known historical and archaeological background of the site and the surrounding landscape to a distance of 0.5km (WA 2017a). It is not intended to repeat that information here and what follows is a brief overview, for further details please refer to the original document.
- 3.2.2 This report identified that there was one designated heritage asset within the site boundary, however there are 29 further assets within the wider search area of 0.5km.
- 3.2.3 **Medieval:** there are few resources regarding the early Medieval history of Dalston and Cumbria. Dalston grew in importance during the twelfth century with the Barony of Dalston given to Robert De Vallibus, Lord of Gilsland. Changing hands when Cumberland was ceded to the Scots in 1139. This was seized back by Henry II and kept under control of the Crown until 1228 when the Manor of Dalston was given to the Bishop of Carlisle.
- 3.2.4 The chancel of the church of St Michael is believed to be of 13<sup>th</sup> Century origin, with earlier medieval features within the nave (Haigh 2012, 11). The chronology of vicars and rectors has been noted to start from 1196 with the earliest structure most likely a stone-built church. It was restored in 1750, and again altered and restored in 1890

by the architect C J Ferguson.

3.2.5 **Post-medieval:** During the late 18<sup>th</sup>/early 19<sup>th</sup> century Dalston benefitted from the opening of several cotton industries leading to the villages expansion. A large portion of the villages historic core originates from the late 17<sup>th</sup> to mid-19<sup>th</sup> century including several houses, a Grammar school built in 1815 and several public houses.

### 3.3 **Previous Archaeological Works**

3.3.1 In 2009, AOC undertook a historic building recording and archaeological watching brief at the west elevation of St Michael's and All Angels Church. They discovered some previous archways at the elevation, and the outlines of a demolished two storey structure that once abutted the church.

3.3.2 Wardell Armstrong undertook a HIA and Gravestone survey on St. Michaels Church during 2017 (WA 2017c, 2017d). These identified the gravestones at risk as well as the heritage assets within a 0.5km area.

## 4 ARCHAEOLOGICAL EVALUATION RESULTS

### 4.1 Introduction

4.1.1 The evaluation was undertaken between the 11<sup>th</sup> and 19<sup>th</sup> of September 2018 with three trenches excavated across the proposed development site (Figure 2). The trenches were placed to investigate a c.12% representative area of the proposed development.

### 4.2 Results

4.2.1 **Trench 1** (Figure 2) was situated in the north eastern corner of the site and orientated east to west. The trench measured 5m in length and 1.6m in width (plate 2). It had a minimum depth of 0.9m and maximum depth of 1.3m. The natural substrate (**102**) consisted of mid red brown sandy gravel natural and was overlain by a 0.7m thick deposit of light red brown clayish silt subsoil (**101**) (Figure 3). The trench was sealed by 0.3m of a dark greyish brown silty topsoil (**100**).

4.2.2 The archaeology identified within Trench 1, comprised the disturbed remains of several skeletons, a breakdown of which can be found in Table 1 (Appendix 3). These were located within a disturbed subsoil which also contained building debris consisting of worked sandstone and slate. Along the trenches southern edge, a construction cut for the existing footpath was also visible (**104**) along with associated rubble (**103**).

4.2.3 **Trench 2** (Figure 2) was 1.6m wide and 1.6m long and square in shape. Trench 2 was located towards the west of the site and was excavated to a maximum depth of 1.0m aOD. The natural geology (**102**) of Trench 2 was observed to comprise a mid-red orange sandy gravel and encountered at a depth of 0.9m (plate 3). This was overlain by a 0.5m thick deposit of mid red brown clayish silt subsoil (**101**) and was sealed by topsoil (**100**) consisting of a mid to dark greyish brown silty topsoil.

4.2.4 As with trench 1 the subsoil contained several disarticulated skeletons, further information on which can be found in Table 1. A fragment of medieval pottery was recovered during sieving of the subsoil. Further possible former building material was also noted in the upper levels of this subsoil layer.

4.2.5 **Trench 3** (Figures 2 & 3) was 1.6m wide and 1.6m long and square in shape. Trench 3 was located towards the southwest of the site and was excavated to a maximum depth of 0.9m aOD. The natural geology (**102**) of Trench 3 was observed to comprise a mid-red orange sandy gravel and encountered at a depth of 0.9m. This was overlain by a

0.5m thick deposit of mid red brown clayish silt subsoil (**101**) and was sealed by topsoil (**100**) consisting of a mid to dark greyish brown silty topsoil.

4.2.6 As with trenches 1 and 2 the subsoil contained several disarticulated skeletal remains. A further articulated skeleton (Plate 1 & 4) of an adolescent female (**SK17**) was encountered at a depth of 0.8m. The remains of a burial shroud/cloth and several shroud pins were recovered from the skeleton and these were recorded before being left in situ. The subsoil also contained several worked sandstone blocks and roofing slates along with some modern plastic.

#### 4.3 **Archaeological Finds and Environmental Sampling**

4.3.1 Several archaeological finds were recovered during the work along with a large amount of human bone. This is detailed in sections 5 and 6. No environmental samples were retained.

## 5 HUMAN REMAINS & ASSOCIATED BURIAL ARTEFACTS

### 5.1 Introduction

- 5.1.1 Over 8,057g of human bone were recovered from deposits in three trenches excavated in the northwest area of the graveyard of St Michael's Church.
- 5.1.2 The vast bulk of the human remains were disarticulated with the exception of one articulated skeleton located in Trench 3. The disarticulated human remains were spread randomly throughout Trenches 1 to 3 with no distinct pattern; the position of the human remains did not match the location of any above-ground tombstones / memorials.
- 5.1.3 The disarticulated human bone, with the exception of skeleton 17, was recorded, photographed and lifted. The remains were stored in St Michael's Church whilst excavations were on-going. A rapid osteoarchaeological assessment was undertaken on-site in order to establish MNI count (minimum number of individuals) and to gather biological profile data, including age estimation, sex determination, ancestry, pathologies as well as metric and non-metric data (if available). It should be noted that the remains were not processed (i.e. washed) at the time of the assessment. Finds of both a funerary and domestic nature were also recorded and analysed.
- 5.1.4 The human remains are currently being stored at St Michael's Church. The human remains will be reburied in the grounds of the churchyard.
- 5.1.5 Quantification of the osteological data and finds by context is provided in Tables 1-3 (Appendix 3).

