

St Mark's Church, Surbiton, Royal London Borough of Kingston upon Thames An Archaeological Watching Brief Report

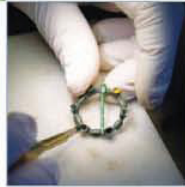
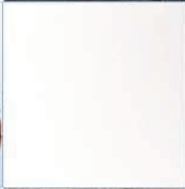
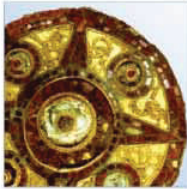
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AOC Project No: 30507

Site Code: MKU09

September 2009



ARCHAEOLOGY

HERITAGE

CONSERVATION

St Mark's Church, Surbiton, Royal London Borough of Kingston

An Archaeological Watching Brief Report

On Behalf of:	Wilson Stephen Associates 181 Union Street London SE1 0LN
National Grid Reference (NGR):	TQ 1835 6760
AOC Project No:	30507
Site Code:	MKU09
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This document has been prepared in accordance with AOC standard operating procedures.

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Non-Technical Summary

This report documents the results of an archaeological watching brief undertaken at St Mark's Church, Church Hill Road, Surbiton, Royal London Borough of Kingston, in August 2009.

The watching brief was carried out during the exhumation of two areas within the cemetery of St Marks Church. Grave monuments within the graveyard were recorded, followed by the recording of coffins and skeletal remains during each exhumation and the subsequent rapid osteological assessment of any 19th century remains.

Two hundred burials were exhumed from the cemetery and an osteological assessment was undertaken on 36 burials dated to the 19th century. A considerable wealth of information was gathered from the study of the burial assemblage. Data regarding grave construction and coffin decoration provided insights into the continuity in trends of burial practice throughout the 19th century. New developments in coffin embellishment were also indicated, particularly in religious insignia and coffin wreaths that have not been widely documented in earlier post-medieval assemblages. Crucifixes were also demonstrated across the grave-markers. These findings indicate an increase in spirituality and importance of visiting the grave during the later 19th and into the 20th century.

The information gained on reflected a relatively wealthy sample of suburban parishioners, the majority of whom had successfully lived into old age. Age-related pathologies were observed in the skeletal remains, together with evidence for infection, trauma and methods of treatment. Poor dental hygiene was observed together with evidence for dental restoration and dentures. Personal ornamentation in the burials was observed through burial with jewellery and clothing and further reflect on burials from a wealthy suburban parish.

1. INTRODUCTION

- 1.1 This document details the results of an archaeological watching brief undertaken on exhumation works carried out in two areas of the cemetery of St Mark's Church, Surbiton, Surrey.
- 1.2 The development site was located close to Surbiton Station within the historic core of Surbiton. The land encompasses an existing parish church with an associated cemetery. The churchyard was a triangular piece of land bounded by Church Hill Road, St Mark's Hill and Adelaide Road; National Grid Reference TQ 1835 6760 (Figures 1 and 2).
- 1.3 Two areas of the churchyard underwent exhumation (Figure 2). The northern area measured 400 square metres and the south-western area measured 600 square metres. The church was located on raised land located at 29.22mOD and was surrounded by the cemetery. The northern area of the cemetery sloped from south to north from 29.22mOD to 26.26mOD. The south-western area of the cemetery sloped from east to west and from 29.11mOD to 27.47mOD.

2. PLANNING BACKGROUND

- 2.1 The proposed development is for the construction of a new vicarage and an annex to the church. The client for the project is Wilson Stephen Associates on behalf of the Parochial Church Council, St Mark's Church. The works were carried out under a Faculty (Ref No. 1530). Archaeological advice to the church was provided by Chris Constable, Southwark's Diocesan Advisory Committee (DAC) Archaeological Advisor.
- 2.2 The church is not Listed and the site does not form part of a Conservation Area.
- 2.3 The works were undertaken pursuant to resolutions to grant two planning approvals. However, no archaeological condition has been attached to planning consent. The Greater London Archaeological Advisory Service were also consulted prior to the commencement of works.
- 2.4 No desk-based assessment was produced prior to works on site. A written scheme of investigation was prepared and approved prior to the works on site (Melikian and Ives 2009).
- 2.5 This report has been designed in accordance with current best archaeological practice and local and national standards and guidelines:
 - English Heritage – Management of Archaeological Projects (EH 1991).
 - Institute of Field Archaeologists – Standard and Guidance for an Archaeological Watching Brief (IFA 2008).
 - English Heritage and The Church of England – Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds In England (2005).
 - Institute of Field Archaeologists – Code of Conduct (IFA 1997).

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Surbiton Development

- 3.1.1 The settlement at Surbiton was originally rural and developed with a few houses predominantly surrounded by farms during 1830 (Jarvis 1960). The town, originally named Kingston New Town, developed in 1845. The construction of houses concentrated on a large plot of ground near the railway station (Walford 1894, 413). The town formed a fashionable suburb to nearby Kingston. The town primarily developed due to the proximity of the mainline railway that linked London,

Southampton and the south west of England (Weinreb & Hibbert 1983, 870). The town comprised a few villas set within their own grounds. The High Street is reported as having only contained a few residences and several shops (Walford 1894, 314; Weinreb & Hibbert 1983, 870).

3.2 Church History

3.2.1 The church of St. Mark's was built during 1844 on Surbiton Hill, near the railway bridge (Jarvis 1960). Land for the church was donated by Lady Burdett-Coutts (Walford 1894, 314). The church was chiefly built of stone and comprised a nave, short transepts and a square tower (Walford 1894, 315). The church was built following the Gothic revival style, which was popular during the Victorian period (Weinreb & Hibbert 1983, 870). In 1872 a second church, that of St. Andrew, was built as a chapel-of-ease to St. Mark's (Walford 1894, 314). Alterations to the church, particularly enlargement of the chancel and lengthening of the nave, were undertaken in 1854 (Jarvis 1960). The church was extensively damaged by bombing during October 1940, with only the original north aisle wall and the tower remaining. Permission was granted for a new church to be built on the original foundations. During the rebuilding, alterations were made to the south transept and an adjoining turret and south aisle walls to improve the elevation to St. Mark's Hill (Jarvis 1960).

3.3 Burial Ground

3.3.1 A book of remembrance from the parish indicated that 154 burials took place between 1848 and 1871 (D. Houghton pers. com.). Burial registers from the ground at St. Mark's Church are available from 1871 and continue until 1933. Burials in the churchyard are thought to have ceased following the bombing of the church in 1940 (D. Houghton pers. com.). There are no burial records known for the period from 1933 to 1940. The burial plots are located on detailed plans in the burial records and are spread across six areas to the north, south, east and west of the church (Figure 3). A survey of the data in the burial registers indicates that there is no zoning of the burials with regard to period of cemetery use; burials are located in each of the six areas of the cemetery from 1871 onwards. The burial records present the year of death for each individual together with the name of the deceased and the location of the burial plot. This information allows identification the sex of the individual but not the age at death. There does not appear to be any particular zoning of burials by sex as documented by the burial registers. On the information present, the zoning of burials cannot be assessed by age.

3.3.2 A burial plan outlining the burial plots was provided with the burial registers (Figure 3). According to the burial plans provided with the registers, the majority of burials appear to have been made in individual plots. Where more than one individual is indicated in a plot, there is frequently only two burials indicated. The plans do however indicate where multiple burials have been made within a plot. It is not clear at this stage whether the stacked burials represent family groups. It is not clear whether additional burials have also been interred in the burial plots but are unmarked on the register.

3.3.3 Several burial plots in areas A, C, D and F are larger than is the typical pattern for plots represented throughout the churchyard. Several of these plots are located in areas F and D, scheduled for development. It is not clear whether these are family plots rather than single stacks or whether these differ in construction compared to the other burials (eg. comprise brick-lined subterranean graves). A description in the burial registers identifying specific purchasers of land within each area of the

cemetery indicates that only one area (Area A) is recorded as comprising of a vault built 8ft deep and constructed in 1879. The majority of the plots follow the same east-west alignment throughout each area although there are slight deviations, which are likely to have been made in order to fit burials into spaces between plots (e.g. Area C) or alternatively to fit the shape of the land as dictated by the cemetery boundary (e.g. Areas A and F).

- 3.3.4 A brief overview of the churchyard highlights the presence of several well-established trees that have a protective conservation status (St. Mark's Church, 2009). It is also reported that the most of the gravestones have been previously removed from the churchyard due to damage. A few monuments are reported as having been kept in the burial ground (St. Mark's Church, 2009), although the nature of these monuments is currently unknown. No archaeological works have been identified as previously undertaken in the burial ground.

4. AIMS OF THE INVESTIGATION

- 4.1 The general aims of the watching brief, as detailed in the WSI (Melikian and Ives 2009) were defined as being:
- To establish the presence/absence of archaeological remains within the site.
 - To determine the extent, condition, nature, character, quality and date of any archaeological remains encountered.
 - To make available to interested parties (DAC) the results of the investigation.
- 4.2 The specific objectives of the watching brief were to:
- Establish the minimum number of individuals interred.
 - Electronically 3 dimensionally record the location of any uncovered headstones and burials.
 - To record (photographic, written and drawn) any headstones.
 - To record (photographic, written and drawn) any coffins and associated coffin plates.
 - Carry out basic osteological recording of each individual dating to the 19th century, prior to re-burial, where appropriate.
 - To identify any evidence of pre-cemetery activity.
- 4.3 The final aim was to make public the results of the investigation, subject to any confidentiality restrictions.

5. STRATEGY

- 5.1 Fieldwork procedures followed the Museum of London's Archaeological Manual (MoL 1994).
- 5.2 The excavation, recording and reporting conformed with current best archaeological practice and local and national standards and guidelines:
- Council for British Archaeology – *First Aid for Finds* (Second Edition) (CBA 1987).
 - English Heritage – *Management of Archaeological Projects* (EH 1991).
 - English Heritage – *Archaeological Guidance Paper 3: Standards and Practices in Archaeological Fieldwork* (EH 1998a).
 - English Heritage – *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (EH 2002).
 - Institute of Field Archaeology – *Standards and Guidance and Guidelines for Finds Work* (IFA 1992).

- Institute of Field Archaeologists – *Standard and Guidance for Archaeological Field Evaluations* (IFA 1994).
- Institute of Field Archaeologists – *Code of Conduct* (IFA 1997).
- United Kingdom Institute for Conservation – *Conservation Guidelines No.2* (UKIC 1983).
- United Kingdom Institute for Conservation – *Guidance for Archaeological Conservation Practice* (UKIC 1990).

5.3 The watching brief was monitored by Chris Constable for the DAC and was managed by Melissa Melikian, General Manager, for AOC Archaeology.

5.4 A unique site code, MKU09, for the project was obtained from the Museum of London, and an OASIS form has been completed, aocarcha1-56273 (Appendix C).

6. METHODOLOGY

6.1 The exhumation was undertaken by a professional exhumation contractor, Burial Ground Services (BgS). The areas of exhumation and watching brief are shown on Figure 2. AOC Archaeology worked alongside the exhumation contractors to undertake the archaeological recording of the burials. The contractor provided the access and other facilities necessary for the safe collection and recording of archaeological data throughout the project. The exhumation contractor also arranged and sequenced their works so as to enable the archaeologists to record their observations without causing overall delay to the works program.

6.2 A number of general photographs were taken of the exhumation site before, during and after removal of the burials. The photographic record also included working shots to represent more generally the nature of the fieldwork.

6.3 Prior to ground reduction, any funeral monuments were digitally photographed *in situ* and 3D located using a total station. The monuments were removed to the periphery of the site by the exhumation contractor. The tombstones were sponged down and a tombstone context sheet recorded following Mytum (2000), noting the style of the monument, the material, dimensions, details of the inscription and any decorative motifs and masons marks. An additional photograph of the cleaned inscription was then taken.

6.4 Ground reduction and exposure of stone slabs covering the burials was undertaken with a mechanical digger and monitored by AOC Archaeology. Slabs were electronically surveyed, measured and recorded and then lifted by hand where possible. The brick grave outline was digitally surveyed using a total station. Every coffin was recorded, incorporating the dimensions, material, preservation, as well as the presence of any fittings such as handles or grips, as well as lid motifs or plates and coffin plates. The coffin fittings were sketched and described and breast plates were cleaned, described, sketched, photographed and the inscriptions recorded for each burial. The burials were digitally photographed *in situ* using between two and four targets points that were 3D located using a total station. Levels were taken at the base of every burial chamber as well as at the base of each stacked grave.

6.5 If the coffin was sealed or any soft tissue was found to be present then the remains were removed for reburial. Nineteenth century human remains within unsealed wooden coffins were lifted by the exhumation contractor under osteological supervision, bagged and moved to secure area of the site

before rapid osteological assessment. The osteological assessment followed relevant guidance (English Heritage 1991) and included establishing an age, sex and stature estimation as well as a brief description of any pathological conditions.

- 6.6 Once the human and coffin remains were removed, the individual brick graves were subject to archaeological recording (digitally, photographic, written and drawn).
- 6.7 A continuous unique numbering system was employed for the remains uncovered within each exhumation area (MoL 1994). Contexts and photographs were kept upon standardized pro forma sheets.
- 6.8 All staff and sub-contractors behaved with due care and attention, and an attitude of respect for the dead was upheld at all times
- 6.9 The reburial of the remains were managed and undertaken by Burial Ground Services. All remains were re-interred in the nearby Kingston Cemetery.

7. RESULTS

7.1 Natural Deposits

- 7.0.1 The natural deposits were uncovered at the base of the brick-lined graves and comprised of natural reddish-orange sand brickearth and sandy gravel. Some deposits of redeposited natural clay made ground were also found. The natural deposits represent the natural London Clay (BGS 2003).

7.2 The Cemetery

7.2.1 Grave Monuments

- 7.2.1.1 Seventeen grave monuments were found within the graveyard prior to the commencement of the exhumation. The majority were located within area F to the north of the church. Although the monuments relate to the burials within the graveyard, and specifically to those within the area they were found within, several were not found directly above the burial vaults they refer to (Figure 4). The dates of death from the grave monuments ranges from 1854 to 1960, although inscriptions on several monuments are incomplete and other examples indicate referrals to burials made elsewhere. The latest date of grave monument suggests that monuments continued to be erected in the cemetery after the grounds had been closed to burials (see Section 3.3). The inscriptions from the monuments are shown in Appendix D Table 1.

- 7.2.1.2 A variety of different styles of grave monuments were present in the cemetery. Seven grave monuments were associated with burials exhumed from the areas proposed for development. These monuments included flat stone slabs with inscriptions, a flat stone embellished with a cross as well as a capping stone over the length of the graves (Plates 1 to 5). Raised crosses were also present as grave markers for known burials, and again show variety in embellishment with climbing roses (Plate 4) and a Celtic cross with an incised spiral motif (Plate 5). Three of the graves with associated monuments covered vertically stacked burials from the same family, and in all instances the family members were included on the inscription on the monument.

7.2.1.3 The Burney family monument (Plate 5) is the only example of a cross applied to a horizontally laid stone slab. This monument covers the graves of (1193) Margaret Carmichael Burney, (1195) Eliza Mary Burney, (1200) Alice Warner Burney, (1201) Mary Ann Burney, (1205) Charles Burney, (1207) Elizabeth Carmichael. Of particular note in this family is the burial of Charles Burney who was the vicar of the parish of St. Mark's Church between 1870 and 1905 and who died in 1907. The inscription on the grave monument states that Charles was also the first Archdeacon of Kingston in 1879 (see Appendix D).



Plate 1. The grave monument for burials (2090) Priscilla Jerram and (2092) Edward Jenner Jerram.



Plate 2. The grave monument for burial (2088) Jane Feake Sandford.



Plate 3. The grave marker for burials (2038) Alice May Shilling and (2041) Henry Shilling.



Plate 4. Left: The grave monument for burial (1530) Alfred Broadhurst Hill. Right: The grave monument for burial (1439) Francis Adams.



Plate 5. Left: The grave monument for burial (1458) William Whitfield Esq. Right: The burial monument for burials from the Burney family, burials (1193), (1195), (1200), (1201), (1205) and (1207) (see text).

7.2.2 Burial Practice

7.2.2.1 A total of 200 burials were exhumed from St. Mark's Church under an archaeological watching brief. The burials were exhumed from two broad areas of the cemetery, Area F to the north, and an area to the southwest that was divided according to the historical burial plot (Figure 3) into areas D and E. cemetery areas F, D, and E. The burials exhumed from the cemetery closely matched the outlined historical plot of burials (Figure 3) and were largely found arranged in rows and the majority of interments were made in brick-built graves for either single or double burials. The majority of burials were inhumations (n.193), although seven cremation burials were also excavated (Figure 5). The graves contained burials that were vertically stacked as shown on Figure 6. Both adults and juvenile burials were found as shown on Figure 7. The surviving burial register (Section 3.3) together with well-preserved coffin furniture permitted all but ten (5%) of the exhumed burials to be dated. The majority of the exhumed and dated burials were interred at St. Mark's during the 19th century (n=146, 73%). The remaining 45 datable burials were buried during the 20th century.

Area F

7.2.2.2 Area F was located directly to the north of the church (Figure 8). It measured approximately 367m². Seventy-two brick-lined graves were excavated from area F together with one earth-cut grave. This area of the cemetery was arranged into 11 distinct rows orientated north to south, corresponding accurately to the cemetery plan. The graves were overlain by a tri-partite sequence of overburden deposits, comprising 0.10m of mid brown, clayey silt topsoil, above a 0.22m deposit of mid – light yellowish brown, loose silty clay made ground, which in turn overlaid a 0.16m thick deposit of mid – dark brown, soft, sandy silt buried topsoil. The height recorded at the base of the grave stacks ranged from 25.99mOD to 25.10mOD.

7.2.2.3 The brick-lined graves in area F were tightly packed together towards the east and became more spaced out to the west (Figure 8). The graves in area F varied in size and shape, but were generally grouped into rectangular graves, tapered "coffin shaped" graves and trapezoid shaped graves (see Section 7.0.4). Five rectangular brick vaults capable of containing double burials were found in area F and contained up to six burials. A total of 140 inhumations were revealed within the brick graves uncovered in area F, of which 11 were juveniles. Two cremation burials were located set within square stone built graves bonded to earlier inhumation vaults. One additional cremation was found in area F in the same grave and lying alongside the inhumation burial of (1393) (Section 7.2.3).

7.2.2.4 The dates of burial indicate that interments were made in the east aspect of area F before graves in the western end of area F were utilised. Family burials continued to be added to already existing brick graves across the area. The majority of the juvenile burials were found at the northern end of the rows, although this was likely to have been the most practical utilisation of the available space.

Area D

7.2.2.5 Area D was found in the southern corner of the site, extending northwards adjacent to the western retaining wall of the graveyard (Figure 9). Within the area a total of 21 brick built graves were revealed (Figure 9) in 2 distinct rows. A number of the brick graves were not shown on the cemetery plan for the site. The brick graves also varied in shape (rectangular, trapezoid, tapered) in the manner identified in area F. A total of 30 inhumations were revealed in the graves uncovered in area D, of which only 1 was juvenile. Two cremation burials were found in ceramic caskets in a rectangular brick grave from area D. The on-site works investigated 16 numbered grave plots that were identified on the historical plan of the cemetery (Figure 3), but which did not have an associated burial register number. The works confirmed that no burials or graves had been made in these plots and as such these likely indicate the potential areas of grave locations that had been available for purchase. The levels at the base of the shafts measured from 27.48mOD to 28.76mOD.

Area E

7.2.2.6 Area E was located directly to the west of the church's western entrance, to the north and east of Area D and to the south and west of area F (Figure 10). Within area E a total of 20 brick graves were found, comprising rectangular and tapered graves, and two stone built square graves for cremations. The burials revealed within the area totalled 24, composed of 6 adult, 16 juvenile and 2 neonate burials. The high amount of juvenile and neonate inhumations appear related to the close vicinity of this area to the western door of the church.

Grave Construction

7.2.2.7 The majority of the burials were interred in a single-width brick-lined grave (n. 185, 92.5%). Fourteen (7%) of the graves were classed as burial vaults, which are defined by Litten (1992) as subterranean chambers that were designed for at least two adjacent burials. Both hard fired red and yellow stock bricks were used to construct the graves, and standard sizes appear to have been used measuring 230mm by 110mm and 70mm. A grey cement mortar was used to bond the graves with an irregular coursing. The graves appear to have been trench built with the bricks placed directly against the cuts through the natural clays. There was no clear backfill behind the bricks, although there were no clearly visible trench cuts.

7.2.2.8 The brick-lined graves tended to contain vertically stacked burials. One brick grave contained two juvenile coffins buried adjacent to each other in the same chamber (Plate 6). The number of burials in a single-brick grave varied between one and six and is illustrated in Figure 6. The double brick-lined vaults contained between one and six burials. Only one soil grave (1317) was found lying below the floor of burial vault (1313) (Plate 7). This burial was aligned west-east and was found with traces of a wooden coffin. Unusually, the lower legs and feet extended beyond the walls of the brick vault above. It is not clear why this burial deviated from the burial practice demonstrated throughout the remainder of the cemetery. The burial could not be identified or dated.



Plate 6. Two juvenile lead coffins buried adjacent in one chamber of a vertically stacked brick-lined grave.



Plate 7. Earth-cut grave found underlying stone slabs at the base of brick vault. The skeletal remains showed some disturbance, the skull was upside down (bottom of image) and the lower legs and feet extended beyond the wall of the vault to the east (top of image).

7.2.2.9 The was notable variety in the shape of the brick graves throughout the cemetery, ranging from the standard rectangular shape to tapered and trapezoid shapes, which mirrored coffin shapes. The identified shapes are outlined in Table 1.

Inhumation Brick Grave Shape	Number
Rectangular	120
Tapered	54
Burial vault	14
Trapezoidal	4
Total brick graves	192

Table 1. Variation in the outline shape of the brick-built graves.

A total of 186 of the brick graves could be dated by the survival of coffin furniture and correlation of burial plots with the burial register. Table 2 shows the extent to which the shape of the brick grave varied depending on date of interment. The majority of coffined inhumation burials were from the 19th century. Rectangular brick graves were by far the most predominant grave shape in the exhumed burial areas, in both the 19th and 20th century. Double vaults for families were used for burials in both the 19th and 20th centuries.

Inhumation Brick Grave Shape	Nineteenth Century	Twentieth Century
Rectangular	90	24
Tapered	45	9
Double vault	6	8
Trapezoid	4	0
Total	145	41

Table 2. Variation in the outline shape of the brick graves by date of burial

7.2.2.10 The brick-built graves were typically 2.30m long and 0.80m wide. The longest brick-grave recorded measured 2.40m for grave (1001), which contained three coffined inhumation burials. The depth of the graves varied depending on the number of stacked burials interred in the bricked chambers. The deepest brick-lined grave (1059) was 2.52m deep and contained six single vertically stacked burials. The level at the base of this stack was 24.76mOD. The measurements recorded for each grave are presented in Appendix A.

7.2.2.11 All but three of the brick-lined graves were sealed by stone slabs, which were made from sandstone, (Yorkstone) limestone and grey-purple slate (Plate 8). Three to five slabs were typically used to seal the graves. In one instance, the length of an adult grave was sealed by one complete slab of slate. The records of the number of stones, material and dimensions used for each burial are contained in the site archive. In all but two instances, individual chambers within the brick-lined graves were sealed by stone slabs. Various means of construction were demonstrated as supporting the slabs separating the stacks of burial chambers. Slabs were predominantly inserted directly into recesses into the grave walls. In some instances, slabs were also found laid resting on small stone or tile ridges protruding from the walls of the brick graves. Slabs were also found supported by metal bars supported on stone ridges in the brick walls of the grave. The deviants from this practice include the earth-cut burial (1317), and burial (1235), whose lead coffin was found resting directly onto metal

bars dividing the width of the chamber and which were all that separated the coffin from the burial (1238) lying underneath (Plate 9).



Plate 8. The arrangement of the cemetery composed brick-lined graves sealed by stone slabs as shown in this example of burials from Area F.



Plate 9. Metal bars across the width of brick grave (1226) that supported coffin (1235) but without any stone slabs in place to separate the burial chambers.

The use of stone slabs to seal the majority of the brick-lined graves had ensured that the burial chambers remained relatively free from a fill deposit. The exceptions to this included three burials (1058, 1282, 1369) in Area F that were earth-filled and one burial chamber that was filled with sand (1288). These burials were exposed by machining and subsequently hand dug.

7.2.3 Cremation Burials

7.2.3.1 Seven of the burials exhumed from St. Mark's Church were cremation burials. Three of the cremations could be dated and were interred in the cemetery during the 20th century. One cremation burial was considered of a probable 20th century date due to its association with the burial of an adjacent cremation casket (Table 3). Three cremation burials were unidentified. One of the cremation burials had a coffin plate establishing the identity of the burial as Matilda Sara Zimmern (2163) who was buried in 1933 aged 80 years. This cremation was buried adjacent to a second cremation (2164) in a modern brick built vault. The cremations were buried above an inhumation burial (2168), a juvenile in a lead coffin identified as belonging to Adolfus Charles Zimmern who was buried in 1875 aged 11 months. This example indicates the manner of family burial plots that were encountered during the exhumation.

Burial	Description	Date of Burial	Inscription
1028	Rectangular cremation casket	1920	Stanley Pattison Born 15th Oct 1861 Died 3rd Jan 1920
1395	Rectangular cremation casket	n/a	n/a
1522	Rectangular cremation casket in outer wooden case	1918	Edward Collett died Dec 18 th Dec 1918
2095	Rectangular cremation casket	n/a	n/a
2097	Cylindrical unliddded cremation casket	n/a	n/a
2163	Rectangular cremation casket buried adjacent to 2164	1933	Matilda Sara Zimmern died 31 st Oct 1933 aged 80 years
2164	Rectangular cremation casket buried adjacent to 2163	20 th Century?	n/a

Table 3. Summary of the exhumed cremation burials.

7.2.3.2 Two of the cremation burials were found placed in the grave together with an inhumation burial. In (1028) the cremation casket had been lowered in the brick-lined grave of burial (1029) through a purpose built modern brick extension to the grave located at the foot (east) end of the brick-lined grave (Plate 10). In the second example, the cremation casket (1395) was placed directly in the brick-lined grave to the left (north) of the now exposed lower legs of the adjacent inhumation burial (1393, Charles Holmes buried in 1393) (Plate 11).

7.2.3.3 All but one of the cremation caskets were rectangular, ceramic and sealed. In several instances, thin lead wire, used to keep the lid attached to the remainder of the casket, was present. Two of the sealed caskets displayed round tags attached to the lead wire, with one bearing the stamp of "The Cremation Society". One cremation burial (2097) comprised of an English stoneware multi-functional type vessel of an urn/vase-shape. The vessel almost resembled a domestic stoneware storage vessel. There was no evidence for a ceramic, wooden or textile lid attached to the vessel or found in the grave. The vessel was placed on its side in the grave shared with cremation casket (2095) but separated by remnants of a wooden partition, which may indicate that (2096) was a slightly later addition to the grave (Plate 12). The cremated bone remains were visible loose inside the jar (Plate

13). The surface bone fragments were extremely white indicating an efficient cremation at a high temperature (600+°C). Despite this, the bone pieces remained in identifiable fragments, which included a distal left adult fibula, two fragments of adult thoracic vertebrae, one fragment of adult rib, and one fragment of juvenile cranial vault.



Plate 10. Cremation burial (1028) placed into the brick-lined grave of burial (1029) at the west end over the foot of the previously interred lead coffin.



Plate 11. Cremation burial (1395) buried to the left (north) of the legs of inhumation burial (1393). The cremation could not be identified but is likely to have been a family member related to burial (1393). Note the lead wire at the left and right sides of the cremation vessel tying the lid to the base.



Plate 12. Two cremation burials (2095) and (2097) lying adjacent in a rectangular grave. The cremated remains of burial (2097) were placed in a circular stoneware vessel unlike the rectangular forms and was placed adjacent to remains of a wooden partition.



Plate 13. There was no evidence of a ceramic, wooden or textile-made lid for the cremation vessel (2097). The burnt bone fragments were exposed.

7.2.4 Coffins

7.2.4.1 Of the 193 inhumations, 164 were adult burials and the remaining 29 were juveniles (under 18 years) (Figure 7). The demographic profile of the burials is presented in Section 7.2.7. Burials were made in both metal and wood coffins (Plate 14). Of the adult burials exhumed, 83 were in lead coffins, 78 were in wooden coffins. The majority of adult lead coffins contained burials dating to the 19th century, with 73 burials compared to only 10 lead coffins buried in the 20th century. Of the 78 adult burials in wood coffins, 45 dated to the 19th century, 30 burials with wooden coffins dated to the 20th century and three wooden coffined burials remained undated. Three of the adult burials were made in zinc coffins, dating to the 19th century in two cases and the 20th in the third case. Twenty-five of the 29 juvenile burials excavated from the cemetery could be dated, and these all derived from the 19th century. Fifteen of the juvenile burials were made in lead coffins. Fourteen juvenile burials were in wooden coffins. The four undated juveniles were buried in wooden coffins.



Plate 14. Example of brick-lined vault for double burials with a brick wall partition and a well-preserved wood-lined lead coffin (right) and a decayed and collapsed wooden coffin exposing the skeletal remains (left).

Coffin Construction and Decoration

7.2.4.2 Coffins from the burials at St. Mark's were made from wood, lead and zinc and frequently contained composite mixtures of these elements. It was possible to suggest the wood species used for coffin construction in several examples from the exhumed burials. Burial (1129) was a double-shelled wooden coffin with the internal shell made of pine. The outer wooden coffin could not be identified but was made with an extra thin strip of wooden beading placed around the base of the coffin outline. In other cases, coffins had been made from oak (e.g. 1334, 1346). It was not possible to determine

the wood species for all of the coffins exhumed due to varying stages of coffin collapse as well as the rapid nature of on-site works.

7.2.4.3 Where wooden coffin lids had slumped or decayed in the grave, it was possible to identify sections of vertically aligned incomplete incisions or saw marks on the internal aspect of the shouldered designs. This kerfing allowed the planks to be bent to create the shouldered shape of the coffin and eliminating the need for separate planking to be fixed to create shoulder angulation (Plate 11). There was also evidence to indicate that lead coffins were frequently made with wooden outer shells and in some instances demonstrated inner wooden shells, an intermediary lead shell and a final wooden outer coffin. One of the zinc coffins comprised of a zinc lid with lead sides of the shell. Detailed recording of coffin construction has been made on earlier post-medieval burials sites (e.g. Reeve & Adam 1993). It was not possible to undertake a similarly detailed recording of coffin construction on the burials from St. Mark's due to the rapid nature of the site works.



Plate 15. Examples of kerfing or partially sawed vertical lines in wooden coffins to aid bending the sides to create a tapered shape. Example from a well-preserved double wood coffin.

7.2.4.4 Several of the lead coffins also demonstrated preservation of a wooden board on which the metal coffin plate had been attached. Not all lead burials presented evidence of an outer wooden shell, although it is possible that wooden remains had deteriorated after burial. It is also possible in such cases that a different method of coffin casing was used, for example textile remains, which formed the base for the attachment of any wooden fittings.

7.2.4.5 A range of coffin decoration could be identified on well-preserved coffin remains. The range of coffin decoration identified is outlined here and is illustrated in Figure 11. Examples of painted decoration remained on several lead coffins including black and white borders on coffin lids together with white painted panelling on coffin sides. Several lead coffins displayed faint traces of diagonally cross-hatching formed by faint incisions scored over the coffin sides. This type of decoration was very subtle and it is not clear whether this was intended to be seen as the external aspect of the coffin, or whether other means of decoration also existed that had not survived.

- 7.2.4.6 The coffin remains frequently displayed elements of studded decoration over both the lids and coffin sides. Studding was formed by rows of upholstery pins and it is likely that these would have originally been fixed into wooden outer shells or textile remains. Two types of studded decoration existed in the burial assemblage; patterns formed by individual, small, rounded studs pressed into the coffin shells, together with larger, rounded, co-joined studs that formed long linear rows of studded outlines. Both types were used to form various patterns of coffin decoration, although the co-joined studs frequently formed an outline of the coffin shape on the lid remains. Separate, smaller studs were used to create single and double rows of studded coffin outlines together with the creation of panelling effects on both the coffin lid and sides. The variation observed in studded decoration on the coffins is outlined in Figure 11. One very well preserved wooden coffin (1525) displayed a decorative raised outline of the coffin lid made of thin wooden beading rather than upholstery pin studding. This burial could not be dated, but the degree of preservation and wooden beading was thought likely to indicate a 20th century date of interment.
- 7.2.4.7 Fragmentary textile remains had survived on some of the lead and wooden coffin remains. All of the textile remains were poorly preserved, which together with the rapid nature of the on-site works did limit the extent of recording that could be undertaken on these remains. No samples of textile were taken for further analysis and all textile and coffin remains were individually bagged and reburied together with the human remains.
- 7.2.4.8 In at least two instances, a soft outer layer of material was found covering a lead coffin. In example (2030), an unidentified juvenile burial, the covering comprised a soft brown material, which may have been an outer leather shell. Further traces of a felt-like textile were found over the remains of the degraded wooden coffin of (1304). This coffin was unusual with the presence of extremely ornate gold plated coffin grips and coffin plate. The coffin belonged to a William Fothergill Batho who was buried in 1886 aged 58 years. The burial of (2054), Hannah Fielden Mitchell who was buried in 1883 aged 78 years, also displayed remnants of a green felt or possible velvet fabric as an outer-lining to the coffin remains. Traces of a felt lining were also present over the lead coffin of burial (1155), Thomas Evans Jones who died in 1874 aged 68 years. There was insufficient preservation of textiles on the coffin remains to permit a detailed investigation of possible trends in coffin design and decoration. It does appear however, that burials of either sex could be decorated or finished with textiles. There was insufficient preservation of textile remains to permit consideration of possible changes in coffin decoration by date of interment.
- 7.2.4.9 One coffin was particularly unusual in the burial assemblage exhumed from St. Mark's cemetery. A small rectangular piece of glass mounted in a wooden frame and with what appeared to be thin textile or painted traces on the glass was present over the legs of the skeletal remains of the child in burial (2146) (Plate 16). The burial was located in Site E within the cluster of child burials found at the west of the churchyard. The nature of the glass panel was not immediately clear but is discussed further in Section 8.



Plate 16. A wooden framed glass picture was found placed in a juvenile coffin resting over the legs and can be seen here (arrowed) together with a partial circular wire wreath from the coffin decoration.

7.2.4.10 Several burials displayed traces of furnishings related to the internal aspects of the coffins. The damaged lead coffin of burial (1121) displayed traces of hay or grass padding from inside the coffin (Plate 13). The material appeared too coarse to have been horse hair. Pitch had been used to line several coffins and had adhered to the skeletal remains in several examples; for example in burial (1157), Arthur Frank Sutherland, who died aged 29 years and was buried in 1887, and burial (1358), John Richard Race Godfrey who was buried in 1898. John Godfrey's (1358) coffin also presented evidence for sawdust, which was often used as coffin filler in order to soak up coffin liquids from decomposition and embalming fluids. This was a common practice during the post-medieval period and the instances observed from the St. Mark's burials indicates that the practice continued until at least the later stages of the 19th century.



Plate 17. Example of probable grass or hay padding from the inside of a damaged coffin.

Coffin Plates

7.2.4.11 Of the 200 burials exhumed from St. Mark's cemetery, 14 did not have any surviving traces of a coffin plate or had not been buried with a name plate. Of the seven cremation burials, three (1028), (1522), (2161) had associated name plates allowing individual identity to be established. The coffin plates of a further 17 individuals were extremely degraded and were not legible. The metal used for the coffin plates could be determined for 155 of the 200 burials (77.5%). The most frequently used metal for the coffin plate was tin (69%). The remaining coffin plates were made of lead and brass (Table 4).

Metal	Count	Percentage of Sample
Tin	108	69
Lead	25	16
Brass	22	14
Total	155	

Table 4. Composition and prevalence of coffin plates in the burial assemblage.

7.2.4.12 There was marked stylistic variation in the decoration of the coffin plates throughout the sample as illustrated in Figure 10. The predominant shape was of a tapered plate, which varied as to the degree of decoration of the border lines. Simple incised lines were often adopted to create a border. Less frequently borders were demarcated by the use of paint, likely an enamel wash to create a black border or a white lead paint to create a lighter panel (Plate 18).



Plate 18. Example of a tapered coffin plate with a painted black border.

7.2.4.13 In 19 cases, a gold wash had been applied to the coffin plate to create a burnished appearance. Nine of the coffin plates displayed paint application to the lettering of the inscription, varying between blue, black and red. Red paint was utilised to highlight capital letters of each word together with numbers as shown in Plate 19. This type of decoration was used for burials dating to both the 19th and 20th century and for both males and females.



Plate 19. Detail of the painted decorative lettering on a coffin plate from burial (1201) dating to the 20th century.

7.2.4.14 Coffin plate design also varied through elaboration of the plate borders, with examples including raised floral designs as well as stylised architectural designs of facade-style raised upper and lower borders (Plate 20). Further elaboration altered the shape from the typically rectangular design to those with elongated or emphasised corners to those completely different for example with shield or diamond shaped designs (Figure 12). Two of the coffin plates were of an unusual stepped design (Figure 12).



Plate 20. Examples of the various decorative designs of coffin plates in the burial assemblage.

7.2.4.15 The inscriptions recorded for each legible coffin plate are shown in Appendix D Table 1. As with coffin plate decoration, there was considerable variation in the style of inscription presented on the coffin plates, ranging from capitals, bold, gothic and italicised designs. Full analysis of the variation in text style is beyond the scope of this report. Each inscription together with the style of writing was

copied from the legible coffin plates and the records are contained in the site archive. The contents of the inscriptions showed little variation throughout the burials. The text frequently presented the name of the deceased with the date of birth and date of death or in some cases presented the date of death and age in years without showing the date of birth. In all but one example, the full name of the deceased was presented; in burial (1413) the name was abbreviated to "L.E.D". The burial register for this individual recorded the full name as Liza Elizabeth Dodson, who was buried in the cemetery in 1886. Titles were not often included on the coffin plate inscriptions.

7.2.4.16 Five coffin plates presented information beyond basic identification of the deceased. These records are shown in Table 5 below. Further investigation of the individuals and families buried in the cemetery areas under investigation was beyond the scope of this report, but there is potential for several individuals to be identified in historical records. Variations also existed in the text inscribed to commemorate the deceased and included "Rest in Peace" as well as the abbreviation "RIP", "In loving memory of ...[name] interred into rest", "...entered into rest", "...laid to rest", "...at rest", "...departed this life", and "...fell asleep".

Burial	Coffin Plate Inscription
1151	Revd Edward William Jones, died 29 th Dec 1901 aged 34 years
1329	Colonel Arthur Booth Wilbraham died 21 st May 1897 aged 54 years
1464	William Weyland Kershaw M.D. born 27 th July 1821 died 15 th January 1892
1517	Humphrey Barker Chamberlin born at Manchester 7 th Feb 1847 died at K.... 16 th May 1897
2089	Jane daughter of Jonathan Feake Esq of Durrington House Essex and widow of Feake Sanford Esq of Surbiton born 3 rd Dec 1814 died 18 th Oct 1880 aged 65

Table 5. Coffin plate inscriptions with additional details than was typically found in the assemblage.

Coffin Grips

7.2.4.17 Coffin grips are the handles placed around the sides of the coffin. It is not clear whether these were intended to be functional or purely decorative; in many examples the grips could no be envisaged carrying the weight of the coffin. A total of 1164 grips were found from the 200 exhumed burials. The style of grip differed throughout the assemblage to the extent that 23 different designs were noted among the burials (Table 6). Figure 13 illustrates the range of grip styles and several examples of the grip plates found in the assemblage. Grips from all but two of the burials were metal. Of the 198 burials with metal grips, the majority (n=145, 73.2%) were made of brass. The remaining metal grips were made of cast iron, some examples with enamel coating as well as copper alloy, iron and electro-plated silver grips. Burial (1525) had grips and grip plates that were fashioned entirely from wood and were extremely well preserved. These grips were decorative and could not have carried the weight of the coffin. A second burial (2111) was a juvenile burial whose coffin had wooden grips that were capped with metal. The design of the grips of this burial could not be ascertained due to collapse of the wood. This style has not been included in Table 6.

7.2.4.18 The number of grips per coffin showed slight variation but most burials were found with between six to eight grips. Coffins with eight grips included three grips on each side and one at the head and foot end respectively. Coffin grips were found with two of the cremation burials together with decayed wooden remains, indicating that they were enclosed in outer wooden coffins or caskets adorned in a

similar manner as the coffins. Just over half of the burials in the assemblage were found with the maximum number of eight coffin grips per coffin (107/200 burials 53.5%). A further 34 (17%) burials were found with 6 coffin grips, indicating quite good preservation and recovery during exhumation of the coffin furniture from the burials.

7.2.4.19 The prevalence and date range of the styles of coffin grips in the assemblage are shown in Table 6. Grip style 1 was the most frequently found type of coffin grip and was a simple style compared to others in the assemblage. Grip style 1 was found on burials dating throughout the 19th and 20th centuries (1876-1933). Grip style 8 was the second most frequently occurring grip style and dated to 1885-1912. Eight grip styles were present in burials dating to both the 19th and 20th centuries (Table 6). Eleven of the grip styles found in the St. Mark's burials were present in burials dated to the 19th century (Table 6). Three styles of grip plates were found on burials only dating to the 20th century (Table 6).

Style	Count	Date Range	Century of Usage
1	453	1876-1933	C19 & C20
2	124	1880-1915	C19 & C20
3	43	1876-1907	C19 & C20
4	25	1874-1889	C19
5	14	1913-1928	C20
6	85	1873-1927	C19 & C20
7	24	1883-1916	C19 & C20
8	169	1885-1912	C19 & C20
9	68	1873-1923	C19 & C20
10	12	1883	C19
11	23	1875-1882	C19
12	14	1873	C19
13	4	1871	C19
14	4	1910	C20
15	12	1877-1883	C19
16	15	1874-1877	C19
17	4	1886	C19
18	31	1880-1889	C19
19	15	1869-1926	C19 & C20
20	14	1872-1879	C19
21	2	1918	C20
22	8	1861	C19
23	1	1880	C19
Total	1164		

Table 6. Prevalence and date range of the styles of coffin grip recorded from the burials.

7.2.4.20 Four of the brass coffin grips displayed stamped text and/or numbers on the reverse side as shown in Table 7. As indicated in Table 7, the numbers on the reverse of the grips are not the same, suggesting that they represent the individual batch number of each grip rather than a production or batch number.

Burial	Stamped Text/Numbers	Grip Style
1081	Dottridge Bros. No. 2105	6
1120	Clive	1
1142	5400	1
1515	249-C	1

Table 7. Coffin grips with stamped decoration on the reverse of the grip.

Lid Motifs

7.2.4.21 Of the 200 burials, 104 (52%) had metallic lid motifs, which provided additional decoration on the coffin. None of the cremation burials displayed evidence for any such lid motifs. Therefore, of the 193 coffined inhumation burials, 53.8% showed evidence of surviving metallic lid motifs.

7.2.4.22 Lid motifs were found in a variety of different styles as outlined in Table 8. The most frequent motif was a metallic cross or crucifix, which formed 41.3% of the embellished sample. There were a range of variants of the designs of crosses present throughout the burials as illustrated in Figure 12, and included crosses embellished by circles and floral designs. There were also a large number of burials adorned with elaborate and floral designs, the latter comprised intricate leaf designs depicting holly, ivy and roses. Metallic starbursts were found on 6.7% of the burials. Figure 12 illustrates a range of the lid motifs found in the assemblage.

Style	Number of Burials	Date Range
Cross	43	1871-1923
Floral designs	32	1883-1928
Cross and floral design	7	1883-1897
Urn and flowers	7	1888-1923
Sunburst	7	1885-1892
Star	3	1878-1892
Star and cross	3	1885-1889
Roundel with flowers	1	1885
Hand holding flowers	1	n/d

Table 8. Prevalence and style of coffin lid motifs found in the burial assemblage.

7.2.4.23 The most frequently occurring lid motifs were crosses as well as plaques made to feature a variety of intricate floral patterns. These designs were used in both the 19th and 20th centuries. Examples of urns and flowers were also present on burials dating from the 19th and 20th centuries (Plate 21).



Plate 21. Example of a decorated juvenile lead coffin with raised co-joined upholstery pins, partial circular wire for a wreath, tapered coffin plate together with lid motifs comprising a hand holding flowers at the head and a urn with probable flames at the feet.

7.2.4.24 Stars and the sunburst motifs (see Figure 12) did not occur on burials dated after the early 1890's, which suggests that these more elaborate but quite small motifs were less fashionable for coffin decoration. There were slightly more males buried with crosses than females (24M, 19F). Burials decorated with stars and crosses, stars alone, sunbursts and floral designs included slightly more females than males.

7.2.5 Floral tributes

7.2.5.1 Twenty-three burials were recovered with wire frames placed on the coffin. The frames are likely to be remnants of floral wreaths derived from the burial. Coffins of both sexes were found with evidence of floral wreaths throughout St. Mark's cemetery, although slightly more males (n=14) had wreath remains than females (n=8). Both adults and juveniles were buried with wire wreaths, indicating similar traditions for floral tributes were utilised for burials regardless of age. Only one of the burials with evidence of wreath remains dated to the 20th century (1052 - Esther Elizabeth Jennings who was buried in 1904); the remaining burials with wreaths dated between 1873 and 1897.

7.2.5.2 The position of the wreath on the coffin showed some variation with placements at the head of the coffin, over the breast plate or chest, or at the foot end. Thirteen burials (13/23 56%) were found with two or more wreaths on the coffin. Eight of the individuals with multiple wreaths displayed two circular wire frames placed one at each end of the coffin. Individuals (1070), a juvenile burial, and (1134), an adult burial, were exceptional in having five circular wreaths placed over the coffin. Of the twenty-three burials with wreaths, three had metal frames that were not circular. One individual (1041) displayed a wire in the form of a cross, which was placed over the chest. Burials (1267) and (1393) were similar in displaying wire frames of cruciform wreaths but were also accompanied by circular wire wreaths on the coffin (Plate 22).

7.2.5.3 Two further burials, (1367) and (1458), displayed wire frameworks for funeral wreaths in unusual designs. Individual (1367), Francis Shaw died aged 89 years and was buried in 1894 in a wooden coffin with a large wire wreath in the shape of an anchor placed over the chest (Plate 22). This may indicate that the individual had been a sailor or associated with the merchant or military navy during his lifetime. The individual William Whitfield (1458) who died in 1890 aged 30 years had a lead coffin whose length was covered with three large open wire frames (Plate 22). Whilst no floral evidence remained in the grave the presence of the wire frame suggests that the whole coffin was buried covered in floral tributes. The brick-lined grave for this burial was also covered with studs pressed into the bricks. There was no trace of fabric hangings attached to the studs, or evidence of any wire frame for any further floral tributes but it is possible that such decoration had originally existed for the burial but had not survived. This was not however, a typical form of decoration of the grave in the burials excavated.

7.2.5.4 Faint traces of preserved plants leaves were found in small quantities on the breast plates of two burials of the Jennings family. The first burial belonged to (1121), James Love Jennings who died aged 70 years and was buried in 1888. The second burial belonged to (1051), Esther Elizabeth Jennings who was buried in 1904. The coffin plate of Esther's burial displayed traces of plant leaves

together with faint traces of textile, likely remains of the ribbon tied to the wreath or flowers. The plant remains were present in small quantities that could not be identified to plant species during the rapid on-site works prior to reburial. No other traces of plant remains were found across the burials from St. Mark's cemetery.



Plate 22. Variation in the style and shape of wire wreath frames in the assemblage. Left: A wire frame in the shape of an anchor. Middle: The coffin is covered with a meshed wire framework. Right: Two circular wire wreaths and a rectangular wire central frame.