### 5.2 Methods

- 5.2.1 The human remains were subject to a rapid skeletal assessment and were recorded using guidelines published by Buikstra and Ubelaker (1994). This included separating human and animal bone. The completeness of the skeletal remains and the surface preservation of the bones were recorded using Brickley and McKinley's grading system (Brickley & McKinley 2004, 16 Figure 7.1-7; McKinley 2004, 13-16).
- 5.2.2 Age estimation of adults, where anatomical elements were available, relied on a number of methods, including dental attrition (Brothwell 1981, 72; Anderson *et al* 1976), auricular surfaces of the ilium (Lovejoy *et al* 1985a & 1985b), pubic sympheseal analysis (Ubelaker 1989, 75-81; Todd 1920; McKern & Stewart 1957, 74-79; Gilbert & McKern 1973) and sternal rib end analysis (Işcan, Loth & Wright 1984

& 1985).

- 5.2.3 Age estimation of non-adult individuals, where anatomical elements were available, relied on epiphyseal fusion stages published in standards by Scheuer and Black (2000; 2004) and Schaefer *et al* (2009) as well as dental development and eruption stages (Gustafson & Koch 1974).
- 5.2.4 Sex determination of adults, where sexually dimorphic anatomical elements were available, relied on standards published in Brothwell (1981), Ubelaker (1989) and Mays (2010); sex determination of non-adults was not carried out due to continuous osteon remodelling and rapid skeletal growth.
- 5.2.5 Cranial metric analysis was not carried out due to the fragmentary nature and incompleteness of the skulls; some post-cranial metric analysis was carried out on complete epiphyseal ends and limb bones using an osteometric long-board and digital callipers. Unusual enthesal changes were recorded (Davis *et al* 2013) as well as pathological conditions (Roberts & Manchester 2010).

### 5.3 Results

- 5.3.1 The bulk of the human remains were in moderate to very poor condition in the main and were graded from Nos. 3-5 (Surface Preservation) (Table 1). The preservation of the bone, including cortical and trabecular bone, was highly-degraded and soft. The completeness of the skeletal remains varied significantly; individual bones ranged from <10-100% completeness. Many of the skeletal elements comprised small, unidentifiable cranial and post-cranial bones. The poor preservation and varied completeness of the skeletal remains is likely to have been a consequence of the burial environment, including post-depositional damage as a result of continuous re-landscaping of the churchyard plus other taphonomic factors e.g. soil pH.
- 5.3.2 A minimum number of 27 individuals were identified; individual skeleton numbers were assigned to 19 individuals and eight further individuals were identified through age estimation and sex determination analyses. Skeleton Nos. 1-9 were recovered in Trench 1 (as well as the partial remains of eight other individuals), Skeleton Nos. 10-12 were recovered from Trench 2 and Skeleton Nos. 13-19 were found in Trench 3. It should be noted that age estimation and sex determination analyses were hindered by the poor preservation of the bone.
- 5.3.3 Disarticulated adult human remains make up the bulk of the assemblage; of the 27 individuals that could be positively identified, there were a minimum of 20 adult

individuals and seven non-adults.

- 5.3.4 The age range for adults comprised 18 to 50+ years; four adult females and four adult male individuals could be accurately identified. Many sexually dimorphic elements, including diagnostic cranial and pelvic elements, were not available, thus hindering sex determination.
- 5.3.5 The only articulated skeleton was uncovered in Trench 3 (SK 17, **(127)**). Aligned roughly east-west, the individual comprised a young adult female aged 18-25 years. Several shroud pins were evident on the cranium and ribs, indicating her original internment in a shroud or winding-sheet. No grave goods were evident. It is likely that, due to the continuous re-landscaping of the churchyard grounds and the subsequent movement of deposits and human remains, this location was not the final resting-place of Skeleton 17. The positioning of the body suggests that movement to its current resting place may have occurred soon after the initial burial.
- 5.3.6 The non-adults included one neonate, young children (3-8 years), older children (8-12 years) and a young subadult (12-15 years).
- 5.3.7 Some post-cranial metric analyses were undertaken and included complete limb bone measurements of an adult humerus plus measurements of proximal femoral and humeral heads of adults. These measurements are, however, of limited use in the osteological data and for the overall archaeological interpretation of the site.
- 5.3.8 The poor preservation of the skeletal remains severely hindered the recording of pathological conditions. As such, metabolic, infectious and neoplastic conditions were not observed; degenerative osseous changes to vertebrae and the epiphyses of limb bones were observed in two individuals. Dental pathology was recorded in some adult individuals and included periodontal disease and grades 1 and 2 (mild to moderate) dental calculus (Brothwell 1981, 155). Caries and abscesses were not observed. Ante-mortem tooth loss was observed in the left second mandibular molar of Skeleton 15.
- 5.3.9 Pronounced rugose enthesal changes were observed in the humerus and ulna of Skeleton 9 (**(116)**) recovered in Trench 1. It is likely that these enthesal changes relate to sex and body mass rather than occupational / mechanical stress.
- 5.3.10 A common occurrence in both adult and non-adult skeletal remains was the presence of human hair on several skulls; human hair is the most common type of soft-tissue in archaeological burials, as it contains the protein keratin, making it



resistant to decay (Mays 2010, 23). Small fragments of shroud material in the form of coarse linen winding-sheets or woollen blankets were observed adhering to several crania. Black staining and a soft-tissue fatty deposit (adipose) were observed on the right mandibular body of Skeleton 10 (**120**), a child of between 10-12 year of age. The black staining may have been caused by bioturbation or other taphonomic factors caused by the burial environment e.g. a biochemical reaction between the shroud material and the remains after the internment of the body.

5.3.11 Another common occurrence was the presence of funerary-related objects, including small copper alloy shroud pins (SF Nos. **1-12**, Table 2), iron coffin nails plus a fragment of a degraded lead and iron coffin plate and a heavily-rusted coffin handle (Table 3). Fragments and splinters of coffin-wood were a frequent find and all fragments were attached to the iron nails.

5.3.12 *Discussion.* The human remains recovered from the site are highly likely to relate to internments dating to the 18<sup>th</sup> and 19<sup>th</sup> centuries. It should be noted that the site at St Michael's Church, has been in use as a burial ground since the medieval period, so it is possible that some of these remains could date to this period.

5.3.13 The disarticulated human bone assemblage is highly fragmented and poorly preserved as a consequence of the continuous re-landscaping and clearance of the graveyard over the 18<sup>th</sup> to early 20<sup>th</sup> centuries. The disarticulated human bone recovered from the archaeological investigation at the site, represents only a small sample of the total number of internments which took place at the church in preceding centuries.

5.3.14 The poor preservation and fragmentary nature of the human remains hindered age estimation and sex determination analyses as well as the recording of pathological conditions. Both adults and children are represented, although the quantity of non-adults that were recovered is low; a likely consequence of an unfavourable burial environment, as non-adult human remains are more fragile.

## 6 NON-FUNERARY FINDS AND ZOOARCHAEOLOGICAL ANALYSIS

### 6.1 Introduction

- 6.1.1 A total of 16 non-funerary finds and ecofacts, weighing 276g, were recovered during an archaeological evaluation at St Michael's Church (Table 3).
- 6.1.2 All finds were dealt with according to the recommendations made by Watkinson & Neal (1998), Brown (2011) and to the Chartered Institute for Archaeologists (CIfA) Standard & Guidance for the collection, documentation, conservation and research of archaeological materials (2014b).
- 6.1.3 The finds were assessed on-site and will be reburied with the exception of the medieval pottery.
- 6.1.4 The material archive has been assessed for its local, regional and national potential and for its potential to contribute to the relevant research frameworks.
- 6.1.5 The archive has the unique project identifier WA 2019 / CL12053 / DCC-A; the archive will be deposited at Tullie House Museum and Art Gallery.
- 6.1.6 Quantification of the non-funerary finds and ecofacts is visible in Table 4 (Appendix 3).

### 6.2 Ceramics

- 6.2.1 A total of eight sherds of medieval to post-medieval ceramics, weighing 131g, were recovered from subsoil deposits in Trenches 1 to 3 (Table 4). The pottery was in good condition.
- 6.2.2 A single rim sherd of late 12<sup>th</sup> century pottery, weighing 6g, was recovered from Subsoil (**101**) in Trench 2. The fabric comprises Red Gritty Ware and the rim sherd originated from a small cooking pot. Sooting is evident on the exterior and interior of the sherd.
- 6.2.3 Late post-medieval to modern ceramics comprise Buckley-type coarse red earthenware, refined red earthenware, refined white earthenware and Victorian Transfer Print. Vessel types comprise large storage jars, a teacup and a plate.
- 6.2.4 The recovery of medieval pottery is of archaeological significance. The recovery of late post-medieval to modern pottery, representing domestic refuse, is of low archaeological potential. No further assessment or analysis was recommended.

### 6.3 Ceramic Building Material (CBM)

6.3.1 A single fragment of a late post-medieval to early modern land-drain, weighing 34g, was recovered from Subsoil (**101**) in Trench 3 (Table 4). The fragment was in good condition.

6.3.2 No further analysis was warranted.

### 6.4 Glass

6.4.1 A single shard of dark green late post-medieval to modern bottle glass, weighing 24g, was recovered from Subsoil (**101**) in Trench 3 (Table 4). The shard was in moderate condition.

6.4.2 No further analysis was warranted.

### 6.5 Pewter & Base Metal

6.5.1 A pewter and base metal coat button, weighing 4g, was recovered from deposit (**101**) in Trench 3 (Table 4). The button was in good condition.

6.5.2 The button had an intact copper alloy shank and a star design on the front face. It was of late post-medieval to modern date and likely represents casual loss.

6.5.3 No further analysis was warranted.

### 6.6 Zooarchaeology

6.6.1 Five animal bones, weighing 83g, were recovered from the subsoil of all three trenches (Trench 4). The bones were in good condition.

6.6.2 Guidelines adhered to for zooarchaeological analysis include 'Animal Bones & Archaeology: Guidelines for Best Practice' (Historic England 2014).

6.6.3 A minimum number of three animals are represented and include a medium-sized ungulate, a sheep (*Ovid sp.*) and a cow (*Bos sp.*). Anatomical elements include a metapodial, limb bone fragments, a pelvic fragment and a partial sacral fragment.

6.6.4 The animal bone is probably of late post-medieval to modern date and represents domestic food waste. Butchery marks, canid / rodent gnawing or unusual pathologies were not observed. No complete bones were available for measurements.

6.6.5 Further analysis was not warranted.

## 6.7 Statement of Potential

- 6.7.1 The non-funerary artefacts and ecofacts, with the exception of the medieval pottery, are of low archaeological potential and were not retained. They will be reburied with the human skeletal remains.
- 6.7.2 The medieval pottery is of archaeological significance and was retained with the archive.

## 7 CONCLUSIONS

### 7.1 Interpretation

- 7.1.1 During the archaeological evaluation at St. Michaels Church, Dalston, three trenches were excavated covering 13.12m<sup>2</sup> of the proposed 115m<sup>2</sup> development area. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity.
- 7.1.2 The natural substrate was evident, but not fully exposed in all trenches. Excavations were ceased at 0.9m in Trenches 2 and 3. Excavations exceeded this in the eastern end of Trench 1 reaching a maximum depth of 1.2m where the natural substrate was visible along with (**SK 1**). The upper layers of (**101**) contained varying amounts of sandstone, some of which showed working and may be from former buildings or remodelling work on the church. In all trenches, no human bone was evident in the upper 0.5m of both topsoil and subsoil.
- 7.1.3 The survival of the archaeological remains was moderate to poor. Their survival had been influenced by work undertaken within St. Michaels Church graveyard. Remodelling and possible re-use of areas could have contributed to the deep subsoil layer and its frequent disarticulated bone inclusions.