7.2.6 Personal Adornment

7.2.6.1 Several individuals from St. Mark's Church were found with evidence of textiles that were not aspects of coffin furnishings. Detailed analysis of textile remains was not possible on-site. All textile recording was done with the remains *in situ*. No clothing remains were removed from a burial for recording. All fragments of textile remains from the coffins and personal adornments were collected during the excavation of each burial and were placed in individually labelled bags for reburial with the human remains.

Clothing

7.2.6.2 One individual, Adeliza Broomhall, who was buried in 1907 aged 89 years (1442), was found with a loose or open-weave of fine thread over the head as though a bonnet or shawl placed around the head (Plate 23). The thread appeared thinner than wool although the textile may have degenerated

whilst buried. Another individual, Charles Lock Luck who was buried in 1890 aged 56 years, was found with a heavy texture of material, possibly woollen socks found placed over the feet (1436).

7.2.6.3 Individual (1452), John Broomhall aged 73 years who was buried in 1896, was found with a piece of blackened textile covering the face and most of the remainder of the skull. The material was quite thick and coarse in texture. There was no evidence of styled features on the fabric and it is likely that this was part of a winding sheet or shroud that would have covered the whole body including the face for burial. Fragmentary remains of textile were found over the top of the hips and pelvis of the burial of Eliza Amelia Thornton who died in 1889 aged 82 years (1289). The remains were too poorly preserved to identify whether the textile represented a shroud or specific items of clothing.



Plate 23. Textile remains covering the head of burial (1442), possibly a bonnet or shawl.

Pins

7.2.6.4 One shroud pin was found on the sternum of the skeletal remains of an adult female, Adeliza Henrietta Hall who died in 1895 from St. Mark's (1429), indicating that some burials were wrapped in shrouds prior to placing within the coffin and burial. Further evidence for burials in shrouds came from two burials found with safety pins: (1256), an unidentified individual, and (1326), Mary Bennett who was buried in 1896. It is probable that safety pins were used to fasten winding sheets or shrouds in these burials.

Buttons

7.2.6.5 Five individuals were found with buttons during the excavation. Three of the individuals with buttons were male: (1100) Henry Gamble Hobson, aged 78 and was buried in 1923, (1480) Herbert Crosthwaite who was buried in 1906 aged 68 years and (2075) Frederick William Rowlatt who was

buried in 1914 aged 90 years. It was not possible to identify the composition of most of the buttons, although those from the latter burial of Frederick Rowlatt were two small mother-of-pearl, two-holed buttons. One individual with buttons was female (1289), Eliza Amelia Thornton who was buried in 1889 aged 82. The remaining individual (1256) was of undetermined identity; the buttons in this burial were found over the chest. Of the four individuals with buttons and established date of burial, only the female burial of Eliza Amelia Thornton (1289) was dated to the 19th century (1889). The remaining burials with buttons were dated to the 20th century. There was insufficient textile evidence to identify any associated textile remains with the buttons. It therefore remains unclear whether the buttons derived from funerary shirts as were sometimes used during the post-medieval period or whether it indicates the wearing of shirts or day clothes for burial.

Shoes

7.2.6.6 A large fragment of curved leather originating from a shoe was recovered from one burial (1193) from Margaret Carmichael Burney who was buried in 1914 aged 64 years. It is unlikely that individuals wrapped in shrouds were buried with shoes, so it seems more plausible that some individuals were also buried dressed and wearing shoes, or else shoes were included in the burials.

Dentistry

7.2.6.7 During the excavations, a total of 10 adult burials were found with dentures of varying styles. All but two set of dentures were separate plates for the mandible and maxilla. The set of dentures belonging to burial (1077), Mary Sophia Wallich who died in 1903, comprised maxillary and mandibular plates that were attached by a metal spring at the back portion of each set. The denture plate that covered the mandibular gums were made of pink plastic, most likely vulcanised rubber. The plate covering the hard palate of the maxilla was gold or gold-plated and there was a raised heart motif embellished over the centre of the hard palate (Plate 24). It is interesting to note that a second female burial of the Wallich family, (1080), Sophia Wallich who died aged 79 years, was also buried in 1876 wearing a set of dentures. This latter set of dentures were also made of hinged plates with pink plastic over the mandible and a gold plate over the maxilla. There was no embellishment in the gold plate of this latter set. Four mandibular molars from (1080) displayed crossed incised lines in order to mimic the crevices of the normal molar tooth surfaces (Plate 25). None of the exhumed burials were found with two sets of dentures.

7.2.6.8 A set of loose maxillary and mandibular dentures from the burial of Anne Day (1095) were made of pink plastic but demonstrated gold plates attached to the internal aspect of the mandible as well as partially covering the hard palate. These plates were likely included to provide a smooth surface to fit adjacent to the soft tissue of the wearer's mouth. The molar teeth of the mandible were also incised in a similar although cruder fashion than those of (1080) (Plate 26).

7.2.6.9 Six of the ten individuals with dentures had both maxillary and mandibular plates. Three individuals had mandibular plates only and one individual had a maxillary plate only. Individual identity was established for nine of the ten individuals with dentures. Interesting, eight of the nine individuals with dentures were females; only one male burial was found with dentures. The results are summarised in Table 9. Three of the individuals with dentures were buried in the 19th century and six were buried in the 20th century.

Burial	Name	Age	Year of Burial	Description
1077	Mary Sophia Wallich	-	1903	Pink plastic, hinged maxillary and mandibular plates, gold plating maxillary hard palate with heart design, likely porcelain teeth with gold riveting
1080	Sophia Wallich	79	1876	Pink plastic, spring hinged maxillary and mandibular plates, gold plating maxillary hard palate and mandible, spaces for all canines and one real maxillary canine in situ in denture, likely porcelain teeth with gold riveting
1095	Anne Day	62	1892	Pink plastic separate mandible and maxilla dentures
1148	Jane Jones	69	1923	Pink plastic separate mandible and maxilla dentures
1195	Eliza Mary Burney	-	1917	Pink plastic separate mandible and maxilla dentures
1256	?	?	?	Pink plastic separate mandibular denture
1281	Dorothy Kirkland Glazebrook	78	1923	Pink plastic separate mandibular denture
1380	Ann Maria Strapp	-	1923	Pink plastic separate mandible and maxilla dentures with spaces maintained for the maxillary first and second incisors, which were retained
1439	Francis Adams (male)	71	1892	Pink plastic separate maxillary denture
1483	Constance Russell Fullerton	82	1922	Pink plastic separate mandibular denture

Table 9. Summary of the individuals with dentures by date of burial and style of fittings.

7.2.6.10 The dentures of two individuals, (1095) and (1380) were observed to have spaces in the dental bridges for original or real teeth. The dentures of (1095) Anne Day, maintained spaces for all of the mandibular and maxillary canines and the left maxillary canine was retained in situ in the denture (Plate 26). Burial (1380) maintained spaces in the dentures for the maxillary first and second incisors and real teeth were retained, although were discovered to have become loose from the maxilla after burial. The dentures belonged to Ann Maria Strapp, who died in 1923; her age at burial was not discernable.



Plate 24. Example of the hinged, full set of denture embellished with a gold heart from the burial of (1077),



Plate 25. A second example of a hinged, full set denture with gold plating over the maxillary portion and crossed incisions to resemble tooth crowns on the molar surfaces.



Plate 26. Left: Example of both upper and lower dentures with spaces missing in the sockets for the retention of the canine and gold plating on the mandible. Right: A decayed root of the real maxillary left canine incorporated into the denture.

7.2.6.11 Additional evidence for dentistry was observed in the remains examined. Fillings were found in five adults, three males and two females in the assessed osteological sample. Two adults displayed grey metallic fillings and three adults had gold fillings (Plate 27 and Plate 28). One of the adults with gold

fillings also displayed a tooth stained green (Plate 28), and which may have been filled by a metal composite made with some copper alloy. Grey metallic fillings were also present and may have included mercury mixes. Molar teeth were predominantly filled but premolars were also filled. All of the adults with fillings in the assessed sample were buried in the 19th century between 1892 and 1897. Further evidence for burials with fillings from the exhumed burials was noted *in situ*.



Plate 27. Examples of gold fillings in the adult teeth from the sample. Left: In addition to the gold filling in the maxillary right second molar, the third molar crown had been destroyed by caries. Right: The second left mandibular molar has a large gold filling and the adjacent third molar is impacted.



Plate 28. Left: Example of a gold filling as well as a gold cap covering the surface of the right mandibular first molar. Right: green staining on a left maxillary premolar. Staining may be associated with a copper alloy object placed in or near the mouth, or by a filling material that contained a copper alloy.

Combs

7.2.6.12 Two bone combs were recovered from the burials of two adult females from the cemetery. The burials were of Annabella James who died in 1891 aged 86 years (1449) and (1202) Mary Ann Burney who died in 1915. The combs indicate that hair was styled for burial (Plate 29). The combs from the burials at St. Mark's were both bone combs rather than metal, and indicate that hair styling and adornment prior to burial continued to be undertaken to the end of the 19th century and into the 20th century.



Plate 29. Example of one of the two hair combs found on in the burials.

Jewellery

7.2.6.13 Eight burials displayed evidence of jewellery with the human remains. All personal items were recorded in situ, lifted and photographed, bagged and replaced with the relevant individuals for re-burial. Of the burials with jewellery, seven were female (1095), (1130), (1195), (1377), (1380), (1499) and (1509), with one male burial found wearing gold jewellery (1291). Five of the burials with jewellery were dated to the 19th century. The remaining three were 20th century burials. The finds are summarised in Table 10 below.

Burial	Name	Date of Burial	Jewellery
1095	Anne Day	1892	Four gold rings, left hand, each with different decorative pattern and one with two garnets and one opal
1130	Ann Podmore Shadwell	1898	Double-banded gold ring, right hand, one plain ring one incised ring
1195	Eliza Mary Burney	1917	Two small, hinged, gold hoop earrings
1291	Thomas Twanbrooke Glazebrooke	1890	Thick gold ring, displaced at right elbow
1377	Alice Mary Aldersey	1903	Gold ring, found loose during grave clearing

1380	Ann Maria Strapp	1923	Gold ring, raised capital lettering "MIZBETH"
1499	Maria Rosetta Whitehouse	1892	Gold-plated brass, hinged, bracelet, left arm
1509	Elizabeth Loehleim	1896	Gold bangle, left arm, gold ring, left finger

Table 10. Evidence for burials with jewellery in the burial assemblage.

7.2.6.14 Six of the burials with jewellery were found with gold rings of various styles. In particular, burial (1095), Anne Day, was found with four thin gold bands *in situ* on a finger phalanx. Each gold band was of a different decorative design, ranging from a smooth gold band, different incised bands and one band with two probable garnets set either side of a central opal (Plate 30). It is likely that the gold rings were wedding rings. Only one ring was inscribed: (1380), which had raised capital letters spelling "MIZBETH". A pair of gold earrings were found with burial (1195) (Plate 31).



Plate 30. Left: Four-band gold ring found *in situ* on a hand bone. Right: Detail of the opal and possible garnet set ring.



Plate 31. A pair of thin, hinged, gold hoop earrings found in one of the burials.

7.2.6.15 Two females were identified wearing gold-plated metal bangles both on the left arm. Elizabeth [Loehliem] (1509) was found with an oval gold bangle on her left arm together with a gold ring on a finger on her left hand. The bangle of Maria Rosetta Whitehouse (1499) was oval in shape and hinged although the opening mechanism had seized since burial and could not be opened (Plate 32). The bangle appeared to be made of brass or copper with gold plating and measured 5mm in thickness and 6.2mm in length by 5.3mm breadth.



Plate 32. Left: Gold-plated bracelet found in situ on the left arm of one burial. Right: detail of bangle.

Other finds

7.2.6.16 Two small, incomplete fragments of the stem of a ceramic clay tobacco pipe were found loose in fills from graves in area F. There was no decoration on either stem and the fragments could not be dated. Both fragments were bagged with the remains most closely associated and reburied. As the pipes were found loose rather than directly associated with a burial, it is likely that these may have originated from grave diggers smoking during grave construction.

7.2.7 Demography of the Excavated Cemetery Sample

7.2.7.1 A total of 200 burials were exhumed from the areas of the cemetery due for development. There were more females than males in the exhumed burials; 111 females, 78 males and 11 individuals of undetermined sex where identity could not be established. These sexed individuals include both adults and juveniles. Individual identity was predominantly confirmed through the recording of the well preserved coffin plate inscriptions. The coffin plate data tended to correlate well with the burial registers and original map of the burial plots. The burial registers provided the names of the burials together with year of burial. The coffin plates also presented an individual's full name, apart from one instance in which the name had been abbreviated to "L.E.D" (1413). The burial register provided the full name of Liza Elizabeth Dodson for this individual who was buried in 1886 aged 64 years.

7.2.7.2 The coffin plates frequently provided the dates of birth and death, enabling the calculation of age at death for the exhumed burials. Where the date of birth was not recorded on the plate, the age at death was often recorded as part of the inscription. This information enabled a demographic profile of the age-at-death of the excavated cemetery sample to be established as shown in Plate 33. The data indicates that there was a small peak in juvenile burials aged 1 to 5 years old (category 4 in Plate 33). It is notable that the majority of adult burials occurred for individuals aged 56 years or older (age categories 11-15). There is a peak of adult individuals who died between the ages of 76-85 years (category 13). There were also three adults who died between the ages of 96-100 years. The results clearly indicate that some individuals during the late 19th and early 20th centuries were living into old age despite the many challenges to health that existed at this time.

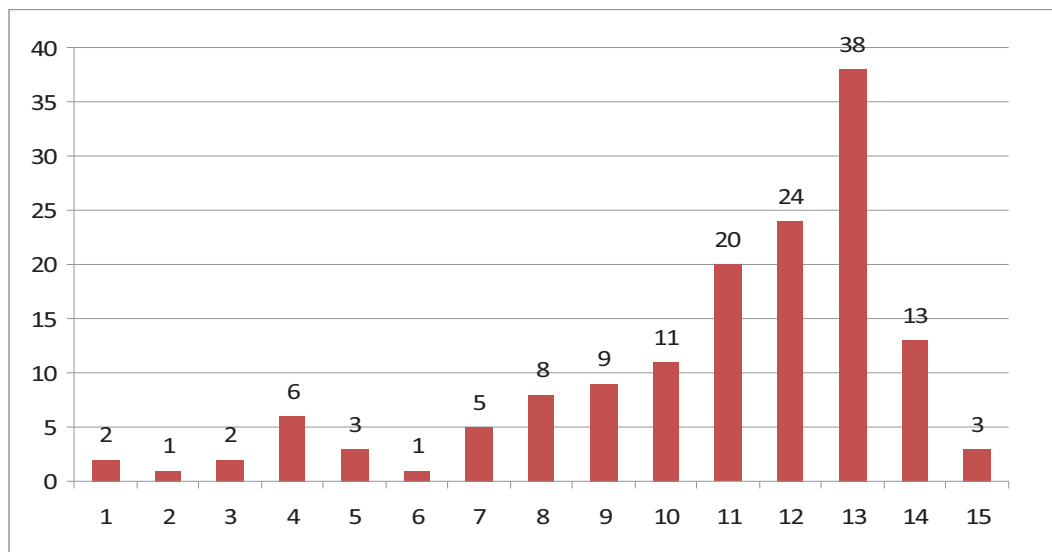


Plate 33. Age-at-death of the exhumed burials from St. Mark's cemetery. Number of individuals are shown in the age-at-death categories along the x-axis. Categories: 1: birth-1 month, 2: 1-6 months, 3: 7-11 months, 4: 1-5 years, 5: 6-11 years, 6: 12-17 years, 7: 18-25 years, 8: 25-35 years, 9: 36-45 years, 10: 46-55 years, 11: 56-65 years, 12: 66-75 years, 13: 76-85 years, 14: 86-95 years, 15: 96-100 years.

7.2.7.3 Rapid on-site sex determination was undertaken on eleven burials during the exhumation works in order to help establish individual identity, which could subsequently be checked with the burial register and coffin plate recording. These individuals did not form part of the on-site osteological assessment as were reburied due to the presence of a damaged lead coffin or due to the date of the burial. In ten of the eleven cases, the osteological sex determination was correct. The one incorrect instance was for burial (1143) of Alice Thompson, who was buried in 1905 aged 61 years. The sex determination of the pelvis in this case identified quite male features (no ventral arc, no ischial ramus ridge, no pubic concavity and a probable male sciatic notch), which were erroneous. The high number of burials correctly sexed is encouraging for the usefulness of the methods routinely used in osteological examinations. Establishing individual sex rapidly on-site during the exhumation works was useful in these cases, particularly where additional burials had been included in family graves without documentation on the historic burial plot.

7.2.8 Osteological Findings

- 7.2.8.1 The methods of osteological assessment and detailed findings from the assessment are outlined in Appendix C. The main findings are reported here. The findings unsurprisingly reflect on the older nature of the burial assemblage from St. Mark's Church, with quite high rates of degenerative joint disease and osteoarthritis. Osteoarthritis had particularly affected old adult females in the sample. Dental hygiene was quite poor in the adult sample with evidence for tooth decay (caries), the accumulation of mineralised tartar (calculus) and periapical abscesses. There were a high number of individuals with ante-mortem tooth loss. This may have derived from poor dental hygiene practices but may also have been influenced by the old age of a number of sample. This findings correlate well with the presence of dentures in ten of the burials exhumed from the cemetery.
- 7.2.8.2 There was evidence of non-specific infection in several of the individuals examined osteologically, and this is a normal occurrence throughout many post-medieval burials. There was little evidence for respiratory disease, and this likely reflects the lower degree of air pollution from smog in the suburbs than existed in the heart of urban areas in central London. There was also no evidence of specific infectious diseases such as tuberculosis or treponemal conditions including venereal syphilis. Both of these diseases have occurred throughout the post-medieval period, and the lack of evidence from the St. Mark's assemblage may be due to the small sample of individuals assessed. There was evidence for an infection having occurred secondary to a leg injury in one adult. Whilst the fracture to this leg had healed and the infection appeared long-standing, evidence of treatment of the injury was in evidence in the grave with a plaster cast found in situ on the leg.
- 7.2.8.3 The skeletal effects of traumatic injuries were present in the collection and included fractures to the spine, thigh and pelvis. Only one adult died before full healing of the fracture at the femoral neck had occurred. The remaining adults demonstrated sufficient survival after injury for the development of skeletal reactions. One individual displayed a secondary infection following fracture to the thigh. The plaster cast found associated with this injury clearly indicates that some treatment of the injury had been sought and was continuing at the time of death. It is likely that the higher socio-economic position of the burials as whole facilitated access to medical treatment during the 19th century.

8. DISCUSSION

8.1 General

- 8.0.1 The archaeological works carried out as a watching brief on an exhumation in St. Mark's cemetery, clearly established the presence of archaeological remains on the site. Two hundred burials were exhumed from the three areas of St. Mark's cemetery demarcated for development. The nature of the works undertaken required a detailed, co-operative methodology to be devised that would realistically support the time constraints of the project and exhumation schedule without compromising the integrity of the archaeological deposits and more importantly, the human burials. The methodology allowed the implementation of digital surveying and levels recording, which increased the speed of data collection. The *pro forma* recording of masonry, graves, coffins and human remains together with any associated finds, enabled a significant body of data to be gathered, all of which could be correlated with site photographs. The well-preserved nature of the burial assemblage, which included coffin furniture such as coffin plates, together with the survival of the church burial register, allowed 95% of the interments to be dated. The areas of the cemetery exhumed housed burials dating to both the 19th and 20th century and received both inhumation and cremation burials.

8.0.2 All aspects of the burials, including human remains, coffin remains and associated finds and decorative furnishings were bagged and identified to each individual prior to reburial in order to maintain the integrity of the original burials. All members of the field staff behaved with due care, diligence and with respect for the burials at all times. Access to the site was carefully maintained and burials were screened from the view of the general public by all means possible. On-site health and safety was successfully managed and regularly monitored externally throughout the works.

8.1 Pre-Cemetery Features

8.1.1 One of the aims of the archaeological works was to determine if there was any evidence for pre-cemetery features in the areas now covered by the church graveyard. Little is known specifically about the site, or the origins of the settlement at Surbiton, prior to its 19th century development as a suburb of London (see Section 3.1). The archaeological works at St. Mark's included all areas of F, D and E of the cemetery that were scheduled to be disturbed by development. Areas shown on the original burial plot without graves marked were machine dug until natural ground was exposed in order to meet the aim of the potential for recognition of pre-cemetery archaeological features. No evidence for any pre-cemetery use of the site was identified throughout the works.

8.2 Date of Cemetery Usage

8.2.1 Jarvis (1960) recorded that St. Mark's Church was built during 1844 on Surbiton Hill. A book of remembrance from the parish indicated that 154 burials were interred in the cemetery between 1848 and 1871 (D. Houghton pers. com.). A burial register for the church listed burials as made between 1871 and 1933. Burials in the churchyard are thought to have ceased following the bombing of the church in 1940 (D. Houghton pers. com.), although there are no surviving burial records for the period from 1933 to 1940. The exhumation works at the cemetery discovered one burial dating to 1861 belonging to burial (2069) Reginald Hughes Hallett. He was buried in a family stack in area D of the cemetery. This burial pre-dates the burial register for the cemetery. It is not clear whether this burial had been moved from an original interment elsewhere and buried within a newly developed family plot when cemetery opened at St. Mark's Church. No other burials pre-dating the burial register were found. Burials continued to be made in the specific areas of the cemetery investigated until 1933.

8.3 Grave Construction

8.3.1 Burials at St Mark's Church were consistently made within brick-built single graves or double-vaults with only one burial isolated from this practice. This individual was buried partially underlying the brick walls of the overlying double vault. The reason for this unusual burial is not clear. The individual was buried in a wooden coffin with fragments of raised, co-joined upholstery nail decoration in a style matching other burials in the assemblage. There was no evidence for a surviving coffin plate and the individual was not included on the burial plans for the cemetery. The identity of the burial remains undetermined.

8.3.2 The over-whelming use of brick-lined graves through the cemetery spanned the period of burials through the 19th and 20th centuries. Comparative cemeteries with dated brick-lined graves demonstrate interments between 1825-1875, with construction of the graves likely to have occurred between 1810 and 1830 (eg. Brickley et al. 2006, 88). The burials from St. Mark's demonstrate that

the use of brick-lined graves continued beyond the date range known for the Birmingham assemblage and were in use until at least 1933.

- 8.3.3 Grave construction was broadly uniform throughout the exhumed cemetery areas. The construction of the brick-lined graves and vaults varied through the manner in which stone slabs separating stacked burials were held in place, by the stone slabs used for burial separation and sealing the graves, the depth and number of stacked burials, and by the small variants in outline grave shape. The analysis of the different styles of grave outline demonstrated that rectangular brick graves were the most prevalence style throughout both the 19th and 20th centuries. This suggests that very little changed in requirements for inhumation burial in graves between the 19th and 20th centuries. Such uniformity in grave construction suggests that the cemetery was to a large extent pre-planned and graves constructed on mass and sold to the congregation, with only a few of the graves and possibly double vaults likely to have been individually commissioned.
- 8.3.4 Stone slabs were used to seal the brick-lined graves in all but three cases at St. Mark's Church. Both sandstone (Yorkstone) and slate were used to separate individual burial chambers in the stacked graves as well as sealing the upper level of the graves. There was no zoning of burials according to area, age, sex or date in relation to stone type utilised in grave construction. This indicates that choice of stone type was either dictated by the available resources or potentially due to the choice of the plot-owner. None of the graves or vaults at St. Mark's Church had vaulted roofs. This may indicate a stylistic change from burials dating to earlier in the post-medieval period, such as those at St. Martin's Church (Brickley et al. 2006) and All Saints, Chelsea Old Church, London (Cowie et al. 2008), compared to the later 19th and 20th century burials at St. Mark's Church. Using stone slabs to seal the graves was also an undoubtedly cheaper and easier means of allowing extra burials to be added to a family vault, in contrast to the requirements of dismantling and rebuilding vaulted roofs (see Brickley et al. 2006, 87). It is not clear whether such building practices also consciously reflected the reduction in ostentatious burial displays adopted throughout the later 19th century (Jalland 1999).
- 8.3.5 Burial in the brick-lined graves followed the west-east alignment demonstrable in post-medieval burials, with the head at the west ready for the deceased's spirit or soul to rise facing the east during the resurrection. Several burials in area F were aligned on a diagonal north-west to south-east alignment. This grave position followed the boundary line of the cemetery defined by the adjacent roads and indicates the most economic use of the available burial space (Figures 2 and 3).
- 8.3.6 The plan of the original burial plots shown in Figure 3 identified twenty-one numbered plots in the development areas D and E that did not have associated burial register numbers. The archaeological works confirmed that no burials had been made in these plots. These were likely to have been included on the burial plan as indications of burial space available for purchase. There were also gaps between uniform rows of burials towards the west of area F, which did not contain any un-plotted burials. These spaces in the cemetery demonstrate that the interments could have continued in the grounds had the bombing damage not occurred (Section 3.2).
- 8.3.7 It was beyond the scope of this report to investigate the rates chargeable for burial in St. Mark's cemetery. If documentation of the surviving burial rates exists, it would be of interest to compare price of burial in the plots with other post-medieval burials of both urban and rural sites. The attitude

of grave construction and coffined interments from St. Mark's are indicative of relatively wealthy parish burials.

- 8.3.8 As is frequent practice in post-medieval cemeteries, the burials made in the brick-lined graves at St. Mark's Church were vertically stacked (eg. Brickley et al. 2006; Cowie et al. 2008). No burials apart from the one earth-cut grave discussed above, over-lapped or inter-cut any other burial. The graves at St. Mark's Church typically held only one or two burials; stacks of five and six burials were not frequent occurrences in the excavated cemetery areas. The distribution of stacked burials throughout the assemblage is illustrated in Figure 6 and identified in the site matrix (Appendix B). This pattern again matches that found in the brick-graves at the urban post-medieval cemetery of St. Martin's-in-the-Bull Ring, Birmingham (Brickley et al. 2006).
- 8.3.9 As outlined in Section 7.1, all burials apart from one at St. Mark's Church were made in brick-lined graves or vaults. A total of 18 juvenile burials were made in brick-lined graves without accompanying juvenile or adult burials. At the cemetery of St. Martin's, Brickley et al. (2006, 86) found that juvenile burials were not made alone in brick-lined graves; where present, juvenile burials in brick graves were accompanied by adult burials. There is no clear evidence to indicate that the separation of juvenile burials at St. Mark's may have been due to changing beliefs in funerary practices for juveniles for the later 19th and 20th centuries. Instead, it is likely that the local parishioners during this period could afford individual burial spaces. It is further possible that no associated family burials also occurred associated with the juvenile burials. Some of the juveniles could not be identified due to poor preservation of the coffin plates (Appendix D Table 1). There also appears to have been some deliberate zoning of child burials interred in area E to the west of the church (Figure 7), a pattern which also would have removed the necessity for juveniles to be buried in stacked family graves.

8.4 The Cremation Burials

- 8.4.1 Archaeological parallels of cremation burials found together with inhumations from the period of the middle to late 19th century and into the 20th century are not well known. A large number of post-medieval cemeteries have been excavated in recent years from areas within the heart of urban areas affected by redevelopment (eg. Brickley et al. 2006; Miles et al. 2008b; Boston et al. 2009). Such burial grounds were affected by the 1852 Burial Grounds Act, which sought to close grounds that had become overcrowded and were considered responsible for disease and social nuisance. Out-of-town cemeteries were increasingly established in the 1850s, supported by the continuing development of the railway infrastructure in order to solve the problem of continuing to bury the urban dead. Experiments in relatively modern cremation practice did not start until the 1870s (Jalland 1999). It would therefore be extremely unusual to uncover cremated remains in burial grounds from post-medieval urban sites that were closed during the 1850s. This creates a slight bias as to what is to be expected from post-medieval and early historic burial grounds in suburban locations. There were no indications on the burial registers from St. Mark's Church highlighting the inclusion of cremation burials in the cemetery. The finding of seven cremation burials during the exhumation works therefore provides an important source of information on suburban burial practice in the early modern period.
- 8.4.2 The modern development of cremation as a burial practice in England originated from the 1870s. The Cremation Society of England was founded in 1874 and promoted the sanitary and financial

benefits of cremation over traditional inhumation burial (Jalland 1999). Proponents of cremation strongly argued that the practice would end the pollution of graveyard air and water and would subsequently halt the spread of related infectious diseases (Thompson 1874 cited by The Cremation Society 1974). Advocates for cremation mainly derived from the upper and middle classes (Jalland 1999). Steady support for the practice resulted in the building of crematoria in Woking, Glasgow and Manchester from 1884. The Cremation Society (1974) reported that ten cremations took place at the first crematorium established at Woking in 1886. In 1888, 28 cremations were undertaken and in 1892 a total of 104 cremations were held. Cremation did not become a legalised practice in Britain until the Cremation Act of 1902 (Jalland 1999; May 2003, 27). Both Jalland (1999) and Jupp & Walter (1999) have considered how infrequent cremations were in England during the early stages of 20th century. In 1908, approximately 800 cremations a year were undertaken in Britain (Jalland 1999). Jalland (1999) has stated that in 1918 only 0.3% of funerals utilised cremation. Jupp & Walter (1999, 264) state in the following year, 99% of English funerals still adopted burial rather than cremation. Cremation remained comparatively inaccessible during the early 20th century as only 13 crematoria had been built by 1918. By 1939, the number of crematoria in England had increased to 58 (Jupp & Walter 1999). The Church of England accepted cremation as a mode of burial in 1944.

- 8.4.3 The dated cremation burials from St. Mark's Church derive from the early stages of cremation burial in the 20th century and date to 1918, 1920 and 1933 (Section 7.2). Given the small percentage of cremation burials reported by Jalland (1999) and Jupp & Walter (1999) occurring prior to 1919, these dated cremation burials from St. Mark's Church are important. The remaining four undated cremation burials must have been made in the cemetery prior to the grounds closing in the 1940s following bombing damage in the Second World War. The socio-economic status and wealth of the local inhabitants to Surbiton during its development from the late 19th and early 20th century is likely to have contributed to the adoption of cremation as a burial practice in this cemetery. Only three areas of the cemetery were affected by the exhumation works in advance of development. It is plausible that further cremation burials may have been interred elsewhere in the cemetery prior to closure of the grounds in the 1940s.
- 8.4.4 Two viable sites may have been used for the cremation of the burials from St. Mark's Church. As outlined above, the crematoria at Woking was in official, if not legal, use from 1885. In 1900, the London Cremation Company Ltd was established by the Council of the Cremation Society, and purchased land in north London adjacent to Hampstead Heath in order to create a crematorium at Golders Green (The Cremation Society 1974). Improvements undertaken on the rail network through the 19th and 20th centuries may have facilitated the transportation of bodies to these early crematoria.
- 8.4.5 Regardless of date of interment, the loose and visible cremated bone placed within the vessel of burial (2097) with no evidence of any means of vessel lid is an unusual find. If the vessel originally had a ceramic lid rather than one made of a perishable material, it is possible that the lid may have broken and a replacement lid could not be provided prior to deposition in the grave, although this is speculative.
- 8.4.6 The observable bone fragments were consistently white. The colour of cremated bone can reflect on the oxidation of the organic component of bone in relation to the temperature burning the bone and indicates the efficiency of the cremation (McKinley 1989, 2000, 2004, 11). The bone pieces remained in large and easily identifiable fragments, which demonstrates that the cremated bone had not been

placed through a cremulator, used in more recent cremations in order to crush and powder the remains into a fine ash.

- 8.4.7 Jupp & Walter (1999) have indicated that cremation was an expensive alternative to burial during the later post-medieval and early historic period, although membership to the Cremation Society included a free cremation. Jupp & Walter (1999) have questioned to what extent free cremation were utilised during the early period. Methods of lessening the cost of funerals were adopted however, with the use of 'public reading time', through which several families could share costs of burial (Jupp & Walter, 1999). It is not clear whether this could have led to multiple cremation interments in one cemetery plot as occurred at St. Mark's with the cremation burials (2095, 2097; Section 7.2.3). The inclusion of both adult and juvenile remains in the one vessel is also quite unusual practice for modern burials. This suggests either a deliberate double burial, which could have occurred in preference for lessened costs of burial. Alternatively, accidental mixing of the remains following collation of bone from the crematorium may also have occurred.

8.5 Coffins

- 8.5.1 The coffins exhumed from St. Mark's Church were made of lead, wood and zinc. There were fewer lead coffins used for burials in the 20th century than 19th. It is possible that changes in design or preference or of materials available contributed to this trend. Coffins were predominantly of the shouldered and tapered (single-break) design with only one tapered example broader at the head than at the feet but with straight sides (trapezoidal form). Examples of these designs have been known from earlier post-medieval assemblages (eg. Christ Church, Spitalfields in Reeve & Adams 1993, 78). None of the well preserved coffins at St. Mark's cemetery were of the fish-tail type found at St. Martin's Church in Birmingham (Hancox 2006, 155). Hancox (2006, 155) posits whether the use of the fish-tail design was regional as no evidence for the style was found in the comparative Christ Church, Spitalfields sample. The data from St. Mark's could support this suggestion, although the later dating of burials at St. Mark's may also have contributed to differences observed in coffin design between assemblages.
- 8.5.2 Decayed and damaged coffins displayed evidence of double-shelled construction in many examples. Lead coffins were often found with traces of a wooden outer coffin, but in some cases possible leather and textile remains were also found as external covers to the coffin. No clear evidence of triple-shelled coffins were observed on-site, but it is possible that remains had decayed sufficiently to prevent accurate identification of these examples. The integrity of sealed and well-preserved coffins was maintained at all times; no investigation of the internal aspects of coffin construction was undertaken on these cases. Examples of lead-lined double and triple-shelled coffins are well documented from comparable higher-status burials from the post-medieval period (eg. Reeve and Adams 1993; Brickley et al. 2006; Miles 2008a; Miles et al. 2008b; Boston et al. 2009). Vertical lines on the internal aspects of the shoulders of several examples of wooden coffins confirmed that the wooden planking used for the coffin sides had been bent into place following partial sawing or kerfing. This technique occurs frequently in post-medieval assemblages (eg. Reeve & Adams, 1993; Brickley et al. 1999; Miles 2008a). It was not possible to undertake the detailed level of recording of coffin construction as was utilised in the Christ Church, Spitalfields sample (Reeve & Adams 1993). There was evidence for sealing of the coffin with pitch in several examples from St. Mark's Church together with filling materials, including sawdust, used in order to soak up liquids originating from the body's decomposition. Parallels for this practice have been reported from both high status burials

(eg. Miles 2008a; Reeve & Adams 1993) and low status burials (Melikian & Ives, forthcoming) from the post-medieval period in London.

- 8.5.3 Wooden coffins were frequently made from elm, oak and pine during the post-medieval period. A predominance of elm was reported in coffins from both high status and low status burials from St. Martin's Church, Birmingham (see Gale 2006, 162). At this site, Gale (2006, 162) suggested that broad planks from mature oak, pine and elm were likely to have been used for the main components of the coffins with smaller decorative pieces of struts constructed from hazel or pine. Burials from the low status site of the Cross Bones Burial Ground, Southwark were made in elm, pine, spruce and larch. (Brickley et al. 1999, 26). Wooden coffins from middle class burials from Christ Church, Spitalfields were made from elm, oak and conifer (Reeve & Adams 1993, 78). Coffin wood could not be identified in the high status burials from All Saints, Chelsea Old Church (Miles 2008a, 31). Detailed analysis of coffin wood could not be undertaken during the on-site works at St Mark's Church, although several examples of pine and oak woods were likely to have been used for some of the well-preserved coffins.
- 8.5.4 There was evidence for various methods of coffin decoration in the inhumation burials from St. Mark's Church. Both studded decoration through upholstery pin panelling, textile covering, painting and incised effects were all apparent. The range of decoration in the St. Mark's burials is likely to have been underestimated due to the inevitable collapse and decay of some coffins. It is clear, however, that the extent of decoration using upholstery studs was less elaborate than in the middle class burials from Christ Church, Spitalfields, where up to 58 designs of studding were observed (Reeve & Adams 1993, 86). There were a number of coffins decorated with double rows of upholstery studs (nail lace design), which Reeve & Adams (1993, 86) discuss as potentially dating to 1780 to 1810. Reeve & Adams (1993, 86) highlight that the contemporary coffin maker Sable Plume's works suggested that this design continued to be used for burials dating up to 1920. The burials from St. Mark's Church demonstrated a double studded design used on at least three burials and which dated from 1872 to 1880.
- 8.5.5 It is not clear to what extent coffins during this period were mass-produced or what degree of custom decoration was adopted in individual specifications for burial. Litten (1992) has suggested that earlier in the post-medieval period that there was very little personal choice in coffin ornamentation. It is not clear whether the role of the undertaker in selecting the full coffin decoration also continued into the later 19th and 20th century. Several lead coffins were decorated with an incised cross-hatching design see elsewhere in burials from St. Martin's, Birmingham, St. George's, Bloomsbury and Christ Church, Spitalfields, London. Other examples from St. Mark's Church included lead coffins with painted decoration emphasising panelling designs or borders. Painted coffins are known from the post-medieval period (eg. Brickley et al. 2006; Cowie et al. 2008). Such decoration is quite unusual as external lead coffin surfaces were not usually intended to be visible during the funeral or burial during this period. Most lead coffins were intended to be covered either by a wooden shell or by textile covering. It is possible that different modes of decoration were utilised in case of exposure of the lead coffin following the decay of the wooden outer coffins.
- 8.5.6 The coffins were found with a range of grips (handles), grip plates, lid motifs and coffin plates. The variation in design of grips in the collection is quite prominent. This is interesting given that coffin grips presented the least amount of variation amongst all of the fittings in the well preserved assemblage from middle class burials at Christ Church, Spitalfields (Reeve & Adams 1993, 86). Only

twelve different styles were found at Spitalfield compared to the 23 styles recorded at St. Mark's Church. Of the Spitalfields designs, styles 2b and 11 have definite parallels in the St. Mark's burials and styles 7, 8, and 9 have possible parallels although preservation prevents full certainty of this. The grip styles at St. Mark's largely included variation in shape of metal designs; some with only subtle differences between the designs, for example a flattened circle compared to a circle with a slightly raised crest running through the midline of the circle (see Figure 11). Other grips were extremely elaborate or bulky (see style 17, Figure 11), which correlated with elaboration of the other elements of lid motifs. There were only a few examples of floral/leaf embellishment on the grips, and one example of a face at the top of the grip where it attaches to the backing plate.

- 8.5.7 An illustration of a trade catalogue from a London coffin manufacturer, the Dottridge Brothers dating from 1922 is presented in Litten (1992, Figure 65). May (2003, 5) reports that Dottridge's was one of the largest wholesale undertaking firms during the 19th century and was based in London. The catalogue illustrates four grip styles that were used in the St. Mark's burials, including styles 1, 6, 8 and 14 (see Figure 11). All of these grip styles were present on burials at St. Mark's dating from the 1870s into the 19th century, with the latest date in 1933. It may well be that several coffin manufacturers were producing identical grips during the periods. Therefore the presence of grips on burials from St. Mark's of the style manufactured and sold by Dottridge does not necessarily imply the source of the coffin manufacturer for the burials at Surbiton. The stamped numbers on several of the grips of style 1 are intriguing. The stamped numbers are not the same and as such suggest the sequential numbering of elements of coffin furniture rather than a stamped batch number. In particular, one stamped example included the legend "Dottridge Brothers" together with a number (Section 7.5.3.4). This stamp does demonstrate that the London-based Dottridge company had supplied at least some of the coffins for the parishioners buried at St. Mark's.
- 8.5.8 Burials were found with a range of decorative coffin lid motifs, which included crosses, floral and elaborate designs, as well as stars, urns, and starbursts. The decoration indicates some degree of wealth as it is unlikely that individuals with a low income would have paid extra to have a coffin well-adorned beyond what was considered necessary. The data from the St. Mark's burials indicates that both males and females were buried in coffins with decorative motifs, but there was little stylistic separation according to the sexes. The most frequently used designs, those of crosses and floral/leaf designs, were used for burials dating to both the 19th and 20th centuries. There is a notable lack of the winged cherubs, banners of flowers as opposed to leafed designs, angels, trumpets and crowns as were found in relatively wealthy burials from earlier in the post-medieval period, particularly Christ Church, Spitalfields (Reeve & Adams 1993). Several flaming urns were present at St. Mark's, continuing the motifs from the earlier period, but these were less commonly observed compared to the leaf designs and crosses (Section 7.5.4). The geometric sunburst motif (sunburst design) present in the St. Mark's burials, was present in the collection from Christ Church, Spitalfields, but Reeve & Adams (1993, 87) noted its use towards the end of the period of burials from 1729 to 1867. Burials with this sunburst motif from St. Mark's were also dated to the later 19th century (1885-1892) and it appears as though this motif falls out of fashion prior to the 20th century.
- 8.5.9 The data indicate changing trends in coffin design or embellishment through the later post-medieval period and into the 20th century. There was also a notable lack of coffin escutcheons, smaller decorative motifs usually placed towards the corners of the coffin in the St. Mark's burials compared to earlier assemblages (eg. Reeve & Adams 1993). The reduced elaboration in motifs is likely to have derived from an increase in simpler style of funeral towards the later Victorian period (see May

2003, 6). Religious designs such as crosses are not often documented in burials from the 18th and early 19th centuries. Only one cross was reported from the large burial assemblage at Christ Church, Spitalfields and this was found together with cherubs, a skull and a sarcophagus motif (Reeve & Adams, 1993, 86; see also Boston et al. 2009; Brickley et al. 2006). Jalland (1999) has reported on the role that religion had in the increasing Evangelical movement, which developed during the 1850s to 1870s. The movement focused on the strengthening of Christianity through seriousness and piety, and contributed to an intensity of grief following an individual's death. The notion of a good Christian death and preparation for death was also prominent into the 19th century and may have contributed to a shift in increasingly religious iconography in coffin decoration as demonstrated in the St. Mark's lid motifs.

- 8.5.10 Burials were found with evidence for floral wreath remains, which had been placed on burials for both males and females as well as for adult and juveniles. All but one of the burials with wreaths dated to the 19th century. May (2003, 10) has suggested that towards the end of the 19th century the sending of wreaths had become more widespread in the mourning process than had been witnessed earlier in the post-medieval period. A published example of an 1888 trade advertisement for Osman and Co. demonstrates the supply of wreaths and wires in a variety of shapes from London (May 2003, 10). This suggests that the variety of shapes and wreath decorations identified at St. Mark's may have been normal for those who could afford such embellishments. Whilst the date of the coffins with wreaths appears to indicate that floral tributes declined as part of the burial tradition during the early 20th century, it is more likely that the styles and preparation of floral tributes developed. This may have included utilising methods of arranging flowers that were not as dependent on wire frames as earlier burials had been.
- 8.5.11 Fabric was frequently used to cover the external coffin during the post-medieval period prior to the introduction of french-polishing of wooden planking, which developed during the 19th century (see Janaway 1993). Burial decoration at St. Mark's Church included in several examples traces of fabric covering to the coffins, with traces of studded designs and panelling made with upholstery pins in some cases. Whilst the textile remains were in general poorly preserved, possible identification of velvet or felt coverings were observed at St. Mark's Church, together with one instance a possible leather outer layer to the coffin. Fragments of fabric coffin covers, in some cases made from black dyed wool, were found from the post-medieval burials at St. Martin's Church, Birmingham, together with panels of studded with upholstery pins (Walton Rogers 2006). Silk velvet covers are known to have been used on coffins of the upper ranks of society and tended to be colourful (Walton Rogers 2006). No examples of velvet covers were found in the burials from St. Martin's Church, Birmingham, but an example was found on high status burials from All Saints, Chelsea Old Church, London together with fragments of wool coverings (Powell 2008, 35). The use of fabric covers were found on burials dated into the 1870s in the St. Martin's burials and examples from St. Mark's Church textile remains on outer coffins were found between 1861 and 1886. Upholstery stud over the outer coffins also indicate that textiles had originally been held in place and were also found on coffins dated to 1861 to 1883 at St. Mark's. The findings indicate that the textile furnishings of coffins had not completely declined during the early 19th century in preference for french-polishing of wood (see Hancox 2006, 155).
- 8.5.12 The internal aspects of post-medieval coffins were decorated and lined with fabrics including wools, silks and linen-effect wools, in order to accommodate the viewing of the deceased in the family home prior to reburial. The body was often dressed in a shroud, and may have been wrapped in a winding

sheet attached to the coffin sides. It is possible that small fragments of textiles remains from St. Mark's were originally part of the coffin linings, but no clearly identifiable fragments survived. No traces of ribbon attachments or decorative lining that would have covered textile seams survived. Linen-effect textile fragments were found in the St. Martin's assemblage and which likely represented pieces of winding sheets from the coffins (Walton Rogers 2006, 168). These fragments were very smooth and appeared to have been made of linen due to the degeneration of the fibres following burial. These textiles were actually made from wool. It was also considered possible that the wool had been bleached in a deliberate attempt to appear like linen.

- 8.5.13 Coffin mattresses and pillows have been found in post-medieval burials, and were used to create the appearance of the deceased asleep. Examples have been found in post-medieval burials from St. Martin's Church, Birmingham (Walton Rogers 2006) as well at All Saints, Chelsea Old Church, London (Powell 2008). No clear evidence of coffin mattresses or pillows were found in the burials from St. Mark's Church. Traces of filling material from the coffins did exist and appeared to have derived from a plant material, most likely hay. In one example, (1121) the padding was observed at the west end of the coffin where the head would have been. Whilst such padding has been used in pillows and mattresses, it could also have derived from padding of the base and walls of the coffin underlying the viewable textiles covers. It is unknown whether examples existed in some of the well-preserved sealed lead coffins whose contents were unobservable. Examples of cow hair and horse hair were used as upholstery fillings in the burials from St. Martin's Church, Birmingham (Walton Rogers 2006, 166). Instances of rabbit-fur have been similarly used in burials at St. Paul-in-the-Bail, Lincoln (see Walton Rogers 1993, 22). In the Birmingham collection, one burial was found with feathers formed into a bolster.

8.6 Personal Adornment and Textiles

- 8.6.1 During the post-medieval period, burials tended to be made in shrouds, which had developed from medieval sheets wound round the body, to elongated, full-length shifts with sleeves, a neck and cuffs. The shrouds tended to be open at the back but were tied by ribbons (Litten, 1992; Walton Rogers 2006). Small fragments of textiles were found from the burials rather than external coffins at St. Mark's as outlined in Section 7.2.6. The majority, if not all of the textile fragments associated with the burials or internal coffin linings from the St. Mark's burials likely derived from wool or possibly cottons. No clear examples of silks or satins found, although detailed textiles analysis could not be undertaken on-site (Section 7.2.6). It is possible that variation in the composition of the textiles observed may have gone undetected on-site. Fragments of textile, thought to be linen shrouds were found in the burials from St. George's Church, Bloomsbury (Boston et al 2009) together with one well-preserved example of a shroud with raglan sleeves and with a floral lace border with sun motifs. No comparatively well-preserved shrouds were identified in the St. Mark's collection. Extremely well-preserved shrouds and shirts were found during excavations in the middle class burials at Christ Church, Spitalfields, London (Janaway 1993).
- 8.6.2 Funerary textiles were frequently made of wool during the post-medieval period in England due to a Parliamentary Act of 1660, which stated that no other fabrics should be used in an attempt to support the wool production. This act was repealed in 1815 (see Janaway 1993). As such, the most frequently identified fabric found in burial assemblages of this period is wool or wool-union mixed fabric and was found in burials dated from the 1820s through to the 1860s (Walton Rogers 2006). Burials at Christ Church, Spitalfields, London, were made of wool until 1815, after which cotton

fabrics tended to replace wool (Janaway 1993; Walton Rogers 2006). The small number of safety pins and shroud pins found at St. Mark's are likely to be further indications that some burials were placed in shrouds with various fastenings. Pins, copper alloy rings and hooks derived from funerary clothing or textiles were found from the burials at All Saints, Chelsea Old Church (see Powell 2008, 35-36). None of these items had parallels in the St. Mark's burials.