### 7.2 Recommendations

- 7.2.1 Following conversations with David Cowen (Dalston Parochial Church Council) and Bingham Yates the appointed structural engineers, plans have been submitted showing a proposed foundation design. These show that pads which would extend down to the natural substrate will be used on the extension, extending through the layer which contained archaeological material. The natural substrate was visible between 0.9m and 1.2m in the three excavated trenches.
- 7.2.2 No human material was identified within the upper most 0.5m of excavations. Excavations below 0.5m from the current ground level would likely encounter disarticulated human remains. However, the results of the evaluation suggest that articulated human remains are not likely to be encountered at a depth above 0.9m.

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## APPENDIX 1: TRENCH DESCRIPTIONS

### Trench 1

Length: 5m

Width: 1.6m

Orientation: East-West

Maximum Depth: 1.2m

Minimum Depth: 0.9m

Context Number	Context Type	Description	Height/Depth
100	Deposit	Topsoil	0.2m
101	Deposit	Subsoil	0.5-0.8m
102	Deposit	Natural	NFX
103	Deposit	Construction Rubble	0.3m
104	Cut	Cut for pavement construction	0.3m

### Trench 2

Length: 1.6m

Width: 1.6m

Orientation: N/A

Maximum Depth: 0.9m

Minimum Depth: 0.9m

Context Number	Context Type	Description	Height/Depth
100	Deposit	Topsoil	0.3m
101	Deposit	Subsoil	0.45-0.6m
102	Deposit	Natural	NFX

### Trench 3

Length: 1.6m

Width: 1.6m

Orientation: N/A

Maximum Depth: 0.9m

Minimum Depth: 0.9m

Context Number	Context Type	Description	Height/Depth
100	Deposit	Topsoil	0.3m
101	Deposit	Subsoil	0.45-0.6m
102	Deposit	Natural	NFX

## APPENDIX 2: PLATES



Plate 1: SK 17 within Trench 3; 1.0m and 0.2m scale



Plate 2: Trench 1 overall shot



Plate 3: Trench 2 overall shot



Plate 4: Trench 3 overall shot

## **APPENDIX 3: TABLES**

Tr #	Context	Sk No	Anat El	SP	% Surviving	Condition	Wgt (G)	Adult	Non-Adult	Age	Sex	Path	Dental Path	Measurements	Additional Comments
1	105	1	Cranial	4	20	Poor	-	1	-	-	-	-	-	-	Adult individual - left in-situ
1	106	2	Misc	4	c.20	Poor	205	1	-	18-35 YRS	F	-	Grade 2 calculus on mand molars; grade 1 calculus on max L&R M3	-	Cranial frags & 1 L patella; Caucasian
1	108	3	Misc	3 to 4	20-100	Mod	306	1	-	-	M	-	-	L fem prox hd 52.08mm Ø	Partial L os coxae 40%; L femur (dist end broken) 95%; hamate & scaphoid (L, 100%); 90% of L tib, L radius, ulna and partial humeral shaft, L distal fib (20% surviving)
1	109	4	Cranial	2 to 3	80	Mod	301	1	-	-	M	-	-	-	Cranial frags only; occipital, temporal, L parietal & c.20 smaller frags; shroud pin & CuA staining on exterior (SF6); some hair and fibres adhering.
1	110	5	Misc	3 to 5	80	Mod to poor	251	1	-	-	-	-	-	-	Adult L femur & tibia; associated with Fe nails
1	111	6	Cranial	3 to 4	60% of skull surviving	Mod	165	-	1	5-8 YRS	-	-	-	-	Shroud pin x 1 - SF4; 4 Fe nails - wood attached
1	112	7	Misc	3	30	Very poor	490	1	-	25-35 YRS	F	-	Calculus on max molars & lingual aspects of mand teeth - I <sub>1</sub> s & RI <sub>2</sub> s	-	Cranium, R hum, vert: C1-C6; considerable amount of hair adhering to cranium; hyoid bone present
1	113	8	Misc	5	<10	Very poor	155	1?	-	-	-	-	-	-	2 cranial frags; femoral shaft frag
1	116	9	Misc	4 to 5	20	Very poor	402	1	-	-	M?	Prox ulnar head and shaft: rugose enthesial change at location of olecranon process; rugose enthesial change at Deltoid	-	-	L humerus: 90% surviving; partial radial shaft frag: <15% surviving; minimum 20+ unidentifiable and unsided limb fragments
2	120	10	Misc	3 to 4	40-100	Mod	302	-	1	10-12 YRS	-	-	-	-	Cranium, mandible, C1-C4 vert; Fe nails x10, hair & shroud material with 3 CuA pins (SF12). Coarse linen shroud material adhering to L mandible, woollen blanket? Intermittent green staining on mandible. Black staining on jaw, bioturbation/taphonomy? From shroud material? Small fatty adipose deposit evident on mandible
2	121	11	L Tib	4 to 5	80	Very poor	204	1	-	-	-	-	-	-	Adult
2	122	12	L Fem	3	95	Mod	190	1	-	-	-	-	-	Prox hd 43.84mm Ø	Adult L femur; dist end broken, prox hd broken; 20-30+ limb bone frags (human), not sided and unidentifiable
3	123	13	Misc	4	<60	Poor	487	1	-	-	F	-	-	-	No mandible
3	124	14	Misc	3	50-95	Mod	552	1	-	20-25 YRS	M	-	-	L fem prox hd 45mm Ø	Left ox cox - missing PS 85%; L fem; shaft & dist end of radius; L rib frag; R 1st & 3rd carpal phalange
3	125	15	Misc	3 to 4	30-100	Poor	306	1	-	40+ YRS	?	-	AMTL on LM <sub>2</sub>	-	Cranium, 95%; 100% mandible, 90% R femur (dist end broken), 2 x C vert (70% each), 1 partial sacral frag (30%), 3 x misc limb frags
3	126	16	Cranial	4	20	Poor	-	1	-	-	-	-	-	-	Adult individual - left in-situ
3	127	17	Misc	3	50	Mod	-	1	-	18-25 YRS	F	-	Moderate dental calculus on mand	-	Articulated adult F; left in-situ; shrouded & CuA pins observed on frontal lobe, orbits and mand; not original burial location - evidence of post-burial disturbance (arms splayed and moved)
3	128	18	Misc	5	10	Very poor	-	1	-	-	-	-	-	-	Disarticulated bone, including sacral & tib
3	129	19	Misc	5	15	Very poor	-	1	-	-	-	-	-	-	Disarticulated bone, including fem & pat