- 8.6.3 There was no clear evidence of face cloths used at St. Mark's in contrast to the decorated examples found at St. Martin's (Walton Rogers 2006, 169). As outlined in Section 7.2.6.3 one instance of textile found covering the face in a male burial dating to 1896, was a large fragment which appeared to cover more of the head and extended towards the chest of the individual and was made of smooth, black, wool-like textile. It is plausible that this represented either a collapsed fragment of external coffin lining or alternatively a slumped piece of coffin lining rather than a facecloth. Fragments of smooth, linen-effect textiles were found in the St. Martin's assemblage and were thought likely to have represented pieces of winding sheets from coffins (Walton Rogers 2006, 168). The textiles were actually made from wool rather than linen, with the smooth appearance having been caused by degeneration of the fibres following burial. It is not clear whether any of the fragments of textile from the St. Mark's burials had been similarly affected.
- 8.6.4 One burial found at St. Mark's presented a relatively open-weave, orange-brown wool-like garment placed over the hair of a female burial dating to 1907 (Section 7.2.6.2). It is possible that this was made from a spun-wool such as worsted, although detailed analysis could not be undertaken to confirm this. It is likely that this represented a head-dress, formed of a bonnet-like cap as part of the burial dress. Post-medieval parallels of this type of head-garment have been reported from vault burials found at St. Martin's, Birmingham (Walton Rogers 2006, 170) and were known to have been worn by males, females and juveniles. There were no visible traces of ribbons that would have tied bonnets under the chin, although it is possible that the style of such head-dresses had developed during the early 20th century.
- 8.6.5 The finding of coarse woollen, orange-brown textile over the feet of burial (1436) was suggestive of a burial with socks. The material was not attached to any large fragments of textile that could have derived from a shroud. The thick weave of the material resembled wool and was strongly indicative of socks covering the feet and ankles of the individual. No detailed analysis of the remains could be undertaken on site. A pair of knee length woollen stockings were found on a burial dating to 1878 at St. Martin's Church, Birmingham, and further examples were recorded from the post-medieval burials from Christ Church, Spitalfields, London. The example from St. Mark's cemetery dated to 1890, and it would of interest to examine whether there was a development for more inclusions of clothing to be added to the burial rather than simply the shroud towards the end of the 19th century as seems to be indicated from the archaeological evidence.
- 8.6.6 The small collection of buttons found from the burials at St. Mark's are likely to have originated from the panels often seen at the upper chest of the burial shroud as illustrated in Litten (1992). The composition of only one button could be identified, which included mother-of-pearl (Section 7.2.6). This may have come from the shroud rather than be functional as may have been prone to snapping or breaking, although parallels from both All Saints, Chelsea Old Church and Christ Church, Spitalfields, both in London were suggested as possibly coming from a cardigan or jacket worn under a shroud (Powell 2008, 38). There were no traces of textile remains found on the buttons found from the burials at St. Mark's, in contrast to the silk-covered examples found from St. Martin's burials

(Walton Rogers 2006, 171). None of the buttons from St. Mark's were decorated with motifs, as was one example from St. Martin's, Birmingham (Bevan 2006, 183). None of the buttons were associated with copper alloy attachment loops as also found at St. Martin's as well as at St. Marylebone (Miles et al, 2009). No examples of buttons were found on shrouds or textiles remains excavated from the burials at St. George's Church, Bloomsbury (Boston et al, 2009).

- 8.6.7 A small fragment of black leather from a shoe was found from a burial dating to 1193, Margaret Carmichael Burney who was buried at St. Mark's cemetery in 1914. The leather fragment was very incomplete and the style of the shoe and means of any decoration could not be gauged. The 20th century date of this burial may have aided the survival of the leather in this instance. Fragments of adult footwear have been found in post-medieval graves, including the poor burials of the Cross Bones cemetery, Southwark, where a pair of boots survived (Brickley et al. 1999, 27; see also Miles et al. 2008, 123-124 for illustrations of contemporary shoe styles). The example from St. Mark's indicates that burials with elements of day clothes and footwear continued from the 19th century and into the 20th.
- 8.6.8 Whilst post-medieval burials frequently lack dedicated grave goods, a variety of personal effects were often buried with individuals. Personal effects, particularly jewellery, was recorded from the burials at St. Mark's cemetery and included wedding rings from both male and female burials, together with earrings, bracelets and hair combs from female burials. Comparative post-medieval assemblages have varied in the surviving evidence for personal adornment. A corpus of jewellery including gold and copper alloy mourning and day-rings, a silver brooch and glass beads were found among burials from St. Martin's Church, Birmingham. Mourning rings were also found in the burials from Christ Church, Spitalfields and were popular through the 18th and 19th centuries when disseminated to guests at the funerals in remembrance of the deceased (see Bevan 2006, 179). Gold band rings, most likely representing wedding rings were found on male and female burials from St. Martin's (Bevan 2006, 179) of a similar style to several of those found at St. Mark's. A gold or copper-alloy hooped ring, thought likely to represent an earring was found with the high status burials from All Saints, Chelsea Old Church (Cowie et al. 2008, 38). In contrast, no grave goods, jewellery or personal effects found in the St. George's burials except a possible snuff box (Boston et al, 2009), despite the wealthy background of the assemblage.
- 8.6.9 Hair combs made from tortoiseshell and bone were found in the St. Martin's burials as discussed by Bevan (2006, 181-182). These have been interpreted as indicating that hair was dressed prior to burial, although Bevan does suggest that combs may have been included in burials due to a reluctance for re-use of combs used in the preparation of the body for mourning in open coffins and subsequent burial (2006, 180). Hair combs found *in situ* holding a styled bun in place have also been found in a post-medieval burial from Clerkenwell, London (Melikian and Ives forthcoming). The findings from St. Mark's cemetery lends further support to the insights of preparation and dressing of the deceased prior to burial in both the 19th and 20th centuries. Whilst traces of hair did remain on several burials, none had survived well enough to permit reconstruction of how hair had been styled prior to burial. The most notable indicators of personal adornment from the St. Mark's burials comprised of the dentures found in ten burials (Section 7.2.6). These finds will be discussed in relation to insights into detail health gleaned from the osteological assessment presented in Appendix C.

- 8.6.10 Burial (2146) contained an unusual find of a small glass panel with possible traces of textile or paint found over the upper legs of a child's burial in a collapsed wooden coffin. The glass was rectangular and was mounted in a wooden frame. Whilst Litten (1992) has discussed the presence of coffin windows included in some burials from the post-medieval period, the position of the glass over the legs is unusual. Whilst the coffin was decayed and collapsed, there was little mixing or slumping of the skeletal remains. It is more likely that this small pane of glass represented a framed photograph or portrait of the deceased child. Jalland (1999, 246) has discussed the various modes of Victorian mourning and highlights the use of photographs or portraits of the deceased on the deathbed in providing comfort through remembrance. Jalland (1999, 246) refers in particular, to examples of photographs and lithographs of deceased children as placed in the coffin as providing comfort to the bereaved families. It seems very likely that the framed glass panel was originally an image of the child placed in the coffin prior to burial as part of the mourning practice.
- 8.6.11 This report is necessarily limited in scope. Whilst, church records indicate that the parish of Surbiton was known to house wealthy individuals together with parish paupers, the elements of coffin decoration, grave construction and grave finds suggest that many of the burials exhumed were of wealthy members of the parish. Further documentary research on the individuals identified from these works may be able to determine the socio-economic status of the burials in more detail than is possible here. Further investigations of the historical background of the parish may also provide important information to enhance the archaeological interpretations suggested in this report. Future research may well develop further information regarding the families identified from the burials.

8.7 Burials

- 8.7.1 An on-site osteological assessment was undertaken on a small sample of human remains dating to the 19th century. Burials were only selected for assessment where the human remains were clearly exposed by decayed and collapsed wooden coffin remains. No burials were removed from lead or wood coffins for osteological assessment where the coffin was substantially intact, and this included cases where the remains were exposed by some areas of damage. This method reduced the number of burials that could have been osteologically examined but was considered necessary and appropriate in order to ensure that the integrity of the burial was maintained. Where substantially covered by coffin remains or intact, the remains were recorded *in situ* and then made ready for re-burial.
- 8.7.2 There was extremely good preservation of the skeletal remains on the site. This was illustrated in the osteological sample where 66% of the sample showed excellent bone surface preservation and 83% of the sample were over 90% complete.
- 8.7.3 There were slightly more females than males in the exhumed areas of the cemetery as established by the coffin plates and burial register, and this was also evident in the sample osteologically sexed. The presence of individuals with known identity from coffin plates allowed a test of the skeletal accuracy of sex determination against the known identity. The sex estimation was correct in all 29 cases investigated osteologically. In five cases, the sex was suggested as 'probable' male or female rather than 'definite'. The additional on-site sex determination undertaken on 11 burials in order to help clarify the identity of the burial was correct in all but one instance. These results are encouraging in view of the rapid nature of the site works. Interpretations on the possible causes of

the higher number of female burials in the assemblage are limited as only three areas of the entire cemetery were exhumed.

- 8.7.4 The osteological determination of individual age-at-death was correct in 72% of cases (18/25 adults). The results indicate less accuracy in determining age than in the identification of sex. The age-at-death profile determined from the coffin plates and burial register suggested that there were fewer deaths in young infancy than occurred in later childhood (between one to five years). It is likely that improvements in maternal health, obstetrics, reduced infections and better weaning foods together with pasteurisation of milk contributed to the reduced number of young infant deaths. Challenges to health clearly persisted with young children dying under six years in the sample. There was a peak in adult age-at-death from 60 years onwards and a substantial number of the sample died aged 75+ years. There were however, 13 individuals aged over 85 years; of these three were over 96 years. Such survival into older age clearly indicates that estimates of a life expectancy are not reflective of the population profile. It is also likely that the high socio-economic status of the parishioners of St. Mark's Church during the 19th and 20th centuries also contributed to increased longevity.
- 8.7.5 There were a diverse number of pathological conditions identified during the on-site osteological assessment at St. Mark's Church. There were reflections of skeletal variants and conditions that arise during fetal and childhood development. There were no severe instances of skeletal developmental deformity and no evidence existed of inherited traits in family groupings. There was evidence for childhood deficiency of vitamin D leading to residual deformities of childhood rickets in adult and juvenile burials. All of the adult cases of residual rickets were buried during the 19th century. Increased urbanisation and industrialisation lead to significant smoke pollution limiting sunlight exposure during the post-medieval period. It would be expected that suburban areas would be less affected by air pollution than sites in the immediate urban centre of London. However, it is possible that individuals may have migrated from areas where childhood was spent out to suburbs later in life. It would be expected that the childhood diets of those of a higher socio-economic status would also not be as restricted in nutrition compared to those on a smaller income. However, dietary practices may have been socially or culturally restricted, and may have limited the intake of fresh oily fish. Social customs may also have prevented skin exposure to sunlight are also likely to have contributed to the onset of rickets during childhood during this period.
- 8.7.6 Age-related degenerative joint changes were particularly notable in the assemblage and are likely to reflect largely on the old age of the burials from the cemetery. There was also a case of an age-related osteoporotic fracture of the femur in one female burial. This injury is often noted in recent clinical reports due to the ageing population particularly prevalent in the UK. The case from St. Mark's indicates that such injuries also occurred in the past.
- 8.7.7 There was some evidence for infectious disease in the group, although in only one case was the condition severe. There was no evidence for specific infections that were known to have been quite wide-spread during the earlier periods of the post-medieval period, particularly tuberculosis and treponemal diseases such as venereal syphilis. It is likely that this is direct reflection of the small sample size osteologically studied rather than a clear indication of the decline of these conditions in the later 19th and early 20th century.
- 8.7.8 The skeletal effects of traumatic injuries were present in the collection and included fractures to the spine, thigh and pelvis. Only one adult died before full healing of the fracture at the femoral neck had

occurred. The remaining adults demonstrated sufficient survival after injury for the development of skeletal reactions. One individual displayed a secondary infection following fracture to the thigh. The plaster cast found associated with this injury clearly indicates that some treatment of the injury had been sought and was continuing at the time of death. It is likely that the higher socio-economic position of the burials as a whole facilitated access to medical treatment during the 19th century.

- 8.7.9 A variety of dental diseases and defects were noted in the osteological sample. The adult burials were largely affected by caries and periapical abscesses. These conditions indicate poor dental hygiene. There were also a large number of cases of ante-mortem tooth loss. This condition can derive from dental diseases such as caries or periodontal (gum) disease also derived from lack of dental hygiene, but can also occur with old age. Ten individuals overall were completely or partially edentulous, which is likely to reflect on the age of the population sample. Indications of the general wealth of the burial group were highlighted in the evidence of dental treatment. A variety of cases of gold and metallic fillings were observed in adult teeth in both the osteological and reburied samples of the cemetery. Gold and plastic (vulcanite) dentures were found in the osteological sample and in individuals marked for reburial. The examples demonstrate access to dentistry from the late 19th century onwards.

9. CONCLUSIONS

- 9.1 The exhumation under an archaeological watching brief enabled a large, well-preserved sample of burials to be investigated. The adopted methodology permitted all of the aims of the investigation to be achieved and enabled a considerable wealth of information to be gathered from the study of the burial assemblage. Data regarding grave construction, coffin decoration and personal adornment provided insights into the continuity in trends of burial practice throughout the 19th century as well as identifying new developments in coffin embellishment, particularly with religious insignia and coffin wreaths that have not been widely documented in comparable post-medieval assemblages. Crucifixes were also demonstrated across the grave-markers. These findings indicate an increase in spirituality and importance of visiting the grave during the later 19th and into the 20th century (Judd 1999).
- 9.2 The information gained on reflected a relatively wealthy sample of suburban parishioners, the majority of whom had successfully lived into old age. The parishioners buried in the sample are only a small proportion of those originally interred in the cemetery of St. Mark's Church. The sample does however, permit important interpretations of life during the 19th and 20th centuries to be gauged. The information gathered provides an important means of developing our knowledge of both health status and burial practice adopted by relatively wealthy parishioners within a developing suburb of London during the 19th and 20th centuries.
- 9.3 The results of the watching brief will be published as a 5-10 page article in the London Archaeologist. The archive will be deposited within 6 months at the London Archaeological Archive and Research Centre (LAARC), Museum of London. The OASIS form (Appendix E) will be completed and an electronic copy of the evaluation report deposited with the Archaeological Data Service (ADS).

10. BIBLIOGRAPHY

- Anon. 1868. *Cassell's household guide: domestic and social economy and forming a guide to every department of practical life*. Volume 3. London.
- AOC Archaeology Group (2003). *Fieldwork Sector On-Site Handbook*.
- Barnes E. 1994. *Developmental Defects of the Axial Skeleton in Palaeopathology*. Boulder: University Press of Colorado.
- Aufderheide AC, Rodriguez-Martin C. 1998. *The Cambridge encyclopedia of human paleopathology*. Cambridge, Cambridge University Press.
- Barnes E. 1994. *Developmental defects of the axial skeleton in paleopathology*. Niwot, University Press of Colorado.
- Bass W.M. 1995. *Human Osteology: A Laboratory and Field Manual*. Missouri Archaeological Society Inc, Missouri.
- Bekvalac J, Kausmally T. 2008. Life and death in Chelsea. In: Cowie R, Bekvalac J, Kausmally T. 2008. Late 17th to 19th century burial and earlier occupation at All Saints, Chelsea Old Church, Royal Borough of Kensington and Chelsea. *Museum of London Archaeology Studies Series 18*. London, Museum of London Archaeology Service. P 40-59.
- Bishop MGH, Gelbier S, Gibbons D. 2001. Ethics – dentistry and tooth-drawing in the late eighteenth and early nineteenth centuries in England. Evidence of provision at all levels of society. *British Dental Journal* 191 (10): 575-580.
- Boston C, Boyle A, Witkin A. 2005. The human skeletal assemblage. In: Boyle A, Boston C, Witkin A. *The archaeological experience at St. Luke's Church, Old Street, Islington*. Oxford Archaeology. <http://iso.co.uk/downloadables/lumps/upload/277-12.pdf>
- Boston C, Boyle A, Gill J, Witkin A. 2009. 'In the vaults beneath'. *Archaeological recording at St. George's Church, Bloomsbury*. Oxford Archaeology Monograph 8. Oxford, Oxford Archaeology.
- Brickley M, Miles A, Stainer H. 1999. *The Cross Bones burial ground, Redcross Way, Southwark, London. Archaeological excavations (1991-1998) for the London Underground Limited Jubilee Line Extension Project*. MoLAS monograph 3. London, Museum of London Archaeology Service.
- Brickley M. & McKinley J. I. (Eds.) 2004. *Guidelines to the Standards for Recording Human Remains*. *Institute of Field Archaeologists Technical Paper No. 7*. BABA/IFA, Reading.
- Brickley M, Buteux S, Adams J, Cherrington R. 2006. *St. Martin's uncovered. Investigations in the churchyard of St. Martin's-in-the-Bull Ring, Birmingham 2001*. Oxford, Oxbow Books.

- Brickley M, Ives R. 2008. The bioarchaeology of metabolic bone disease. Oxford, Academic Press.
- British Geological Survey. 2003. South London Sheet 270.
- Brooks S, and Suchey JM. 1990. Skeletal age determination based on the Os Pubis: A comparison of the Acsádi-Nemeskéri and Suchey-Brooks methods. *Human Evolution* 5:227-238.
- Brothwell D.R., and Zakrzewski S. 2004. Metric and non-metric studies of archaeological human bone. In: Brickley M. & McKinley J. I. (Eds.) 2004. *Guidelines to the Standards for Recording Human Remains. Institute of Field Archaeologists Technical Paper No. 7.* BBAO/IFA, Reading. p 26-32.
- Buikstra J. and Ubelaker D.H. 1994. *Standards for Data Collection from Human Skeletal Remains.* Arkansas Archaeological Survey Series Nr 44.
- Cowie R, Bekvalac J, Kausmally T. 2008. Late 17th to 19th century burial and earlier occupation at All Saints, Chelsea Old Church, Royal Borough of Kensington and Chelsea. Museum of London Archaeology Studies Series 18. London, Museum of London Archaeology Service.
- English Heritage (1991). *Management of Archaeological Projects.*
- English Heritage 2002. *Centre for Archaeology Guidelines. Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports.* English Heritage, Swindon.
- English Heritage and The Church of England (2005). *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England.*
- Eveleth P, and Tanner J. 1976. Worldwide variation in human growth. Cambridge: Cambridge University Press.
- Gale R. 2006. Wooden coffin remains. In: Brickley M, Buteux S, Adams J, Cherrington R. 2006. St. Martin's uncovered. Investigations in the churchyard of St. Martin's-in-the-Bull Ring, Birmingham 2001. Oxford, Oxbow Books. p 160-163.
- Gray J. 1837. Dental Practice; or, observations on the qualifications of the Surgeon-Dentist. London. Printed by Joseph Rickerby, Printer, Sherbourn Lane, London.
- Gustafson G. & Koch G. 1974. Age estimation up to sixteen years of age based on dental development. *Odontologisk Revy* 25:297-306.
- Hancocks A. 2006. In: Brickley M, Buteux S, Adams J, Cherrington R. 2006. St. Martin's uncovered. Investigations in the churchyard of St. Martin's-in-the-Bull Ring, Birmingham 2001. Oxford, Oxbow Books. P 140.
- Hancox E. 2006. Coffins and coffin furniture. In: Brickley M, Buteux S, Adams J, Cherrington R. 2006. St. Martin's uncovered. Investigations in the churchyard of St. Martin's-in-the-Bull Ring, Birmingham 2001. Oxford, Oxbow Books. p 152-160.

- Hillam C (ed). 1990. *The roots of dentistry*. British Dental Association, London.
- Hillson S. 1996. *Dental Anthropology*. Cambridge University Press, Cambridge.
- Institute of Field Archaeologists (1997). *Code of Conduct*.
- Institute of Field Archaeologists (2008). *Standard and Guidance for an Archaeological Watching Brief*.
- İşcan MY, and Loth SR. 1984. Determination of age from sternal rib in white males. A test of the phase method. *Journal of Forensic Sciences* 31:122-132.
- İşcan MY, Loth SR, and Scheuerman EH. 1985. Determination of age from the sternal rib in white females. A test of the phase method. *Journal of Forensic Sciences* 31:990-999.
- Jalland P. 1999. Victorian death and its decline: 1850-1918. In: Jupp PC, and Gittings C (eds). *Death in England. An illustrated history*. Manchester, Manchester University Press. p. 230-255.
- Janaway RC. 1993. The textiles. In: Reeve J, Adams M. 1993. *Across the Styx. The Spitalfields Project. Volume 1. The Archaeology*. CBA Research Report 85. Council for British Archaeology. P 93-119.
- Jarvis HW. (1960). *Beauty for Ashes. Surbiton Parish Church*. John Roberts Press Ltd.
- Jupp PC, and Gittings C (eds). *Death in England. An illustrated history*. Manchester, Manchester University Press.
- Jupp PC, and Walter T. 1999. The healthy society: 1918-1998. In: Jupp PC, and Gittings C (eds). *Death in England. An illustrated history*. Manchester, Manchester University Press. P. 256-282.
- Lovejoy C.O., Meindl R.S., Pryzbeck, T.R. & Mensforth R.P. 1985. 'Chronological metamorphosis of the auricular surface of the ilium: A new method for the determination of adult skeletal age at death'. *American Journal of Physical Anthropology* 68: 15-28.
- McKinley J. 1989. Spong Hill. Anglo-Saxon cremation cemetery. In: Roberts C.A., Lee F., Bintliff J. editors. *Burial archaeology, current research, methods, developments*. *British Archaeological Reports British Series* 211:241-248
- McKinley J. 1994. The Anglo-Saxon cemetery at Spong Hill, North Elmham Part VIII: The Cremations. *East Anglian Archaeology* 69:6-109.
- McKinley J. 2000. The analysis of cremated bone. In: Cox M, and Mays S, editors. *Human Osteology in Archaeology and Forensic Science*. Greenwich Medical Media Ltd, London. p 403-421.
- McKinley J. 2004. Compiling a skeletal inventory: cremated human bone. In: Brickley M, & McKinley J, editors. *Guidelines to the Standards for Recording Human Remains*. *Institute of Field Archaeologists Technical Paper No. 7*. BABAO/IFA, Reading. p 9-12.

Meindl RS, Lovejoy CO, Mensforth RP, and Walker RA. 1985. A revised method of age determination using the os pubis, with a review and tests of accuracy of other current methods of pubic symphyseal ageing. *American Journal of Physical Anthropology* 68:29-45.

May T. 2003. *The Victorian undertaker*. Shire Publications Ltd, Princes Risborough.

Mays S, Brickley M, Ives R. 2006. Skeletal manifestations of rickets in infants and young children in a historic population from England. *American Journal of Physical Anthropology* 129:362-374.

Melikian M, Ives R. 2009. St. Mark's Church Surbiton, Surrey. A written scheme of investigation for an archaeological watching brief. Unpublished document for AOC Archaeology Group.

Miles A. 2008a. Coffins. In: Cowie R, Bekvalac J, Kausmally T. 2008. Late 17th to 19th century burial and earlier occupation at All Saints, Chelsea Old Church, Royal Borough of Kensington and Chelsea. Museum of London Archaeology Studies Series 18. London, Museum of London Archaeology Service. p 31-32.

Miles A, Powers N, Wroe-Brown R, Walker D. 2008b. St. Marylebone Church and burial ground in the 18th to 19th centuries. Excavations at St. Marylebone School, 1992 and 2004-6. London, Museum of London Archaeology Service Monograph 46.

Moorees C.F.A, Fanning E.A., and Hunt E.E. 1963. Formation and resorption of three deciduous teeth in children. *American Journal of Physical Anthropology* 21:205-213.

Museum of London (1994). *Archaeological Site Manual* (Third Edition).

Mytum H. (2000). *Recording and Analysing Graveyards*. Council for British Archaeology Handbook 15. York, Council for British Archaeology, 2000.

Ortner D, Mays S. 1998. Dry-bone manifestations of rickets in infancy and early childhood. *International Journal of Osteoarchaeology* 8:45-55.

Ortner D 2003. *Identification of pathological conditions in human skeletal remains*. Second edition. San Diego, Academic Press.

Phenice T.W. 1969. A newly developed visual method of sexing the os pubis. *American Journal of Physical Anthropology* 30:297-302.

Powell N. 2008. Coffin textile furnishings. In: Cowie R, Bekvalac J, Kausmally T. 2008. Late 17th to 19th century burial and earlier occupation at All Saints, Chelsea Old Church, Royal Borough of Kensington and Chelsea. Museum of London Archaeology Studies Series 18. London, Museum of London Archaeology Service. p 35.

Powell N. 2008. Funerary clothing and shrouds. In: Cowie R, Bekvalac J, Kausmally T. 2008. Late 17th to 19th century burial and earlier occupation at All Saints, Chelsea Old Church, Royal Borough of

Kensington and Chelsea. Museum of London Archaeology Studies Series 18. London, Museum of London Archaeology Service. p 35-38.

Reeve J, Adams M. 1993. *Across the Styx. The Spitalfields Project. Volume 1. The Archaeology.* CBA Research Report 85. Council for British Archaeology.

Roberts C. & Cox M. 2003. *Health and Disease in Britain.* Sutton Publishing Limited, Stroud.

Roberts C. & Manchester K. 2005. *The Archaeology of Disease.* Third edition. Sutton Publishing Limited, Stroud.

Rogers J. & Waldron T. 1995. *A Field Guide to Joint Disease in Archaeology.* John Wiley and Sons, Chichester.

Scheuer L. and Black S. 2000. *Developmental Juvenile Osteology.* London: Academic Press, London.

St. Mark's Church (2009). *St Marks History* <http://www.surbitonchurch.org.uk/markarch.html> accessed 12th March 2009.

Sutherland LD, and Suchey JM. 1991. Use of the ventral arc in pubic sex determination. *Journal of Forensic Sciences* 36:501-511

Thompson H. 1874. The treatment of the body after death. *The Contemporary Review* 23: 319-323.

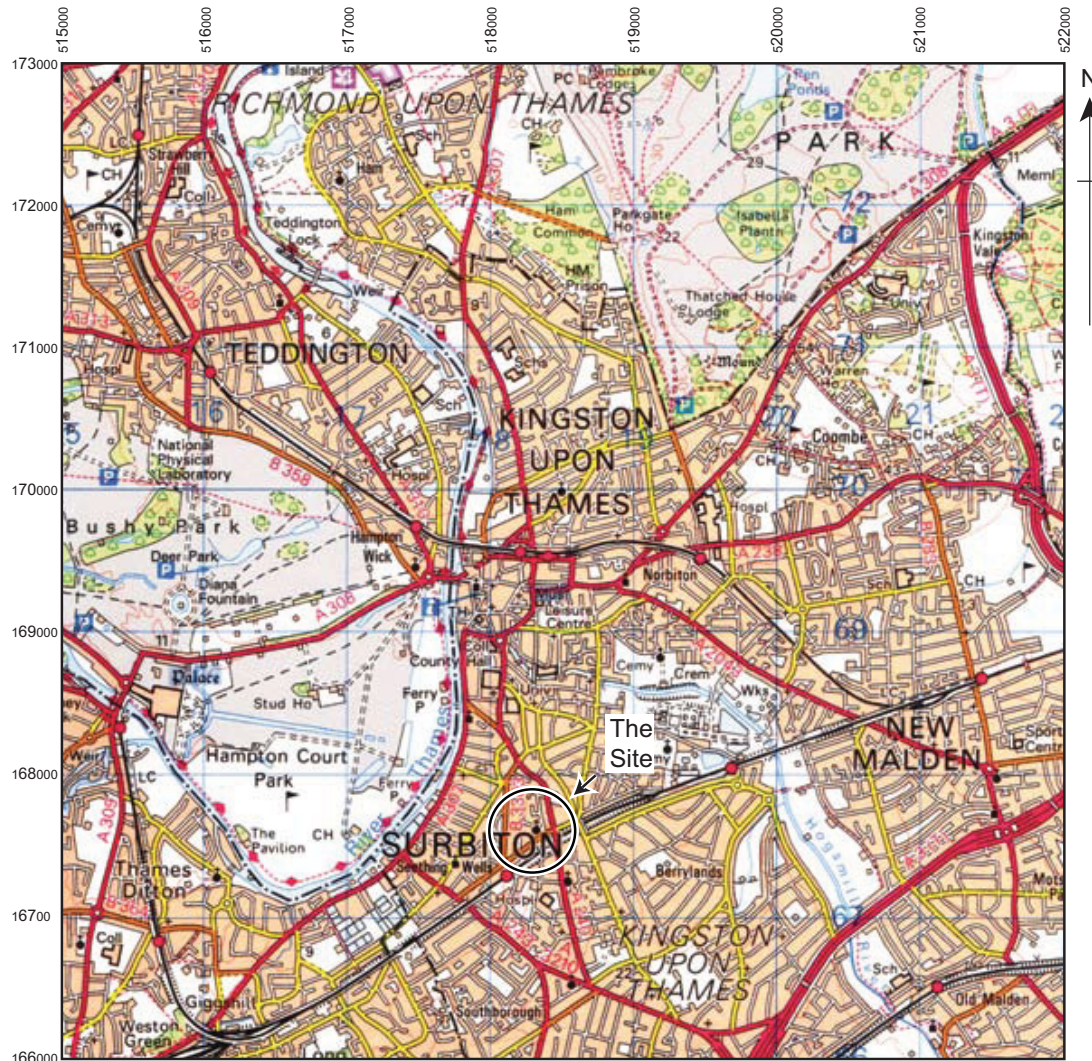
The Cremation Society. 1974. History of modern cremation in Great Britain from 1874: The first hundred years. The Cremation Society of Great Britain. Online article accessed 17/09/09 <http://www.srgw.demon.co.uk/CremSoc/History/HistSocy.html#provincial>

UKIC (1990) *Guidelines for the Preparation of Excavation Archives for Long-term Storage.*

Walford E. (1894). *Greater London. A Narrative of its History, its People and its Places.* Volume 2. Advanced Media Corporation, London.

Walton Rogers P. 2006. Textiles. In: Brickley M, Buteux S, Adams J, Cherrington R. 2006. *St. Martin's uncovered. Investigations in the churchyard of St. Martin's-in-the-Bull Ring, Birmingham 2001.* Oxford, Oxbow Books. p 163-178.

Weinreb B, Hibbert C. (1983). *The London Encyclopedia.* Macmillan, London.



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Figure 1: Site location



Figure 2: Detailed Site / Exhumation Area Locations

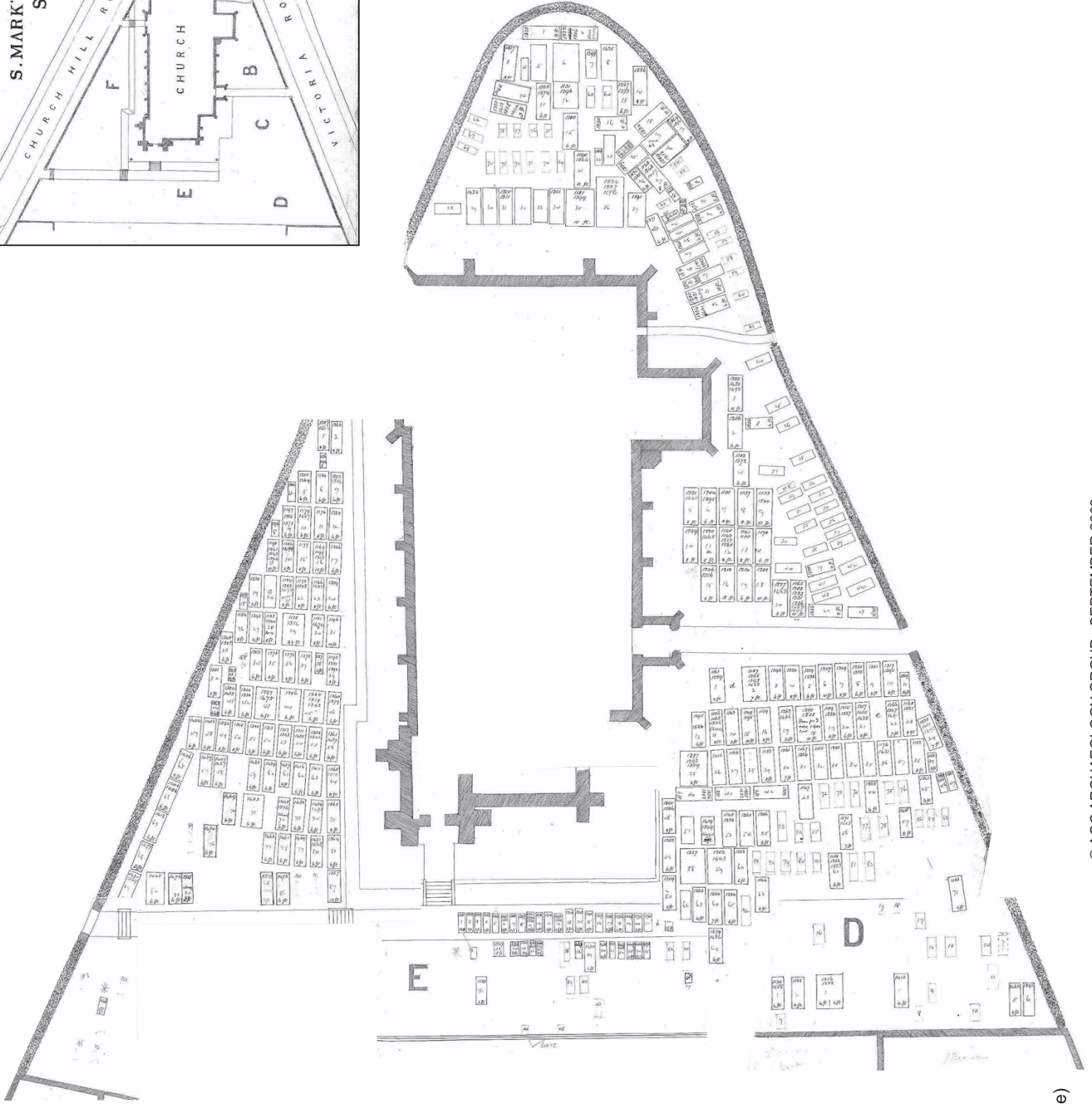
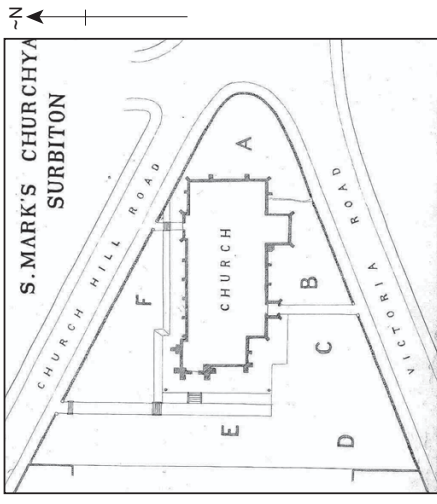


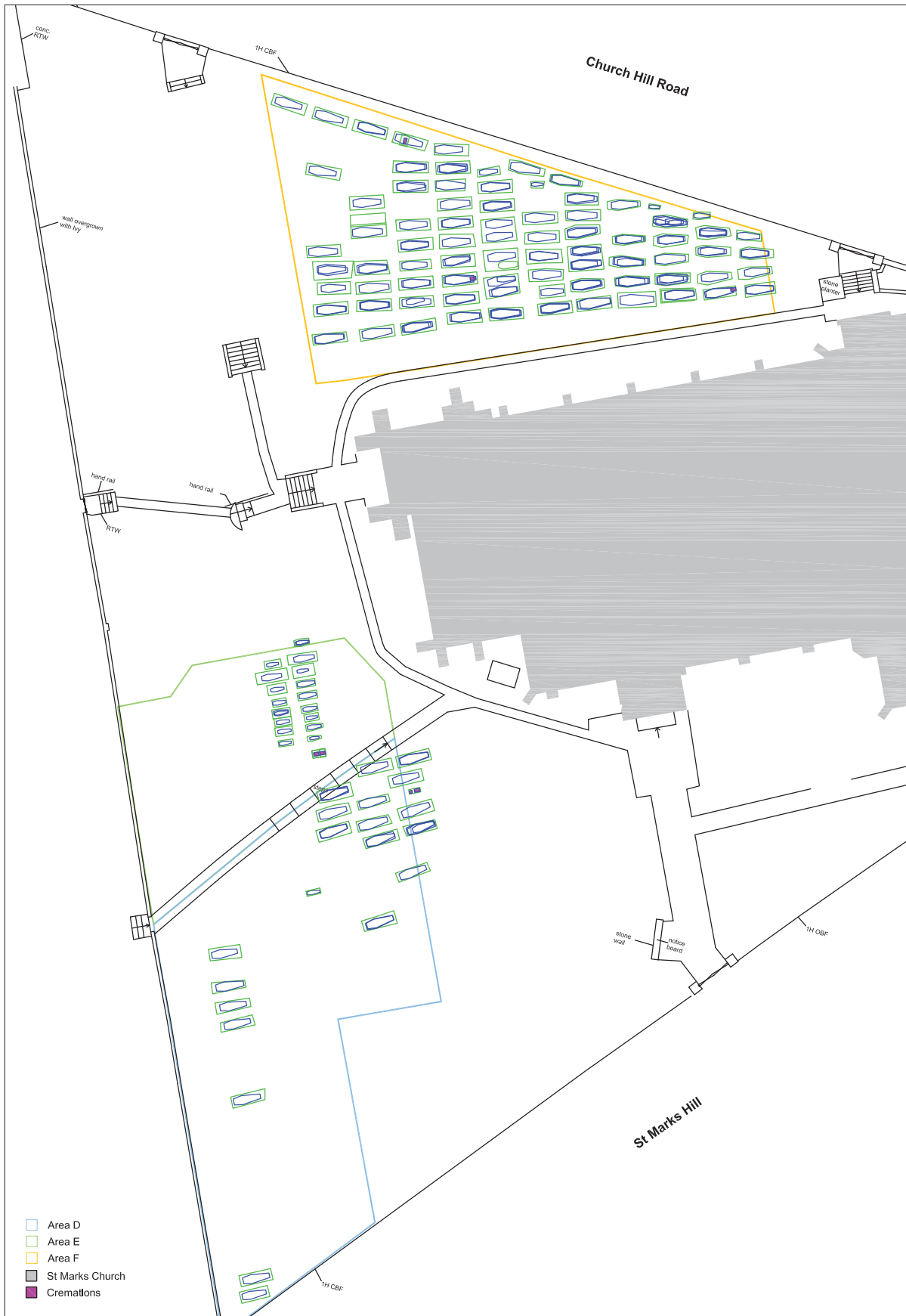
Figure 3: Composite Burials Record Plan (Representative Only, Not To Scale)



Based on the Plan Produced by Twickenham Surveys



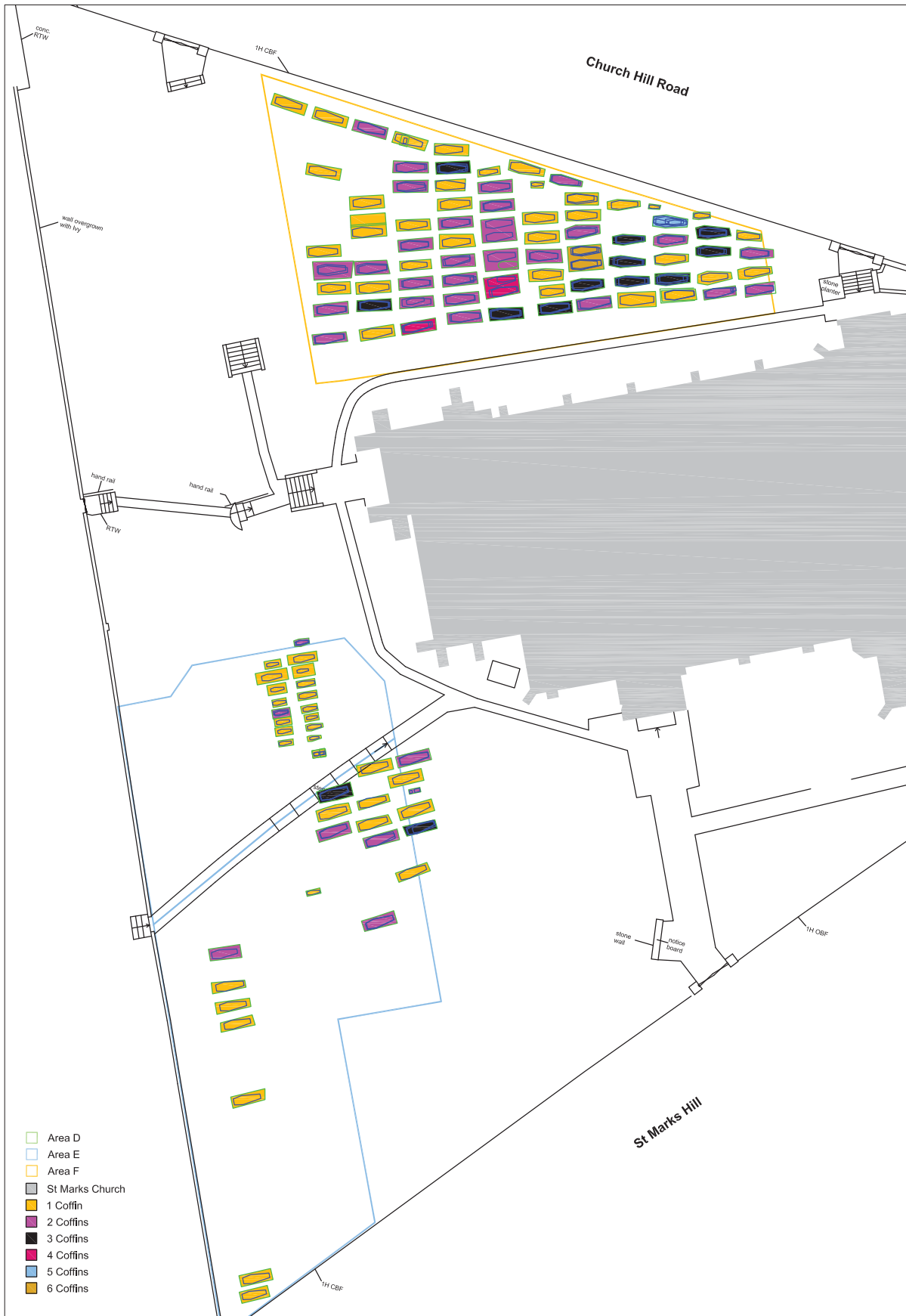
Figure 4: Plan Showing the Locations of Headstones/Monuments



Based on the Plan Produced by Twickenham Surveys

5m 0 10m
1:250

Figure 5: Plan Showing the Locations of Cremation Urns/Caskets



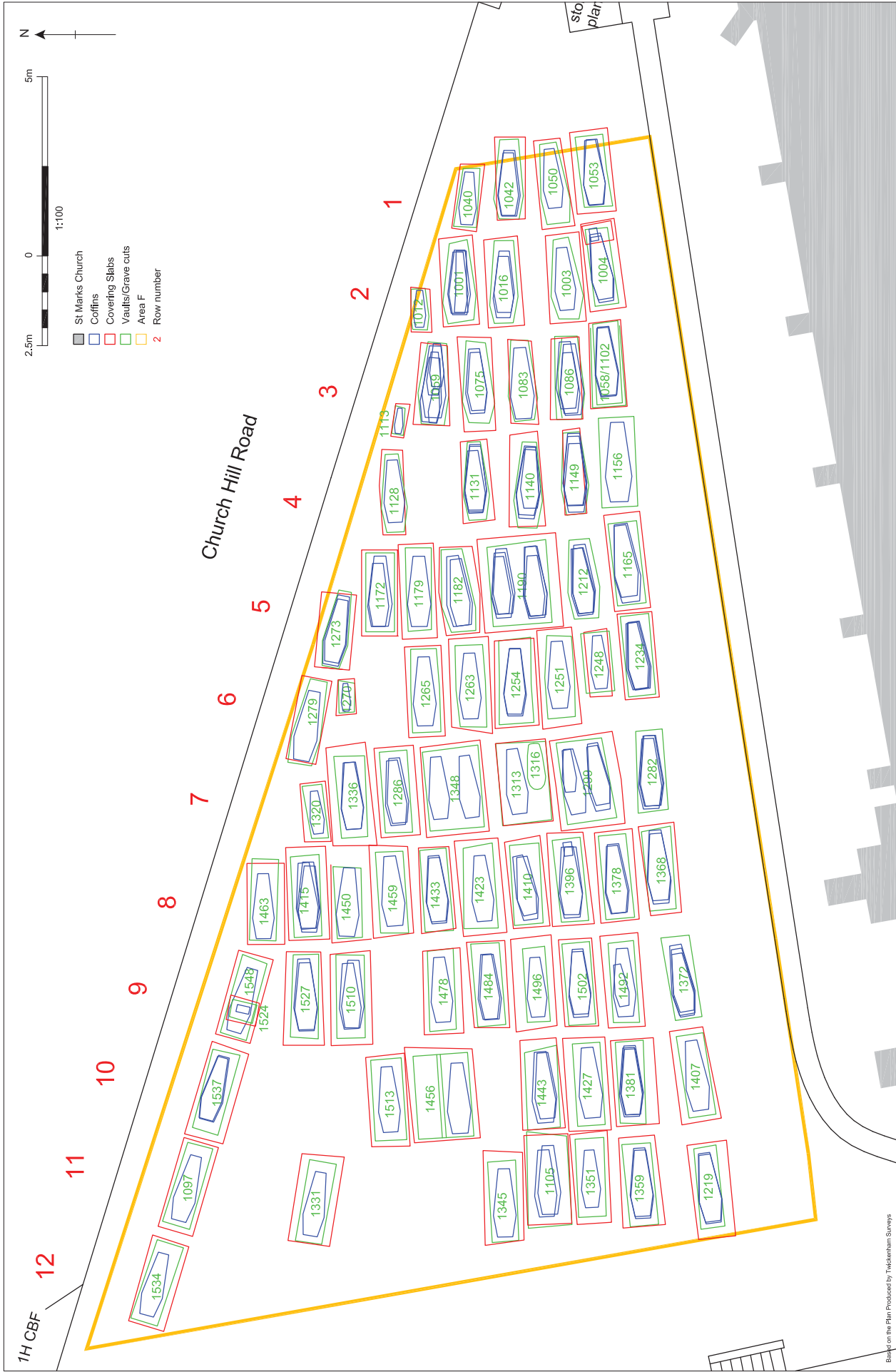
Based on the Plan Produced by Twickenham Surveys