Tr #	Context	Sk No	Anat El	SP	% Surviving	Condition	Wgt (G)	Adult	Non-Adult	Age	Sex	Path	Dental Path	Measurements	Additional Comments
1	101	-	Cranial	4.5	10	Poor	5	-	1	-	-	-	-	-	CuA shroud pin & hair / fibres adhering to cranium - SF 7
1	101	-	Cranial	4	10	Poor	33	Y	-	-	-	-	-	-	Parietal, mastoid (temporal) & foramen magnum; blonde hair adhering to parietal bone
1	101	-	Fem	4	20	Poor	12	Y	-	-	-	-	-	-	Poor state of pres
1	101	-	Hum	4	20	Poor	10	Y	-	-	-	-	-	-	Poor state of pres
1	101	-	Misc inc. LM <sup>1</sup>	3	90	Mod	4	1	-	33-45 YRS	-	-	Grade 1 calculus	-	Very little wear on LM; mid-range adult
1	101	-	Misc inc. LM <sup>2</sup>	3	95	Mod	3	1	-	50+ YRS	-	-	Grade 2 calculus	-	Heavy wear on M2; older adult
1	101	-	Fem	4 to 5	c.60	Mod	10	Y	-	-	-	-	-	-	Unsided fragments, very poor condition
1	101	-	L Fem	4	50	Very poor	100	Y	-	-	-	Broad platymeria - flattening of shaft	-	-	-
1	101	-	L Fem	4	50	Very poor	40	Y	-	-	-	-	-	-	-
1	101	-	L Fem	4	40	Very poor	60	Y	-	-	-	-	-	-	-
1	101	-	R Fem	5	60	Poor	65	Y	-	-	-	-	-	-	-
1	101	-	R Fem	5	70	Poor	82	Y	-	-	-	-	-	-	-
1	101	-	L Tib	5	70	Very poor	93	Y	-	-	-	-	-	-	Shaft and distal portion
1	101	-	Cranial	4 to 5	<5	Very poor	12	Y	-	-	-	-	-	-	-
1	101	-	L Os cox	4	10	Very poor	20	Y	-	-	-	-	-	-	Includes acetabulum
1	101	-	Fem	5	10	Very poor	45	Y	-	-	-	-	-	-	Distal portion only; un-sided
1	101	-	Fem	5	15	Very poor	37	Y	-	-	-	-	-	-	Distal portion only; un-sided
1	101	-	Fem	5	30	Very poor	26	Y	-	-	-	-	-	-	Distal portion only; un-sided
1	101	-	Fem	5	20	Very poor	27	Y	-	-	-	-	-	-	Distal portion only; un-sided
1	101	-	R Fem	4	40	Very poor	23	Y	-	-	-	-	-	-	Proximal portion only
1	101	-	R Fem	4	50	Very poor	31	Y	-	-	-	-	-	-	Proximal portion only
1	101	-	Ribs (2)	4	20	Very poor	1	Y	-	-	-	-	-	-	-
1	101	-	L Tib	4	12	Very poor	2	Y	-	-	-	-	-	-	-
1	101	-	Cranial	3 to 4	<15	Very poor	271	-	1	12-15 YRS	-	-	-	-	Includes occipital, maxillar portions & partial temporal; remains of shroud pin SF8 & blanket fibres (coarse linen?)
1	101	-	2 D PM <sub>1s</sub>	3	80	Mod	13	-	1	-	-	-	-	-	Mandibular
1	101	-	1 D M <sub>1</sub> R	3	75	Mod	6	-	Y	-	-	-	-	-	-
1	101	-	R D I <sup>1</sup> & I <sup>2</sup>	2 to 3	80	Mod	4	-	Y	-	-	-	-	-	-
1	101	-	1 D M <sub>1</sub> L	3	80	Mod	3	-	Y	-	-	-	-	-	-
1	101	-	M <sup>2</sup> R	3	90	Mod	4	Y	-	-	-	-	-	-	-
1	101	-	I <sup>1</sup> R	3	80	Mod	3	Y	-	-	-	-	-	-	-
1	101	-	L Tib	3	98	Mod	178	Y	-	-	-	-	-	-	-
1	101	-	Fem x 2	5	30	Very poor	49	Y	-	-	-	-	-	-	-
1	101	-	Hum x 2	5	20	Very poor	38	Y	-	-	-	-	-	-	-
1	101	-	Misc	5	<5-50	Very poor	533	Y	-	-	-	-	-	-	Fib, tib, fem, cranial
1	101	-	PM <sub>2</sub> L	4	80	Very poor	4	Y	-	-	-	-	-	-	-
1	101	-	L I <sup>2</sup>	4	90	Very poor	3	Y	-	-	-	-	-	-	-