Figure 6: Plan Showing the Number of Burials per Vault/Grave Cut

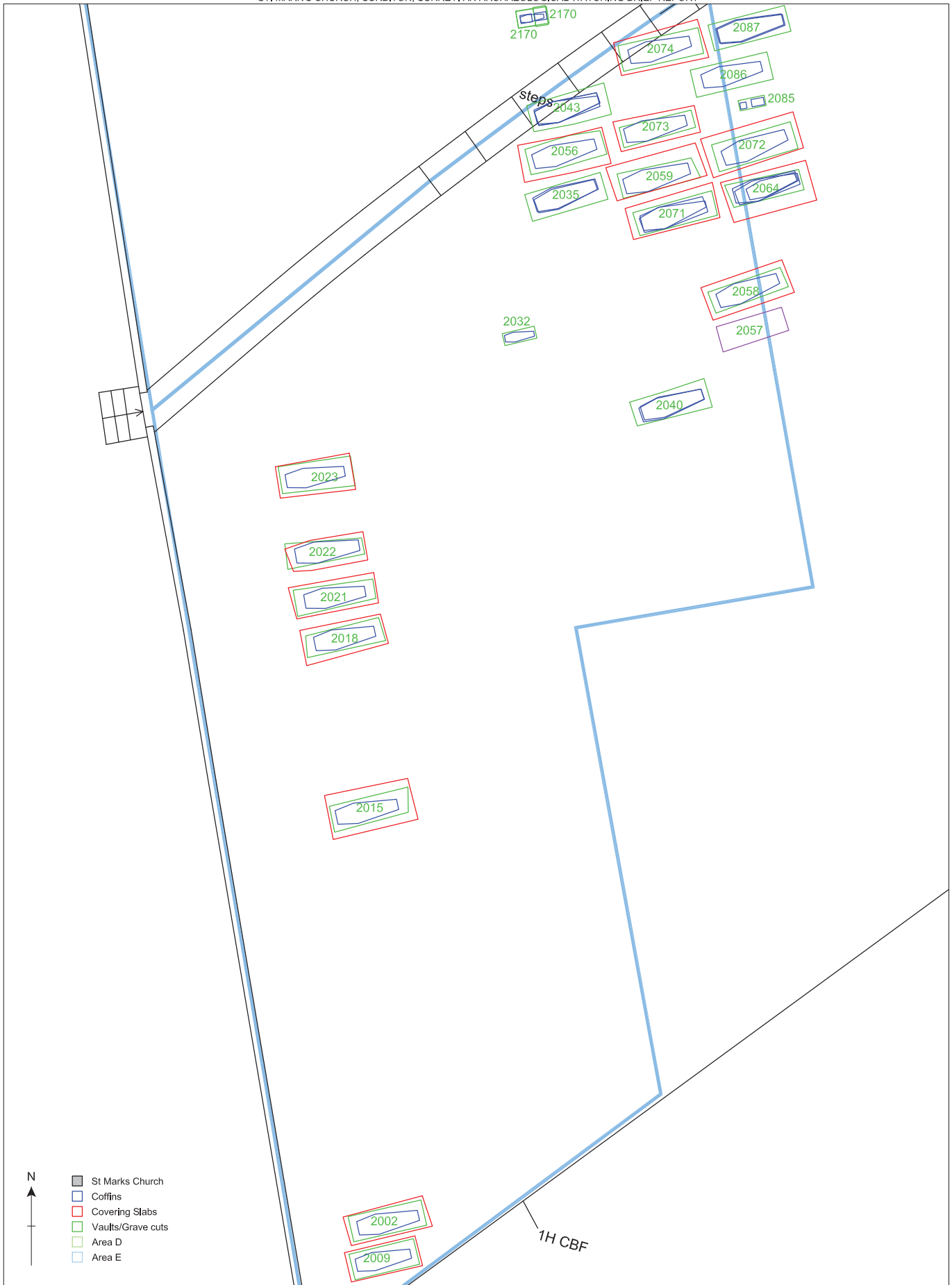


Figure 7: Location of Juvenile Burials



Based on the Plan Produced by Twickenham Surveys

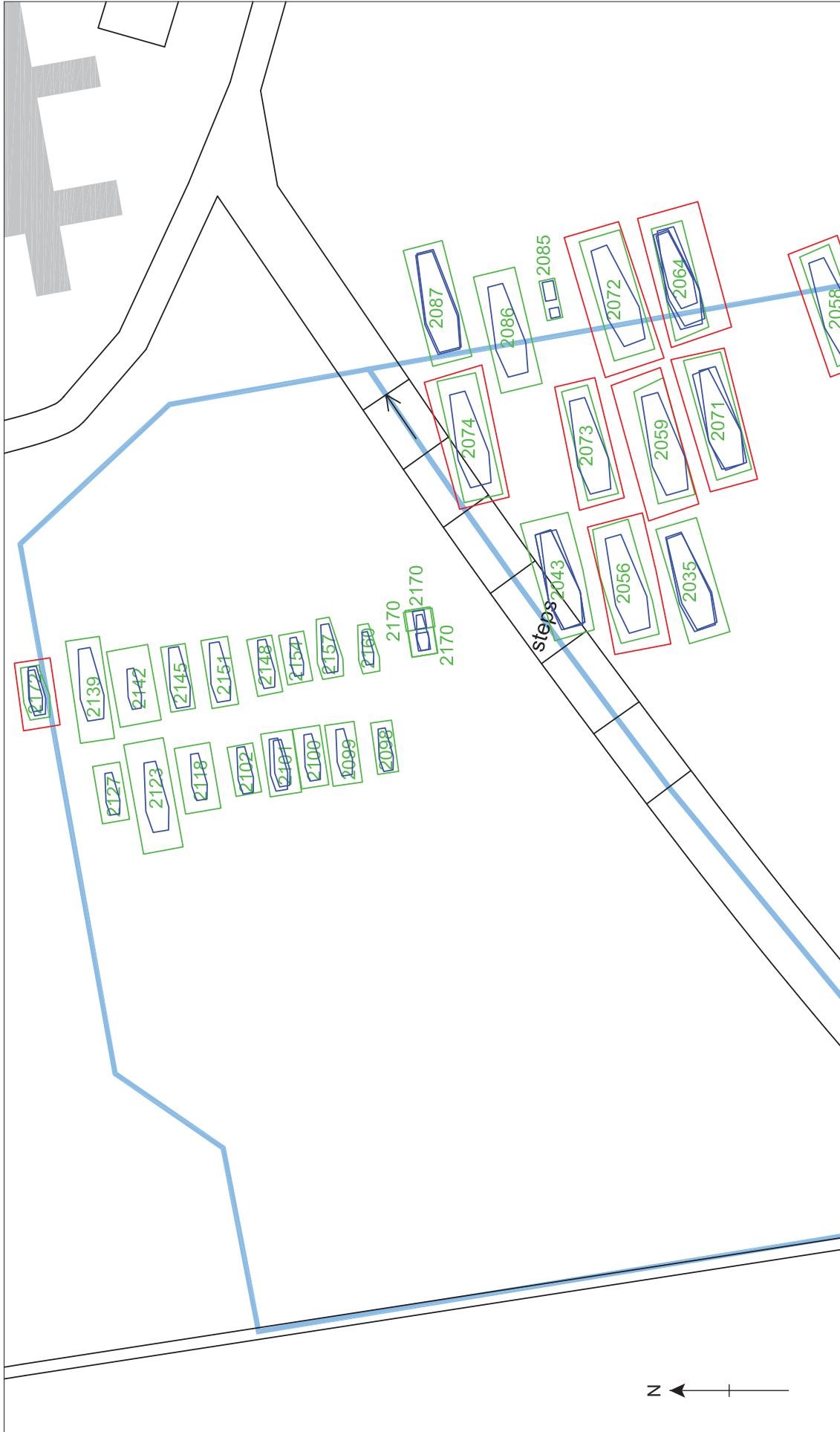
Figure 8: Area F



Based on the Plan Produced by Twickenham Surveys

Figure 9: Area D





Based on the Plan Produced by Twickenham Surveys

- Figure 10: Area D & E**
- St Marks Church
 - Coffins
 - Covering Slabs
 - Vaults/Grave cuts
 - Area D
 - Area E



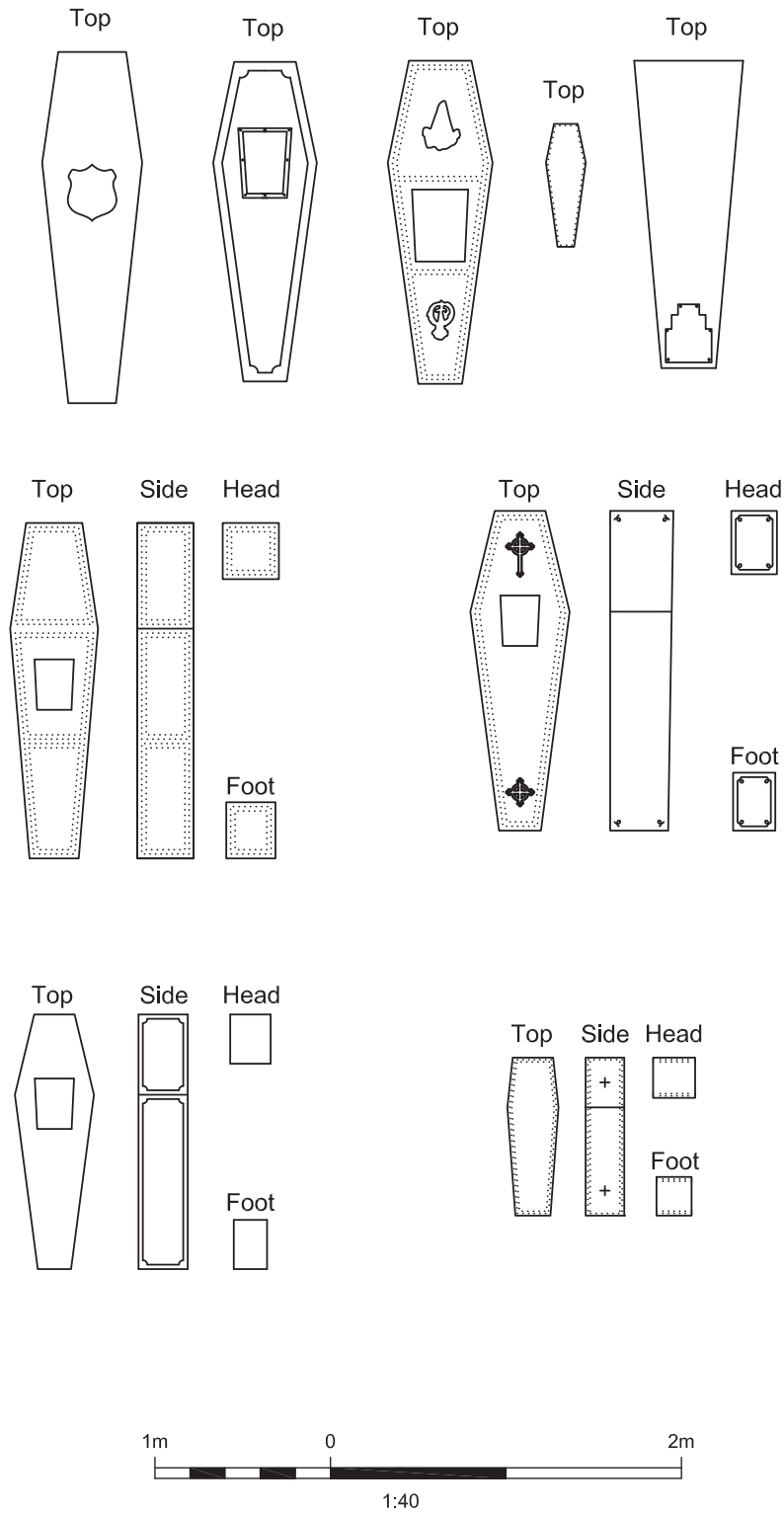
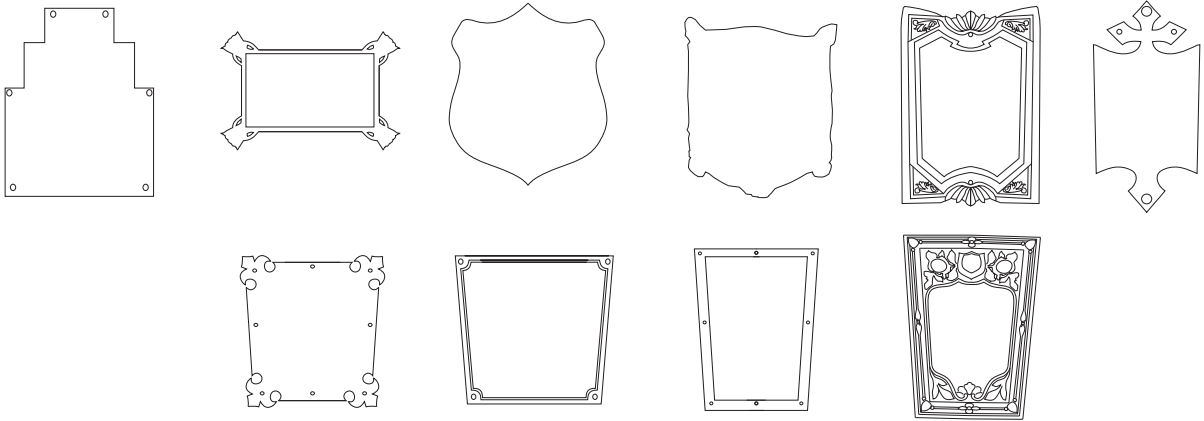


Figure 11: Representative Sample of Coffin Styles and Decorations

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Coffin Plates



Lid Motifs

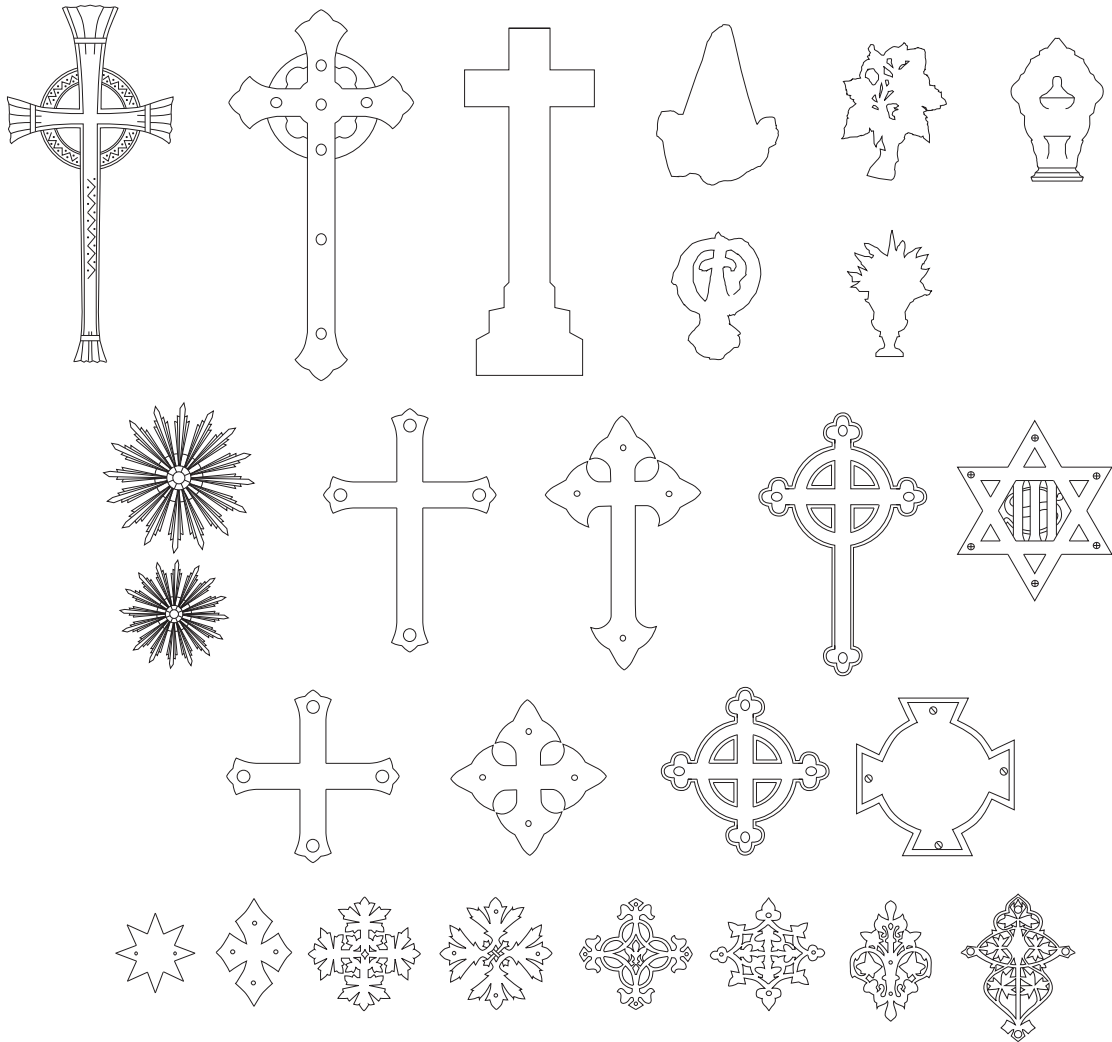


Figure 12: Representative Sample of Coffin Plate and Ornamentation Styles
(Representative Only, Not To Scale)

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WATCHING BRIEF REPORT

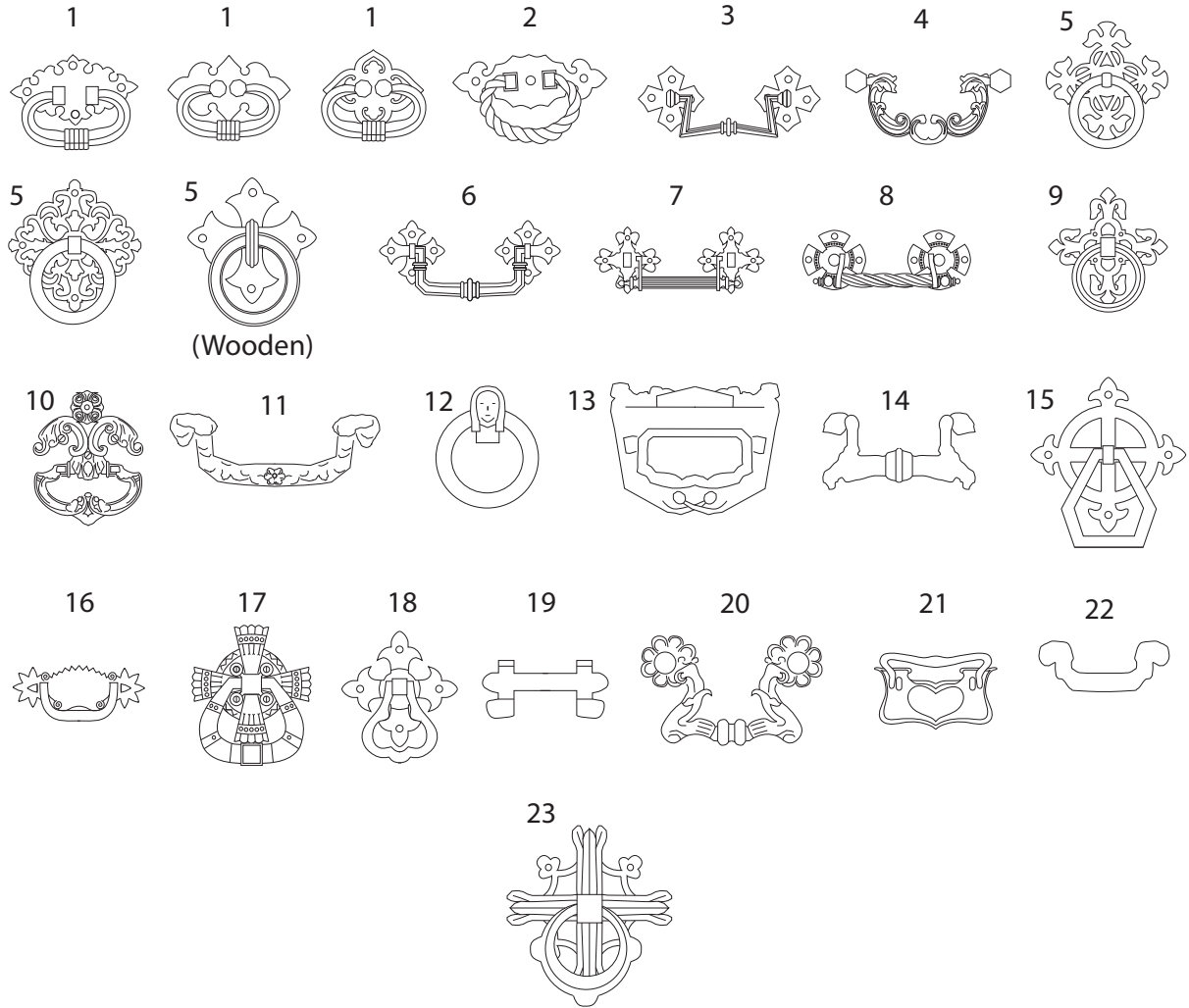


Figure 13: Styles of Coffin Handles from Burials
(Representative Only, Not To Scale)



Appendices

APPENDIX A: Context Register

Context No.	Context Description	Length	Width	Depth	Age of skeleton	Burial phase	Coffin type	Vault shape
	AREA F							
1000	Four stone slabs capping graves 1001 to 1004							
1001	Tapered brick vault containing 3 chambers and coffins 1006, 1007 and 1009	2.40m	0.95m	1.30m				Tapered
1002	Tapered brick vault containing 3 chambers and coffins 1020 and 1023	2.26m	0.80m	1.56m				Tapered
1003	Tapered brick vault containing a single chamber and coffin 1025	2.25m	0.80-m	1.85m				Tapered
1004	Rectangular brick vault containing 2 chambers and coffins 1029 and 1031	2.30m	0.78m	1.27m				Rectangular
1005	Adult skeleton in coffin 1006	1.80m	0.60m		Adult	19th Century		Tapered
1006	Wooden coffin containing 1005. Upper burial within brick vault 1001	1.80m	0.60m		Adult	19th Century	Wood	Tapered
1007	Lead coffin for SK 1008, below coffin 1006 in brick vault 1001	1.70m	0.50m		Adult	19th Century	Lead	Tapered
1008	Adult skeleton in coffin 1007	1.70m	0.50m		Adult	19th Century		Tapered
1009	Basal Lead coffin in brick vault 1001, below 1007 and 1006. Contained 1010				Adult	19th Century	Lead	Tapered
1010	Adult skeleton in coffin 1009				Adult	19th Century		Tapered
1011	Natural reddish orange sand brick earth and sandy gravel							
1012	Rectangular brick vault containing infant coffin 1014	1.20m	0.50m	0.32m				Rectangular
1013	Infant skeleton in coffin 1014	1.01m	0.34m		Juvenile	?		Rectangular
1014	Wooden coffin containing 1013, within brick vault 1012	1.01m	0.34m	0.25m	Juvenile	?	Wood	Rectangular
1015	SAME AS 1011 - Natural brick earth							Rectangular
1016	SAME AS 1002	2.26m	0.80m	1.56m				
1017	Stone floor forming upper empty chamber in vault 1002	2.26m	0.80m	0.07m				
1018	Buried topsoil above natural 1011 / 1015 and below made ground 1019			0.16m				
1019	Re-deposited natural clay made ground			0.22m				

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1020	Lead coffin for SK 1021, below stones 1000 in upper chamber of vault 1002	1.80m	0.54m	0.32m	Adult	19th Century	Lead	Tapered
1021	Adult skeleton in lead coffin 1020	1.80m	0.54m		Adult	19th Century		Tapered
1022	Stone floor supporting coffin 1020 in brick vault 1002	2.26m	0.80m	0.06m				
1023	Lead coffin in vault 1002, below 1022 and 1020	1.92m	0.56m	0.44m	Adult	19th Century	Lead	Tapered
1024	Adult skeleton in 1023	1.92m	0.56m		Adult	19th Century		Tapered
1025	Lead coffin in vault 1003.	1.78m	0.55m	0.38m	Adult	19th Century	Lead	Tapered
1026	Adult skeleton in coffin 1025	1.78m	0.55m		Adult	19th Century		Tapered
1027	Square brick additional entrance to vault 1004 containing casket 1028, bonded to 1000	0.75m	0.50m	0.15m				Casket
1028	Outer wood and inner ceramic casket within brick vault extension 1027, containing SK 1549	0.35m	0.22m	0.20m	Adult	20th Century	Casket	Casket
1029	Upper Outer Wood and inner lead coffin in vault 1004	1.84m	0.54m	0.38m	Adult	19th Century	Lead	Rectangular
1030	Adult skeleton in lead coffin 1029	1.84m	0.54m		Adult	19th Century		Rectangular
1031	Lower outer wood and inner lead coffin in vault 1004	1.86m	0.55m	0.34m	Adult	19th Century	Lead	Rectangular
1032	Adult skeleton in lead coffin 1031	1.86m	0.55m		Adult	19th Century		Rectangular
1033	Stone floor supporting coffin 1029 in brick vault 1004, above 1030	2.30m	0.78m	0.06m				
1034	Brick foundation for memorial placement	0.70m	0.70m	0.13m				
1035	Sandstone capping slabs over 1053	2.00m	1.09m	0.07m				
1036	Sandstone capping slabs over 1050	2.50m	0.96m	0.06m				
1037	Sandstone capping slabs over 1042	2.33m	1.02m	0.07m				
1038	Sandstone capping slabs over 1040	1.90m	0.80m	0.07m				
1039	Lead coffin with outer wood coffin in brick vault 1040	1.45m	0.45m	0.18m	Juvenile	19th Century	Lead	Trapezoid
1040	Trapezoid brick vault containing coffin 1039	1.76m	0.58m	0.52m				Trapezoid
1041	Juvenile skeleton in lead coffin 1039	1.45m	0.45m		Juvenile	19th Century		
1042	Tapered brick vault divided into chambers containing 2 burials 1043 and 1044	2.23m	0.78m	1.16m				Tapered
1043	Lead coffin with outer wood coffin in brick vault 1042	1.84m	0.50m	0.35m	Adult	19th Century	Lead	Tapered
1044	Lead coffin with outer wood coffin in brick vault 1042 below 1046	1.70m	0.50m	0.42m	Adult	19th Century	Lead	Tapered
1045	Adult skeleton in lead coffin 1043	1.84m	0.50m		Adult	19th Century		Tapered
1046	Stone floor within vault 1042, below 1043 and above 1044	2.23m	0.78m	0.07m				
1047	Adult skeleton in lead coffin 1044	1.70m	0.50m		Adult	19th Century		Tapered

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1048	Lead coffin with decayed outer wood coffin in brick vault 1050	1.68m	0.46m	0.30m	Adult	19th Century	Lead	Tapered
1049	Adult skeleton in 1048	1.68m	0.46m		Adult	19th Century		Tapered
1050	Tapered brick vault containing coffin 1048	2.28m	0.76m	1.26m				Tapered
1051	Lead coffin with decayed outer wood coffin in brick vault 1053	1.82m	0.55m	0.48m	Adult	20th Century	Lead	Rectangular
1052	Adult skeleton in lead coffin 1051	1.82m	0.55m		Adult	20th Century		Rectangular
1053	Rectangular brick vault , 2 chambers, containing coffins 1051 and 1120	2.30m	0.80m	1.20m				Rectangular
1054	Sandstone capping slabs over 1059							
1055	Sandstone capping slabs over 1075	2.69m	1.10m	0.07m				
1056	Slate capping slabs over 1083	2.49m	0.88m	0.025m				
1057	Sandstone capping slabs over 1086	2.43m	0.99m	0.07m				
1058	Rectangular brick vault , uncapped	2.32m	0.74m	0.58m				Rectangular
1059	Tapered brick vault , divided into 5 chambers containing 5 coffins	2.27m	0.81m	2.52m				Tapered
1060	Upper sandstone floor within vault 1059	2.27m	0.81m	0.07m				
1061	Wood coffin in 1059	2.08m	0.60m		Adult	19th Century	Wood	Tapered
1062	Adult skeleton in 1061				Adult	19th Century		Tapered
1063	Second sandstone floor within vault 1059	2.26m	0.80m	0.07m				
1064	Lead coffin with decayed outer wood casket, in vault 1059	1.26m	0.45m	0.28m	Juvenile	19th Century	Lead	Tapered
1065	Juvenile skeleton in lead coffin 1064				Juvenile	19th Century		Tapered
1066	Third stone floor in vault 1059	2.27m	0.81m	0.04m				
1067	Lead coffin with decayed outer wooden coffin in 1059, below 1066, to the east of 1069	1.22m	0.30m	0.29m	Juvenile	19th Century	Lead	Tapered
1068	Juvenile skeleton in lead coffin 1067				Juvenile	19th Century		Tapered
1069	Lead coffin with decayed outer wooden coffin in 1059, to the west of 1067	1.04m	0.37m	0.27m	Juvenile	19th Century	Lead	Tapered
1070	Juvenile skeleton in lead coffin 1069				Juvenile	19th Century		Tapered
1071	Sandstone floor within vault 1053	2.30m	0.77m	0.07m				
1072	Lead coffin with decayed outer wood coffin at base of vault 1059	1.80m	0.60m	0.30m	Adult	19th Century	Lead	Tapered
1073	Adult skeleton in lead coffin 1072				Adult	19th Century		Tapered
1074	Sandstone slabs forming capping and upper floor within vault 1075	2.27m	0.82m	0.07m				
1075	Tapered brick vault , divided into 3 chambers containing 2 coffins	2.26m	0.78m	1.82m				Tapered
1076	Wood coffin in 1075	1.82m			Adult	20th Century	Wood	Tapered

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1134	Adult skeleton in lead coffin 1133					Adult	19th Century		Tapered
1135	Sandstone floor in 1131, below 1133 and above 1136	2.26m	0.73m	0.07m					
1136	Lead coffin with outer wooden coffin in vault 1131	1.83m	0.50m	0.36m		Adult	19th Century	Lead	Tapered
1137	Adult skeleton in lead coffin 1136					Adult	19th Century		Tapered
1138	Wood coffin within vault 1140	1.87m	0.47m	0.34m		Adult	20th Century	Wood	Tapered
1139	Adult skeleton in wood coffin 1138					Adult	20th Century		Tapered
1140	Tapered brick vault containing 3 coffins	2.30m	0.84m	2.02m					Tapered
1141	Sandstone floor within vault 1140, below 1138	2.30m	0.84m	0.07m					
1142	Wood coffin, heavily decayed in vault 1140	1.95m	0.58m			Adult	20th Century	Wood	Tapered
1143	Adult skeleton in wood coffin 1142					Adult	20th Century		Tapered
1144	Sandstone floor within vault 1140, below 1142	2.30m	0.84m	0.07m					
1145	Lead coffin at the base of vault 1140	1.66m	0.46m	0.34m		Adult	19th Century	Lead	Tapered
1146	Adult skeleton in lead coffin 1145					Adult	19th Century		Tapered
1147	Wood coffin, heavily decayed in vault 1149	1.90m	0.45m	<0.12m		Adult	20th Century	Wood	Tapered
1148	Adult skeleton in wood coffin 1147					Adult	20th Century		Tapered
1149	Tapered brick vault , divided into 3 chambers containing 3 coffins	2.30m	0.77m	1.90m					Tapered
1150	Sandstone floor within vault 1149, below 1147	2.30m	0.77m	0.07m					
1151	Wood coffin in vault 1149, below 1150	2.00m	0.54m	0.27m		Adult	20th Century	Wood	Tapered
1152	Adult skeleton in wood coffin 1151					Adult	20th Century		Tapered
1153	Sandstone floor within vault 1149, below 1151	2.30m	0.77m	0.07m					
1154	Lead coffin in vault 1149, below 1153	1.92m	0.52m	0.38m		Adult	19th Century	Lead	Tapered
1155	Adult skeleton in lead coffin 1154					Adult	19th Century		Tapered
1156	Rectangular brick vault containing a single coffin 1158	2.30m	0.85m	1.20m					Rectangular
1157	Adult skeleton in wood coffin 1158					Adult	19th Century		Rectangular
1158	Wood coffin in vault 1156	2.20m	0.62m			Adult	19th Century	Wood	Rectangular
1159	Stone slabs capping 1165	2.70m	0.78m	0.07m					
1160	Stone capping slabs over 1212	2.70m	0.78m	0.07m					
1161	Stone slabs capping 1190	2.62m	2.20m	0.07m					
1162	Stone slabs capping 1182	2.47m	0.97m	0.04m					

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1163	Stone slabs capping 1179	2.64m	0.98m	0.07m				
1164	Stone slabs capping 1172	2.40m	1.00m	0.07m				
1165	Tapered brick vault divided into 3 chambers containing 2 burials	2.30m	0.80m	2.41m				Tapered
1166	Sandstone floor in vault 1165	2.30m	0.80m	0.07m				
1167	Wood coffin, heavily decayed within vault 1165	2.08m	0.60m		Adult	20th Century	Wood	Tapered
1168	Adult skeleton in wood coffin 1167				Adult	20th Century		Tapered
1169	Stone floor in vault 1165, below 1167	2.30m	0.80m	0.07m				
1170	Wood coffin, heavily decayed in vault 1165	2.00m	0.60m		Adult	20th Century	Wood	Tapered
1171	Adult skeleton in wood coffin 1170				Adult	20th Century		Tapered
1172	Rectangular brick vault divided into 2 chambers, containing a single coffin	2.20m	0.80m	1.80m				Rectangular
1173	Stone floor in vault 1172, creating empty top chamber	2.20m	0.80m	0.07m				
1174	Stone floor in vault 1165, below 1170	2.30m	0.80m	0.07m				
1175	Lead coffin in vault 1172	2.00m	0.57m	0.40m	Adult	19th Century	Lead	Rectangular
1176	Adult skeleton in lead coffin 1175				Adult	19th Century		Rectangular
1177	Lead coffin in vault 1165 below 1174				Adult	19th Century	Lead	Tapered
1178	Adult skeleton in lead coffin 1177				Adult	19th Century		Tapered
1179	Rectangular brick vault containing a single coffin 1180	2.32m	0.70m	0.72m				Rectangular
1180	Lead coffin with decayed outer wood coffin, in vault 1179	1.85m	0.48m	0.36m	Adult	19th Century	Lead	Rectangular
1181	Adult skeleton in lead coffin 1180				Adult	19th Century		Rectangular
1182	Tapered brick vault divided into 3 chambers containing 2 coffins	2.30m	0.86m	2.06m				Tapered
1183	Stone floor in vault 1182, creating empty top chamber	2.15m	0.77m	0.07m				
1184	Lead coffin with decayed outer wood coffin in vault 1182, below 1183	1.85m	0.50m	0.40m	Adult	19th Century	Lead	Tapered
1185	Adult skeleton in lead coffin 1184				Adult	19th Century		Tapered
1186	Sandstone floor in vault 1182, below 1184	2.15m	0.77m	0.07m				
1187	Lead coffin in base of vault 1182	1.82m	0.59m	0.40m	Adult	19th Century	Lead	Tapered
1188	Adult skeleton in lead coffin 1187				Adult	19th Century		Tapered
1189	Fill of lower chamber of 1082, surrounding 1087	2.15m	0.77m	0.60m				
1190	Double rectangular brick vault , divided into 7 chambers containing 6 coffins	2.21m	1.66m	2.26m				Double

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1191	Stone capping slabs over 1190	2.50m	0.94m	0.06m	Adult	20th Century	Wood	Double
1192	Wood coffin, poorly preserved in vault 1190	1.90m	0.30m	0.30m	Adult	20th Century	Wood	Double
1193	Adult skeleton in wood coffin 1192				Adult	20th Century	Wood	Double
1194	Wood coffin, poorly preserved in vault 1190	1.58	0.56m		Adult	20th Century	Wood	Double
1195	Adult skeleton in wood coffin 1194				Adult	20th Century		Double
1196	Stone floor within vault 1190	2.11m	1.85m	0.07m				
1197	Brick wall dividing 1192 and 1194 in 1190	2.28m	0.10m	0.50m				
1198	Brick wall dividing 1199 and 1201 in 1190	2.28m	0.10m	0.50m				
1199	Wood coffin in vault 1190	1.90m	0.60m	0.29m	Adult	20th Century	Wood	Double
1200	Adult skeleton in wood coffin 1199				Adult	20th Century		Double
1201	Wood coffin, poorly preserved in vault 1190				Adult	20th Century	Wood	Double
1202	Adult skeleton in wood coffin 1201				Adult	20th Century		Double
1203	Stone floor in vault 1190 below 1198, 1199 and 1201	2.25m	1.76m	0.07m				
1204	Lead coffin, crushed in 1190, below 1203	1.80m	0.50m	0.32m	Adult	20th Century	Lead	Double
1205	Adult skeleton in lead coffin 1204				Adult	20th Century		Double
1206	Lead coffin in vault 1190	1.68m	0.52m	0.36m	Adult	19th Century	Lead	Double
1207	Adult skeleton in lead coffin 1206				Adult	19th Century		Double
1208	Brick wall in basal chamber of 1190	2.26m	0.10m	0.50m				
1209	Stone floor within brick vault 1212 forming empty top chamber	2.36m	0.84m	0.07m				
1210	Wood coffin, poorly preserved in vault 1212	1.90m	0.60m		Adult	19th Century	Wood	Trapezoid
1211	Adult skeleton in wood coffin 1210				Adult	19th Century		Trapezoid
1212	Trapezoid brick vault , divided into 4 chambers, containing 3 coffins	2.36m	0.84m	2.02m				Trapezoid
1213	Stone floor in vault 1212	2.26m	0.80m	0.07m				
1214	Lead coffin, trapezoid in shape, in vault 1212	1.75m	0.62m	0.42m	Adult	19th Century	Lead	Trapezoid
1215	Adult skeleton in lead coffin 1214				Adult	19th Century		Trapezoid
1216	Stone floor in vault 1212	2.26m	0.80m	0.07m				
1217	Lead coffin in vault 1212	1.88m	0.47m	0.35m	Adult	19th Century	Lead	Trapezoid
1218	Adult skeleton in lead coffin 1217				Adult	19th Century		Trapezoid
1219	Rectangular brick vault , divided into 2 chambers, containing 2 coffins	2.28m	0.78m	1.28m				Rectangular

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1220	Adult skeleton in wood coffin 1221					Adult	20th Century		Rectangular
1221	Wood coffin, poorly preserved in vault 1219					Adult	20th Century	Wood	Rectangular
1222	Stone floor below 1221 in vault 1219	2.28m	0.77m	0.07m					
1223	Adult skeleton in wood coffin 1224					Adult	19th Century		Rectangular
1224	Wood coffin, poorly preserved, in vault 1219					Adult	19th Century	Wood	Rectangular
1225	Slate slabs at base of vault 1219	2.28m	0.78m	0.03m					
1226	Stone capping slabs over 1232	2.42m	0.95m	0.04m					
1227	Stone capping slabs over 1248	1.80m	0.66m	0.04m					
1228	Stone capping slabs over 1251	2.75m	1.10m	0.06m					
1229	Stone capping slabs over 1254	2.50m	1.10m	0.07m					
1230	memorial stone base over 1231	1.30m	0.80m	0.08m					
1231	Stone capping slabs over 1263	2.67m	1.10m	0.06m					
1232	Adult skeleton in Lead coffin 1233					Adult	19th Century		Rectangular
1233	Lead coffin in vault 1234	1.86m	0.50m	0.37m		Adult	19th Century	Lead	Rectangular
1234	Rectangular brick vault , divided into 3 chambers, containing 3 coffins	2.25m	0.75m	1.97m					Rectangular
1235	Stone floor within vault 1234, below 1233	2.25m	0.75m	0.20m					
1236	Adult skeleton in Lead coffin 1237					Adult	19th Century		Rectangular
1237	Lead coffin with decayed outer wooden coffin in vault 1234	1.90m	0.54m	0.37m		Adult	19th Century	Lead	Rectangular
1238	Iron bar support holding coffin 1237 in vault 1234								
1239	Adult skeleton in Lead coffin 1240					Adult	19th Century		Rectangular
1240	Lead coffin, distorted, in vault 1234	1.83m	0.45m	0.42m		Adult	19th Century	Lead	Rectangular
1241	Stone floor to vault 1234								
1242	Stone capping slabs over 1265	2.53m	1.02m	0.07m					
1243	Stone capping slabs over 1269	1.60m	1.05m	0.06m					
1244	Stone capping slabs over 1279	2.80m	1.20m	0.07m					
1245	Stone capping slabs over 1282	2.10m	0.98m	0.07m					
1246	Lead coffin with decayed outer wooden coffin, in vault 1248	1.50m	0.41m	0.27m		Juvenile	19th Century	Lead	Rectangular
1247	Juvenile skeleton in lead coffin 1246					Juvenile	19th Century		Rectangular
1248	Rectangular brick vault , containing coffin 1246	1.67m	0.80m	0.88m					Rectangular

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1249	Lead coffin in vault 1251	1.90m	0.50m	0.35m	Adult	19th Century	Lead	Tapered
1250	Adult skeleton in Lead coffin 1249				Adult	19th Century		Tapered
1251	Tapered brick vault , containing a single coffin	2.30m	0.85m	1.20m				Tapered
1252	Wood coffin, poorly preserved, in vault 1254	1.90m	0.60m		Adult	20th Century	Wood	Rectangular
1253	Adult skeleton in wood coffin 1252				Adult	20th Century		Rectangular
1254	Rectangular brick vault , stepped containing 1252 and 1259	2.30m	0.90m	1.30m				Rectangular
1255	Sandstone floor in 1254, below 1252	2.38m	0.90m	0.07m				
1256	Adult skeleton in wood coffin 1257				Adult	?		
1257	Wood coffin, poorly preserved in vault 1104				Adult	?	Wood	Rectangular
1258	Collapsed concrete slab over 1156	2.50m	1.23m	0.06m				Rectangular
1259	Lead coffin with decayed outer wooden coffin in vault 1254	1.82m	0.55m	0.40m	Adult	19th Century	Lead	Rectangular
1260	Adult skeleton in Lead coffin 1259				Adult	19th Century		Rectangular
1261	Lead coffin with poorly preserved outer wood coffin in vault 1263	1.86m	0.55m	0.38m	Adult	19th Century	Lead	Rectangular
1262	Adult skeleton in Lead coffin 1261				Adult	19th Century		Rectangular
1263	Rectangular brick vault , containing coffin 1261	2.27m	0.86m	0.86m				Rectangular
1264	Upper stone floor in vault 1265	2.29m	0.76m	0.07m				
1265	Rectangular brick vault , containing a single coffin 1266	2.32m	0.78m	1.12m				Rectangular
1266	Zinc coffin with decayed outer wooden coffin, in vault 1265	1.93m	0.54m	0.40m	Adult	19th Century	Zinc	Rectangular
1267	Adult skeleton in zinc coffin 1266				Adult	19th Century		Rectangular
1268	Wood coffin in vault 1270	0.76m	0.28m	0.18m	Juvenile	19th Century	Wood	Rectangular
1269	Juvenile skeleton in wood coffin 1268				Juvenile	19th Century		Rectangular
1270	Rectangular brick grave , for juvenile coffin 1268	0.88m	0.46m	0.46m				Rectangular
1271	Wood coffin, poorly preserved, in vault 1273				Adult	20th Century	Wood	Tapered
1272	Adult skeleton in wood coffin 1271				Adult	20th Century		Tapered
1273	Tapered brick vault , divided into 2 chambers, containing 2 coffins	2.30m	0.80m	1.13m				Tapered
1274	Sandstone floor in vault 1273, below 1271	2.30m	0.80m	0.07m				
1275	Wood coffin in the base of vault 1273	1.80m		0.40m	Adult	19th Century	Wood	Tapered
1276	Adult skeleton in wood coffin 1275				Adult	19th Century		Tapered
1277	Wood coffin, poorly preserved in vault 1279	1.94m	0.60m		Adult	19th Century	Wood	Tapered

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1278	Adult skeleton in wood coffin 1277								Adult	19th Century			Tapered
1279	Tapered brick vault , containing a single coffin	2.36m	0.85m	0.90m					Adult				Tapered
1280	Wood coffin, poorly preserved, within vault 1282	2.00m	0.60m						Adult	20th Century	Wood		Rectangular
1281	Adult skeleton in wood coffin 1280								Adult	20th Century			Rectangular
1282	Rectangular brick vault , containing three coffins	2.27m	0.76m	1.44m									Rectangular
1283	Upper stone floor in vault 1282	2.27m	0.76m	0.06m									
1284	Backfill of upper chamber of 1282	2.27m	0.76m	0.33m									
1285	Stone capping stones over vault 1286	2.50m	1.10m	0.07m									
1286	Rectangular brick vault containing 2 coffins	2.30m	0.77m	1.12m									
1287	Sandy fill within upper chamber of 1286, surrounding 1288	2.28m	0.76m	0.60m									Rectangular
1288	Wood coffin in vault 1286								Adult	19th Century	Wood		Rectangular
1289	Adult skeleton in wood coffin 1288								Adult	19th Century			Rectangular
1290	Wooden coffin in 1282								Adult	19th Century	Wood		Rectangular
1291	Adult skeleton in 1290								Adult	19th Century			Rectangular
1292	Stone floor within brick vault 1282	2.27m	0.76m	0.06m									
1293	Wood coffin, poorly preserved within vault 1282	1.90m	0.60m						Adult	19th Century	Wood		Rectangular
1294	Adult skeleton in wood coffin in 1293								Adult	19th Century			Rectangular
1295	Stone floor within 1286	2.30m	0.77m	0.06m									
1296	Lead coffin within brick vault 1286	1.80m	0.45m	0.30m					Adult	19th Century	Lead		Rectangular
1297	Adult skeleton in Lead coffin 1296								Adult	19th Century			Rectangular
1298	Stone capping slabs over 1299	2.60m	1.80m	0.06m									
1299	Double rectangular brick vault , divided into 6 chambers containing 4 coffins	2.30m	1.44m	1.12m									Double
1300	Stone floor in brick vault 1299	2.30m	1.44m	0.07m									
1301	Lead coffin in vault 1299	1.70m	0.48m	0.33m					Adult	20th Century	Lead		Double
1302	Adult skeleton in Lead coffin 1301								Adult	20th Century			Double
1303	Stone floor in vault 1299	2.30m	1.44m	0.06m									
1304	Wood coffin, poorly preserved in vault 1299	1.80m	0.56m						Adult	19th Century	Wood		Double
1305	Adult skeleton in Wood coffin 1304								Adult	19th Century			Double
1306	Dividing wall within vault 1299, above 1303	2.30m	0.39m	0.07m									

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1307	Dividing wall within vault 1299, below 1303	2.30m	0.39m	0.07m	Juvenile	19th Century	Lead	Double
1308	Lead Coffin in vault 1299	1.20m	0.40m	0.25m	Juvenile	19th Century	Lead	Double
1309	Juvenile skeleton in 1308				Juvenile	19th Century		Double
1310	Lead Coffin in vault 1299	1.85m	0.50m	0.35m	Adult	19th Century	Lead	Double
1311	Adult skeleton in Lead coffin 1310				Adult	19th Century		Double
1312	Stone capping slabs over 1313	2.30m	1.40m	0.06m				
1313	Double rectangular brick vault containing 2 coffins	2.30m	1.40m	1.20m				Double
1314	Lead Coffin in vault 1313	1.90m	0.55m	0.42m	Adult	20th Century	Lead	Double
1315	Adult skeleton in Lead coffin 1314				Adult	20th Century		Double
1316	Grave cut containing SK 1317, found below brick vault 1313	1.79m	0.50m	0.30m				Soil Grave cut
1317	Adult skeleton within grave cut 1316				Adult	?		Soil Grave cut
1318	Wood coffin, completely dissolved within earth grave 1316				Adult	?	Wood	Soil Grave cut
1319	Stone capping slabs over brick vault 1320	1.67m	0.72m	0.07m				
1320	Rectangular brick vault containing coffin 1322	1.50m	0.50m	0.71m				Rectangular
1321	Stone floor within vault 1320	1.50m	0.50m	0.06m				Rectangular
1322	Wood coffin in vault 1320	1.20m	0.44m	0.26m	Neonate	19th Century	Wood	Rectangular
1323	Juvenile skeleton in coffin 1322				Neonate	19th Century		Rectangular
1324	Stone floor in vault 1105	2.32m	0.78m	0.05m				
1325	Wood coffin, poorly preserved in vault 1105				Adult	19th Century	Wood	Rectangular
1326	Adult skeleton in Wood coffin 1325				Adult	19th Century		Rectangular
1327	Fill of soil grave 1316	1.79m	0.50m	0.30m				Soil Grave cut
1328	Stone capping slabs over vault 1331							
1329	Wood coffin in vault 1331	1.80m	0.55m		Adult	19th Century	Wood	Rectangular
1330	Adult skeleton in Wood coffin 1329				Adult	19th Century		Rectangular
1331	Rectangular brick vault divided into 2 chambers, containing a single coffin	2.28m	0.76m	0.95m				Rectangular
1332	Stone capping slabs over vault 1336	2.80m	1.20m	0.07m				
1333	Stone capping slabs over vault 1348	2.55m	1.90m	0.07m				