Tr #	Context	Sk No	Anat El	SP	% Surviving	Condition	Wgt (G)	Adult	Non-Adult	Age	Sex	Path	Dental Path	Measurements	Additional Comments
2	101	-	Misc	4 to 5	20	Poor	184	Y	-	-	-	-	-	-	Partial L femur; Fe coffin nail, rib frag, 5+ very small limb bone frags
3	101	-	Misc	2 to 4	10-100	Mod	361	Y	-	-	-	-	-	Complete L adult humerus L = 368mm; L hum prox hd 50.12mm Ø	Dist adult L tib - 10%; L adult calcaneus 100%; adult L&R talli (85% & 100%); R adult 1st MT (80%); L adult fem (dist, 15%); 8 x misc cranial frags (SP = 4), 10 x adult limb frags (SP = 4), 1 adult dist hum (10%), 1 x adult mandible 90% - young adult; 1 x L adult humerus 98% complete; adult MC 2-5 (R) 95-100% complete; 8 x misc unsided limb bone frags, L&R adult fib; 2 x R adult ribs 95%; tib shaft 30%; 9 adult cranial frags, adult L tib frag 10%; L&R adult ulnae; 5 x adult hum shafts; 2 x adult R scap frags; 2 x adult rib frags; 7 misc limb frags; adult C vert frag, adult RM <sub>1</sub> , cranial frag & mand condyle
3	101	-	Misc	2	95-98	Good	7	-	1	NEONATE	-	-	-	-	L ulna, L & R tibia; tiny fragile cranial frags
3	101	-	Misc	5	<10%	Very poor	900	Y	-	-	-	-	-	-	Approx 900g of unidentifiable tiny fragments of human and animal bone
3	101	-	Misc	3 to 4	20-70	Mod to poor	189	-	1	3-4 YRS	-	-	-	-	Hum L; R radius, L clav, partial non-adult max - eruption of RI <sup>1</sup>
3	101	-	Os coxae	3	15	Good	51	1	-	18-19 YRS	-	-	-	-	Very young adult - Phase 1 (Todd 1920)
3	101	-	Cranial	3	30	Mod	199	-	1	5-7 YRS	-	-	-	-	Partial temporal lobe and partial maxilla
<b>TOTAL</b>							<b>8057</b>								

Table 1: Quantification of Human Remains

SF No	Context	Sk No	Tr #	Material	Qty	Wgt (g)	Period	Comments
1 to 3	112	SK 7	1	Copper Alloy	3	2	PM	Shroud pins
4	111	SK 6	1	Copper Alloy	1	1	PM	Shroud pin (associated with child, 5-8 years of age)
5	101	-	?	Copper Alloy	1	2	PM	Shroud pin
6	109	SK 4	1	Copper Alloy	1	1	PM	Shroud pin (associated with adult male skeleton)
7	101	?	1	Copper Alloy	1	1	PM	Shroud pin; human hair and fibres adhering to fragment; associated with non-adult
8	101	-	?	Copper Alloy	1	1	PM	Shroud pin
9	112	SK 7	1	Copper Alloy	1	1	PM	Shroud pin in-situ
10	112	SK 7	1	Copper Alloy	2	1	PM	Shroud pins - discovered post-lift
11	112	SK 7	1	Copper Alloy	3	2	PM	Shroud pins - discovered post-lift
12	112	SK 10	2	Copper Alloy	3	2	PM	Shroud pins (associated with child, 10-12 years of age)

Table 2: Funerary Artefacts (Small Finds)



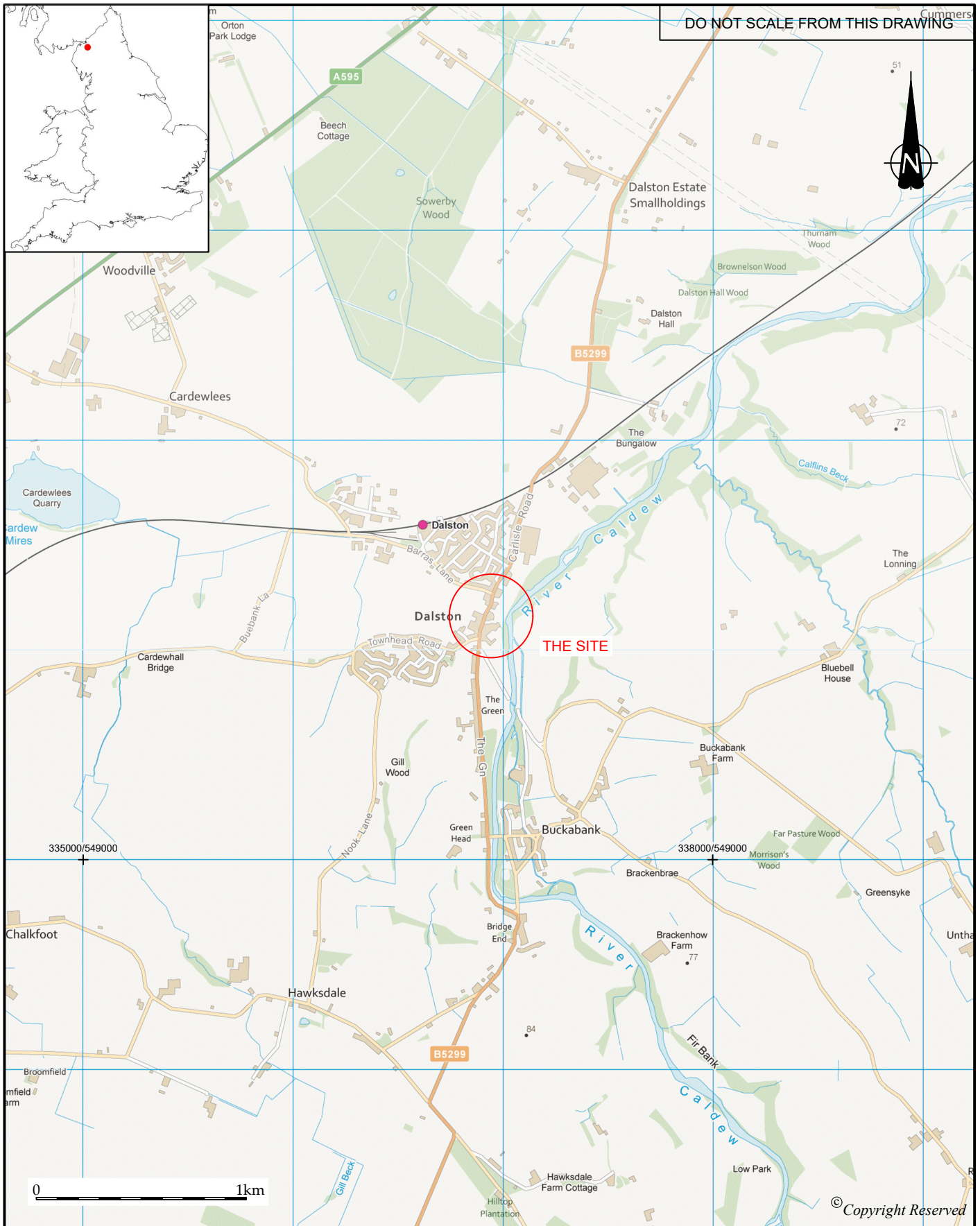
Context	Sk No	Tr #	Material	Qty	Wgt (g)	Period	Comments
101	-	1	Fe	1	3	PM	Nail shaft - likely from coffin
101	-	2	Fe	1	9	PM	Coffin nail - wood attached
108	SK 3	1	Fe	1	8	PM	Coffin nail
110	SK 5	2	Iron	3	20	PM	Coffin nails (with molten Pb attached) associated with adult of unknown age/sex
110	SK 5	1	Fe, Pb & Wood	3	17	PM	Coffin nails, molten lead (remnants of coffin plate?) and wood attached
111	SK 6	1	Fe	4	29	PM	Coffin nails - wood attached
112	SK 7	1	Fe	1	29	PM	Probable coffin nails
113	SK 8	1	Fe	2	8	PM	Probable coffin nails
120	SK 10	2	Iron	10	25	PM	Coffin nails (associated with child, 10-12 years of age)
128	SK 18	3	Fe & Pb	1	417	PM	Heavily rusted coffin handle, poorly preserved, Fe & Pb fused together
<b>TOTAL</b>				<b>27</b>	<b>565</b>		