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1334	Wood coffin in vault 1336	1.92m	0.54m	0.43m	Adult	19th Century	Wood	Rectangular
1335	Adult skeleton in Wood coffin 1334				Adult	19th Century		Rectangular
1336	Rectangular brick vault divided into 2 chambers, containing 2 coffins	2.30m	1.12m	0.77m				Rectangular
1337	Stone floor in brick vault 1336	2.30m	0.80m	0.07m				
1338	Stone floor in 1313	1.29m	0.61m	0.06m				
1339	Lead coffin in vault 1336, below 1337	1.96m	0.50m	0.37m	Adult	19th Century	Lead	Rectangular
1340	Adult skeleton in Lead coffin 1339				Adult	19th Century		Rectangular
1341	Lead coffin in vault 1313	1.90m	0.55m	0.30m	Adult	19th Century	Lead	Double
1342	Adult skeleton in Lead coffin 1342				Adult	19th Century		Double
1343	Internal wall within vault 1313	2.30m	0.10m	0.40m				
1344	Slate floor in 1345	2.23m	0.82m	0.03m				
1345	Rectangular brick vault containing a single coffin 1346	2.23m	0.82m	1.00m				Rectangular
1346	Lead coffin with decayed outer wooden coffin in vault 1345	1.91m	0.54m	0.34m	Adult	19th Century	Lead	Rectangular
1347	Adult skeleton in Lead coffin 1346				Adult	19th Century		Rectangular
1348	Double rectangular brick vault containing 2 coffins	2.30m	1.50m	1.02m				Double
1349	Wood coffin, poorly preserved in vault 1351	1.60m	0.50m		Adult	19th Century	Wood	Rectangular
1350	Adult skeleton in Wood coffin 1349				Adult	19th Century		Rectangular
1351	Rectangular Brick vault containing a single coffin 1350	2.22m	0.78m	0.76m				Rectangular
1352	Stone floor in brick vault 1348	2.22m	0.78m	0.07m				
1353	Wood coffin, poorly preserved, in vault 1348	1.80m		0.29m	Adult	20th Century	Wood	Double
1354	Adult skeleton in Wood coffin 1353				Adult	20th Century		Double
1355	Lead coffin with outer wood coffin in vault 1348	1.75m	0.55m	0.40m	Adult	19th Century	Lead	Double
1356	Adult skeleton in Lead coffin 1355				Adult	19th Century		Double
1357	Wood coffin, poorly preserved, in vault 1359	1.90m	0.50m	0.35m	Adult	19th Century	Wood	Rectangular
1358	Adult skeleton in Wood coffin 1357				Adult	19th Century		Rectangular
1359	Rectangular brick vault containing 2 coffins	2.28m	0.80m	1.10m				Rectangular
1360	Internal wall within vault 1359	2.30m	0.10m	0.41m				
1361	Slate floor in vault 1359	2.28m	0.78m	0.07m				
1362	Wood coffin, poorly preserved, in vault 1359	1.90m	0.30m+		Adult	19th Century	Wood	Rectangular

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1392	Wood coffin, poorly preserved, within vault 1396	1.85m	0.65m	Adult	19th Century	Wood	Rectangular
1393	Adult skeleton in Wood coffin 1392			Adult	19th Century		Rectangular
1394	Casket in vault 1396	0.38m	0.24m	Adult	19th Century	Casket	Rectangular
1395	Cremation in Casket 1394			Adult	19th Century		Rectangular
1396	Rectangular brick vault containing a coffin and casket in a single chamber	2.30m	0.78m				Rectangular
1397	Wood coffin, poorly preserved, within vault 1381			Adult	19th Century	Wood	Rectangular
1398	Adult skeleton in Wood coffin 1397			Adult	19th Century		Rectangular
1399	Stone floor in vault 1396	2.28m	0.78m				
1400	Stone capping slabs over vault 1407	2.50m	1.10m				
1401	Lead coffin with outer wooden coffin in vault 1396	1.95m	0.50m	Adult	19th Century	Lead	Rectangular
1402	Adult skeleton in Lead coffin 1401			Adult	19th Century		Rectangular
1403	Rectangular brick vault below slab 1404	2.30m	0.80m				Rectangular
1404	Stone slabs capping vault 1403	2.28m	0.77m				
1405	Adult skeleton in lead coffin 1406			Adult	19th Century		Rectangular
1406	Lead coffin with outer and inner wood lining, within vault 1407	1.96m	0.57m	Adult	19th Century	Lead	Rectangular
1407	Rectangular brick vault divided into 2 chambers, containing a single coffin 1406	2.28m	0.77m				Rectangular
1408	Lead coffin with outer and inner wood lining, within vault 1410	1.78m	0.24m	Adult	19th Century	Lead	Rectangular
1409	Adult skeleton in lead coffin 1408			Adult	19th Century		Rectangular
1410	Rectangular brick vault divided into 2 chambers, containing coffins 1408 and 1412	2.28m	0.77m				Rectangular
1411	Stone floor within vault 1410	2.30m	0.75m				
1412	Lead coffin with outer and inner wood lining, within vault 1410, below 1408	1.65m	0.59m	Adult	19th Century	Lead	Rectangular
1413	Adult skeleton in lead coffin 1412			Adult	19th Century		Rectangular
1414	Stone capping slabs over vault 1415	2.60m	1.10m				
1415	Rectangular brick vault divided into 3 chambers, containing 3 coffins	2.24m	0.78m				Rectangular
1416	Lead coffin with outer wooden coffin in vault 1415	1.80m	0.55m	Adult	20th Century	Lead	Rectangular
1417	Adult skeleton in lead coffin 1416			Adult	20th Century		Rectangular
1418	Stone floor in vault 1415	2.23m	0.78m				
1419	Lead coffin in vault 1415	1.80m	0.50m	Adult	20th Century	Lead	Rectangular

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1448	Wood coffin, heavily degraded, in vault 1450	1.90m	0.40m	Adult	19th Century	Wood	Rectangular
1449	Adult skeleton in wood coffin 1448			Adult	19th Century		Rectangular
1450	Rectangular brick vault containing coffin 1448	2.29m	0.75m				Rectangular
1451	Wood coffin, heavily degraded, in vault 1443	2.00m		Adult	19th Century	Wood	Rectangular
1452	Adult skeleton in wood coffin 1441			Adult	19th Century		Rectangular
1453a	Stone capping slabs over vault 1463	2.10m	1.18m				
1453b	Stone capping slabs over double vault 1460	2.48m	1.73m				
1454	Lead coffin with decayed wood lining in vault 1456	1.96m	0.55m	Adult	19th Century	Lead	Rectangular
1455	Adult skeleton in lead coffin 1454			Adult	19th Century		Rectangular
1456	Double rectangular brick vault	2.28m	1.54m				Double
1457	Lead coffin with 2 outer wood coffins in vault 1459	1.95m	0.55m	Adult	19th Century	Lead	Rectangular
1458	Adult skeleton in lead coffin 1457			Adult	19th Century		Rectangular
1459	Rectangular brick vault containing coffin 1457	2.27m	0.76m				Rectangular
1460	Stone capping slabs over vault 1456	2.30m	0.78m				
1461	Internal dividing brick wall in vault 1456	2.28m	0.11m				
1462	Stone floor in vault 1463	2.27m	0.74m				
1463	Rectangular brick vault containing coffin 1464	2.27m	0.74m				Rectangular
1464	Lead coffin in vault 1463, below 1462	1.80m	0.50m	Adult	19th Century	Lead	Rectangular
1465	Adult skeleton in lead coffin 1464			Adult	19th Century		Rectangular
1466	Stone floor in vault 1372	2.30m	0.77m				
1467	Stone capping slabs over vault 1492	2.62m	1.10m				
1468	Stone capping slabs over vault 1502	2.41m	0.95m				
1469	Stone capping slabs over vault 1496	2.55m	1.18m				
1470	Stone capping slabs over vault 1484	2.46m	1.10m				
1471	Stone capping slabs over vault 1478	2.34m	1.11m				
1472	Wood coffin in vault 1372	1.80m	0.24m	Adult	20th Century	Wood	Rectangular
1473	Adult skeleton in wood coffin 1472			Adult	20th Century		Rectangular
1474	Stone floor below 1471 in vault 1478	2.26m	0.78m				
1475	Stone floor in vault 1372	2.30m	0.80m				

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1476	Wood coffin, poorly preserved, in vault 1478					Adult	19th Century	Wood	Rectangular
1477	Adult skeleton in wood coffin 1476					Adult	19th Century		Rectangular
1478	Rectangular brick vault containing coffin 1476	2.26m	0.78m	1.05m					Rectangular
1479	Wood coffin in vault 1372	1.90m	0.58m			Adult	20th Century	Wood	Rectangular
1480	Adult skeleton in wood coffin 1479					Adult	20th Century		Rectangular
1481	Stone floor below 1479	2.30m	0.77m	0.07m					
1482	Wood coffin, poorly preserved, in vault 1484	1.80m				Adult	20th Century	Wood	Rectangular
1483	Adult skeleton in wood coffin 1482					Adult	20th Century		Rectangular
1484	Rectangular brick vault divided into 2 chambers, containing 2 coffins	2.28m	0.78m	1.11m					Rectangular
1485	Wood coffin, poorly preserved, in vault 1372					Adult	19th Century	Wood	Rectangular
1486	Adult skeleton in wood coffin 1485					Adult	19th Century		Rectangular
1487	Stone floor in vault 1484	2.28m	0.78m	0.07m					
1488	Wood coffin, poorly preserved, in vault 1484	1.80m				Adult	19th Century	Wood	Rectangular
1489	Adult skeleton in wood coffin 1488					Adult	19th Century		Rectangular
1490	Lead coffin in vault 1492	1.80m	0.53m	0.40m		Adult	20th Century	Lead	Rectangular
1491	Adult skeleton in lead coffin 1490					Adult	20th Century		Rectangular
1492	Rectangular brick vault	2.28m	0.76m	1.10m					Rectangular
1493	Silty clay infill of chamber containing coffin 1490 in vault 1492	2.28m	0.76m	0.45m					
1494	Lead coffin in vault 1496	1.65m	0.62m	0.35m		Adult	19th Century	Lead	Rectangular
1495	Adult skeleton in lead coffin 1494					Adult	19th Century		Rectangular
1496	Rectangular brick vault containing coffin 1494	2.06m	0.70m	0.72m					Rectangular
1497	Stone floor in vault 1492	2.25m	0.74m	0.07m					
1498	Wood coffin, very poorly preserved, in vault 1492	1.19m	0.60m			Adult	19th Century	Wood	Rectangular
1499	Adult skeleton in wood coffin 1498					Adult	19th Century		Rectangular
1500	Lead coffin with wood lining in vault 1502	1.80m	0.50m	0.35m		Adult	20th Century	Lead	Rectangular
1501	Adult skeleton in lead coffin 1500					Adult	20th Century		Rectangular
1502	Rectangular brick vault divided into 2 chambers containing coffins 1468 and 1500	2.27m	0.76m	1.06m					Rectangular
1503	Stone floor in vault 1502	2.27m	0.76m	0.07m					
1504	Wood coffin, poorly preserved, in vault 1502	1.80m	0.60m			Adult	19th Century	Wood	Rectangular

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1534	Rectangular brick vault containing coffin 1535	2.30m	0.78m	0.68m						Rectangular
1535	Lead coffin with poorly preserved outer wood coffin in vault 1534	1.74m	0.55m	0.44m	Adult	19th Century	Lead			Rectangular
1536	Adult skeleton in lead coffin 1535				Adult	19th Century				Rectangular
1537	Rectangular brick vault containing 2 coffins	2.28m	0.78m	1.13m						Rectangular
1538	Wood coffin, poorly preserved, in vault 1537	1.80m	0.58m	0.38m	Adult	20th Century	Wood			Rectangular
1539	Adult skeleton in wood coffin 1538				Adult	20th Century				Rectangular
1540	Stone capping slabs over vault 1548	2.42m	1.00m	0.06m						
1541	Stone floor within vault 1537	2.28m	0.73m	0.07m						
1542	Wood coffin, poorly preserved, in vault 1537	1.85m	0.50m		Adult	19th Century	Wood			Rectangular
1543	Adult skeleton in wood coffin 1542				Adult	19th Century				Rectangular
1544	Fill of foundation trench 1545	0.70m	0.60m	0.50m						
1545	Foundation cut for cremation vault 1524	0.80m	0.60m	0.50m						
1546	Wood coffin, poorly preserved, in vault 1548	1.80m	0.60m		Adult	19th Century	Wood			Rectangular
1547	Adult skeleton in wood coffin 1546				Adult	19th Century				Rectangular
1548	Rectangular brick vault containing coffin 1546	2.28m	0.75m	0.55m						Rectangular
1549	Cremation in casket 1028									Casket
2000	Topsoil									
2001	Subsoil									
2002	Rectangular brick vault	2.14m	0.74m	0.60m						Rectangular
2003	Grave cut									
2004	Grave cut									
2005	Grave cut									
2006	Grave cut									
2007	Wood coffin, poorly preserved, in vault 2002	1.75m	0.45m		Adult	?	Wood			Rectangular
2008	Adult skeleton in wood coffin 2007				Adult	?				Rectangular
2009	Rectangular brick vault containing coffin 2010	1.90m	0.75m	0.53m						Rectangular

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2010	Lead coffin with poorly preserved outer wood coffin in vault 2009	1.55m	0.55m	Adult	19th Century	Lead	Rectangular
2011	Adult skeleton in lead coffin 2010			Adult	19th Century		Rectangular
2012	Natural brickearth						
2013	Adult skeleton in wood coffin 2014			Adult	19th Century		Rectangular
2014	Wood coffin, poorly preserved, in vault 2015	1.80m	0.64m	Adult	19th Century	Wood	Rectangular
2015	Rectangular brick vault containing coffin 2014	2.30m	0.76m				Rectangular
2016	Adult skeleton in lead coffin 2017			Adult	19th Century		Rectangular
2017	Lead coffin with poorly preserved outer wood coffin in vault 2018	1.75m	0.65m	Adult	19th Century	Lead	Rectangular
2018	Rectangular brick vault containing coffin 2017	2.30m	0.80m				Rectangular
2019	Adult skeleton in lead coffin 2020			Adult	19th Century		Tapered
2020	Lead coffin with poorly preserved outer wood coffin in vault 2021	1.92m	0.60m	Adult	19th Century	Lead	Tapered
2021	Tapered brick vault containing coffin 2020	2.30m	0.80m				Tapered
2022	Tapered brick vault containing coffin 2025	2.25m	0.80m				Tapered
2023	Rectangular brick vault containing coffins 2027 and 2029	2.10m	0.80m				Rectangular
2024	Adult skeleton in lead coffin 2025			Adult	19th Century		Tapered
2025	Lead coffin with poorly preserved outer wood coffin in vault 2022	1.85m	0.58m	Adult	19th Century	Lead	Tapered
2026	Adult skeleton in wood coffin 2027			Adult	19th Century		Rectangular
2027	Wood coffin, poorly preserved, in vault 2023 above coffin 2029	1.80m	0.60m	Adult	19th Century	Wood	Rectangular
2028	Adult skeleton in lead coffin 2029			Adult	19th Century		Rectangular
2029	Lead coffin with poorly preserved outer wood coffin in vault 2023	1.70m		Adult	19th Century	Lead	Rectangular
2030	Juvenile skeleton in wood coffin 2031			Juvenile	?		Rectangular
2031	Wood coffin, poorly preserved, in vault 2032	0.82m		Juvenile	?	Wood	Rectangular
2032	Rectangular brick vault containing juvenile coffin 2031	0.94m	0.30m				Rectangular
2033	Adult skeleton in lead coffin 2034			Adult	19th Century		Rectangular
2034	Lead coffin with poorly preserved outer wood coffin in vault 2035	1.80m	0.60m	Adult	19th Century	Lead	Rectangular
2035	Rectangular brick vault containing coffins 2034 and 2037	2.25m	0.80m				Rectangular
2036	Adult skeleton in lead coffin 2037			Adult	19th Century		Rectangular
2037	Lead coffin in vault 2035	1.83m	0.58m	Adult	19th Century	Lead	Rectangular
2038	Adult skeleton in wood coffin 2039			Adult	20th Century		Rectangular

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2039	Wood coffin, well preserved, in vault 2040	1.80m	0.61m	0.39m	Adult	20th Century	Wood	Rectangular
2040	Rectangular brick vault containing coffins 2039 and 2042	2.25m	0.75m	0.85m	Adult			Rectangular
2041	Adult skeleton in wood coffin 2042				Adult	20th Century		Rectangular
2042	Wood coffin, poorly preserved, in vault 2040				Adult	20th Century	Wood	Rectangular
2043	Rectangular brick vault containing coffins 2045, 2049 and 2053	2.30m	0.75m	1.76m	Adult			Rectangular
2044	Adult skeleton in wood coffin 2045				Adult	19th Century		Rectangular
2045	Wood coffin, completely decayed, in vault 2043				Adult	19th Century	Wood	Rectangular
2046	Stone capping slabs	2.70m	1.14m	0.07m				
2047	Stone floor in vault 2043	2.30m	0.75m	0.07m				
2048	Adult skeleton in wood coffin 2049				Adult	19th Century		
2049	Wood coffin, completely decayed, in vault 2051				Adult	19th Century	Wood	
2050	Stone floor in vault 2043 (lower)	2.30m	0.75m	0.07m				
2051	SAME AS 2050							
2052	Adult skeleton in lead coffin 2053				Adult	19th Century		Rectangular
2053	Lead coffin with poorly preserved outer wood coffin in vault 2043	1.83m	0.59m	0.30m	Adult	19th Century	Lead	Rectangular
2054	Adult skeleton in lead coffin 2053				Adult	19th Century		Rectangular
2055	Lead coffin with poorly preserved outer wood coffin in vault 2056	1.85m	0.52m	0.34m	Adult	19th Century	Lead	Rectangular
2056	Rectangular brick vault containing coffin 2055	2.25m	0.72m	1.02m				Rectangular
2057	Memorial slab	2.17m	0.93m	0.15m				
2058	Tapered brick vault containing coffin 2061	2.20m	0.80m	2.16m				Tapered
2059	Rectangular brick vault containing coffin 2063	2.25m	0.70m	1.48m				Rectangular
2060	Adult skeleton in lead coffin 2061				Adult	19th Century		Tapered
2061	Lead coffin with well preserved outer wood coffin in vault 2058	1.82m	0.53m	0.36m	Adult	19th Century	Lead	Tapered
2062	Adult skeleton in lead coffin 2063				Adult	19th Century		Rectangular
2063	Lead coffin in vault 2059	1.93m	0.53m	0.27m	Adult	19th Century	Lead	Rectangular
2064	Tapered brick vault containing coffins 2066, 2068 and 2070	2.32m	0.90m	2.20m				Tapered
2065	Adult skeleton in wood coffin 2066				Adult	19th Century		Tapered
2066	Wood coffin, poorly preserved, in vault 2064	1.80m		0.30m+	Adult	19th Century	Wood	Tapered
2067	Adult skeleton in lead coffin 2068				Adult	19th Century		Tapered

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2068	Lead coffin with poorly preserved outer wood coffin in vault 2064	1.90m	0.54m	0.36m	Adult	19th Century	Lead	Tapered
2069	Adult skeleton in lead coffin 2070				Adult	19th Century		Tapered
2070	Lead coffin with poorly preserved outer wood coffin in vault 2064	1.43m	0.50m	0.19m	Adult	19th Century	Lead	Tapered
2071	Rectangular brick vault divided into 2 chambers, containing coffins 2076 and 2078	2.29m	0.80m	1.30m				Rectangular
2072	Rectangular brick vault divided into 4 chambers, containing coffin 2082 at base	2.35m	0.80m	2.26m				Rectangular
2073	Tapered brick vault containing coffin 2080	2.21m	0.78m	0.76m				Tapered
2074	Rectangular brick vault divided into 3 chambers, containing coffin 2084 at base	2.35m	0.75m	1.70m				Rectangular
2075	Adult skeleton in wood coffin 2076				Adult	20th Century		Rectangular
2076	Wood coffin, poorly preserved, in vault 2071	1.90m	0.60m		Adult	20th Century	Wood	Rectangular
2077	Adult skeleton in lead coffin 2078				Adult	19th Century		Rectangular
2078	Lead coffin in vault 2071	1.78m	0.49m	0.33m	Adult	19th Century	Lead	Rectangular
2079	Adult skeleton in lead coffin 2080				Adult	19th Century		Rectangular
2080	Lead coffin with poorly preserved outer wood coffin in vault 2073	1.78m	0.50m	0.35m	Adult	19th Century	Lead	Tapered
2081	Adult skeleton in lead coffin 2082				Adult	19th Century	Lead	Tapered
2082	Lead coffin with poorly preserved outer wood coffin in vault 2072	1.91m	0.50m	0.40m	Adult	19th Century	Lead	Rectangular
2083	Adult skeleton in zinc coffin 2084				Adult	19th Century		Rectangular
2084	Zinc coffin with decayed wood lining in vault 2074	1.76m	0.48m	0.32m	Adult	19th Century	Zinc	Rectangular
2085	Stone built cremation vault	0.76m	0.30m	0.32m				Casket
2086	Rectangular brick vault containing coffin 2089	2.26m	0.80m	0.92m				Rectangular
2087	Rectangular brick vault containing 2 coffins	2.26m	0.76m	1.20m				Rectangular
2088	Adult skeleton in lead coffin 2089				Adult	19th Century		Rectangular
2089	Lead coffin with poorly preserved outer wood coffin in vault 2086	1.74m	0.52m	0.36m	Adult	19th Century	Lead	Rectangular
2090	Adult skeleton in lead coffin 2091				Adult	20th Century		Rectangular
2091	Lead coffin with outer wood coffin in vault 2087	1.90m	0.58m	0.40m	Adult	20th Century	Lead	Rectangular
2092	Adult skeleton in lead coffin 2093				Adult	19th Century		Rectangular
2093	Lead coffin with poorly preserved outer wood coffin in vault 2087	1.90m	0.51m	0.36m	Adult	19th Century	Lead	Rectangular
2094	Cremation in casket 2095				Adult	?		Casket
2095	Casket for cremation 2094	0.36m	0.21m	0.17m	Adult	?	Casket	Casket

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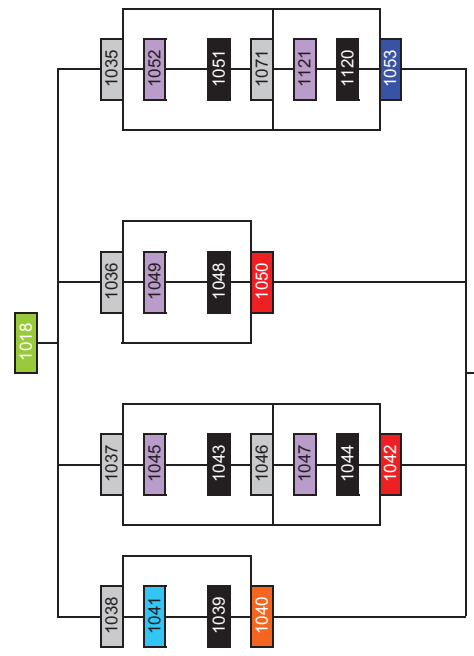
						Juvenile	19th Century		Rectangular
2125	Juvenile skeleton in wood coffin 2126					Juvenile			Rectangular
2126	Wood coffin, poorly preserved, in vault 2127	0.80m	0.25m			Juvenile	19th Century	Wood	Rectangular
2127	Rectangular brick vault containing coffin 2126	1.10m	0.52m	0.36m					Rectangular
2128	Slate capping slabs	1.95m	0.65m	0.03m					
2129	3 slate capping slabs over 2140	1.45m	0.79m	0.03m					
2130	3 limestone capping slabs over 2143	1.60m	0.68m	0.07m					
2131	2 stone slabs capping vault 2152	1.58m	0.70m	0.06m					
2132	2 limestone slabs over vault 2146	1.20m	0.76m	0.05m					
2133	Sandstone capping slab over vault 2151	1.05m	0.60m	0.08m					
2134	Sandstone floor	1.32m	0.61m	0.05m					
2135	Soil infill of cremation chambers in 2165	0.45m	0.50m	0.28m					
2136	Limestone slab	1.22m	0.66m	0.05m					
2137	Adult skeleton in lead coffin 2138					Adult	19th Century		Tapered
2138	Lead coffin in vault 2139	1.36m	0.38m	0.24m		Adult	19th Century	Lead	Tapered
2139	Tapered brick vault containing 2138	1.95m	0.65m	1.00m					Tapered
2140	Juvenile skeleton in lead coffin 2141					Juvenile	19th Century		Rectangular
2141	Lead coffin with poorly preserved outer wood coffin in vault 2142	0.74m	0.14m+	0.23m		Juvenile	19th Century	Lead	Rectangular
2142	Rectangular brick vault containing coffin 2141	1.45m	0.79m	1.01m					Rectangular
2143	Juvenile skeleton in lead coffin 2141					Juvenile	19th Century		Rectangular
2144	Lead coffin with poorly preserved outer wood coffin in vault 2145	1.11m	0.32m	0.20m		Juvenile	19th Century	Lead	Rectangular
2145	Rectangular brick vault containing coffin 2144	1.24m	0.47m	0.56m					Rectangular
2146	Juvenile skeleton in wood coffin 2147					Juvenile	19th Century		Tapered
2147	Wood coffin in vault 2148	0.95m	0.15m+	0.17m		Juvenile	19th Century	Wood	Tapered
2148	Tapered brick vault containing wood coffin 2147	1.09m	0.48m	0.62m					Tapered
2149	Juvenile skeleton in lead coffin 2150					Juvenile	19th Century		Rectangular
2150	Lead coffin with outer wood coffin in vault 2151	1.11m	0.33m	0.22m		Juvenile	19th Century	Lead	Rectangular
2151	Rectangular brick vault containing coffin 2150	1.30m	0.51m	0.37m					Rectangular
2152	Juvenile skeleton in lead coffin 2153					Juvenile	19th Century		Tapered
2153	Lead coffin with poorly preserved outer wood coffin in vault 2154	0.65m	0.26m	0.21m		Juvenile	19th Century	Lead	Tapered

APPENDIX B: Matrix

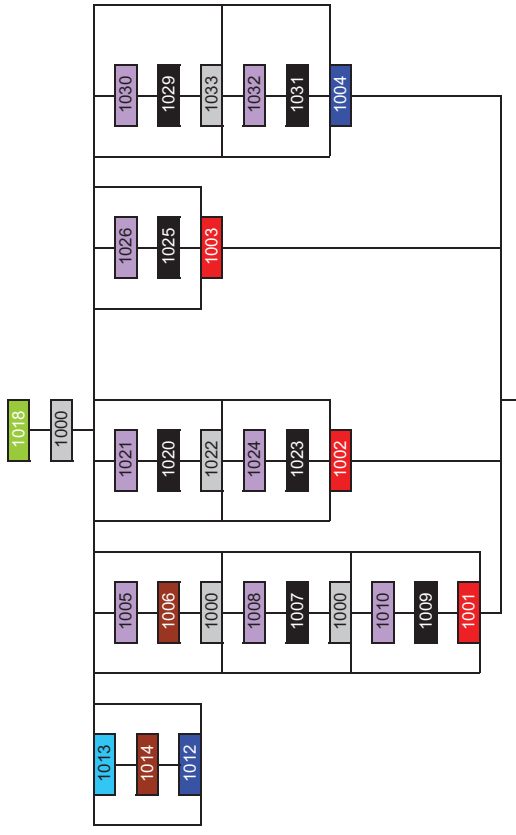
- = Casket vault
- = Double vault
- = Tapered vault
- = Trapezoid vault
- = Rectangular vault
- = Internal brick wall
- = Soil Grave
- = Adult skeleton
- = Juvenile skeleton
- = Neonate skeleton
- = Stone floor/ slab
- = Lead coffin
- = Wood coffin
- = Zinc coffin
- = Casket
- = Overburden
- = Natural sediment
- = Grave infill

Area C

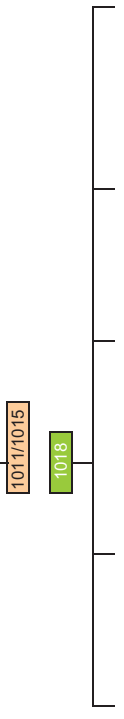
Row C1

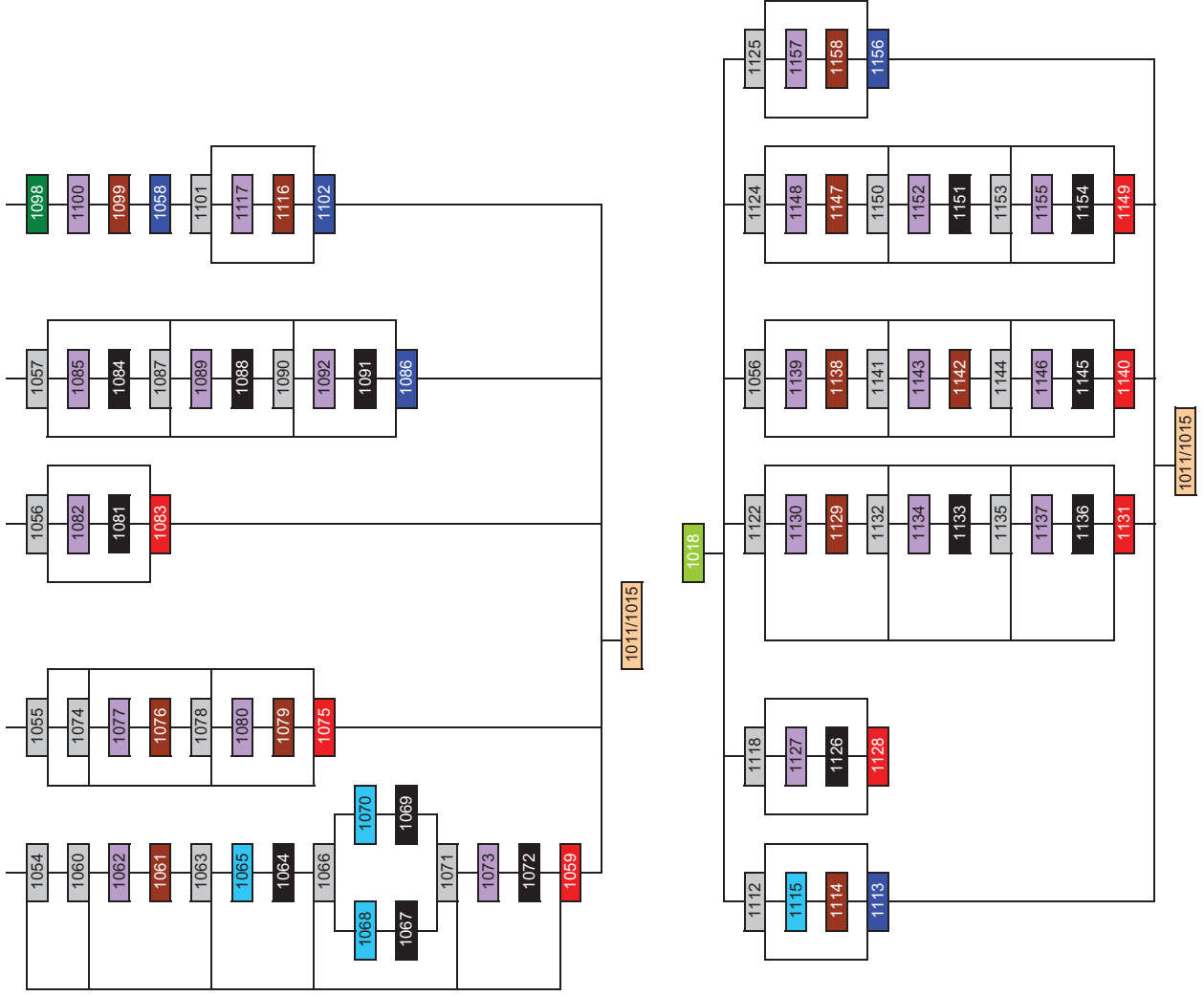


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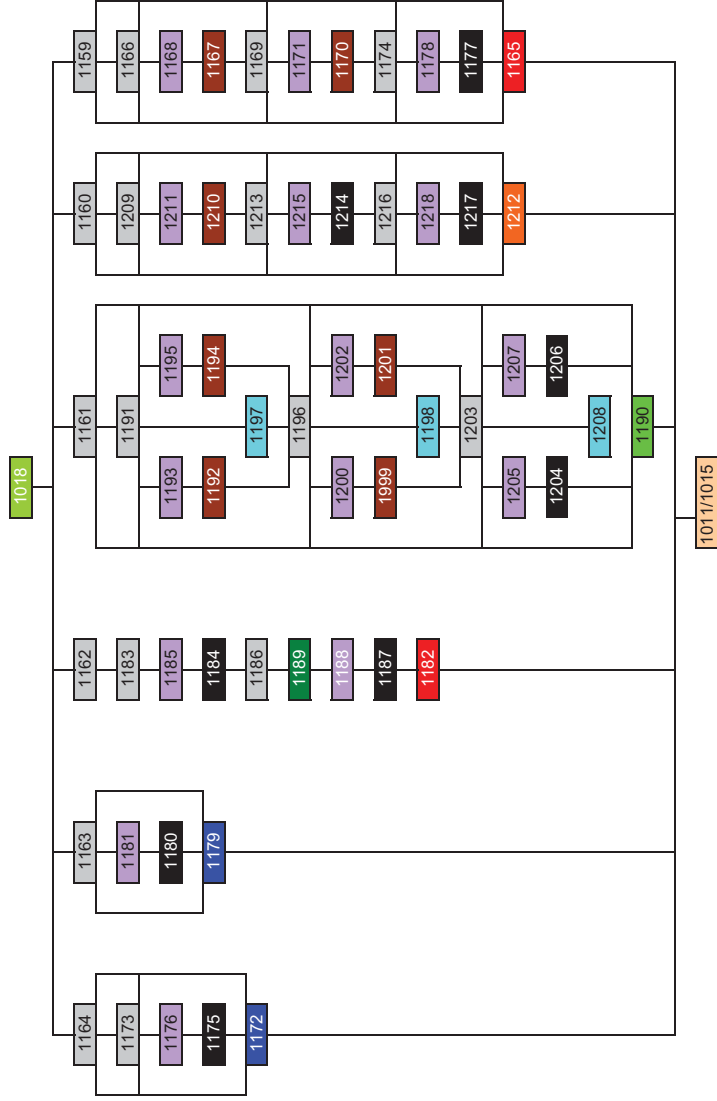
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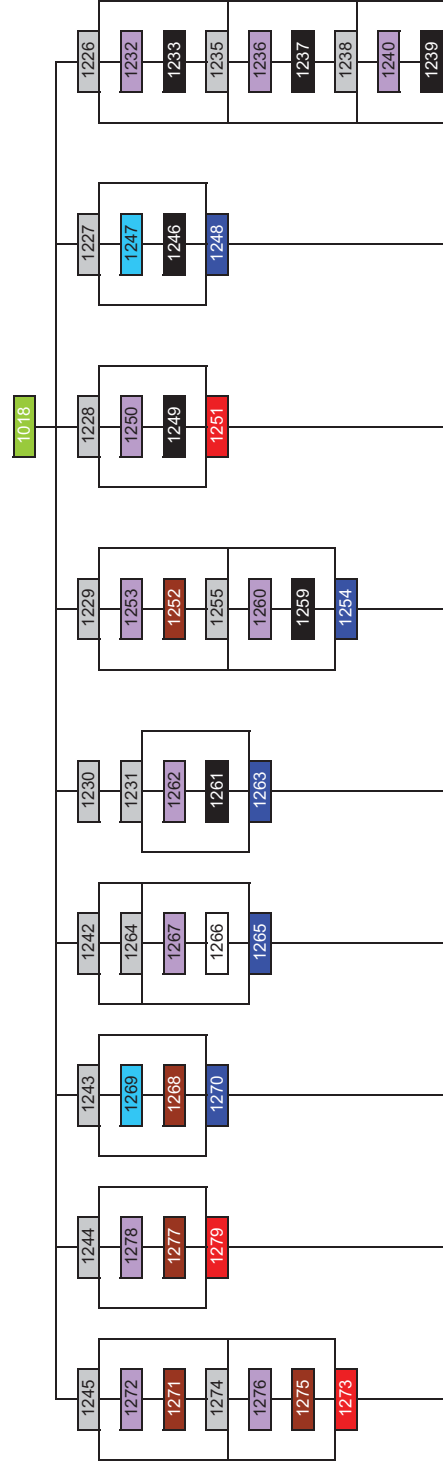


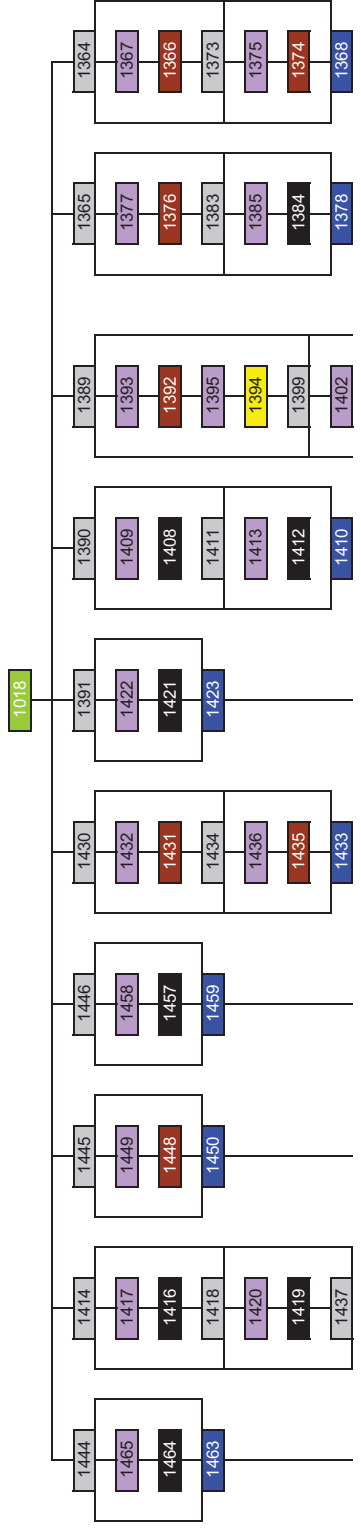
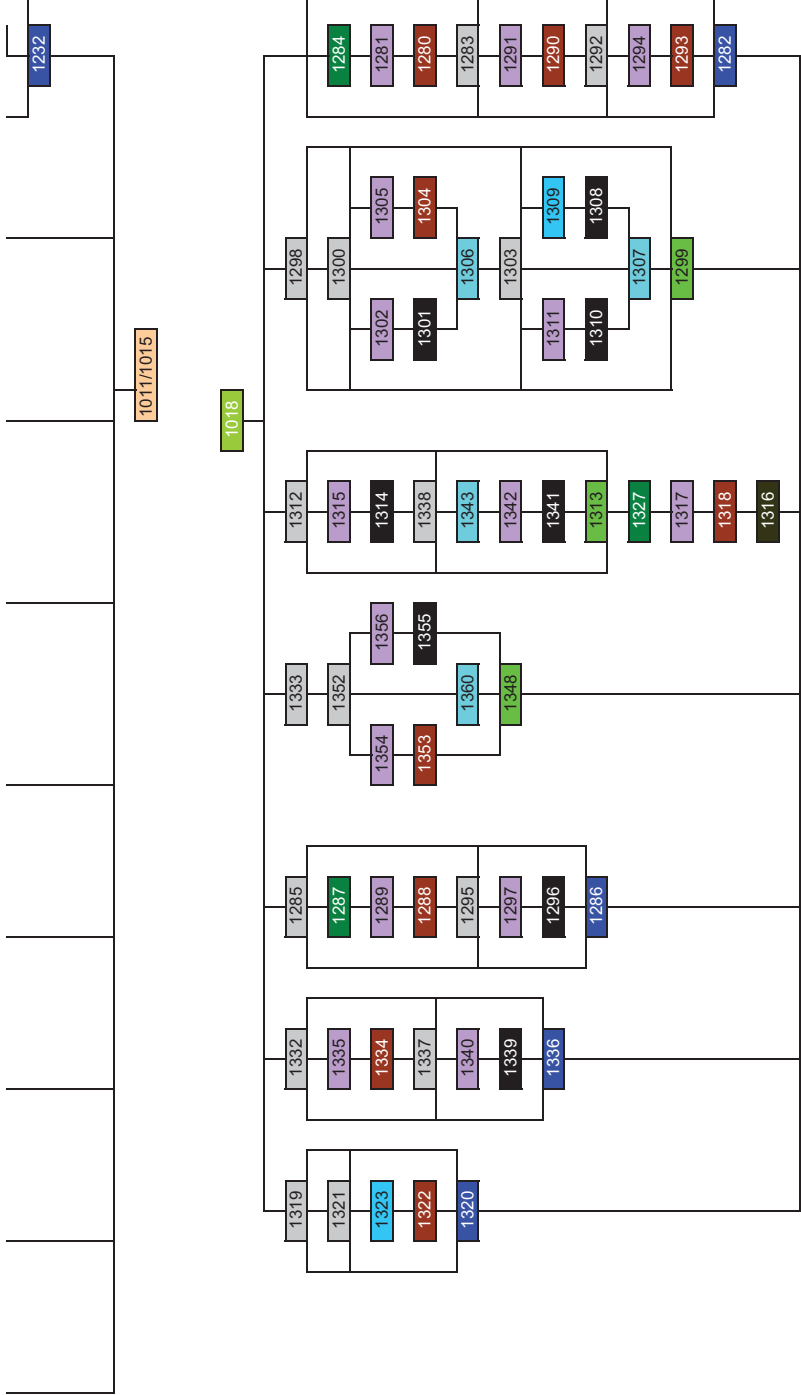
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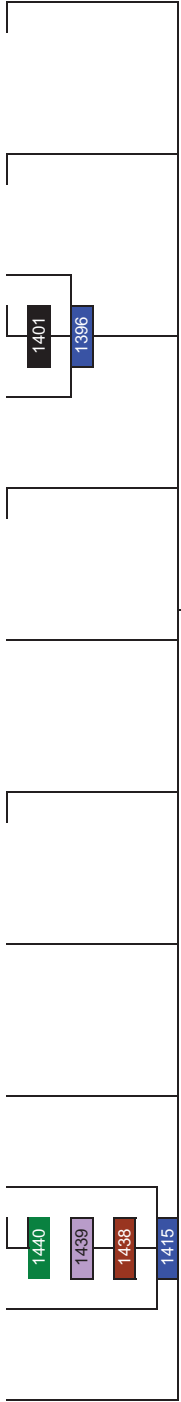
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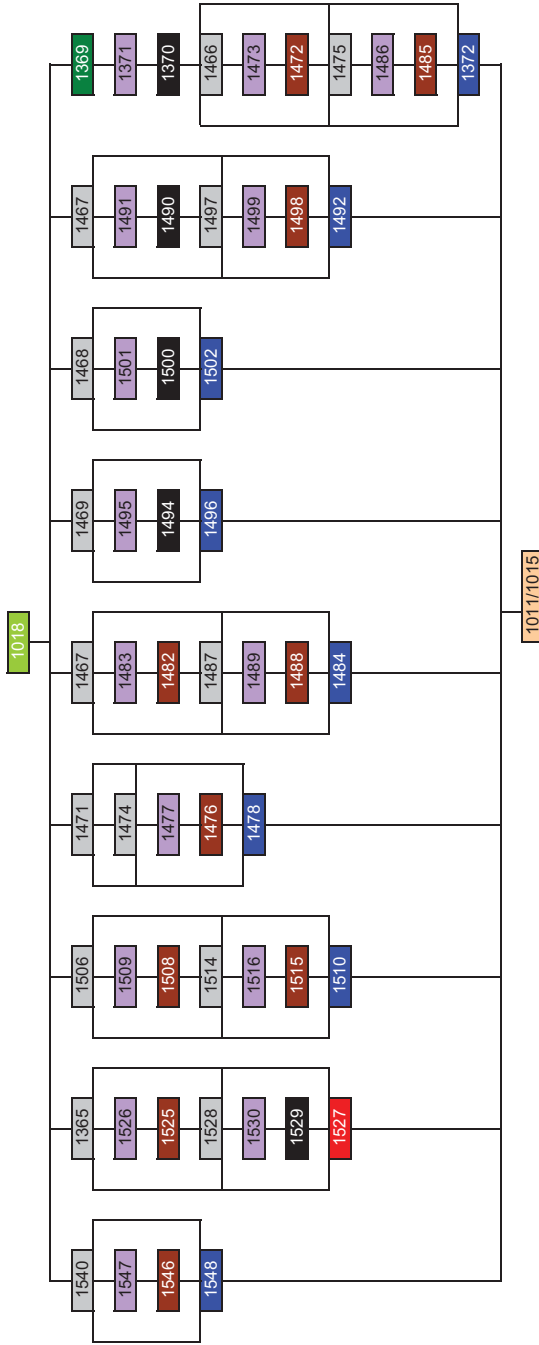
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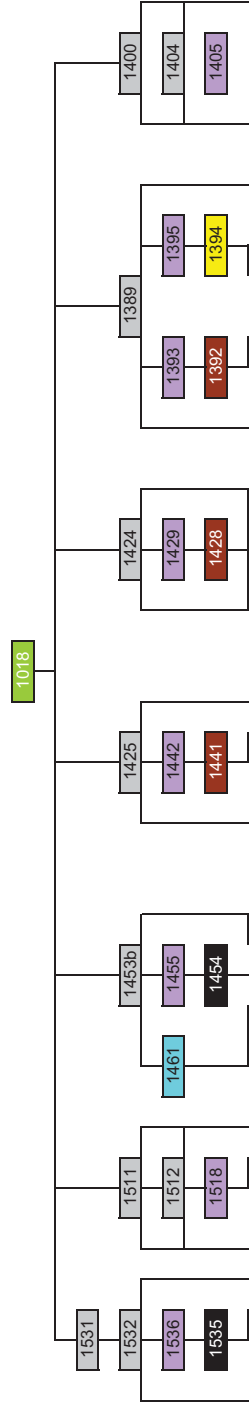


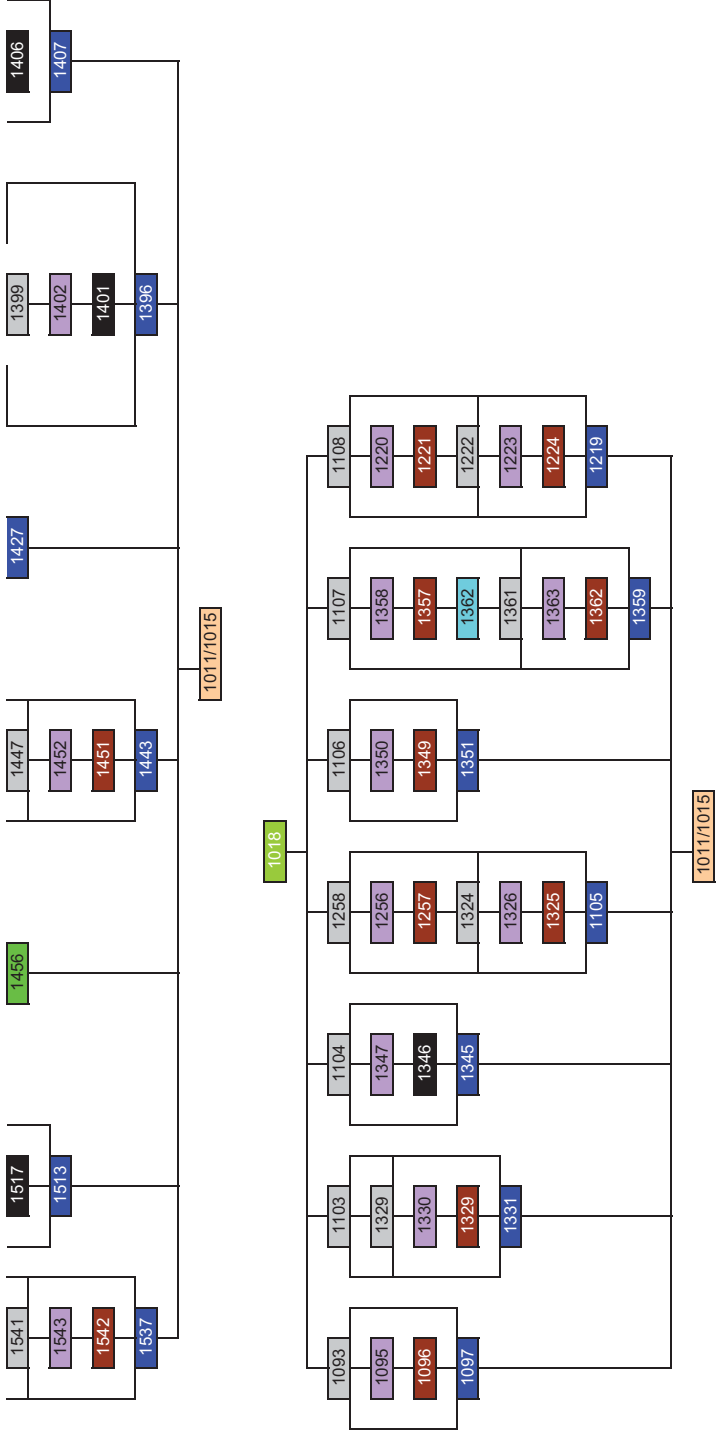


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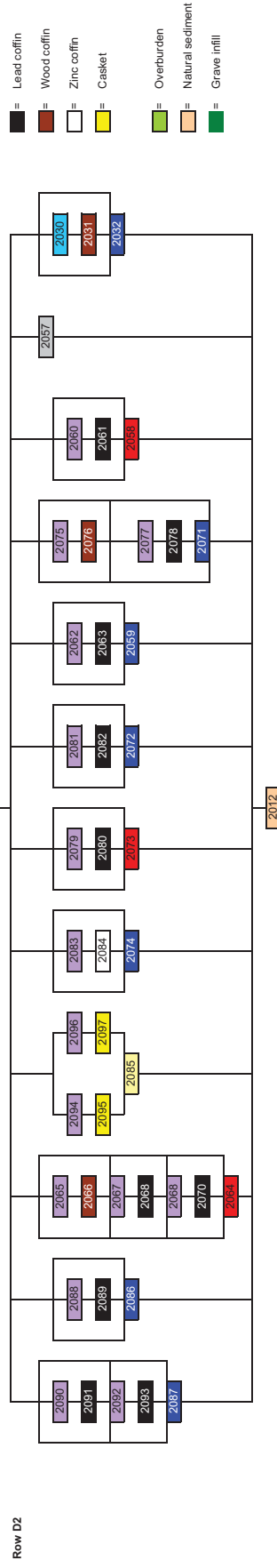
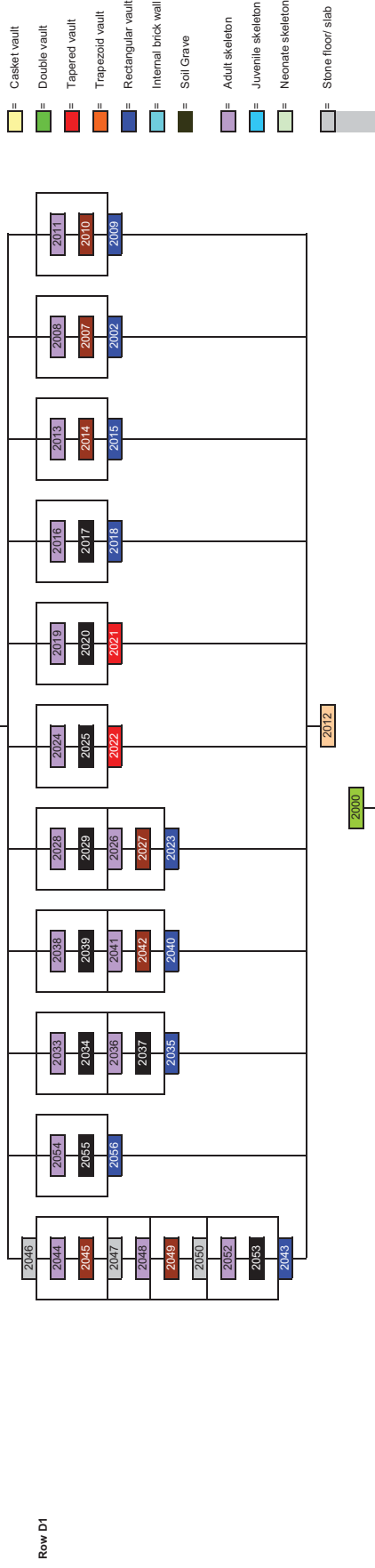
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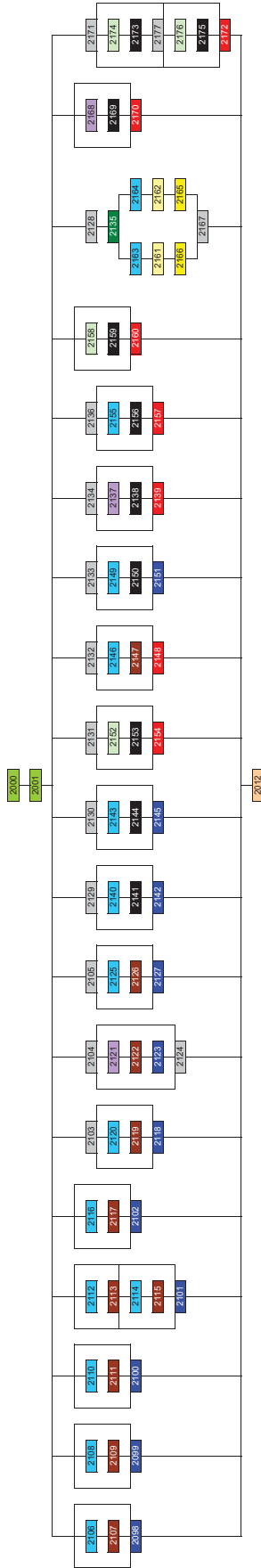


Row C11

Area D



Area E



- = Casket vault
- = Double vault
- = Trapezoid vault
- = Trapezoid vault
- = Rectangular vault
- = Internal brick wall
- = Soil Grave
- = Adult skeleton
- = Juvenile skeleton
- = Neonate skeleton
- = Stone floor slab
- = Lead coffin
- = Wood coffin
- = Zinc coffin
- = Casket
- = Overburden
- = Natural sediment
- = Grave infill

APPENDIX C. On-Site Osteological Assessment of Nineteenth Century Burials from St. Mark's Church, Surbiton.

Rachel Ives. AOC Archaeology Group. September 2009.

1 Summary

1.0.1 An on-site osteological analysis of 36 burials dating to the 19th century were examined. Age-at-death and sex determination were undertaken and compared to the known identities of the burials. Sex determination proved more accurate than ageing. A diverse range of pathological changes were present on the remains. The old age of the sample was however, indicated by the number of degenerative joint pathologies and an example of age-related osteoporosis. Non-specific infections and trauma were also present in the assemblage, together with evidence of treatment. Poor dental hygiene was apparent in the sample. The relatively wealthy status of the burials was indicated by the evidence for dentistry, particularly gold fillings as well as dentures.

2 Introduction

2.0.1 Nineteenth century burials exhumed from the St. Mark's cemetery under archaeological watching brief were subject to a rapid on-site osteological assessment prior to reburial. The aim of the osteological assessment was to provide a brief insight into the demographic composition and health status of a cemetery sample of a quite wealthy socio-economic status from a suburban settlement.

3 Methods

3.0.1 On-site osteological analysis was undertaken on human remains from wooden coffins that pre-dated 1900, following the criteria specified in the WSI (AOC 2009). The osteological assessment followed English Heritage standards and recommendations (2002). It was not possible to process any of the human remains on-site. Where the remains were heavily covered in thick clay or were co-joined to degraded wooden coffin remains, the bones were considered unobservable and were reburied. The majority of the skeletons collated for assessment were well preserved and external bone surfaces could be clearly observed after light brushing with a soft-bristled paint brush.

3.0.2 A basic inventory of the presence or absence of cranial and post-cranial remains was undertaken on the osteological sample. The grouping of skeletal elements (eg. torso) is shown in Appendix Table 1. A survey of skeletal completeness and preservation was undertaken as outlined in Appendix Table 1. Bone preservation was categorised by the Museum of London recording schema, whereby the degree of surface preservation is classified using the following criteria:

1 = Bone surface is in **good** condition with no erosion, fine surface detail such as coarse woven bone deposition would be clearly visible (if present) to the naked eye.

2 = Bone surface is in **moderate** condition with some post-mortem erosion on long bone shafts but the margins of articular surfaces are eroded and some prominences are eroded.

3 = Bone surface is in **poor** condition with extensive post-mortem erosion resulting in pitted and eroded cortical surfaces and long bones with articular surfaces missing or severely eroded.

3.0.3 The percentage completeness of each skeleton was noted. This was calculated on the basis that the skull equated to 20% of the skeleton, the upper limbs 20%, the torso 40%, and the lower limbs 20%.

3.0.4 Various regions of the pelvis and skull were recorded in order to provide an estimation of the sex of each adult skeleton assessed. The female pelvis is typically more gracile than a male pelvis, and is also broader as modified for childbirth. The specific areas analysed include the ventral arc, ischio-pubic ramus ridge and sub-pubic concavity of the pubis (Phenice 1969; Sutherland & Suchey 1991), together with the greater sciatic notch (Buikstra & Ubelaker 1994:18; Bass 1995). The regions of the cranium that can display sexually dimorphic features include the supra-orbital brow ridges (glabella), the supra-orbital margins, the mastoid processes, the nuchal crest and inion protuberance, as well as the shape and slope of the forehead when viewed in profile and the shape of the eye orbits. The assessment of these regions for the determination of sex followed the methods of Buikstra & Ubelaker (1994, 20).

3.0.5 Methods of adult age-at-death determination are based on degenerative changes that occur at various joint surfaces including the pubic symphysis (Brooks & Suchey 1990) and auricular surface of the pelvis (Lovejoy *et al* 1985), as well as at the sternal rib end (İşcan and Loth 1984; İşcan *et al* 1985), and have been reviewed by Buikstra & Ubelaker (1994, 21-32). Methods for the determination age-at-death from juvenile remains include assessment of the degree of tooth formation and eruption sequence (Moorees *et al* 1963; Ubelaker 1989; Gustafson & Koch 1974), together with estimations of growth derived from long bone diaphyseal lengths and additional bone size estimates (eg. width and length of the pars basilaris and ilium) (see Scheuer & Black 2000) together with estimates of epiphyseal fusion rates (see Buikstra & Ubelaker 1994:40; Scheuer & Black 2000).

3.0.6 Records were made of any macroscopically visible pathological changes following standard guidance from a variety of sources including Aufderheide & Rodriguez-Martin (1998), Roberts & Manchester (2005), Ortner (2003) and Waldron (2009).

4 Results

- 4.0.1 The on-site osteological assessment was undertaken on skeletal remains of thirty adults and six juveniles. The results of the skeletal assessment are presented in Appendix Tables 1 and 2. Key findings from the assessment are presented below and are discussed Section 6.

4.1 Bone Preservation and Completeness

- 4.1.1 The majority of skeletal remains excavated from St. Mark's cemetery displayed excellent bone preservation. Those individuals examined osteologically give an indication of the quality of bone preservation, with 66.6% (24/36) of the individuals studied scored as Grade 1, excellent surface preservation. Of the remaining individuals, 27.7% (10/36) were Grade 2, good - moderate preservation. Only 5.5% of the osteological sample (2/36) had Grade 3 or poor level of bone preservation. Assessment of the osteological sample identified that 83.3% (30/36) of the sample were over 90% complete. In particular, all six of the juveniles studied were over 90% complete. The individual results of the assessment of bone preservation and completeness are shown in Appendix Table. 1.

4.2 Demography

- 4.2.1 Thirty adults and six juveniles were osteologically assessed on-site. Of the adults studied, eighteen of the adults were female and twelve were male. The six juveniles comprised two males, three females and one juvenile who could not be identified (2116). The presence of individuals with known identity from coffin plates allowed a test of the skeletal accuracy of sex determination against the known identity. Twenty-nine of the adults in the osteological sample could be tested (determination could not be undertaken on burial 1005). The sex estimation was correct in all 29 cases investigated osteologically. In five cases, the sex was suggested as 'probable' male or female rather than 'definite'. The additional on-site sex determination undertaken on remains in order to help clarify the identity of the burial was correct in all but one instance. The skeletal determination of age-at-death was correct in 72% of the 25 adult burials tested in the osteological sample (Appendix Table 1). In six instances, the skeletal age determination under-aged the true age and in one instance over estimated. Both males and females were incorrectly aged. In several cases the under aging derived from disagreement between the pubic symphysis and the auricular surface results, with the latter frequently indicating a young age (Appendix Table 1). The results are not as good as the accuracy of the sex determination.

4.3 Stature

- 4.3.1 Adult stature can provide an indirect reflection on whether challenges to growth had occurred in males and females from past populations. Twenty-four of the thirty adults osteologically assessed at St. Marks could be recorded for a stature estimate. All but one of the adults had a complete femur that was used for stature estimation. The stature estimate for burial (1289) was undertaken using tibia length. Individual stature results are shown in Appendix Table 3. Mean stature for males and females from the assemblage

are shown in Table 1 below. Males were on average taller than females in the assessed burials by seven cm.

Sex	Stature	Standard Deviation	Stature Range	Number of Individuals
Males	172.3cm	8.68cm	163.6-180.9cm	10
Females	165.3cm	6.53cm	158.7-171.8cm	14

Table 1. Estimated stature of males and females in the osteological sample.

4.4 Pathological Conditions

4.4.0.1 The osteological assessment identified a range of pathological conditions that had affected the skeletal and dental remains. The diseases identified are outlined and discussed below.

4.4.1 Congenital Defects

4.4.1.1 There are a range of skeletal and dental defects that can occur during fetal and childhood development. A range of developmental defects in the cranial and post-cranial skeletons and the dentition were observed in the burial sample.

4.4.1.2 One adult (1398) displayed a skeletal anomaly that affected the shape of the back of the skull, known as bathrocephaly. In this condition, there is an overgrowth of bone in the occipital bone, which creates a bulge or swelling at the back of the skull. The overgrowth of bone is benign and occurs as a normal variant of skull development rather than due to a pathological condition. The affected individual (1398) was Maria Strapp who was buried at St. Mark's cemetery in 1894 aged 75 years. The cranial swelling could have been easily masked during life if Maria had long hair. Maria also exhibited multiple, small, additional pieces of bone within the cranial sutures at the back of skull (lambdoid ossicles). It is likely that these extra bone pieces developed to allow the expansion of the sutures in response to the bathrocephaly. A second individual (1278) displayed extra ossicles of bone formation in the cranial suture lines without any evidence for bathrocephaly. This individual (1278) also presented additional holes for blood vessels (foramen) penetrating through the left and right parietal cranial bones at the back of the skull, as did a second individual in the collection (1393).

4.4.1.3 Individual (1278) was affected by several dental anomalies that were created during the very early stages of the person's growth. The second premolar of the left mandible and the left and right first premolars of the maxilla were crowded although none of the teeth had moved out of the normal dental position. In addition, incisor shovelling was present on both the left and right first and second maxillary incisors. The feature is manifest as a thickened layer of dental enamel forming on the margins of the teeth, creating a raised border to the crown.

- 4.4.1.4 Four adult males (1157), (1278), (1291), (2013) and two adult females (1130), (1350) displayed evidence of a cleft in the spinous process of a vertebra. Clefts occur due to a failure to form bone over the spinous process at back of the spine or in the sacrum. Where all of the sacral vertebrae are cleft, this is referred to as spina bifida occulta, or in cases where severe complications arise due to exposure of the neural canal containing the spinal cord to other soft tissues, spina bifida cystica. There were no cases of spina bifida in the burials from St. Mark's Church. The most frequently affected cleft vertebral arches in the sample occurred in the first sacral vertebra. One individual (1278) displayed clefts in both first and second sacral vertebrae. Individual (2013) was slightly unusual and presented an incomplete cleft in the second cervical vertebra (C2). The cleft of the cervical vertebra was also incomplete and failed to penetrate all the way through the spinous process. These clefts are unlikely to have caused any detrimental problems for the affected individuals.
- 4.4.1.5 Individual (1278) also displayed a supernumerary vertebral segment in the sacrum, in which six segments were present instead of the normal five. This change occurred together with a cleft neural arch of the first and second sacral segments. Waldron (2009, 220) has reported that approximately 3% of the general population has a sixth lumbar vertebra. There are usually no detrimental effects of having an extra vertebral segment. One other individual (1393) presented a developmental anomaly of the spine in which the lumbar vertebra L5 had partially fused to the sacrum and had partially developed some sacral characteristics (unilateral sacralisation).
- 4.4.1.6 One individual (1157) displayed complete and bilateral separation of the posterior aspect of the vertebral spinous process and lamina from the remainder of the vertebral body (spondylolysis). The vertebra affected was lumbar L5 at the base of the spine, and this is the most frequently affected vertebrae in this condition. The etiology of the defect was originally considered to be due to a developmental failure or weakness in the bone in the spinous process, which if placed under stress during life potentially by increased load-bearing would lead to fracture and separation. More recently, research appears to suggest that the bone separation can occur due to localised trauma such as a fissure fracture through the lamina and spinous process due to increased loading without an underlying congenital defect.
- 4.4.1.7 Asymmetrical development of joint surfaces in the spine (apophyseal facet hypoplasia) was observed in two adults; (1130) and (1350), and both of these individuals also displayed cleft neural arches of the sacrum. In this defect, one of the joint facets tends to be marked smaller than the opposing facet, which can lead to unequal stress on the joints and can result in joint degeneration.
- 4.4.1.8 Three individuals displayed evidence of two ribs co-joined in the burial sample as a result of congenital defects in the development of the rib cage (Barnes 1994). Individual (1499) was affected by a failure to separate two left rib ends of the fourth and fifth rib and located

to the front of the rib cage (sternal aspect), which subsequently formed a large block of smooth lamellar bone (Plate 1). The fusion is a variant of normal development and had not occurred due to any trauma or pathology. Such fusion is unlikely to have affected the individual significantly during life. A second individual (1509), Elizabeth Loehleim, who died aged in 1896 aged 65 years presented evidence of a third case of a failure of rib separation at the sternal aspect of the shaft on the left side with a middle rib (from 4 to 9) affected.



Plate 1. Example of two fused ribs at the curve of the shaft. The fusion is caused by long-standing smooth lamellar bone formation and there is no evidence of bone fracture.

4.4.1.9 A third burial from St. Mark's Church, (1157), displayed fusion of two ribs (likely ribs 3 and 4 although fragmentary), but this fusion occurred in a manner very different to the case above. In individual (1157) two right ribs were fused by smooth and long-standing bone formation from the lower or inferior border of one rib through to the upper or superior border of the adjacent rib. The fusion occurred at the middle portion of the rib shaft adjacent to the curve of the shaft. The ribs were incomplete and the sternal ribs ends were not observed. There was no evidence of trauma in the ribs, such as fractures or traumatic ossification of bleeding or soft tissue that could explain this bone fusion. Instead, it is plausible that this example represents a further example of a developmental defect of unusual bone fusion. Each rib had a fully formed and clearly defined morphology, which indicates that this is not a typical case of a failure of separation of the ribs during embryonic development. This fusion occurred after each rib development had occurred, but may have been developmental ossification of the adjoining soft tissues between the ribs. The rib fusion in this individual occurred together with a range of other developmental defects including spondylolysis (see below), cleft neural arch of the sacrum.

4.4.2 Non-Metric Traits

- 4.4.2.1 There are a large number of anomalies that can occur in skeletal and dental morphology and structure as a result of normal variation rather than pathological conditions. The variation of the non-metric traits have been discussed by Berry and Berry (date), Schwartz (1995), Buikstra and Ubelaker (1994) and Brothwell & Zakrzewski (2004). These traits can be of particular importance in the potential for a genetic component to play a role in their development. As such, the traits can become manifest within family groups. It was beyond the scope of the on-site osteological assessment to conduct a comprehensive recording of the large number of potential variants in the burials studied. Several variants were noted and are discussed in summary below with consideration for the potential occurrence within identified families and presented by individual in Appendix Table 2.
- 4.4.2.2 Six adults presented double facets on the calcaneal joint in the foot (1095), (1130), (1294), (1350), (1516), (1543). Of these, four individuals were female, two were male. None of these burials shared a familial surname and as such are unlikely to have been related. Examples of apertures or holes through the bone occurred in various locations in the St. Mark's burials. A sternal foramen was observed in (1350), and this individual displayed a range of other non-metric as well as congenital defects throughout the human remains. Septal apertures, or small holes through the lower or distal humerus were also seen on both the left and right bones of (1350) and (1393). In contrast, an unusual overdevelopment or excess formation of bone (torus) can occur in the maxilla and mandible. Two individuals presented such bone formation occurred in the maxilla in (1350) and (1363). None of the individuals demonstrating apertures or foramen or tori appeared related through the consideration of family names.
- 4.4.2.3 An unusual anomaly was identified in the right ulna of individual (1505), Mary Ellen Whitworth Limbert who was buried at St. Mark's Church in 1893 aged 58 years. This right ulna was missing the uppermost portion of the olecranon joint surface and tip of the bone. The bone surface at the point of separation was markedly porous but was extremely smooth and comprised of long-standing lamellar bone (Plate 2). This surface indicates that the separation had occurred quite a long time prior to death. The separation was not the result of fracture through the joint but may have resulted from a developmental defect in the formation of the joint. The corresponding portion of the joint on the distal humerus was normal, therefore the joint would have functioned normally. The smooth but porous bone surface through the joint suggests that there was some form of fibrous, soft tissue join between the two pieces of bone in the ulna joint, which would have facilitated joint function.



Plate 2. A failure to fuse the superior portion of the olecranon joint of the ulna to the remainder. The smooth but slightly porous surface at the point of separation indicates a long-standing change, a lack of fracture and likely fibrous union with the superior portion.

4.4.3 Dental Disease

4.4.3.1 A variety of dental diseases were present in the osteological assemblage. The results are summarised below and considered between the sexes, and are described by individual in Appendix Table 2.

4.4.3.2 Sixteen of the thirty adults in the osteological sample displayed evidence of carious lesions in the dentition. Equal numbers of males and females were identified with caries. Similar numbers of old adults with caries were present between males and females (six male, five females). The remaining adults included two middle adult males, one middle adult female and two adult females. Caries results from demineralisation and cavity formation on the teeth caused by acid secretion by bacteria that are attracted to fermentable carbohydrates (Hillson 1996; Waldron 2009, 237). Regular cleaning of the teeth removes the carbohydrates, reducing the risk of caries. Calculus was present in six individuals (four old adult females, two old adult males); a much lower frequency than dental caries. This dental disease occurs where plaque is not adequately removed from the teeth and subsequently mineralises into hard accumulations on the tooth or root surface (Plate 3).



Plate 3. Example of dental calculus deposits on the mandibular incisors and canines.

4.4.3.3 Seven adults in the sample had periapical abscesses, affecting three males and four females. These lesions are caused by an accumulation of bacteria in a cavity or cyst often at the base of a tooth root. The cavities contain a build up of pus, which eventually passes from the bone through the soft tissues and is expressed out into the mouth (Hillson 1996; Waldron 2009, 241). The bacteria can enter the blood stream through vessel holes or foramen in the mandible or maxilla, which can result in new bone formation representing a secondary non-specific infection. One affected individual (2013) showed multiple abscesses at the very front of the mandible and maxilla together with a secondary infectious or inflammatory response. These changes indicated a severe bacterial infection had been present in the mouth, which would have been quite painful during life (Plate 4).



Plate 4. Externally and internally draining periapical abscesses in the anterior maxilla.

- 4.4.3.4 Ante-mortem tooth loss was observed in nineteen of the 30 adult individuals; ten females and nine males. This condition indicates the loss of a tooth and closure of the tooth socket, which can only occur while the individual is alive. The majority of individuals affected were old adults; five old adult males, eight old adult females, three middle adult males, one middle adult female, one adult male and one adult female displayed ante-mortem tooth loss. Infections and diseases of the gums and trauma to the mouth can contribute to ante-mortem tooth loss but the most likely causative factors are dental disease such as caries as well as old age.
- 4.4.3.5 Four adults displayed congenital absence of teeth. These burials comprised three males and one female. None of the individuals appeared to be related according to family surnames. In three cases, teeth were missing from the left maxilla, but there was no consistency in which teeth were missing (two molars, one first premolar and one second incisor). Two individuals showed two congenitally absent teeth; one with two molars missing and one example with the left and right second maxillary incisors missing. It is possible that some of the absent teeth may simply have failed to erupt rather than actually failed to develop during childhood. It is not possible to differentiate between these factors without radiographs, which could not be undertaken on-site.
- 4.4.3.6 Three individuals displayed teeth that were partially erupted or had become mal-aligned and unable to erupt entirely (dental impaction). The third molar was impacted in three examples; (1291), (1330), (1499). The third molar is frequently affected by impaction as there can often be insufficient room in the mouth for all of the teeth to erupt properly. One old adult male, one adult male and one adult female showed the impacted molars; none of the burials were related according to surname. Two burials additionally displayed examples of congenitally absent teeth; (1330), (1499).
- 4.4.3.7 Individual (1291), Thomas Twanbroove Glazebrook who was buried in 1890 aged 85 years, had an edentulous maxilla except for an impacted maxillary right canine. The tooth had partially erupted but was aligned horizontally instead of vertically and partially obscured the sockets for the first and second maxillary incisors. Whilst not fully erupted, the mal-position of the canine would have been visible at the front of the mouth during life. The root of the canine showed a small cavity demonstrating caries of the tooth root. The same individual (1291) also had an edentulous mandible except for an impacted left third molar.

4.4.4 Joint Disease

- 4.4.4.1 Degeneration of the joints in the skeleton is a frequent finding in post-medieval burials (Roberts and Cox 2003; Waldron 2009). Of the 30 adults examined, 19 (63%) displayed slight evidence of degenerative joint changes (excluding spinal changes, see below). The

bone changes included porosity and marginal bone formation (osteophyte lipping). Twelve females (ten old adults and two adults) and seven males (six old adults and one adult) displayed joint degeneration. Of the females in the sample, six old females displayed more severe joint degeneration that included the loss of cartilage during life leading to bone polishing (eburnation) indicating osteoarthritis. The knees were most frequently affected by osteoarthritis in the affected females (five cases) (Plate 5). There was one case of osteoarthritis in the shoulder (acromio-clavicular joint) and one case in the elbow. No males showed evidence of osteoarthritis.

4.4.4.2 Twelve adults displayed mild degenerative joint changes throughout the spine. Of the affected individuals, eight were old adult females, one was a middle adult female, two were old adult males and one was a middle adult male. Males were affected by osteoarthritis in the spine in three cases in contrast to the pattern of extra-spinal joint osteoarthritis. Two females presented osteoarthritis in the spine. All of the affected individuals were old adults except for one adult female. Further evidence for spinal degeneration in the vertebral bodies underlying the intervertebral discs (intervertebral disk disease, IVD) was also present in four old adult females in the osteological sample.

4.4.4.3 Six adults displayed evidence of rotator cuff disease, which affects the ligaments of the shoulder that enable joint flexibility and rotation. Prolonged or repetitive strain and age-related degeneration of the joint capsule can result in rotator cuff disease. The skeletal changes in this condition can be particularly prominent at the top of the humerus. Five of the affected burials were old adults (three females, two males). The remaining individual could not be aged.



Plate 5. Example of degenerative breakdown, porosity, eburnation and marginal osteophyte formation in the knee joint.

4.4.4.4 There were several instances of joint fusion in the osteological sample. Six burials displayed fusion across the auricular surface at the joint where the sacrum articulates with the pelvis; (1157), (1294), (1363), (1452), (1516), (2013). Four of these cases were male and two were female. Four of the individuals affected were old adults (two males, two females) and it is likely that age-related degeneration of the joint played a role in the development of the joint ankylosis. Of the six individuals affected, three showed fusion over the left joint, one right joint was fused and two cases of bilateral fusion were present.

4.4.4.5 Three individuals in the osteological sample presented varying degrees of spinal fusion. One burial (2013) showed anterior and slight lateral (right) fusion of nine adjacent vertebrae through the middle to lower back. There was in general maintenance but with narrowing of intervertebral disk spaces, there was marked fusion over the laminae, apophyseal facets and ligamentous ossification throughout the posterior tips of the spinous process. There was also extra-spinal ossification at muscle insertion points in the pelvis and long bones and sacro-iliac fusion. The extent of the spinal fusion would have lead to some stiffening and reduced movement in the torso and limited bending. Several of these changes could indicate the specific condition DISH (Diffuse Idiopathic Skeletal Hyperostosis), but this does not tend to involve the apophyseal joints. The condition was not due to ankylosing spondylitis as the lumbar vertebrae were unaffected. It is possible that this spinal fusion was caused by a tendency to form excess bone in this individual (a bone former). Age-related degeneration in the spine was likely the cause for two other instances of spinal fusion, one in the cervical spine at the base of the skull (1350) and one case of four thoracic vertebrae fused by small osteophytes (1276). These examples are illustrated in Plate 6.



Plate 6. Three examples of

spinal ossification in the osteological sample.

4.4.4.6 A more unusual form of joint fusion was observed in one individual (1330), Colonel Arthur Booth Wilbraham who was buried in 1897 aged 54 years. Pathological bone fusion had occurred across the joint at the front of the pelvis (pubic symphysis). Fusion at this surface is quite unusual; this joint in particular can separate slightly in females during childbirth to help expand the birth canal. The joint fusion was not a primary pathological condition but had occurred secondary to a healed fracture of the left pubis (see Section 4.4.7.2).

4.4.5 Infectious Disease

4.4.5.1 There was no evidence of any specific infectious diseases, such as tuberculosis or treponemal infection (e.g. venereal syphilis) in the osteological sample from St. Mark's Church.

4.4.5.2 Eight individuals displayed periosteal new bone formation including six adults; (1276), (1398), (1505), (1516), (2008), (2013) and two juveniles also displayed possible non-specific infections (2110) and (2116). Of the affected adults, four cases occurred in old adults (three females, one male). Two cases, one male and one female could not be aged. This bone formation can be caused by a range of factors including non-specific infection, inflammation due to injury, or bleeding into the soft tissues adjacent to the bone surface (Roberts & Manchester 2005; Waldron 2009).

4.4.5.3 Four of the affected adult burials displayed evidence of periosteal new bone formation on the legs; in two cases the pathology was found on tibiae of the lower legs. This could have derived from a localised injury or bruising or from a non-specific infection. In two cases the bone formation was present in the upper and lower legs (femora and tibiae) and suggests a non-specific infection was most likely responsible.

4.4.5.4 In one individual (1516), there was a mixed response of long-standing healed lamellar periosteal new bone formation, together with more recently formed porous woven bone formation. These changes indicate that multiple phases of bone reaction had occurred and most likely in response to a non-specific infection. In the juvenile burials, porous, recently formed woven periosteal new bone had occurred on the external surfaces of the skull (parietals and frontal bones) (2110) and in the long bones of the ulna, radius and tibiae (2116). These changes most likely indicate a non-specific infection or inflammation had occurred.

4.4.5.5 Individual (2121) had a healed fracture of the left thigh (see Section 4.4.7.1). Evidence of a secondary infection was also present in the femur together with evidence of an infection in the lower leg (tibia). The periosteal new bone formation predominantly comprised of long-standing raised layers of lamellar bone. In some places, however, porous woven bone was present, which would have been formed shortly before the individual died.

There were residual traces of white plaster on the tibia and this individual was found with a textile and plaster cast on the leg. The cast was originally white but was stained green (see Section 4.4.7.1). It is likely that a bacterial invasion of the blood system had affected this individual via the fractured femur. The extent of bone reaction demonstrates the individual had survived both the injury and subsequent infection for quite a long time. This survival may have been aided by the clear evidence for treatment of the injury and infection. There was no evidence for any bone tissue necrosis or death as can happen in specific infections (osteomyelitis) (see Ortner 2003, 181-186).

4.4.5.6 A more serious infectious response was observed in the individual affected by DISH (2013) (Section 4.4.4.5). The infectious bone response caused significant swelling of the left forearm and two ribs together with less severe changes present in the legs. The middle of the affected left ulna was 14mm larger (medio-laterally) than the normal right ulna (Plate 7). The bone expansion in the arms and ribs was such that the external and internal aspects of the bone were likely to have been affected by the infection (periostitis and osteitis), although a radiograph would have been needed to confirm this. Whilst the exact cause of the infection could not be determined, there were no skeletal changes that were characteristic of tuberculosis or treponemal infection. There was also no evidence of bone necrosis or suppurative (pus)-derived draining channels (osteomyelitis).



Plate 7. Severe bone formation and expansion of the left ulna (shown on left of image) compared to the normal right ulna, due to a non-specific infection

4.4.5.7 There was little evidence of respiratory infection in the osteological sample. Two adults presented periosteal new bone formation in the ribs; one as a result of the systemic infection in the individual with severe spinal fusion (2013). The second individual (1505) presented less severe and localised new bone formation, most likely in response to a non-specific infection. Persistent coughing or episodes of conditions such as bronchitis, pneumonia, pleurisy or bleeding can result in soft tissue inflammation adjacent to the lungs and may cause reactionary bone changes (Waldron 2009, 117). Specific diseases that affect the lungs, such as tuberculosis can also cause new bone formation through the ribs (Roberts & Manchester 2005).

4.4.6 Metabolic Bone Disease

4.4.6.1 Three adult burials, all dating to the 19th century, displayed evidence of a vitamin D deficiency that had occurred during childhood; (1291) Thomas Twanbrooke Glazebrooke who was buried in 1890 aged 85 years, (1393) Charles Holmes who was buried in 1894 aged 38 years and (2121) Ellen Cilby who was buried in 1896 aged 81 years. In all adult individuals the skeletal changes involved mild to moderate bending deformities of the legs without any alterations in the torso or arms. One of the six juveniles examined also displayed bone changes indicating the child had died whilst suffering the early stages of a vitamin D deficiency. The body needs sunlight exposure on the skin or a dietary intake of oily fish or eggs in order to produce vitamin D (Brickley and Ives 2008). A lack of vitamin D prevents normal bone mineralisation, which results in soft and weakened bones. When pressure is placed on affected bones, bending deformities often occur. This particularly affects children who can acquire bending deformities through crawling and walking (Ortner and Mays 1998; Mays et al. 2006). In children, the condition is called rickets and if bending deformities are severe they cannot be fully corrected and will be retained into adulthood. When observed in adults, these indications of the childhood defects are called residual rickets (Brickley and Ives, 2008).

4.4.6.2 One adult female burial, (2121) Ellen Cilby, displayed evidence of a second metabolic bone disease in addition to the residual rickets discussed above. The skeletal preservation of (2121) was complicated by the brittle and porous nature of the bone. In particular, the vertebral bodies were very poorly preserved and the long bones were extremely light to lift in comparison with the other adult burials. The shoulder blades were translucent, suggesting there had been some thinning or loss of bone. An un-healed fracture had occurred through the intertrochanteric line of the right femur (Plate 8).



Plate 8. An unhealed intertrochanteric fracture of the right femur in an old adult female burial. Left: fracture visible *in situ* (arrowed). Right: Detail of fracture line and reactionary porous woven bone formation at fracture margin and over the lesser trochanter to right of image. The fracture was most likely due to age-related osteoporosis.

Porous bone formation had occurred at the margins of the fracture and in the internal structure of the fractured margins. This indicated that some reaction to the fracture and had occurred prior to death. Ellen had however, died before bone bridging and full healing of the fracture had occurred. This type of fracture frequently results from a fall onto the hip, but may have been exacerbated by an underlying osteoporosis. This disease results from a gradual imbalance in bone formation and bone removal in the skeleton culminating in a net loss of bone. There are a number of different causes of this condition, including the menopause, increased age, nutritional imbalance and starvation and immobility (see further Brickley and Ives, 2008). As Ellen was 81 years old when she died it is likely that an age-related osteoporosis contributed to the fracture, which most likely resulted from a fall.

4.4.7 Trauma

4.4.7.1 In addition to the pathological fracture of the femur reported above (Section 4.4.6.2, burial 2121), two cases of trauma were present in the osteologically assessed burials. The individual (1276) Helen Julia Collin, who was buried in 1888 aged 63 years, was particularly unusual in being found with what appeared to be a curved, green-stained, white plaster cast in the grave on the left leg (Plate 9). The distal aspect of the left femur

displayed slight medial (internal) angulation of the shaft together with remodelled raised layers of periosteal new bone formation (see Section 4.4.5.5). There were residual traces of white plaster on the tibia, indicating where the plaster cast was placed over the left leg. The slight misalignment of the femur suggests an open fracture had occurred that had been accompanied or followed by a secondary infection. The infection was most likely caused by bacterial entering the blood system due to the injury to the leg. The extent of bone reaction demonstrates the individual had survived both the injury and subsequent infection for quite a long time.



Plate 9. Left: An apparent healed fracture and secondary infection in the left distal femur of an adult burial. Right: A white-green textile cast found in the grave likely a method of treatment for the injury and infection.

4.4.7.2 Individual (1330) displayed long-standing bone fusion of the pubic symphysis joint at the front of the pelvis as outlined above (Section 4.4.4.6). This bone fusion (ankylosis) had

occurred secondary to a traumatic injury at the front of the pelvis. Ossification had occurred at the front (ventral) aspect of the pelvis due to the fracture callus and masked the original fracture line in the left pubis (Plate 10). Fractures to the front of the pelvis frequently occur in motor vehicle accidents in modern cases. Severe falls or blows to the front of the body may also result in similar traumas, although fractures at this location tend to manifest more frequently in the pubic rami rather than parallel to the pubis as occurred in this example.



Plate 10. Healed fracture parallel to the left pubic symphysis of the pelvis causing bone ankylosis of the joint.

4.4.7.3 One individual (1543), Joseph Goss who was buried in 1892 aged 83 years, displayed severe trauma in five fractured vertebrae at the base of the spine. The vertebral bodies were compressed resulting in a loss of vertebral body height as well as wedging to the front or anterior aspect. The fractures occurred in thoracic vertebrae T10, T11, T12 and lumbar vertebra L3 and L5. The fracture margins in the vertebral bodies displayed bone remodelling, indicating some healing from the trauma, but several fracture lines had not been bridged as shown in Plate 11. This suggests that complete healing of the fractures had not occurred before Joseph had died.



Plate 11. A severe vertical compression fracture with remodelling and healing around the margins but no bridging of the fracture lines.

4.4.8 Autopsy

4.4.8.1 Evidence of a post-mortem autopsy was present on the burial of (1148), Jane Jones who was buried in 1923 aged 69 years. The skull had been separated by a complete craniotomy. This procedure would have been undertaken in order to examine the inside of the skull and brain to help establish a cause of death. This burial was unusual in having the apparent removal of the left and right scapulae, clavicles, right ulna, ribs, cervical and thoracic vertebrae. The remainder of the skeleton was present. In graves with exposed skeletal remains, the grave was hand excavated, all of the bones lifted and the remaining spoil (e.g. fragments of coffin wood, soil) removed by hand and placed to the side of the grave and examined for any loose bones. The missing skeletal elements from (1148) were therefore not simply displaced to another location in the grave. It is not clear why these skeletal elements were missing from the burial although it is possible that they were removed for further autopsy investigations prior to reburial.

5 Discussion

5.0.1 There was extremely good preservation of the skeletal remains on the site. A total of 66% of the osteological sample showed excellent bone surface preservation and 83% of the examined sample were over 90% complete. The graves were well drained and only a small number of coffins showed small amounts of water-logging on the coffin surface, most likely due to the collection of rainwater. No soft tissue remains were observed in any of the collapsed or damaged coffins. It is unclear whether soft tissue remained in any of the sealed coffins.

- 5.0.2 There were slightly more females than males in the exhumed areas of the cemetery as established by the coffin plates and burial register, and this was also evident in the sample osteologically sexed. The interpretation of sex based from skeletal remains involves gauges of size and robusticity differences between males and females as well as the development of ligament attachment sites and bone shape that are present in females in order to allow childbirth (Buiksta and Ubelaker, 1994; Schwarcz 1995). The accuracy of the skeletal interpretation of sex can be limited by individual variation. The presence of individuals with known identity from coffin plates allowed a test of the skeletal accuracy of sex determination against the known identity. Twenty-nine of the adults in the osteological sample could be tested (determination could not be undertaken on burial 1005). The sex estimation was correct in all 29 cases investigated osteologically. In five cases, the sex was suggested as 'probable' male or female rather than 'definite'. The additional on-site sex determination undertaken on remains in order to help clarify the identity of the burial was correct in all but one instance. These results are encouraging in view of the rapid nature of the site works. Interpretations on the possible causes of the higher number of female burials in the assemblage are limited as only three areas of the entire cemetery were exhumed.
- 5.0.3 The skeletal determination of age-at-death was correct in 72% of the 25 adult burials tested in the osteological sample (Appendix Table 1). In six instances, the skeletal age determination under-aged the true age and in one instance over estimated. Both males and females were incorrectly aged. In several cases the under aging derived from disagreement between the pubic symphysis and the auricular surface results, with the latter frequently indicating a young age (Appendix Table 1). The results are not as good as the accuracy of the sex determination.
- 5.0.4 The age-at-death profile of the burials derived from the known age-at-death indicates that there were fewer deaths in young infancy than occurred in later childhood (between one to five years). This profile is slightly different to that reported by Roberts and Cox (2003, 363) in which life expectancy rates between 1841 and 1911 were highest for those under one year of age. Local variations are likely to have existed in the nature of birth and death profiles and data from suburban locations may also differ to that gathered from urban centres. It is likely that improvements in maternal health, obstetrics, reduced infections and better weaning foods together with pasteurisation of milk contributed to the reduced number of young infant deaths. Challenges to health clearly persisted with young children dying under six years in the sample. There was a peak in adult age-at-death from 60 years onwards and a substantial number of the sample died aged 75+ years. There were also 13 individuals aged over 85 years; of these three were over 96 years. It is likely that the high socio-economic status of the parishioners of St. Mark's Church during the 19th and 20th centuries also contributed to increased longevity.

- 5.0.5 There were a diverse number of pathological conditions identified during the on-site osteological assessment at St. Mark's Church. There were reflections of skeletal variants and conditions that arise during fetal and childhood development. There were no severe instances of developmental deformity and no evidence for inherited traits within family groups. There was evidence for childhood deficiency of vitamin D in adult and juvenile burials. All of the adult cases of residual rickets were buried during the 19th century. Increased urbanisation and industrialisation lead to significant smoke pollution limiting sunlight exposure during the post-medieval period. It would be expected that suburban areas would be less affected by air pollution than sites in the immediate urban centre of London. It is possible that individuals may have migrated from areas where childhood was spent, to suburbs later in life. It would be expected that the childhood diets of those of a higher socio-economic status would not be as restricted in nutrition compared to those on a smaller income. However, dietary practices may have been socially or culturally restricted and may have limited the intake of fresh oily fish. Social customs may also have prevented skin exposure to sunlight, potentially contributing to the onset of rickets during this period.
- 5.0.6 Joint disease occurs frequently throughout many past populations and is well documented in the post-medieval period (Roberts and Cox 2003). The most severe form of joint breakdown and degeneration is osteoarthritis. In this condition, there is marked breakdown of joint cartilage, which allows bone surfaces to rub against each other and become polished (eburnated). Osteoarthritis is a multifactorial condition. The varying contributing factors include age, sex, genetics, race, obesity, trauma (see Rogers and Waldron 1993; Waldron 2009). Increased age is a frequent factor contributing to the development of osteoarthritis, although there is also some evidence for a genetic predisposition in affected individuals (Waldron 2009). More females tend to be affected than males, especially elderly females. This pattern of occurrence was demonstrable in the sample of burials from St. Mark's studied. The skeletal areas most affected at St. Mark's included the knee (femoro-patella) and shoulder (acromio-clavicular), which are the most frequently affected joints as reported on by Waldron (2007, 31). Both males and females were affected by less severe manifestations of joint degeneration (osteophytes and joint pitting). The wealthy socio-economic status of the sample is likely to have shielded the individuals from repetitive physical activity. It is possible that dietary excess contributed to obesity, which can place added stress and risk of joint disease in the skeleton, particularly in the knees (Waldron 2009). Overall, the most significant contributing factor to the presence of osteoarthritis in the sample is likely to have been increased age. In the osteological sample, old adults were also affected by rotator cuff disease caused by degeneration and instability of the shoulder. Whilst, this condition can be caused by repetitive over-use of the shoulder, the wealthy socio-economic status of the burials from St. Mark's suggests the individuals would have been unlikely to have endured hard, repetitive, physical work. Degeneration of joint stability due to increased age is more likely to have contributed to this skeletal change in the sample.

- 5.0.7 In addition to the age-related degenerative joint changes notable in the assemblage, a case of an age-related osteoporotic fracture of the femur in one female burial represents an injury frequently noted in clinical reports due to the ageing population particularly prevalent in the UK. The case from St. Mark's indicates that such injuries also occurred in the past.
- 5.0.8 There was some evidence for infectious disease in the group, although only one case was severe. There was evidence of periosteal new bone formation in several of the osteologically assessed burials. These cases most likely indicated localised injury or inflammation or a non-specific infection. These are frequently occurring changes in past populations (Roberts & Manchester 2005; Roberts & Cox 2003). There was no evidence for specific infections that were known to have been quite widespread during the earlier periods of the post-medieval period, particularly tuberculosis and treponemal diseases such as venereal syphilis. It is likely that this is direct reflection of the small sample size osteologically studied rather than a clear indication of the decline of these conditions in the later 19th and early 20th century. Two cases of quite marked periosteal new bone formation were present, which indicated quite severe infections. One infection was systemic through the arms, legs and ribs. The second case of infection was a secondary to a fracture of the femur. Treatment of the infection was indicated by the presence of a white plaster and textile cast on the leg in the grave. It is likely that the relatively wealthy socio-economic status of the sample had provided some benefits in access to treatment for injuries.
- 5.0.9 The osteological sample demonstrated that poor dental hygiene had existed in the St. Mark's burials. Caries was found in equal numbers in both males and females in the sample, demonstrating a failure to remove fermentable carbohydrates from the tooth surfaces by cleaning. Bacteria are attracted to these carbohydrates and secrete acid, which eventually causes demineralisation and cavity formation of the teeth. Deposits of mineralised plaque had also developed predominantly on the incisors and canines in the adults in the osteological sample, and further demonstrated that plaque was not removed from the teeth by cleaning. Caries and calculus are frequently found in assemblages of post-medieval burials (see Roberts and Cox 2003), yet methods of cleaning the teeth were known. Examples of tooth-brushes have been dated to the 18th and 19th centuries (Hillam 1990, 5). Contemporary dental advice included brushing the teeth with a soft brush or soap, although rubbing the teeth with a cloth was not advocated (Gray 1837, 18). The Cassell's Household Guide (1897) also suggested cleaning using a tooth-powder to remove plaque and stains; "The simple powders composed of chalk or cuttle-fish may be with advantage employed." Often powders used contained acids and abrasives that damaged and removed the tooth enamel as well as plaque (Hillam 1990, 7). Acids, highly seasoned foods, and mercurial preparations were also to be avoided to prevent tooth decay (Gray 1837, 19). The initial and progressive stages of tooth decay or caries reported on by contemporaries. Gray (1837, 23) and Cassell's Household Guide (1897) both suggested that when the 'black spots of decay' had emerged, the application

of a little lint or cotton soaked in tincture of opium or a tincture of opium and camphor was the best treatment. Filing of a carious tooth was often used to remove the lesion (Hillam 1990, 23) and microscopic evidence of filed striae on teeth with fillings from an archaeological collection from St. Marylebone Church, London (Miles et al. 2008b). Evidence of fillings was present in the osteological sample as well in other burials exhumed from the cemetery. Fillings comprised grey metals, possibly mercury based, as well as copper alloys identified by residual staining of tooth enamel green, as well as gold leaf. In one instance, gold had been used to cap the entire occlusal surface of the molar. Hillam (1990, 21) notes that gold shells crowns were made to cover worn teeth and were dated from the mid-18th century. The example from St. Mark's indicates that gold caps were still used into the late 19th and 20th century. The presence of gold fillings throughout the sample, together with gold plates used in the dentures is indicative of the wealth of some, if not most, of the burials from St. Mark's Church.