Table 3: Funerary Artefacts (Bulk Finds)

Context	Tr #	Material	Qty	Wgt (g)	Period	Comments
101	3	Animal Bone	1	16	PM-Mod	<i>Ovid sp.</i> metapodial; prox & shaft; SP = 2; 60% of bone surviving
101	1	Animal Bone	2	51	PM-Mod	<i>Bos sp</i> pelvis frag & sacral frag
101	2	Animal Bone	2	16	PM-Mod	Limb bone frags from med-sized ungulate ( <i>Ovid/Caprid sp.</i> )
101	3	CBM	1	34	PM-Mod	Land-drain fragment
101	3	Ceramic	1	16	PM-Mod	RWE jar base
101	3	Ceramic	3	79	PM	BT CRE, base, rim and body sherd
101	1	Ceramic	2	20	PM-Mod	RWE with yellow green glaze; 1 x TP
101	2	Ceramic	1	6	Med	Late 12th C red gritty ware, rim sherd from a small cooking jar, sooting on exterior & interior
101	2	Ceramic	1	10	PM-Mod	CRE sherd from jar
101	3	Glass	1	24	PM-Mod	Bottle shard (dark green)
101	3	Pewter?	1	4	PM-Mod	Coat button (star design); with copper alloy shank (intact)
<b>TOTAL</b>			<b>16</b>	<b>83</b>		

Table 4: Non-Funerary Artefacts & Ecofacts

## **APPENDIX 4: FIGURES**



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CLIENT	Dalston Parochial Church Council		DRG No.	CL12053-001		REV	A	
PROJECT	St Michaels Church, Dalston, Cumbria		SIZE	A4		SCALE	1:25,000	
			DATE	Jan 2018		DRAWN BY	HP	
DRAWING TITLE	Figure 1: Site location		CHECKED BY	DJ		APPROVED BY	CBC	
						■ CARLISLE   TEL 01228 550 575 WWW.WARDELL-ARMSTRONG.COM <input type="checkbox"/> BIRMINGHAM <input type="checkbox"/> LONDON <input type="checkbox"/> BOLTON <input type="checkbox"/> MANCHESTER <input type="checkbox"/> CARDIFF <input type="checkbox"/> NEWCASTLE UPON TYNE <input type="checkbox"/> EDINBURGH <input type="checkbox"/> SHEFFIELD <input type="checkbox"/> GLASGOW <input type="checkbox"/> STOKE ON TRENT		

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KEY:



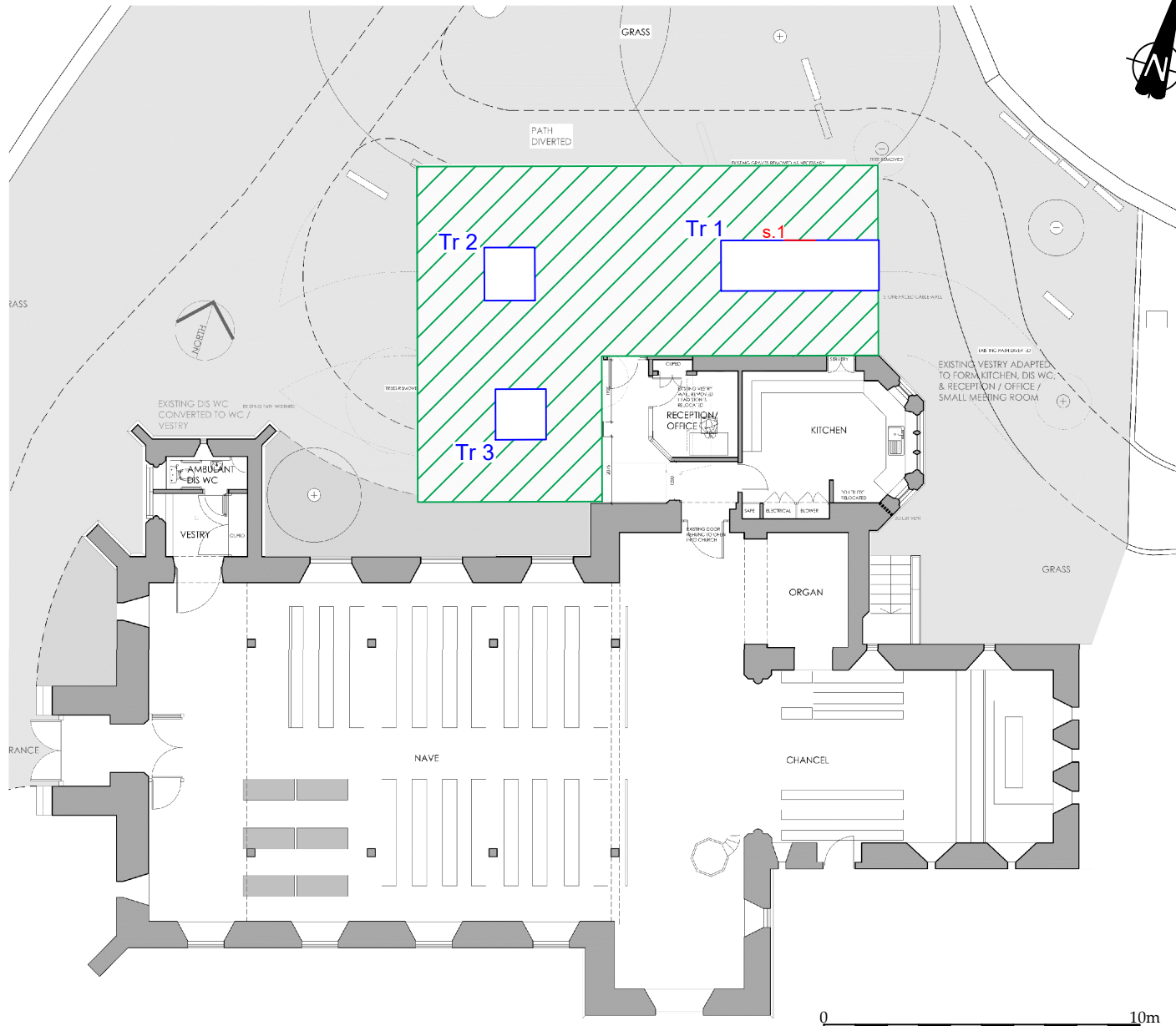
Evaluation trench



Proposed building footprint



Section location



REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

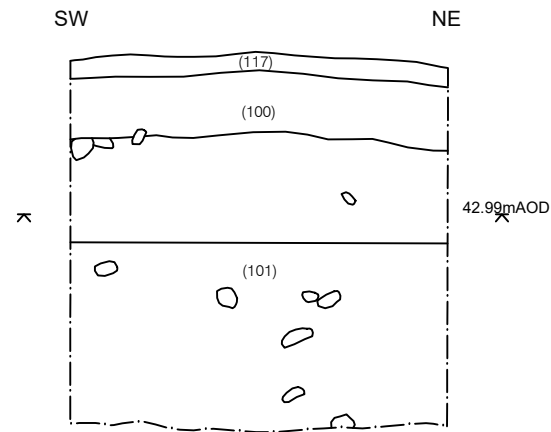
CLIENT  
**Dalston Parochial Church Council**

PROJECT  
**St. Michaels Church,  
Dalston, Cumbria**

DRAWING TITLE  
**Figure 2:  
Trench location plan within proposed  
building footprint**

DRG No	CL12053-002	REV	A
SIZE	A4	SCALE	1:200
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Section 5. South-east facing section across Trench 1.



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KEY:

- (100) Context number
- Limit of excavation
- / Height mAOD

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

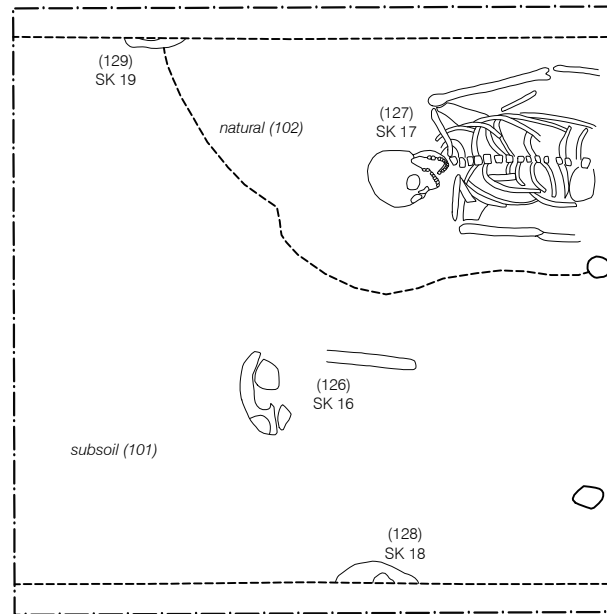
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Dalston Parochial Church Council

PROJECT  
St. Michaels Church,  
Dalston, Cumbria

DRAWING TITLE  
Figure 3: Representative section of Trench 1

DRG No	CL12053-003	REV	A
SIZE	A4	SCALE	1:20
		DATE	Jan 2019
DRAWN BY	HP	CHECKED BY	DJ
		APPROVED BY	CBC

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KEY:

(100) Context number

Limit of excavation

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

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DRAWING TITLE  
Figure 4: Plan of Trench 3

DRG No	CL12053-004	REV	A
SIZE	A4	SCALE	1:20
		DATE	Jan 2019
DRAWN BY	HP	CHECKED BY	DJ
		APPROVED BY	CBC

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