- 5.0.10 A high number of the adult burials osteologically examined presented evidence for periapical abscesses, which often result in a rounded lesion where pus has accumulated due to bacterial infection between the gums, teeth and bone. Abscesses are frequently linked with carious lesions as the destruction of tooth enamel and dentine allows bacteria to pass into the tooth roots and soft tissues in the tooth sockets. The association between tooth decay and the development of bacterial infections and treatments was also discussed by Gray (1837, 24-25):

"In severe and protracted cases [of toothache], hold the mouth over hot water. Cloths rung out of it, with a handful of camomile flowers wrapped in them, may be applied to the cheek....In chronic and rheumatic cases, in addition to the above-mentioned remedies, a piece of ginger or pellitory of Spain may be kept in the mouth, or a hot wire may be introduced into the hollow of the tooth to deaden the nerve. When the pain subsides, stop the tooth with bees' wax or (for more permanence) with gum-mastic, softened in the mouth or in warm water, which by shielding the nerve from the external air, will prevent irritation".

- 5.0.11 Ante-mortem tooth loss was prevalent in the osteological sample from St. Mark's burials. If the tooth sockets are well-healed following tooth loss, it can be impossible to determine when during an individual's lifetime a tooth was lost. Old adults were frequently affected by ante-mortem tooth loss and edentulous individuals (complete loss of teeth) were noted in the osteological sample and in the exhumed burials. Ante-mortem tooth loss frequently occurs with increased age due to periodontal disease and receding of the gums, soft tissues and bone loss. It is likely that poor dental hygiene, as was demonstrated in the sample, together with increased age contributed to ante-mortem tooth loss. Teeth can also be lost due to extraction of decayed teeth or by trauma to the mouth. Certain pathological conditions can also affect the soft tissues of the gums, which can loosen the teeth such as vitamin C deficiency (scurvy), as well as conditions that increased bone loss such as osteoporosis.

- 5.0.12 Methods of coping with ante-mortem tooth loss were in evidence in the burial assemblage. Ten individuals were found with dentures. All of the examples were made out of vulcanite with gold plates and fitted with probable porcelain teeth. This method of denture construction dates to the 1850s and replaced the earlier forms of simple gold plates and hippopotamus ivory dentures (Hillam 1990, 20).
- 5.0.13 A mixture of resources were utilised in order to make teeth for dentures during the 18th, 19th and 20th centuries. Tooth extraction from paupers in return for payment or of teeth extracted from those recently deceased, remains one of the most ubiquitous horror stories often reported and illustrated from the period (see Bishop et al. 2001). Replacement teeth were also fashioned out of hippopotamus tusk (Gray 1837, 50), ivory (Miles et al. 2008b) as well as porcelain (Hillam 1990). Teeth were often fitted to the denture plate by gold pegs and examples of this mode of fitting were observed in several examples from St. Mark's cemetery (Section 7.6.5). In the comparative example from the St. Martin's assemblage from Birmingham, platinum pegs were used rather than gold to attach the teeth into the plate (Hancocks 2006).
- 5.0.14 Two of the dentures from the St. Mark's collection displayed springs at either side to hinge the upper and lower plates together. The metal of the springs had degraded slightly but may have been gold or brass. Springs were attached to these dentures in order to force the plates apart and keep the plates in position in the mouth (Hillam 1990). Parallels from the St. Martin's burials had springs made of gold (Hancocks 2006). The springs were attached to the dentures by a rotary pin at the outside of each plate below the tooth line and roughly below the second premolar and first molar. The examples from the St. Mark's burials showed quite marked attention to detail in aspects of the denture construction. In particular, the molars had been incised with a crossed design in order to mimic the fissures and crevices of the surface of normal teeth. The additional of gold plates to the plastic vulcanite of dentures in order to provide a smooth surface against the gums and soft tissues has been observed in other parallels, for example in the burials from St. George's Church, Bloomsbury. To date, no parallels from other cemeteries are known to have been embellished with a gold heart design as was included on the dentures of burial (1077). This design was raised away from the roof of the mouth or hard palate and would have been felt when worn by the owner. Whilst, the possibility remains that these were decorative dentures included either rarely, or specifically for the burial, the decoratively incised molars showed some evidence of wear indicating some degree of usage.
- 5.0.15 The remaining dentures from the St. Mark's assemblage were separate pieces for the upper and lower plate and were made of a bright pink plastic, likely still vulcanite but had more similarities with the modern appearance of dentures than those of the hinged style. A set of vulcanite dentures, together with a partial copper alloy plate denture, were found from the post-medieval burials from St. Martin's Church in Birmingham (Hancocks 2006,

140). Hancocks (2006, 140) has suggested that the early vulcanite dentures would have been initially cast as a beeswax mould, replaced by a composite tinted rubber/sulphur mix which was then placed under steam pressure and baked at high temperatures in order to solidify.

- 5.0.16 Dentures were advocated on both medical and aesthetic grounds by contemporary medical observers during the 19th century. Gray (1837, 48) argued that the reduced production of saliva due to a lack of mastication in edentulous individuals caused the accumulation of gastric fluid "...and a variety of diseases are the consequence; and it is not to be doubted that multitudes of both sexes are prematurely hurried out of existence...". Gray (1837, 48) also acknowledged the additional effects of the loss of teeth for an individual:

"...there is usually great anxiety of mind arising from the change in personal appearance and the loss of comfortable feeling...the energy, tone and sweetness of the voice are thus destroyed...How often a fine face changed into an object of disgust from this cause alone!"

- 5.0.17 Traumatic injuries were present in the collection and included fractures to the spine, thigh and pelvis. Only one adult died before full healing of the fracture at the femoral neck had occurred. The remaining adults demonstrated sufficient survival after injury for the development of skeletal reactions. One individual displayed a secondary infection following fracture to the thigh. The plaster cast found associated with this injury clearly indicates that some treatment of the injury had been sought and was continuing at the time of death. It is likely that the higher socio-economic position of the burials as a whole facilitated access to medical treatment during the 19th century.

- 5.0.18 As an indirect measure of health, the assessment of a population sample's growth can be stunted by illness including infections and metabolic diseases (eg. vitamin D deficiency rickets), by non-specific stresses as well as by poor diets with inadequate calories and protein availability and which limit optimum skeletal development. It is posited that improvements in nutrition and childhood health, together with genetic variation all contributed to increasing individual stature and bone sizes between the post-medieval and earlier populations and individuals in the 20th century (see Eveleth and Tanner 1976). The investigation of adult stature from the burials at St. Mark's, which date to the late 19th century and early 20th century provide the opportunity to investigate if any increases in stature are demonstrable between the post-medieval and slightly later period.

- 5.0.19 A survey of stature from post-medieval sites during the post-medieval period has suggested that there is very little evidence of an impact of social status on improved height during childhood leading to adult stature. There is very little variation in adult stature between males and females from middle and lower class burials (Roberts & Cox 2003, 308). Recently excavated urban post-medieval sites excavated from London, St.

Marylebone (Miles et al. 2008b) and St. Luke's, Old Street (Boyle 2005) also seem to have confirmed this trend.

5.0.20 The stature of the both the males and females burials from the assessed osteological sample from St. Mark's are among the highest when compared to burials dating to the earlier 18th and 19th centuries (Table 2). The data from St. Mark's are derived from quite a small sample so need to be interpreted with caution. It is of interest that the tallest males from the post-medieval and early historic period derive from sites located in the suburbs or outside of central urban areas such as inner London and Birmingham. Burials from St. Nicholas' Church in Sevenoaks and St. George's Church in Canterbury have similarly large stature for males as those at St. Mark's. This is unlikely to simplistically relate to the role that wealth may have in providing adequate nutrition, and may suggest that the environment in which children grew up in, and with associated differences in sanitation and disease presence, also contributes to improved growth and taller statures. The females from St. Mark's Church were taller than any of the earlier sites examined, which may indicate that improvements in living conditions, improved health and dietary quality had benefits particularly demonstrable in females.

Site	Status	Male Mean Stature	Female Mean Stature	Source
St. Mark's, London	High/Middle	1.72	1.65	This study
St. Marylebone, London	High/Middle	1.70	1.59	Miles et al. 2008
St. Luke's, London	High/Middle	1.70	1.58	Boston et al. 2005
St. Bride's Crypt, London	High/Middle	1.70	1.60	Roberts & Cox 2003
Kingston upon Thames	Middle	1.69	1.60	Roberts & Cox 2003
St. Nicholas' Church, Sevenoaks, Kent	Middle	1.73	1.61	Roberts & Cox 2003
Christ Church, Spitalfields, London	Middle	1.68	1.56	Molleson & Cox 1993
All Saints, Chelsea Old Church, London	Middle	1.70	1.59	Bekvalac & Kausmally 2008
St. Martin's Church Birmingham	Middle and Lower class	1.71	1.59	Brickley et al. 2006
Broadgate, London	Low	1.72	1.58	Roberts & Cox 2003
St. George's Church, Canterbury	Low	1.73	1.60	Roberts & Cox 2003
Cross Bones Burial Ground, Southwark, London	Low	1.69	1.58	Brickley et al. 1999

Table 2. Mean estimated stature by sex for post-medieval burial assemblages compared to St. Mark's Church.

6 Conclusions

- 6.0.1 Age-related degenerative joint changes were particularly notable in the assemblage and are likely to reflect largely on the old age of the burials from the cemetery. There was also a case of an age-related osteoporotic fracture of the femur in one female burial. This injury is often noted in recent clinical reports due to the ageing population particularly prevalent in the UK. The case from St. Mark's indicates that such injuries also occurred in the past.
- 6.0.2 There was some evidence for infectious disease in the group, although in only one case was the condition severe. There was no evidence for specific infections that were known to have been quite wide-spread during the earlier periods of the post-medieval period, particularly tuberculosis and treponemal diseases such as venereal syphilis. It is likely that this is direct reflection of the small sample size osteologically studied rather than a clear indication of the decline of these conditions in the later 19th and early 20th century.
- 6.0.3 The skeletal effects of traumatic injuries were present in the collection and included fractures to the spine, thigh and pelvis. Only one adult died before full healing of the fracture at the femoral neck had occurred. The remaining adults demonstrated sufficient survival after injury for the development of skeletal reactions. One individual displayed a secondary infection following fracture to the thigh. The plaster cast found associated with this injury clearly indicates that some treatment of the injury had been sought and was continuing at the time of death. It is likely that the higher socio-economic position of the burials as a whole facilitated access to medical treatment during the 19th century.
- 6.0.4 A variety of dental diseases and defects were noted in the osteological sample. The adult burials were largely affected by caries and periapical abscesses. These conditions indicate poor dental hygiene. There were also a large number of cases of ante-mortem tooth loss. This condition can derive from dental diseases such as caries or periodontal (gum) disease also derived from lack of dental hygiene, but can also occur with old age. Ten individuals overall were completely or partially edentulous, which is likely to reflect on the age of the population sample. Indications of the general wealth of the burial group were highlighted in the evidence of dental treatment. A variety of cases of gold and metallic fillings were observed in adult teeth in both the osteological and reburied samples of the cemetery. Gold and plastic dentures were also observed through both sample groups and demonstrate access to dentistry from the late 19th century onwards.

Appendix Table 1. Osteological Assessment Catalogue of Skeletons from St. Mark's Church, Surbiton.

Skeleton no.	Pr	%	Sk	D	T	P	L	F	A	H	Burial Register Age	Burial Register Sex	Age Category	Suspected Age Range	Pubic Symphysis	Auricular	Sex	Bone Length	Stature
1005	2	10	0	0	0	0	1	0	0	0	100	F	Adult	n/a	n/a	n/a	n/a	n/a	-
1080	1	95	1	1	1	1	1	1	1	1	79	F	OA 46+	34-60	V 48.1 ± 14.6	7 50-59	F	442	163.2
1095	3	60	1	0	1	1	1	1	1	1	62	F	MA (B) 36-45	35-39	N/A	4 35-39	F	n/a	-
1130	1	90	1	1	1	1	1	1	1	1	78	F	OA 46+	48-60(+)	VI 60 ± 12.4	8 60+	F	483	173.0
1157	1	95	1	1	1	1	1	1	1	1	29	M	MA A 26-35	28-40	III 28.7 ± 6.5	4 35-39	M	500	180.4
1223	2	95	1	1	1	1	1	1	1	1	42	F	OA 46+	45-60	V 48.1 ± 14.6	6 45-49	?F	464	168.7
1276	2	90	1	1	1	1	1	1	1	1	63	F	MA (B) 36-45	35-52	V 48.1 ± 14.6	4 35-39	F	379*	147.7
1278	1	95	1	1	1	1	1	1	1	1	45	M	OA 46+	35-55	V 45.6 ± 10.4	4 35-39	M	453	169.2
1289	1	95	1	1	0	1	1	1	1	1	82	F	OA 46+	60+	n/a	8 60+	F	369	168.5**
1291	1	95	1	1	1	1	1	1	1	1	85	M	OA 46+	45-60	V 45.6 ± 10.4	7 50-59	M	436*	165.1
1294	2	90	1	1	1	1	1	1	1	1	82	F	OA 46+	60+	n/a	8 60+	F	458	167.2
1330	1	90	1	1	1	1	1	1	1	1	54	M	OA 46+	50-60	n/a	7 50-59	?M	470	173.2
1350	2	90	1	1	1	1	1	1	1	1	67	F	OA 46+	60+	VI 60 ± 12.4	4 35-39	F	450	165.2
1363	2	90	1	1	1	1	1	1	1	1	70	F	MA B 36-45	35-39	n/a	4 35-39	F	454	166.2
1367	1	95	1	1	1	1	1	1	1	1	89	M	OA	45-60	V	7	M	451	152.4

1393	1	95	1	1	1	1	1	1	1	1	1	38	M	46+	28-35	45.6 ± 10.4	50-59	M	491	178.2
1398	1	95	1	1	1	1	1	1	1	1	1	75	F	OA 46+	50-60+	28.7 ± 6.5	30-34	?F	435	161.5
1429	1	95	1	1	1	1	1	1	1	1	1	-	F	OA 46+	45-59	n/a	6	F	455	166.4
1436	3	60	1	1	1	1	1	1	1	1	1	56	M	Adult	n/a	n/a	n/a	M	481	175.8
1449	1	95	1	1	1	1	1	1	1	1	1	86	F	OA 46+	60+	VI	8	F	456	174.0
1452	2	70	1	1	1	1	1	1	1	1	1	73	M	MA B 36-45	35-45	IV	n/a	M	465	172.0
1486	1	95	1	1	1	1	1	1	1	1	1	21	M	YA 18-25	18-25	I	1	?M	480	-
1499	1	95	1	1	1	1	1	1	1	1	1	50	F	OA 46+	45-60	V	6	F	n/a	-
1505	1	95	1	1	1	1	1	1	1	1	1	58	F	OA 46+	45-60	VI	6	F	n/a	-
1509	2	95	1	1	1	1	1	1	1	1	1	65	F	MA B 36-45	40-45	n/a	5	F	443	163.5
1516	2	80	1	1	1	1	1	1	1	1	1	68	M	OA 46+	60-70	VI	8	M	508	182.3
1543	1	95	1	1	1	1	1	1	1	1	1	83	M	OA 46+	45-49	n/a	6	M	n/a	-
2008	1	95	1	1	1	1	1	1	1	1	1	-	F	OA 46+	45-50	n/a	6	F	470	170.1
2013	1	95	1	1	1	1	1	1	1	1	1	-	M	OA 46+	35-45	IV	5	M	478	175.1
2108	1	90	1	1	1	1	1	1	1	1	0	-	F	Juv	6-12 months	n/a	n/a	n/a	n/a	-
2110	1	90	1	1	1	1	1	1	1	0	1	-	M	Juv	6-9 months	n/a	n/a	n/a	n/a	-
2112	1	95	1	1	1	1	1	1	1	1	1	-	F	Juv	3 years ± 6 months	n/a	n/a	n/a	n/a	-
2116	1	95	1	1	1	1	1	1	1	1	1	-	n/a	Juv	1 month	n/a	n/a	n/a	n/a	-

2120	1	95	1	1	1	1	1	1	0	1	0	-	F	Juv	3-6 months	n/a	n/a	n/a	n/a	-
2121	2	80	1	1	1	1	1	1	1	1	1	81	F	OA 46+	60+	n/a	8	?F	441*	163.0
2125	1	95	1	1	1	1	1	1	1	1	1	-	M	Juv	6-9 months	n/a	n/a	n/a	n/a	-

Abbreviations: Pr = preservation grade (1 = excellent, 2 = moderate, 3 = poor), % = percentage completeness, Sk = skull, D = dentition, T = torso, P = pelvis, L = legs, F = feet, A = arms, H = hands all scored as 1 = present, 0 = absent. All stature estimated based on femoral length except ** which used tibial length. *stature estimate likely influenced by pathological condition.

Appendix Table 2. Individual Stature Estimates from St. Mark's Church Burials.

Skeleton no.	Burial Register Sex	Bone Length	Stature
1080	F	442	163.2
1130	F	483	173
1223	F	464	168.7
1276	F	379*	147.7
1289	F	369	168.5**
1294	F	458	167.2
1350	F	450	165.2
1363	F	454	166.2
1398	F	435	161.5
1429	F	455	166.4
1449	F	456	174
1509	F	443	163.5
2008	F	470	170.1
2121	F	441*	163
1157	M	500	180.4
1278	M	453	169.2
1291	M	436*	165.1
1330	M	470	173.2
1367	M	451	152.4
1393	M	491	178.2
1436	M	481	175.8
1452	M	465	172
1516	M	508	182.3
2013	M	478	175.1

Appendix Table 3. Evidence of Pathological Changes on the Skeletal Remains from St. Mark's Church, Surbiton.

HB	Pathology
1080	<p>Endentulous mandible and maxilla, separate denture plates for maxilla and mandible.</p> <p>IVD and osteophyte formation throughout the cervical vertebrae and horizontal osteophyte formation throughout the thoracic vertebrae.</p> <p>Marginal lipping in the glenoid fossae and acromion of the left and right scapulae and humeral heads of the left and right humeri, and pitting and lipping through the left and right medial clavicles, lipping of the right tibio-fibular joint, lipping of the right distal ulna and lipping distal right femur.</p> <p>Rotator cuff disease in both shoulders.</p>
1095	<p>Double facets over the left and right calcanei.</p> <p>Mandible and maxilla unobservable.</p>
1130	<p>Apophyseal facet hypoplasia of the left superior facet of thoracic T11.</p> <p>Incomplete cleft neural arch of the first sacral segment with displaced cleft through the right aspect of the spinous process.</p> <p>Double facet on the right calcaneus.</p> <p>Calculus on all mandibular incisors and canines (3/21).</p> <p>Ante-mortem tooth loss of the right mandibular first molar and left maxillary second premolar and first and second molars (4/32).</p> <p>Intervertebral disk disease through the cervical, thoracic and lumbar vertebra.</p> <p>Fusion by osteophyte formation between thoracic T4-T5 and T11-T12 likely due to degenerative joint disease.</p> <p>Severe degenerative pitting and osteophyte formation of the medial left and right clavicles, left and right patellae, eburnation (OA) of the left knee of the femur and patella, osteophyte lipping proximal tibiae, eburnation (OA) and pitting of the right elbow at the capitulum of the humerus and radial head, eburnation (OA) of the left elbow at capitulum of humerus and radial head.</p> <p>Enthesophytes at deltoid insertion of the left and right clavicles, greater trochanters of the left and right femora, and olecranon of the left ulna.</p> <p>Ossification of the thyroid cartilage.</p>
1157	<p>Complete bilateral spondylolysis of lumbar L5.</p> <p>Cleft neural arch of the first sacral segment.</p> <p>Fusion of two right ribs beyond curve of rib neck and into shaft from inferior to superior borders of rib shafts; no fractures, sternal rib ends unobservable.</p> <p>Caries mandible and maxilla (2/20).</p> <p>Externally draining periapical abscess of the left mandibular first molar associated with caries.</p> <p>Ante-mortem tooth loss of the right maxillary first molar and the right mandibular first, second and third molars (4/32).</p> <p>Congenital absence of the first left maxillary molar (1/32).</p> <p>Rotation of the left mandibular canine to mesial.</p> <p>Multiple Schmorl's nodes throughout thoracic vertebrae.</p> <p>Sacroiliac fusion of the left pelvis, right side unobservable.</p> <p>Enthesophytes pectoralis major and deltoid of left and right humerus.</p>
1223	<p>Bilateral scapula notch in superior border.</p> <p>Caries of the left mandibular canine, first and second premolars, first and third molars (5/26).</p> <p>Calculus mandibular incisors and canines (3/26).</p> <p>Ante-mortem tooth loss of right mandibular first molar and left maxillary first premolar (2/32).</p> <p>Crowding of the left mandibular canine and first premolar.</p> <p>Horizontal osteophyte formation through the thoracic vertebrae, no OA.</p> <p>Enthesophytes iliac crests, olecranon process of the left and right ulnae, lateral epicondyle and pectoralis major of the left and right humeri, deltoid insertion of the left and right clavicles, anterior</p>

	<p>tuberosities and soleal lines of the left and right tibiae, linea aspera and trochanteric lines of the left and right femora.</p> <p>Lots of sternal rib cartilage ossification.</p> <p>Ossification of thyroid cartilage and fusion of the manubrium to the xiphoid.</p>
1276	<p>Calculus throughout the mandibular and maxillary incisors and canines and left first and second premolars, and maxillary left first and second molars (10/27).</p> <p>Rotation of the second premolar distal.</p> <p>Crowding of the second maxillary right incisor out of position in dentition.</p> <p>Ante-mortem tooth loss of the mandibular first and second molars left and right and right third molar (5/32).</p> <p>Internally draining periapical abscess third molar left mandible.</p> <p>Degenerative fusion by osteophyte formation of the vertebral bodies and apophyseal joints of thoracic vertebrae T3-T6.</p> <p>Suspected healed, open fracture of the distal left femur, united but with slight medial angulation of the distal shaft. Secondary, remodelling woven and lamellar, periosteal new bone formation over shaft, quite extensive and likely a secondary infection to the fracture. The left proximal and tibia displayed accumulations of striated lamellar periosteal new bone formation. A plaster cast was found in situ on the leg of during excavation and was likely treatment for the fracture and/or infection.</p> <p>Left femoral length taken but shortened due to fracture; no right femoral length available.</p> <p>Enthesophytes of the pectoralis major of the left and right humeri, deltoid of right clavicle.</p> <p>Fusion of the manubrium and sternum.</p>
1278	<p>Supernumerary 6th sacral vertebral segment.</p> <p>Cleft neural arch of the first and second sacral segments.</p> <p>One left and two right ossicles in lambdoid suture, ossicle at lambda and left and right parietal foramen.</p> <p>Caries with crown destruction of left mandibular first molar (1/31 teeth present).</p> <p>Ante-mortem tooth loss of left mandibular second and third molars and right third molar, and of the right maxillary second and third molars and left maxillary third molar (6/31 teeth present).</p> <p>Rotation of left mandibular second premolar and bilateral rotation distal 45° first maxillary premolars.</p> <p>Bilateral incisor shovelling of the first and second maxillary incisors.</p> <p>Horizontal osteophyte formation throughout the upper and middle thoracic vertebrae.</p> <p>Fusion of sternum and xiphoid.</p> <p>No trauma, infection, metabolic, neoplastic, or joint disease observed.</p>
1289	<p>Mandible and maxilla edentulous.</p> <p>Degenerative pitting through the medial and acromial joints of the right clavicle.</p> <p>Eburnation (OA) and osteophyte lipping of the left and right patellae, and lipping of the left and right knees of the medial and lateral tibiae and distal femora, osteophyte lipping of the left femoral head.</p> <p>Enthesophytes iliac crests and ischial tuberosities.</p>
1291	<p>Cleft neural arch of the first sacral segment.</p> <p>Ante-mortem tooth loss; mandible edentulous apart from an impacted right canine horizontally aligned with crown towards first incisor (30/32). Root caries present just below the cemento-enamel junction of the canine (1/2).</p> <p>Eburnation (osteoarthritis) of the apophyseal joints of the first sacral vertebra.</p> <p>Slight medial bending of the left and right proximal tibiae, slight anterior bending of the left and right femora and posterior thickening of the middle femoral shafts and increased angulation of the femoral necks indicating residual vitamin D deficiency rickets.</p> <p>Age-related degenerative porosity of the left medial clavicle.</p> <p>Enthesophytes soleal line left and right tibiae, linea aspera of the left and right femora, iliac crests.</p>
1294	<p>Edentulous mandible, maxilla unobservable.</p> <p>Bilateral fusion of apophyseal joints of lumbar L5 to the sacrum.</p> <p>IVD throughout cervical and thoracic vertebrae and horizontal osteophyte formation through lumbar</p>

	<p>vertebrae.</p> <p>Marginal lipping left tibia lateral epicondyle, distal right and left femora and patellae with eburnation (OA).</p> <p>Bilateral sacro-iliac fusion.</p> <p>Double facets left calcaneus.</p> <p>Slight lateral straightening of the ribs.</p> <p>Enthesophytes of the greater trochanters of the left and right femora,</p>
1330	<p>Septal aperture left humerus.</p> <p>Caries (2/21).</p> <p>Calculus through mandibular incisors and canine left and right (3/21).</p> <p>Gold fillings in right mandibular second premolar, maxillary left second and third molars and right second premolar (5/21).</p> <p>Mesial rotation of mandibular right third molar.</p> <p>Ante-mortem tooth loss 7 teeth (7/32).</p> <p>Congenital absence of left maxillary first premolar (1/22).</p> <p>Impaction of the right maxillary third molar.</p> <p>Healed fracture of the left pubis parallel to the pubic symphysis rather than through the superior or inferior pubic rami. Secondary lamellar cortical bone fusion over the left and right pubic symphysis on ventral and dorsal aspects.</p> <p>Marginal lipping proximal left and right humerus, proximal left ulna, no eburnation (osteoarthritis).</p> <p>Posterior expansion and slight impaction of the right glenoid fossa, no fracture, possible slight extension of joint surface or possible slight posterior incomplete dislocation?</p> <p>Osteophyte formation and pitting between lumbar L5 and sacral S1 joint, age-related degeneration likely.</p> <p>Schmorl's nodes in one middle thoracic vertebra inferior aspect with horizontal osteophyte formation.</p> <p>Enthesophytes bilateral patellae, deltoid left humerus, left and right anterior tibial tuberosities.</p> <p>Ossification of cricoid and thyroid cartilage.</p>
1350	<p>One thoracic vertebra (T11) hypoplasia of the left superior apophyseal facet with likely secondary horizontal osteophyte formation in the centrum.</p> <p>Cleft neural arch of the first sacral segment.</p> <p>Sternal foramen. Double facet of the left calcaneus. Small maxillary torus.</p> <p>Large external and internally draining periapical abscess over the left maxillary canine and right canine (2/32).</p> <p>Ante-mortem tooth loss complete dentition (32/32).</p> <p>Eburnation (osteoarthritis) of the one cervical vertebral apophyseal joints.</p> <p>Fusion of cervical C2 and C3 lateral centra and fusion of lumbar L5 to sacral S1 by osteophyte formation over apophyseal joints.</p> <p>Osteophyte lipping of the right patella, bilateral distal femora.</p> <p>Enthesophytes pectoralis major of the left humerus, iliac crests.</p> <p>Fusion of sternum and xiphoid.</p> <p>Ossification of the cricoid and thyroid cartilage.</p>
1363	<p>Caries right mandibular canine and first premolar (2/2).</p> <p>Endentulous maxillary dentition, ante-mortem tooth loss all teeth except second mandibular right incisor, right canine, second left premolar and right first premolar (28/32).</p> <p>Massive maxillary torus measuring 17.5mm in AP length by 10mm ML width.</p> <p>Enlarged right nasal concha.</p> <p>Osteophyte formation through the distal first left metacarpal, no eburnation.</p> <p>Osteophyte formation lumbar vertebrae apophyseal facets.</p> <p>Eburnation and osteophyte formation (osteoarthritis) of the femoro-patellae joints of the left and right knees and patellae.</p> <p>Sacro-iliac fusion of the left pelvis.</p>

	<p>Cortical lamellar bone enthesophytes over the left and right greater trochanters, left and right anterior tuberosities of the tibiae and the anterior patellae.</p> <p>Ossification of the thyroid cartilage.</p> <p>Fusion of the manubrium and sternum.</p>
1367	<p>Total crown destruction by caries of the left mandibular canine (1/1).</p> <p>Ante-mortem tooth loss of all mandibular dentition except the left mandibular canine and maxilla edentulous (31/32).</p> <p>Horizontal osteophyte formation through thoracic and lumbar vertebrae and degenerative porosity through the lumbar vertebral bodies.</p> <p>Osteophyte formation and eburnation through the cervical and lumbar vertebral apophyseal facets (osteoarthritis). Pathological fusion of three cervical vertebrae across the apophyseal joints, laminae and osteophyte formation over the centra due to joint disease.</p> <p>Marked osteophyte marginal lipping of the distal right femur on the anterior, medial and lateral aspects, no eburnation.</p> <p>Cortical lamellar bone enthesophytes over the left and right radial tuberosities, right greater trochanter, left and right ischial tuberosities and iliac crests.</p>
1393	<p>Incomplete sacralisation of lumbar L5 on right side.</p> <p>Bilateral humeral septal apertures.</p> <p>Bilateral parietal foramen.</p> <p>Ante-mortem tooth loss right mandibular first and third molars, and first, second and third left molars, and left maxillary second premolar, first molar and third molar and first right premolar, first and third molars (11/30).</p> <p>Caries (1/6).</p> <p>Congenital absence of the maxillary left and right second incisor (2/32).</p> <p>Slight medial bending of proximal and middle tibiae and fibulae, anterior bending and anterior ridge development of proximal femora indicating residual vitamin D deficiency rickets.</p> <p>Enthesophytes at deltoid insertion bilateral humeri.</p> <p>Sternal fusion with xiphoid.</p>
1398	<p>Mandible edentulous.</p> <p>Caries left maxillary canine (1/1).</p> <p>Externally draining periapical abscess of the left maxillary second incisor.</p> <p>Ante-mortem tooth loss of the right maxillary except the first incisor and canine and left maxillary first incisor and canine (28/32).</p> <p>Bathrocephaly and multiple lambdoid ossicles.</p> <p>Healed, lamellar striated periosteal new bone formation on the medial proximal and middle left and right tibiae.</p> <p>Sacro-iliac articulation at the left side of the pelvis, no fusion.</p> <p>Enlarged attachment sites for the conoid ligament of left and right clavicles no bone formation.</p> <p>Enthesophyte formation bilateral deltoid insertion humeri and lesser trochanter of the left femur.</p>
1429	<p>Caries of the right maxillary first premolar (1/25).</p> <p>Grey, metallic fillings of the maxillary left first premolar and first molar (2/25).</p> <p>Slight osteophyte lipping of the left glenoid fossa.</p> <p>Enthesophytes pectoralis major of the right humerus.</p>
1436	<p>Mandible observable: caries total crown destruction of the left mandibular first premolar (1/10)</p> <p>Calculus throughout the incisors, canines, and left and right first premolars (8/10).</p> <p>Ante-mortem tooth loss of the left and mandibular second premolar, first molar and second molar and right mandibular second premolar, first molar and third molar (6/16).</p> <p>Dark grey metallic fittings in the left mandibular third molar and right second molar (2/10).</p> <p>Lots of sternal rib cartilage ossification.</p> <p>No trauma, infection, metabolic, neoplastic, or joint disease observed.</p>
1449	<p>Caries of the left mandibular first premolar (1/3).</p>

	<p>Ante-mortem tooth loss of the first left mandibular incisor, second premolar to third molar and complete tooth loss of the right mandible, and all maxillary dentition except left and right canines (27/32).</p> <p>Left maxillary canine displays an externally draining periapical abscess.</p> <p>Enlarged right nasal concha.</p> <p>Fusion of cervical C2 and C3 at the body and apophyseal joints, likely degenerative joint related not congenital block vertebrae.</p> <p>Severe IVD throughout cervical vertebrae.</p> <p>Ribs appear thinned and display some lateral straightening, iliac fossae are thinned.</p> <p>Marginal lipping of the glenoid fossae of the scapulae, severe lipping of the lateral left tibia and eburnation (OA) together with mirrored changes on the left femur.</p> <p>Enthesophytes on the greater trochanter of the left and right femora.</p> <p>Lots of sternal cartilage ossification.</p> <p>Fusion of the sternum and manubrium.</p>
1452	<p>Mandible observable: Total crown destruction by caries of left second mandibular incisor and third molar, less severe caries left mandibular first molar (3/9).</p> <p>No ante-mortem tooth loss (0/9).</p> <p>Bilateral sacro-iliac fusion.</p> <p>Mild degenerative pitting through the left and right femoral heads.</p> <p>Enthesophytes bilateral greater trochanters and linea aspera, anterior tuberosities and soleal lines bilateral tibiae, deltoid and pectoralis major of the left humours, enthesophyte left patella, bilateral iliac crests.</p>
1486	<p>Gold fillings, circular in shape occlusal right mandibular first and second molars and left and right maxillary second molar (fillings in 4/29 teeth present). No ante-mortem tooth loss present.</p> <p>Schmorl's nodes on inferior aspect of three thoracic vertebrae.</p> <p>No trauma, infection, metabolic, neoplastic, or long bone joint disease observed.</p> <p>Epiphyseal fusion: long bone epiphyses fused lines still open.</p>
1499	<p>Congenital/developmental failure to separate one fourth left rib with lamellar bone fusion across the sternal aspect of the ribs ends.</p> <p>Total crown destruction by caries of the right maxillary third molar (1/28).</p> <p>Calculus deposits affecting incisors and canines (11/11).</p> <p>Ante-mortem tooth loss of the left mandibular first and the maxillary left first incisor (2/28).</p> <p>Impaction of the left mandibular third molar and left maxillary third molar (2/28).</p> <p>Congenital absence of the right mandibular first and third molars (2/28).</p> <p>Gold fillings of the left and right mandibular second molar and the left and right maxillary second molar. Green staining and likely copper alloy fillings on the first maxillary left premolar (fillings total 5/28).</p> <p>Moderate osteophyte formation on the dens facet of the first cervical vertebra, no eburnation.</p> <p>Moderate osteophyte formation around the medial right clavicle and slight joint surface porosity, no eburnation.</p> <p>Slight, healed, vertically striated lamellar periosteal new bone formation on the medial middle and distal aspects of the left tibia. Non-specific infection or inflammation.</p> <p>Fusion of manubrium and xiphoid to the sternum.</p> <p>No fractures, joint disease, metabolic or neoplastic disease observed.</p>
1505	<p>Ante-mortem tooth loss of the right mandibular first premolar and first to third molars, left mandibular second premolar to third molar, and left and right maxillary first premolar to third molar (17/32).</p> <p>Remodelling lamellar periosteal new bone formation over rib necks, likely non-specific infection.</p> <p>Osteophyte pitting and eburnation (OA) through left and right acromial joints of clavicles, lipping of the glenoid fossae, lipping distal left ulna.</p> <p>Separation of the superior portion of the right olecranon aspect of the ulna; no fracture, lamellar margins to area of separation and appears as though a pseudojoint or fibrous union of the tip. Right</p>

	<p>trochlear of the humerus normal – suggests articulation of elbow was normal despite bone separation in ulna.</p> <p>Enthesophytes at soleal lines of left and right tibiae, linea aspera of left and right femora.</p>
1509	<p>Caries right mandibular canine and first premolar (2/8).</p> <p>Ante-mortem tooth loss of the right mandibular second premolar to third molar and left mandibular first premolar to third molar. Maxilla edentulous except for both canines (23/32).</p> <p>Failure to separate in one left sternal rib end from the middle ribs (4-9) together with lots of sternal cartilage ossification.</p> <p>Rotator cuff disease in the left humerus.</p> <p>Osteophyte lipping of the left femur and tibia of the knee.</p> <p>Enthesophytes at the medial and lateral epicondyles, pectoralis major and deltoid of the left and right humeri, and left olecranon process of the ulna, anterior tuberosities and soleal lines of of the left and right tibiae, left greater trochanter and linea aspera and lesser trochanter of the left and right femora.</p> <p>Fusion of the manubrium and sternum.</p>
1516	<p>Dentition unobservable.</p> <p>Double facet on the left calcaneus.</p> <p>Sacro-iliac fusion left side of pelvis, right unaffected.</p> <p>Osteophyte formation on right and left patellae, enlargement of articulating facet with pitting distal first left metatarsal no OA, lipping left distal ulna and radius and proximal left ulna, proximal left and right humeri.</p> <p>Rotator cuff disease left and right shoulders.</p> <p>Periosteal healed, lamellar, new bone formation medial middle and distal left and right femora and medial proximal to distal left and right tibiae with porous woven more active raised layers of periosteal new bone formation.</p> <p>Enthesophyte formation left patella, deltoid and pectoralis major and lateral epicondyle right and left humerus, achilles tendon insertion left and right calcanei, linea aspera and greater trochanters left and right femora, iliac crests and ischial tuberosities.</p>
1543	<p>Caries mandibular left second incisor, maxillary right first molar (2/22).</p> <p>Externally draining periapical abscess left maxillary canine.</p> <p>Ante-mortem tooth loss left and right mandibular first to third molars, right maxillary first and second premolars and left maxillary first premolar to second molar (12/32).</p> <p>Rotation of right mandibular second premolar to mesial.</p> <p>Double facets on left calcaneus.</p> <p>Eburnation (OA) of the cervical vertebrae.</p> <p>Osteophyte lipping of the medial clavicles with severe degenerative pitting left and right and acromial facets.</p> <p>Rotator cuff disease of the left and right shoulders.</p> <p>Thinned and translucent scapula blades.</p> <p>Multiple severe compression and wedge fractures of the spine: thoracic T10 wedge fracture to anterior centrum and fracture line superior vertebral body, T11 superior fracture line in centrum and complete body compression, T12 superior fracture line and compression of the whole centrum, L3 fracture line inferior body and anterior wedge to body, L5 fracture line superior centrum and compression of central body and wedge to anterior.</p> <p>Enthesophytes Achilles tendon insertion of the left calcaneus.</p>
2008	<p>Bilateral scapula notch in superior border.</p> <p>Caries right mandibular canine and maxillary left first molar (2/4).</p> <p>Rotation left maxillary second molar.</p> <p>Ante-mortem tooth loss left mandibular first incisor, canine, second premolar to third molar, right mandibular first incisor, first molar, right maxillary first premolar to third molar, and left maxillary first incisor to first premolar and first and third molar (22/32).</p> <p>Mild osteophyte formation of the distal anterior left and right femora, acromial joints of left and right</p>

	<p>scapulae and proximal and distal right ulna.</p> <p>Enlarged left nasal concha.</p> <p>Eburnation (OA) cervical vertebrae apophyseal facets.</p> <p>Healing, striated, woven and lamellar non-specific, periosteal new bone formation on the medial and lateral aspects of the proximal and middle left and right tibiae</p> <p>Enthesophytes left and right greater trochanters, deltoid and lateral epicondyle left and right humeri,</p> <p>Fusion manubrium and xiphoid.</p>
2013	<p>Incomplete cleft spinous process of cervical vertebra C2 – cleft evident on posterior aspect of spinous process only.</p> <p>Periapical abscesses external left mandibular first incisor and remodelling periosteal new bone formation (secondary infection) and external drains at the left and right maxillary first and second incisors (5/32).</p> <p>Ante-mortem tooth loss in the left mandibular second and third molars and right third molar and right maxillary canine, first and second premolars, first and second molars and all of the left maxilla except for the left canine and left third molar (14/30).</p> <p>Two left ribs display marked expansion of the cortex in addition to periosteal healed, lamellar new bone formation throughout the shafts. Severe periosteal new bone formation and likely osteitis causing significant bone expansion of the left ulna and radius throughout the proximal and middle shafts, healed, lamellar formation, the proximal lateral and anterior left humerus and middle and distal left femur also affected periosteal new bone formation.</p> <p>Non-specific periosteal new bone formation throughout the left fibula shaft.</p> <p>Severe degenerative porosity of the bilateral medial and acromial clavicular facets. Marked degenerative osteophyte formation over the glenoid fossae of bilateral scapulae.</p> <p>Pathological fusion of central aspects of thoracic vertebrae from thoracic T6 to lumbar L2 and fusion of one left rib to costo-vertebral facet. Fusion also occurs through lamina, apophyseal facets and posterior ligaments to spinous process tips. Possible DISH but involvement of joints is marked, possible bone former.</p> <p>Pathological fusion of the right sacro-iliac joint. Enthesophytes bilateral iliac crests and ischial tuberosities, Achilles tendon insertions of bilateral calcanei, bilateral patellae, distal bilateral fibulae, bilateral anterior tuberosities of the tibiae and tibio-fibulae joints, and the olecranon process of the right ulna, tuberosity of the right radius, greater trochanter of bilateral femur.</p> <p>Osteophyte formation of the distal right femur.</p> <p>Left and right rotator cuff disease.</p> <p>Fusion of the first right sternal rib end to the manubrium.</p> <p>Fusion of manubrium, sternum and xiphoid.</p> <p>Ossification of sternal rib cartilage.</p> <p>Ossification of thyroid and cricoid cartilage.</p>
2108	<p>Slight sternal flaring of the ribs supero-inferiorly and anteriorly, slight posterior flaring of the distal left and right tibiae, slight anterior bending of the left and right femora and slight porosity adjacent to the growth plates. Likely indications of an active vitamin D deficiency rickets.</p>
2110	<p>Small patches of porous woven periosteal new bone formation over the ectocranial frontal and parietals, possible non-specific infection.</p>
2116	<p>Porous woven, periosteal new bone formation over the proximal anterior left ulna and radius, and medial right and left tibiae. Possible non-specific infection. Differential diagnosis would include vitamin C deficiency but no clearly pathological cranial changes: increased porosity around the medial aspect of the left and right mandible between coronoid and condyle but no changes in maxilla, orbits, sphenoid or other cranial bones.</p>
2121	<p>Edentulous mandible and maxilla (32/32).</p> <p>Intervertebral disk disease and osteophyte formation through the cervical vertebrae, eburnation (OA) through the lumbar vertebrae. Degenerative fusion of thoracic T4-T7 through the laminae. Remainder of the spine is in extremely poor condition, very light and bone that remains is extremely</p>

	<p>porous or pitted.</p> <p>Extremely light long bones, scapulae blades are translucent and indicate cortical thinning.</p> <p>Mild marginal lipping of the left and right glenoid fossae.</p> <p>Rotator cuff disease of the left and right shoulders.</p> <p>Marked medial bending of the proximal left and right tibiae and anterior bending of the left and right femora indicating residual vitamin D deficiency rickets.</p> <p>The right lateral tibia displays a raised layer of healed, lamellar remodelling, striated, periosteal new bone formation not related to mechanical filling of the curvature of the shaft – non-specific infection.</p> <p>Un-healed intertrochanteric fracture of the right femur with remodelling, porous woven and lamellar bone formation at margins of fracture and internally but non-union at the time of death – possibly due to an underlying age-related or post-menopausal osteoporosis.</p>
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APPENDIX D. Grave Monument and Coffin Plate Inscriptions.

1 Grave Monument Inscriptions.

GRAVE 1

CODE 100-LEDGER/SLAB. PINK BLACK MOTTLE GRANITE.
219cm <E-W> X 66cm X 15cm

IN BELOVED MEMORY OF
EDWARD JENNER JERRAM
BORN 5TH JUNE 1810
DIED 25TH MAY 1885

"IN THY LIGHT SHALL WE SEE LIGHT"

ALSO HIS CHILDREN
EDWARD JENNER, BORN 23 NOVEMBER 1861
DIED IN KENSINGTON 12 ,DECEMBER 1874

CHARLES LAWRENCE , BORN 2 SEPTEMBER 1868,
DIED AT THE CAPE OF GOOD HOPE, 13 JANUARY 1869

AND OF HIS WIFE

PRISCILLA JERRAM
BORN 25TH JULY 1828.
DIED 27TH MARCH 1909.

ALSO OF THEIR GRANDSON

HARRY ESCOMBE RAVENHILL JERRAM,
AGED 17 YEARS. MIDSHIPMAN R.N. HMS HAWKE
TORPEDOED IN THE NORTH SEA, OCT. 15.1914.
SECOND SON OF THE REV. ARNOLD E JERRAM

GRAVE 2

LIMESTONE WALL BOX WITH 3CM SLATE LID

45cm HEIGHT. 43cm N-S X 41cm

in gothic script a simple

TO JANE

GRAVE 3

PINK GRANITE (BLACK MOTTLE) ON LIMESTONE SLAB/LEDGER. LETTERS ARE WHITE PASTE?
INFILLING CARVED

NORTH-FACING SIDE

IN LOVING MEMORY OF
HENRY SHILLING.
BORN AUGUST 27 1818. DIED JUNE 4 1902

AGED 83
"AT REST"

SOUTH-FACING

SACRED
TO THE MEMORY OF
ANNE WIFE OF HENRY SHILLING,
OF THIS PARISH,

DIED APRIL 30 1866, AGED 48 YEARS.

GRAVE 4

WHITE MARBLE AND LIMESTONE CROSS WITH EXTENSIVE IVY DECORATION ALL OVER CROSS.
APPLIED LEAD INSCRIPTION
270mm, 700mm width, 300mm thick

JEANNIE HUMPHREY
BELOVED WIFE OF
FRANK WILLIAMS JONES
DIED NOVEMBER 16TH 1888
ALSO OF
FRANK WILLIAMS JONES
HUSBAND OF THE ABOVE
DIED JANUARY 1914 AT NEW HARTFORD. CONN. USA.

GRAVE 5

(next to gabled cross). A limestone 'coffin' shaped *500 body stone lid on coffin shaped grave.
The west end has been broken and moved. Thick dark grey slate cap.
The east end has a small headstone (possibly re-used and re-carved) with

WBH

1854
TLH
1860
MH
1877

GRAVE 6

RAISED GABLED –CROSS STYLE<SEE 0550> (ON RAISED KERB/GRAVE). ALL INSCRIPTION (ON NORTH SIDE) TOTALLY WEATHERED

GRAVE 7

HEADSTONE -4100 ROUNDTOP.

(TILTING BACK WESTWARD)

MUCH SURFACE DAMAGE TO WEST SIDE.

In
[MEMO]RY? OF
.....SON OF
..... DAVIES
..... 1865.

GRAVE 8

LIMESTONE BASE FOR A THREE-BASED CROSS NOW MISSING.

IN TENDER MEMORY OF
WINIFRED HENRIETTA
DEARLY BELOVED CHILD OF
JAMES AND BEATRICE SHEARS
BORN JULY 3RD 18[.]....
DIED JUNE 26TH 1894
OF SUCH IS THE KINGDOM OF HEAVEN

GRAVE 9

SMALL PLAIN CROSS –NO INSCRIPTIONS.

GRAVE 10

HALF COVERED LEDGER SLAB? AT A NE-SW ORIENTATION!

HIGHLY WEATHERED. NO VISIBLE INSCRIPTIONS. SUBTLE CHAMFER SURROUND

GRAVE 11

East –facing elevation

GERTRUDE KATE
BELOVED DAUGHTER OF
CHARLES NICHOLSON AND FANNY LAILEY
DIED SEPT. 24th 1960
ALSO
DOROTHY HELENA LAILEY

SOUTH –FACING

IN SACRED MEMORY
-OF-
CHARLES NICHOLSON LAILEY
WHO DIED OCT 11TH 1930
AGED 76 YEARS
“OUR BELOVED FATHER”

NORTH-FACING

IN SACRED MEMORY
-OF-
FANNY
LOVING WIFE OF G. NICHOLSON LAILEY
WHO DIED
SEPT. 16TH 1920
AGED 69 YEARS
“THE DEAREST OF MOTHERS”

WEST- FACING ELEVATION

IN LOVING MEMORY
-OF-
FANNY
ELDEST DAUGHTER OF
CHARLES NICHOLSON AND FANNY LAILEY
BORN APRIL 4TH 1881. DIED JANUARY 6TH 1891
ALSO OF
CHARLES NICHOLSON
ONLY SON OF THE ABOVE
BORN MAY 27TH 1885. DIED JUNE 2ND 1885
INTERED IN ST GEORGES HANOVER SQUARE CEMETERY

GRAVE 12

lettering is applied (stuck-on) darkened lead

NORTH-FACING

TO THE MEMORY
OF
EUPHEMIA, BELOVED WIFE OF
GEORGE NOTTIDGE THOMAS,
DIED OCT 26TH 1932.

SOUTH-FACING

ALSO

AGNES THOMAS
MOTHER OF GEORGE NOTTIDGE THOMAS
DIED 15TH APRIL 1907 AGED 90 YEARS

EAST FACING-<THE MAIN FACE>

IN
LOVING MEMORY
OF

GEORGE NOTTIDGE THOMAS
BORN 4TH JUNE 1846
DIED 22ND DECEMBER 1897 AGED 50 YEARS
"THY WILL BE DONE"

GRAVE 13

GOTHIC CROSS ON A THREE TIER BASE
1.69m, 70cm width, 70mm thick.

CRVX AVE SPES INCISED ACROSS ARMS OF CROSS
VNKA INCISED AT MIDDLE OF CROSS

INDECIPHERABLE FAINT TRACES OF APPLIED LETTERING ON BASE – UNREADABLE

IS SAME STYLE AS 14(above). INSCRIPTION UNRECORDED.

GRAVE 14

LIMESTONE GOTHIC CROSS ON THREE TIER BASE

DETAILS ON THE CROSS ITSELF ARE CARVED RELIEF
TEXT ON PEDESTAL INCISED (CARVED) SIMPLE GOTHIC STYLE

[...O

CRVX... ... AVE... ...SPES

.....VNICA]

HERE RESTS THE BODY OF
HENRY FRANCIS SHEBRARE
WHO DEPARTED THIS LIFE
JUNE 7TH 1897 AORO 68

ALSO OF
LILU LUCY ROBERTA SHEBBRARE
HIS WIFWE AND DAUGHTER OF

THE [RTH] ROBERT [COPR WOLTE]
WHO DEPARTED THIS LIFE JAN 21 1927 AORO 89
BLESSED ARE THE DEAD WHICH [DIR] IN THE LORD

GRAVE 15

9410 PEDESTAL TOMB. LIMESTONE. APPLIED LEAD CAPITAL TEXT

EAST-FACING

TOP PEDESTAL:

IN
LOVING MEMORY
OF

MIDDLE PEDESTAL:
ALFRED BROADHURST- HILL.
DIED FEBRUARY 3RD 1895
IN HIS 61ST YEAR.

AND OF
KATE SUSAN, HIS WIFE
ON WEST- FACING SIDE OF MIDDLE

CALL ME KNOWMORE I CANNOT COME
I'M GONE TO BE AT REST, AT HOME

BASE PLINTH:
BORN MAY 24TH 1844~ DIED OCTOBER 19TH 1937
ALSO OF THEIR DAUGHTER SYBIL,
WHO DIED SEPT 18TH 1936

GRAVE 16

9410 PEDESTAL WITH A 2100 CROSS BROKEN OFF ON FLOOR
CROSS IS WHITE MARBLE. BASE PLINTH/PEDESTAL LIMESTONE

EAST-FACING

TOP:

IN
LOVING MEMORY
OF

MIDDLE:

FRANCIS ADAMS
BORN APRIL 21ST 1821
INTERED INTO REST
JANY 6TH 1893

WEST`-FACING (BACK OF)

TOP:

ALSO OF
MIDDLE:
BEATRICE MAY ADAMS
THEIR DAUGHTER

GRAVE 17

EAST-FACING CROSS ON 3 BASE PLINTHS

lhs

IN LOVING MEMORY
OF
CHARLES EDWIN CHURCHILL
BORN SEPTEMBER 16TH 1837

GRAVE 18

CELTIC CROSS STYLE. LETTERS IN APPLIED LEAD

EAST-FACING

WILLIAM WHITFIELD ESQUIRE
BORN
MARCH 24TH 1860.

NORTH FACING

TO MY DARLINGS
MEMORY

GRAVE 19

IN MEMORY OF
CHARLES BURNEY
1816-1907
VICAR OF THIS PARISH 1870-1905
FIRST ARCHDEACON OF KINGSTON 1879
AND OF HIS WIFE
MARY ANN BURNEY
1825-1915
AND OF THEIR DAUGHTERS
ANNIE WARNER BURNEY
1842-1912
ELIZA MARY BURNEY
1847-1917

GRAVE 20

3 PEDASTAL/PLINTH STACK - BROKEN OFF CROSS-PRESUME 2130. LATIN CROSS WITH 3 STEPPED BASE

TOP- IN
TENDER MEMORY
OF

MIDDLE WINIFRED HENRIETTA

BASE "OF SUCH IS THE KINGDOM OF HEAVEN"

2. Coffin Plate Inscriptions

Appendix D Table 1. Table of Coffin Composition, Breast Plate Inscriptions, Breast Plate and Grip Style

Context	Description	Age	Date	Coffin	Coffin Plate Inscription	Breast Plate Composition	Grip Style	Grip Composition	Lid Motifs
1006	Wooden coffin containing 1005. Upper burial within brick vault 1001	Adult	19th Century	Wood	Elizabeth Richmond aged 100 years	Tin with thin gold veneer	1	8 copper side grips and 2 iron corroded head/foot handles	
1007	Lead coffin for SK 1008, below coffin 1006 in brick vault 1001	Adult	19th Century	Lead	corroded plate, no inscription visible	tin riveted onto wooden panel	6	4 badly corroded iron grips	
1009	Basal Lead coffin in brick vault 1001, below 1007 and 1006. Contained 1010	Adult	19th Century	Lead	corroded plate, no inscription visible	lead	8	iron grips one with tin plate residue	
1014	Wooden coffin containing 1013, within brick vault 1012	Juvenile	?	Wood	corroded plate, no inscription visible	lead	2	brass grips	degraded diamond foot lid motif
1020	Lead coffin for SK 1021, below stones 1000 in upper chamber of brick vault 1002	Adult	19th Century	Lead	Sarah Henrietta Mason	Degraded gilded tin plaque on wood mount	n/a	n/a	
1023	Lead coffin in vault 1002, below 1022 and 1020	Adult	19th Century	Lead	Charles Mason died 1876	tin	3	brass grips	celtic cross head star/pentangle foot

1025	Lead coffin in vault 1003.	Adult	19th Century	Lead	Mary Marshall died May 1875 Aged 70 years	lead	11	lead grips?	tin/copper urn motif, circle and straight line vertical through at foot
1028	Outer wood and inner ceramic casket within brick vault extension 1027, containing SK 1549	Adult	20th Century	Casket	Stanley Pattison Born 15th Oct 1861 Died 3rd Jan 1920	Brass	n/a	n/a	n/a
1029	Upper Outer Wood and inner lead coffin in vault 1004	Adult	19th Century	Lead	Elizabeth Pattison Died 23rd Nov 1907 72 years	tin	1	brass grips	n/a
1031	Lower outer wood and inner lead coffin in vault 1004	Adult	19th Century	Lead	In loving memory of Henry John Patterson Interred into Rest May 2nd 1888	tin	1	brass grips	2 brass crosses one head and foot
1039	Lead coffin with outer wood coffin in brick vault 1040	Juvenile	19th Century	Lead	n/a	tin	1	brass grips	iron wreath cross; white panelling painted coffin sides
1043	Lead coffin with outer wood coffin in brick vault 1042	Adult	19th Century	Lead	George Croucher Died 28th Feb 1883 aged 89 years	lead plate thin with black enamelled front	10	iron grips	double iron stud row in three panels, tin flaming iron head and tin circle and triangle at foot

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1044	Lead coffin with outer wood coffin in brick vault 1042 below 1046	Adult	19th Century	Lead	Mrs Mary Croucher Died 17th June 1878 Aged 78 years	lead	4	thin cast iron with black enamel coating	Cross-hatched design coffin lid and sides. Possible lead urn head and tin circle and triangle at foot
1048	Lead coffin with decayed outer wood coffin in brick vault 1050	Adult	19th Century	Lead	Isabella Heston Pogson Died 2nd Sept 1871 Aged 42 years	lead with enamel plate tin	13	iron grips	doubled rowed studs, tin celtic cross at foot, head plate destroyed
1051	Lead coffin with decayed outer wood coffin in brick vault 1053	Adult	20th Century	Lead	unobs	Possible thin lead with enamel coating	10	possible cast iron with black enamel coating	inner decorate shaped foot motif underneath circular wire wreath; decayed head possible lowering urn motif
1061	Wood coffin in 1059	Adult	19th Century	Wood	Robert Wilson Harris Born 29th Feb 1878 died 7th March 1913 Rest in Peace	tin	5	brass grips	elaborate brass coffin motifs at head and foot

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1064	Lead coffin with decayed outer wood casket, in vault 1059	Juvenile	19th Century	Lead	Bernard John Harris born 12th May 1873 died ...Feb 1881	tin plate with gold burnishing and blue painted lettering	1	brass grips	tin cross with gold burnishing
1067	Lead coffin with decayed outer wooden coffin in 1059, below 1066, to the east of 1069	Juvenile	19th Century	Lead	Francis Sheppard Harris born 20th Jan 1875 died 18th Dec 1880	tin plate with gold burnishing and blue painted lettering	1	brass grips	brass cross with two circular wire wreaths
1069	Lead coffin with decayed outer wooden coffin in 1059, to the west of 1067	Juvenile	19th Century	Lead	Ernest Gurney Harris born 21st September 18.. died 7th Feb 1881	tin plate with gold burnishing and blue painted lettering	n/a	n/a	copper cross at head and five circular wire wreaths
1072	Lead coffin with decayed outer wood coffin at base of vault 1059	Adult	19th Century	Lead	Elizabeth Gurney Harris Born of 18th October 1848 died on St Andrew's Day 1877	Tin plate with blue and red painted lettering, small rectangular plate and first letter of each word painted in red, numbers and remaining text in blue	6	brass grips	small rectangular tin plate at foot end
1076	Wood coffin in 1075	Adult	20th Century	Wood	Mary Sophia Wallich Died 27th Jan 1903	tin plate oxidised remains	1	brass grips	n/a

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1079	Heavily decayed wood coffin in 1075, below 1078	Adult	19th Century	Wood	Sophia Wallich born 13th Feb 1797 died 20th Sept 1876	tin	n/a	ferrous and brass grips	
1081	Lead coffin with decayed outer wooden coffin in vault 1083	Adult	19th Century	Lead	William Wyatt Died 19th Feb 1876 Aged 65 years	tin	6	brass grips STAMPED Dotidge Bros No. 2105 individual batch number	wire wreath in cross ober chest and small tapered tin plaque over foot
1084	Lead coffin with decayed outer wood coffin in 1086	Adult	19th Century	Lead	Anthony Kripe Morton Died 12th Nov 1878 aged 89 years	lead	6	iron/ferrous handle	n/a
1088	Lead coffin with heavily decayed outer wooden coffin in vault 1086, below 1087	Adult	19th Century	Lead	Sophia Morton Died 14th Dec 1877 aged 83 years	thin polished brass plaque with applied black lettering	6	iron	n/a
1091	Lead coffin with severely decayed outer wooden coffin in vault 1086, below 1090	Adult	19th Century	Lead	Cathering Manning Died 24th November 1874 Aged 83 years	lead plate with fabric backing	n/a	n/a	n/a
1096	Heavily decayed wooden coffin in vault 1097	Adult	19th Century	Wood	Ann Day died 9th June 1892 aged 62 years	thin brass	6	style 1	Two brass sunburst roundels decorations one head and one foot
1099	Wood coffin, heavily decayed in vault 1058	Adult	20th Century	Wood	Henry Gamble Hobson Died 26th April 1923 aged 78 years	tin	1	brass	small cross at head and foot likely tin
1109	Zinc coffin with decayed wood lining in 1102	Adult	20th Century	Zinc	Winifred Maude Hobson born 29th Sept 1870 died 23rd Dec 1916	lead plate in coffin shield design	7	lead grips?	n/a

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1114	Wood coffin for infant in 1113	Juvenile	?	Wood	corroded plate, inscription not observable	tin	n/a	n/a	Raised co-joined dupolstered studs design single row
1116	Wood coffin at base of 1102	Adult	19th Century	Wood	Mary Hobson Died 2nd March 1888 aged 43 years	tin	8	brass	Brass urn with circular flowers at foot
1120	Lead coffin at the base of vault 1053	Adult	19th Century	Lead	James Love Jennings died 31st Aug 1888 in his 70th year	lead	1	brass	Brass cross fitting at head and base; "Clive" inscribed on reverse of grips STAMPED
1126	Lead coffin within decayed outer wood coffin in vault 1128	Adult	19th Century	Lead	Mary Lav..[inia] Perrott died 14th Oct 1879 aged 69 years	tin	1	brass	round wire wreaths on head and one foot
1129	Double wood coffin in vault 1131	Adult	19th Century	Wood	Ann Podmore Shadboit born 23rd Jan 1820 died 31st Jan 1898	tin plate with gold paint	8	copper alloy with gilding	Elaborate floral designs of copper alloy lid motifs with some ivy tracing and matrese crosses on grip plates

1133	Lead coffin in 1131, below 1132 and above 1135	Adult	19th Century	Lead	Eliza Shadbolt died 24th Feb 1884 aged 45 years	tin	2	brass	Brass cross with raised circular motif possible IDC inscription? at head and cross at foot and three wreaths and foot and two at head circular iron wire
1136	Lead coffin with outer wooden coffin in vault 1131	Adult	19th Century	Lead	Charles Shadbolt died 2nd July 1876 aged 68 years	lead plate with black enamelled or painted border for approx 2cm possible white lead painted central portion of plate	1	iron	double studded three panels
1138	Wood coffin within vault 1140	Adult	20th Century	Wood	William Thompson died 15 May 1910 aged 88 years	tin	14	copper alloy	cruciform at head possible lead
1142	Wood coffin, heavily decayed in vault 1140	Adult	20th Century	Wood	Alice Thompson died 1st Sept 1905 aged 61 years	tin	1	brass STAMPED on reverse	copper alloy crosses at head and foot

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1145	Lead coffin at the base of vault 1140	Adult	19th Century	Lead	n/a	n/a	11	cast iron	cross hatching incised decoration on coffin sides
1147	Wood coffin, heavily decayed in vault 1149	Adult	20th Century	Wood	Jane Jones died 12th Jan 1923 aged 69 years	tin	1	Brass	n/a
1151	Wood coffin in vault 1149, below 1150	Adult	20th Century	Wood	Revd. Edward William Jones died 29th Dec 1901 aged 34 years	tin	1	Brass	elaborate floral designs one on head and one at foot
1154	Lead coffin in vault 1149, below 1153	Adult	19th Century	Lead	Thomas Evans Jones Died 21st May 1874 aged 68 years	lead	4	brass	n/a
1158	Wood coffin in vault 1156	Adult	19th Century	Wood	Arthur Frank Sutherland Born 11th July 1858 died 5th Nov 1889	brass	8	brass	pitch residue
1167	Wood coffin, heavily decayed within vault 1165	Adult	20th Century	Wood	William Acfield died 5th Oct 1916 in his 85th year	tin	9	brass	small tapered rectangular name plate found at the feet
1170	Wood coffin, heavily decayed in vault 1165	Adult	20th Century	Wood	.....ssy Acf... ..rest 24th Feb aged 76 years [Amelia Jessy Acfield laid to rest 24th Feb]	tin	9	brass	small tapered rectangular name plate found at the feet
1175	Lead coffin in vault 1172	Adult	19th Century	Lead	William Lawson Towart Esq died 3rd August 1873 aged 34 years	lead	12	lead grips?	n/a
1177	Lead coffin in vault 1165 below 1174	Adult	19th Century	Lead		n/a	n/a	n/a	coffin full of liquid

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1180	Lead coffin with decayed outer wood coffin, in vault 1179	Adult	19th Century	Lead	Maria Oldfield born 14th July 1804 died 28th Apr 1888	lead	1	brass	elaborate floral/ornamental brass cross at foot
1184	Lead coffin with decayed outer wood coffin in vault 1182, below 1183	Adult	19th Century	Lead	Julia Susanna Galley Died 23rd Feb 1888 aged 72 years	tin	1	brass	ornamental flower crosses at the head and feet
1187	Lead coffin in base of vault 1182	Adult	19th Century	Lead	Charles Benet Galley born 19th April 1820 died 20th May 1873 aged 53 years	tin	6	brass	white lead paint over lid in border
1192	Wood coffin, poorly preserved in vault 1190	Adult	20th Century	Wood	Margaret Carmichael Burney Born 22nd June 1850 entered into rest 17th Jany (sic) 1914	copper alloy	9	copper alloy	two copper alloy crosses one at head and one at foot
1194	Wood coffin, poorly preserved in vault 1190	Adult	20th Century	Wood	Eliza Mary Burney	tin	9	copper	n/a
1199	Wood coffin in vault 1190	Adult	20th Century	Wood	Annie Warner Burney Born 23rd March 1842 died 9th Sept 1912	tin	8	copper	tin crosses at the head and feet
1201	Wood coffin, poorly preserved in vault 1190	Adult	20th Century	Wood	Mary Ann Burney Born 9th Sept 1825 died 11th Dec 1915	tin plate with black and red painted letters with first letter of each word red	2	brass	brass cross at head and small rectangular plate over legs
1204	Lead coffin, crushed in 1190, below 1203	Adult	20th Century	Lead	Charles Burney Born 9th June 1815 died 1st Jan 1907	tin	3	copper alloy	Large cross with circle at legs/feet
1206	Lead coffin in vault 1190	Adult	19th Century	Lead	Elizabeth Carmichael Born 3rd Feby [sic] 1792 departed this life Oct 11th 1874	tin	6	brass	n/a

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1210	Wood coffin, poorly preserved in vault 1212	Adult	19th Century	Wood	Margaret Edith Dixon died 27th Jan 1912 aged 64 years	tin plate red painted maltese cross at top of plate and ref paint for first letter of every word and date	9	brass	stepped coffin plate at foot of coffin; a small cross on the cloth was found in the coffin at the hands 90mm by 50mm
1214	Lead coffin, trapezoid in shape, in vault 1212	Adult	19th Century	Lead	Eliza Dixon died 13th Nov 1897 aged 82 years	tin plate with gold paint and lettering in black with first letter red	Styles 2 for head and foot and style for 8 sides	brass	stepped coffin plate at the foot of the coffin; tapered coffin
1217	Lead coffin in vault 1212	Adult	19th Century	Lead	Walter Edward Dixon born July 28th 1848 died Nov 20th 1872 aged twenty four	tin with white paint around edge and back and red lettering	n/a	n/a	lead cross at headwith a stepped base
1221	Wood coffin, poorly preserved in vault 1219	Adult	20th Century	Wood	Charles Marshall died 21st March 1914 aged 82 years	brass	1	brass	crosses at head and foot of coffin
1224	Wood coffin, poorly preserved, in vault 1219	Adult	19th Century	Wood	Georgina Caroline Eliza Marshall died 29th April 1880 aged 42 years	brass	2	brass	crosses at head and foot of coffin
1233	Lead coffin in vault 1234	Adult	19th Century	Lead	George Crabbe died 7th Sept 1891 aged 79 years	brass	1	brass	floral crosses on the head and foot of the cross together with wire wreaths

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1237	Lead coffin with decayed outer wooden coffin in vault 1234	Adult	19th Century	Lead	Ellen Crabbe died 19th January 1878	brass	6	brass	very large lead cross over the head and small rectangular plate at feet
1240	Lead coffin, distorted, in vault 1234	Adult	19th Century	Lead	Elisabeth Byles died 1st August 1877 [Elise]	tin	15	brass	large brass cross at head
1246	Lead coffin with decayed outer wooden coffin, in vault 1248	Juvenile	19th Century	Lead	William Whistler Morgan died 28th Oct 1873 aged 12 years	tin	9	brass	two crucifixes tin? one at head and foot and one wire wreath, incised decoration forming cross hatching sides
1249	Lead coffin in vault 1251	Adult	19th Century	Lead	William Andrew Moore Barnard born 11 May 1881 died 4th June 1883	tin	2	brass	two floral decoration from head
1252	Wood coffin, poorly preserved, in vault 1254	Adult	20th Century	Wood	Ann Perrin born 31st Jan 1824 died 20th May 1921	tin	1	brass	n/a
1257	Wood coffin, poorly preserved in vault 1104	Adult	?	Wood	n/a	n/a	8 style sides and style 12 ends	brass	n/a
1259	Lead coffin with decayed outer wooden coffin in vault 1254	Adult	19th Century	Lead	Jane Perrin died 31st Aug 1883 aged 33 years	brass	7	brass	elaborate grip plates

1261	Lead coffin with poorly preserved outer wood coffin in vault 1263	Adult	19th Century	Lead	Louisa Caroline Walls born 12th April 1804 died 12th Oct 1883	lead	15	brass	very elaborate floral crosses at head and foot
1266	Zinc coffin with decayed outer wooden coffin, in vault 1265	Adult	19th Century	Zinc	Samuel William Reeves died 23rd May 1885 aged 40 years	tin plate with gold paint varnish	8	copper	elaborate copper round plaque with roses and floral design at head and foot of coffin
1268	Wood coffin in vault 1270	Juvenile	19th Century	Wood	corroded plate, no inscription visible	lead	16	silver?	plant motifs for upper and lower
1271	Wood coffin, poorly preserved, in vault 1273	Adult	20th Century	Wood	Thomas Collin born 11th Dec 1817 died 2nd Oct 1904	tin plate with gold paint finish	8	brass	elaborate floral motifs head and foot
1275	Wood coffin in the base of vault 1273	Adult	19th Century	Wood	Helen Julia Collin died 17th March 1888 aged 63 years	tin	1	brass	elaborate floral designs
1277	Wood coffin, poorly preserved in vault 1279	Adult	19th Century	Wood	Charles Henry Spitta Born 31st Oct 1843 died 30th May 1888	tin plate with gold paint wash	1	brass	n/a
1280	Wood coffin, poorly preserved, within vault 1282	Adult	20th Century	Wood	Dorothy Kirkland Glazebrook ..[feil] asleep 1st April 1923 aged 78 years	tin	9	brass	floral urn and elaborate brass detail at feet
1288	Wood coffin in vault 1286	Adult	19th Century	Wood	Eliza Amelia Thornton died 11th Feb 1889 aged 82 years	brass	8	brass	brass start and cruciform brass for head and foot

1290	Wooden coffin in 1282	Adult	19th Century	Wood	Thomas Glazebrooke fell asleep 21st Feb 1890 Aged 85 years Twanbrooke	brass	1	1	brass	two tin ornamental stars one sunburst roundel at top and bottom of coffin
1293	Wood coffin, poorly preserved within vault 1282	Adult	19th Century	Wood	Catherine Glazebrooke fell asleep on the 20th March 1889 aged 82 years	tin	1	1	brass	two tin ornamental sunburst roundels one at head and one at foot
1296	Lead coffin within brick vault 1286	Adult	19th Century	Lead	Sophia Cecilia Thorton died 7th April 1885 aged 77 years	tin with gold paint	8		brass	tin ornamental start and cross at head and foot
1301	Lead coffin in vault 1299	Adult	20th Century	Lead	Elizabeth Batho died 28th Sept 1910 aged 85 years	tin	1		brass	white lead paint over the coffin lid and sides ornate floral brass fittings
1304	Wood coffin, poorly preserved in vault 1299	Adult	19th Century	Wood	William Fothergill Batho Born 11th 1828 died May 18th 1886	brass plate	17		brass	felt covering lead coffin with VERY ornate brass handles
1308	Lead Coffin in vault 1299	Juvenile	19th Century	Lead	Arnold William Cunningham Dornword Strettell born 1st March 1884 died 4th Jan 1888	tin	18		brass	two ornamental crosses at head and foot

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1310	Lead Coffin in vault 1299	Adult	19th Century	Lead	Harriette Elizabeth Strettell born 17th March 1855 died 23rd March 1884	tin	2	brass	n/a
1314	Lead Coffin in vault 1313	Adult	20th Century	Lead	Elizabeth Bryant at rest 19th October 1926	lead	7 at sides and 9 at head	brass	n/a
1318	Wood coffin, completely dissolved within earth grave 1316	Adult	?	Wood	n/a	n/a	n/a	n/a	n/a
1322	Wood coffin in vault 1320	Neonate	19th Century	Wood	Mabel Frances Belchier died 29th April 1889 aged 7 years	tin	18	brass	tin plate gold painted star at head and foot
1325	Wood coffin, poorly preserved in vault 1105	Adult	19th Century	Wood	Mary Bennett died 10th Dec 1893 aged 51 years	?	1	brass	sunburst roundel copper with metal incised flattened wreath styled decoration corper
1329	Wood coffin in vault 1331	Adult	19th Century	Wood	Colonel Arthur Booth Wilbraham died 21st May 1897 aged 54 years	?	2	brass	iron wreaths and crosses at top and bottom of coffin
1334	Wood coffin in vault 1336	Adult	19th Century	Wood	Ann McNish died 23rd April 1896 aged 78 years	tin	1	brass	floral lid motifs
1339	Lead coffin in vault 1336, below 1337	Adult	19th Century	Lead	Alfred Holder MacNish died 26th May 1885 aged 59 years	tin	2	brass	star on upper lid and cross on feet
1341	Lead coffin in vault 1313	Adult	19th Century	Lead	Arthur Charles Bryant born 11th June 1841 died 30th May 1884	tin with gold paint wash	n/a	n/a	n/a

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1346	Lead coffin with decayed outer wooden coffin in vault 1345	Adult	19th Century	Lead	Eliza Bouch born 7th Sept 1848 died 4th Feb 1897	?	2	brass	crosses at head and foot of coffin
1349	Wood coffin, poorly preserved in vault 1351	Adult	19th Century	Wood	Harriet Morgan born 13th May 1829 died 21st Oct 1896	?	8	brass	upper and lower cruciforms
1353	Wood coffin, poorly preserved, in vault 1348	Adult	20th Century	Wood	corroded plate, no inscription visible	?	6	brass	n/a
1355	Lead coffin with outer wood coffin in vault 1348	Adult	19th Century	Lead	Catherine Harriet Boyne Smith died 16th Jan 1885 aged 78 years	tin with god paint wash	1	brass	coffin painted white with border sunburst roundel at top and circular motif at bottom
1357	Wood coffin, poorly preserved, in vault 1359	Adult	19th Century	Wood	corroded plate, no inscription visible	?	1	brass	elaborate floral cross designs at head and foot
1362	Wood coffin, poorly preserved, in vault 1359	Adult	19th Century	Wood	Jane Mary Margaret Godfrey Born 6th June 1826 died 31st March 1896	?	8	brass	elaborate floral designs
1366	Wood coffin in vault 1368	Adult	19th Century	Wood	Francis Shaw born 19th Aug 1805 died 21st Nov 1894	tin plate with gold plate wash	8	brass	bronze floral motifs
1370	Lead coffin, crushed, in vault 1372	Adult	20th Century	Lead	n/a	n/a	9	brass	n/a
1374	Wood coffin within vault 1368	Adult	19th Century	Wood	Lousia Ann wife of Francis Shaw born 19th Dec 1803 died 6th April 1889	tin	8	brass	brass lid motifs very floral
1376	Wood coffin in vault 1378	Adult	20th Century	Wood	Alice Mary Aldersey deid 28th June 1903 aged 80 years	tin	3	brass	bronze floral motifs

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1379	Wood coffin, almost completely dissolved in vault 1381	Adult	20th Century	Wood	Ann Marie Strapp deid 8th July 1923	tin	1	brass	n/a
1384	Lead coffin with outer wood coffin in vault 1378	Adult	19th Century	Lead	William Hugh Aldersey Born 11th June 1827 deid 7th Sept 1885 aged 58 years	tin	1	brass	n/a
1386	Wood coffin, poorly preserved, in 1381	Adult	20th Century	Wood	John Strapp born 30th Dec 1821 did 5th Oct 1900	tin	3	brass	elaborate floral designs
1392	Wood coffin, poorly preserved, within vault 1396	Adult	19th Century	Wood	Charles Holmes born 21st Sept 1856 died 22nd June 1894	plate	8	brass	ornate copper floral designs
1394	Casket in vault 1396	Adult	19th Century	Casket	n/a	n/a	n/a	n/a	n/a
1397	Wood coffin, poorly preserved, within vault 1381	Adult	19th Century	Wood	Maria Strapp born 2nd Feb 1819 died 26th Aug 1894	tin	8	brass	ornate floral design
1401	Lead coffin with outer wooden coffin in vault 1396	Adult	19th Century	Lead	Henry Holmes born 27th June 1864 died 6th Jan 1886	brass	1	brass	n/a
1406	Lead coffin with outer and inner wood lining, within vault 1407	Adult	19th Century	Lead	Alfred Charles Tathan born 23rd Oct 1818 died 8th July 1889	brass	18	brass	Two brass crosses one upper and one lower
1408	Lead coffin with outer and inner wood lining, within vault 1410	Adult	19th Century	Lead	Frederick Dodson born 10th June 1816 died 21st Jan 1888	lead	1	brass	n/a
1412	Lead coffin with outer and inner wood lining, within vault 1410, below 1408	Adult	19th Century	Lead	L.E.D died 6th Jan 1886 aged 64 years	Brass	1	brass	n/a

1416	Lead coffin with outer wooden coffin in vault 1415	Adult	20th Century	Lead	Louisa Adams born 9th Nov 1829 died 16th Feb 1929 RIP	lead	1	1	brass	coffin plate at feet, small wire traces of wreath possible, painted white in centre of coffin lid, possible zinc body
1419	Lead coffin in vault 1415	Adult	20th Century	Lead	Beatrice Mary Adams born 13th June 1850 died 19th June 1924	n/a	1	1	brass	n/a
1421	Lead coffin with outer wooden coffin in vault 1423	Adult	19th Century	Lead	Frances Charlotte Gardner died 23rd Jan 1886 aged 53 years	n/a	1	1	brass	metal wreath design and quarter sunburst decoration
1428	Wood coffin, heavily degraded, in vault 1427	Adult	19th Century	Wood	Adoliza Henrietta Hall died 1895	n/a	1	1	brass	elaborate floral brass designs at top and bottom
1431	Wood coffin, heavily degraded, in vault 1433	Adult	20th Century	Wood	Julia Luck 7th December 1916	n/a	1	1	brass	iron crucifix over foot of coffin over name plate
1435	Wood coffin, heavily degraded, in vault 1433	Adult	19th Century	Wood	Charles Lock Luck died 19th Feb 1890 aged 56 years	lead	1	1	brass	elaborate floral designs brass at head and foot

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1438	Wood coffin, heavily degraded, in vault 1415	Adult	19th Century	Wood	Francis Adams born 15th April 1821 entered into rest 6th Jan 1892	tin	8	brass	tin plate of two crosses large at head and smaller at foot
1441	Wood coffin, heavily degraded, in vault 1443	Adult	20th Century	Wood	Adeliza Broomhall died 2nd may 1907 aged 89 years	tin with gold paint finish	1	brass	floral designs upper and lower plates
1448	Wood coffin, heavily degraded, in vault 1450	Adult	19th Century	Wood	Annabel Jones born 10th March 1805 died 6th April 1891	tin	8	brass	circular wire wreath only
1451	Wood coffin, heavily degraded, in vault 1443	Adult	19th Century	Wood	John Broomhall died 20th Feb 1896 aged 73 years	n/a	8	brass	floral designs with holly like leaves at head and foot
1454	Lead coffin with deacyed wood lining in vault 1456	Adult	19th Century	Lead	George Frederick Vickers died 23rd April 1896 aged 27 years	n/a	1	brass	n/a
1457	Lead coffin with 2 outer wood coffins in vault 1459	Adult	19th Century	Lead	William Whitfield born 24th March 1860 died 4th oct 1890	tin	3	brass	lots of chicken wire over the coffin
1464	Lead coffin in vault 1463, below 1462	Adult	19th Century	Lead	William Weyland Kershaw M.D born 27th July 1821 died 15th January 1892	tin	1	brass	n/a
1472	Wood coffin in vault 1372	Adult	20th Century	Wood	Emma Maria Crosthwaite died 26th June 1914 aged 74 years	tin	2	brass	n/a
1476	Wood coffin, poorly preserved, in vault 1478	Adult	19th Century	Wood	Frederica Julia Mary Beer died May 23rd 1894 aged 18 years	n/a	8	brass	n/a
1479	Wood coffin in vault 1372	Adult	20th Century	Wood	Herbert Crosthwaite died 21st April 1906 aged 68 years	tin	2	brass	head and foot small tin crosses

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1482	Wood coffin, poorly preserved, in vault 1484	Adult	20th Century	Wood	Constance Russell Fullerton died 23rd Sept 1922 aged 82 years	n/a	1	brass	n/a
1485	Wood coffin, poorly preserved, in vault 1372	Adult	19th Century	Wood	.....[Sidney Crosthwaite] born 28th May 1868 died 2nd May 1889	?	4	brass	shield design of plate together with shield upper plate with urn and flower banner below urn
1488	Wood coffin, poorly preserved, in vault 1484	Adult	19th Century	Wood	Eliza Russell Fullerton born 29th Jan 1818 died 6th March 1894	?	2	brass	n/a
1490	Lead coffin in vault 1492	Adult	20th Century	Lead	Alice Isabelle Collisson died 26th Nov 1926 aged 80 years	tin red or pink	19	brass	n/a
1494	Lead coffin in vault 1496	Adult	19th Century	Lead	.....[Maria Keys] Lister.....	?	1	brass	two small crosses for head and foot
1498	Wood coffin, very poorly preserved, in vault 1492	Adult	19th Century	Wood	Maria Rosetta Whitehouse born 7th Feb? 1842 died 31st May 1892	tin plate with gold paint wash	8	brass	tin floral designs with ivy leaf design head and foot
1500	Lead coffin with wood lining in vault 1502	Adult	20th Century	Lead	Charles Albert William Limbert died 6th Nov 1928 aged 63 years	tin	5	brass	elaborate floral plates head and foot leafy design
1504	Wood coffin, poorly preserved, in vault 1502	Adult	19th Century	Wood	Mary Ellen widow of William Whitworth Limbert born 11th Oct 1835 died 22nd Jan 1893	tin	8	brass	broken pointed slightly floral design at top and small cross at bottom

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1508	Wood coffin in vault 1510	Adult	19th Century	Wood	Elizabeth Loelheim died 10th Oct 1896 aged 65 years	n/a	1	brass	very elaborate floral type crosses at head and foot
1515	Wood coffin, poorly preserved, in vault 1510	Adult	19th Century	Wood	Rudolf Loehlein died 19th Feb 1896 aged 68 years	n/a	1	brass STAMPED on back 249 - c	elaborate floral designs for top and bottom
1517	Lead coffin with poorly preserved outer wood coffin in vault 1513	Adult	19th Century	Lead	Humphrey Barker Chamberlin born at Manchester 7th Feb 1847 died at K.... 16th May 1897	tin	8	brass	floral cross designs head and foot
1522	Ceramic casket in outer wooden box, within small vault 1524	Adult	20th Century	Casket	Edward Collett died Dec 18th 1918	tin	21	n/a	n/a
1525	Wood coffin, well preserved with wood handles, in vault 1527	Adult	20th Century	Wood	corroded plate, no inscription visible	lead	9	wood	wooden coffin with wooden fitting and handles
1529	Lead coffin with poorly preserved outer wood coffin in vault 1527	Adult	19th Century	Lead	Alfred Brodhurst Hill born 15th May 1834 died 3rd Feb 1895 aged 60	tin	1	brass	n/a
1535	Lead coffin with poorly preserved outer wood coffin in vault 1534	Adult	19th Century	Lead	Elizabeth Few born 10th July 1810 at rest 3rd Jan 1898	tin with gold paint wash	1	brass	small ivy and floral designs head and foot tin
1538	Wood coffin, poorly preserved, in vault 1537	Adult	20th Century	Wood	Julia Goss died 11th Feb 1901 aged 84 years	tin	6	brass	large tin cross for head of coffin

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1542	Wood coffin, poorly preserved, in vault 1537	Adult	19th Century	Wood	Joseph Goss born 2nd Feb 1809 died 13th Feb 1892	tin plate with gold paint wash	1	brass	floral design plates for head and foot with ivy leaf designs
1546	Wood coffin, poorly preserved, in vault 1548	Adult	19th Century	Wood	Ellen Clarke Collett died 19th Jan 1892 aged 82 years	tin	1	brass	ivy leaf design head and foot motifs
1549	Cremation in casket 1028				n/a	n/a	n/a	n/a	n/a
2007	Wood coffin, poorly preserved, in vault 2002	Adult	?	Wood	corroded plate, no inscription visible CHECK INDIVIDUAL WITH DISH	lead	12	brass	two sunburst roundels
2010	Lead coffin with poorly preserved outer wood coffin in vault 2009	Adult	19th Century	Lead	Thomas Wells died 6th Oct 1884 aged 73 years	tin with black enamel wash	4	cast iron with black enamel coating	one celtic cross cruciform at head and one rounded cross at foot possible iron
2014	Wood coffin, poorly preserved, in vault 2015	Adult	19th Century	Wood	Godf.....	tin	2	brass	n/a
2017	Lead coffin with poorly preserved outer wood coffin in vault 2018	Adult	19th Century	Lead	Louisa Ann ...owes died.... March...	tin	6	brass	n/a
2020	Lead coffin with poorly preserved outer wood coffin in vault 2021	Adult	19th Century	Lead	Amelia.....	tin	n/a	n/a	n/a

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2025	Lead coffin with poorly preserved outer wood coffin in vault 2022	Adult	19th Century	Lead	Martha Langton died 6th Sept [1878].....	tin possible	6	6	brass	studded outline and panelled decoration with possible leather outer layer to coffin
2027	Wood coffin, poorly preserved, in vault 2023 above coffin 2029	Adult	19th Century	Wood	Alice Feildeu.....1899...aged 58 years	brass	1	1	brass	floral design coffin head motif
2029	Lead coffin with poorly preserved outer wood coffin in vault 2023	Adult	19th Century	Lead	corroded plate, no inscription visible	n/a	n/a	n/a	n/a	n/a
2031	Wood coffin, poorly preserved, in vault 2032	Juvenile	?	Wood	corroded plate, no inscription visible	n/a	19	?	n/a	n/a
2034	Lead coffin with poorly preserved outer wood coffin in vault 2035	Adult	19th Century	Lead	Alice Carr.....	n/a	2	2	brass	n/a
2037	Lead coffin in vault 2035	Adult	19th Century	Lead	no breast plate observable	n/a	n/a	n/a	n/a	n/a
2039	Wood coffin, well preserved, in vault 2040	Adult	20th Century	Wood	Alice Mary Shilling died 6th Jan 1927 aged 78 years	n/a	6	6	n/a	floral designs head and foot
2042	Wood coffin, poorly preserved, in vault 2040	Adult	20th Century	Wood	Henry? ...born ...1818...died 1902	n/a	6	6	brass	n/a
2045	Wood coffin, completely decayed, in vault 2043	Adult	19th Century	Wood	Fanny Ann Lawrence born 5th Feb 1832.... 16th June 1893	tin with gold paint	6	6	brass	Three point leaf in brass head lid motif small floral

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2049	Wood coffin, completely decayed, in vault 2051	Adult	19th Century	Wood	Emma Belinda Le Maitre died 18th March 1888 aged 49 years	tin	1	brass	floral designs head and foot
2053	Lead coffin with poorly preserved outer wood coffin in vault 2043	Adult	19th Century	Lead	Henry Lawrence died 2nd April 1883 aged 45 years	tin	1	brass	cruciform at head and smaller cross at foot
2055	Lead coffin with poorly preserved outer wood coffin in vault 2056	Adult	19th Century	Lead	Hannah Fieldern Mitchell died 14th April 1883 aged 78 years	possibly brass	2	brass	cross at head possibly iron
2061	Lead coffin with well preserved outer wood coffin in vault 2058	Adult	19th Century	Lead	Edward Drew died 12th April 1872 aged 89 years	tin	20	brass	celtic circular cross at head and smaller circular cross at foot, studded decoration throughout
2063	Lead coffin in vault 2059	Adult	19th Century	Lead	Robert Diggles died 16th Nov 1882 aged 89 years	brass	1	brass	cross hatched design over coffin sides
2066	Wood coffin, poorly preserved, in vault 2064	Adult	19th Century	Wood	Bridget Anne Hughes Hallet died 21st Oct 1895 aged 79 years	tin with black enamel wash	1	brass	elaborate floral crosses one at head and one at foot
2068	Lead coffin with poorly preserved outer wood coffin in vault 2064	Adult	19th Century	Lead	Henry Hughes Hallet died 2nd Feb 1878 aged 67 years	tin	1	brass	8 pointed star on lid

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2070	Lead coffin with poorly preserved outer wood coffin in vault 2064	Adult	19th Century	Lead	Reginald Hughes Hallett died 6th Dec 1869 aged 5 years	n/a	19	brass	studding holding textile to wooden coffin
2076	Wood coffin, poorly preserved, in vault 2071	Adult	20th Century	Wood	Frederick William Rowlatt died 22nd Sept 1914 aged 90 years	tin	2	brass	crosses at head and foot of coffin
2078	Lead coffin in vault 2071	Adult	19th Century	Lead	Emma Rowlatt born 31st Aug 1824 died 3rd March 1884	brass?	3	brass	hollowed outline crosses one at head and one at foot
2080	Lead coffin with poorly preserved outer wood coffin in vault 2073	Adult	19th Century	Lead	Maria Sophia Donner died 8th Sept 1882 aged 64 years	tin with black enamel wash	1	brass	n/a oak coffin
2082	Lead coffin with poorly preserved outer wood coffin in vault 2072	Adult	19th Century	Lead	Charles Frederick Hughes Hallett died 11th June 1861 aged.... years	tin	23	brass	studded three panelled design
2084	Zinc coffin with decayed wood lining in vault 2074	Adult	19th Century	Zinc	Evelyn Maud Percival born 19th Oct 1830 died 4th Oct 1885	tin	7	brass	n/a
2089	Lead coffin with poorly preserved outer wood coffin in vault 2086	Adult	19th Century	Lead	Jane daughter of Jonathan Feake Esq of Durrington House Essex and widow of Feake Sanford Esq of Surbiton born 3rd Dec 1814 died 18th Oct 1880 aged 65	?	1	brass	n/a
2091	Lead coffin with outer wood coffin in vault 2087	Adult	20th Century	Lead	Priscilla Jerram born 25th July 1828 died 27th March 1909	brass	2	brass	metal crosses at head and foot
2093	Lead coffin with poorly preserved outer wood coffin in vault 2087	Adult	19th Century	Lead	Edward Jenner Jerram born 5th June 1810 died 25th May 1885	brass	1	brass	n/a

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2095	Casket for cremation 2094	Adult	?	Casket	n/a	n/a	n/a	n/a	n
2097	Cylindrical casket for cremation 2096	Adult	?	Casket	n/a	n/a	n/a	n/a	n
2107	Wood coffin, poorly preserved, in vault 2098	Juvenile	19th Century	Wood	corroded plate, no inscription observable	tin	1	brass	n/a
2109	Wood coffin, poorly preserved, in vault 2099	Juvenile	19th Century	Wood	corroded plate, no inscription observable	tin	1	brass	n/a
2111	Wood coffin, poorly preserved, in vault 2100	Juvenile	19th Century	Wood	corroded plate, no inscription observable	tin	24	wood	n/a
2113	Wood coffin, poorly preserved, in vault 2101	Juvenile	19th Century	Wood	Violet Loxley died ...1895	tin	6	brass	crosses at head and foot of coffin
2115	Wood coffin, poorly preserved, in vault 2101, below 2113	Juvenile	19th Century	Wood	corroded plate, no inscription observable	n/a	1	brass	n/a
2117	Wood coffin, poorly preserved, in vault 2102	Juvenile	?	Wood	no breast plate observable	n/a	18	brass	n/a
2119	Wood coffin, poorly preserved, in vault 2118	Juvenile	19th Century	Wood	corroded plate, no inscription observable	n/a	1	brass	two circular wire wreaths
2122	Wood coffin, poorly preserved, in vault 2123	Adult	19th Century	Wood	Ellen Cilby died 9th March 1896 in her 81st years	tin	1	brass	floral designs at head and foot
2126	Wood coffin, poorly preserved, in vault 2127	Juvenile	19th Century	Wood	William Macey Richardson	n/a	16	n/a	hand holding flowers at foot and head and a plate with inscription "our darling"

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2138	Lead coffin in vault 2139	Adult	19th Century	Lead	Basil Ernest Egerton Broad born 22nd Dec 1874 died 19th Dec 1880	tin	18	brass	crucifix and wreath and head
2141	Lead coffin with poorly preserved outer wood coffin in vault 2142	Juvenile	19th Century	Lead	Helena Elizabeth Ryland Roffey died 12th Feb 1881 aged 2 months	tin	19	brass?	floral urn detail at base and hand holding flowers at head
2144	Lead coffin with poorly preserved outer wood coffin in vault 2145	Juvenile	19th Century	Lead	Frederick Tipton died 11th Feb 1882 aged 2 yrs 8 months	tin	11	cast lead?	very detailed coffin grip plates with tassels plus circular wreaths
2147	Wood coffin in vault 2148	Juvenile	19th Century	Wood	Vivienne Emily Woodhouse 31st August 1879 RIP	tin?	20	brass	wreaths
2150	Lead coffin with outer wood coffin in vault 2151	Juvenile	19th Century	Lead	Arthur Featherstonehaugh Thompson born 21st Feb 1877 died 1st Nov 1880	tin?	n/a	n/a	diamond shaped coffin plate and metal cross at head
2153	Lead coffin with poorly preserved outer wood coffin in vault 2154	Juvenile	19th Century	Lead	corroded plate, no inscription observable	n/a	n/a	n/a	n
2156	Lead coffin with poorly preserved outer wood coffin in vault 2157	Juvenile	19th Century	Lead	Cha... McLeod Howell died 9th April 1875 aged 9 months	?	11	cast iron?	n/a
2159	Lead coffin with poorly preserved outer wood coffin in vault 2160	Juvenile	19th Century	Lead	Kate Joy Jackson born 9th Jan 1874 died 7th Feb 1874	tin	16	tin	n/a
2161	Casket in vault 2166	Adult	20th Century	Casket	Matilda Sara Zimmern died 31st Oct 1933 aged 80 years	tin	1	brass	n/a

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		Adult	20th Century	Casket	n/a	n/a	n/a	n/a	n/a	n
2162	Casket in vault 2165			Casket	n/a	n/a	n/a	n/a	n/a	n
2169	Lead coffin with poorly preserved outer wood coffin in vault 2170	Juvenile	19th Century	Lead	Adolphus Charles Zimmern died 26th Jan 1875 aged 11 months		11	n/a	n/a	n/a
2173	Lead coffin with well preserved, beaded, outer wood coffin in vault 2172	Neonate	19th Century	Lead	Helena Muriel King died 25th Feb 1880 aged 15 months	lead	23	electro plated silver handles	two crosses at head and foot	
2175	Lead coffin in vault 2172	Neonate	19th Century	Lead	Ethel Kate King born 6th Nov 1876 died 16th May 1877	lead	16	iron	n/a	n/a

APPENDIX E: Oasis Form

OASIS ID: aocarcha1-56879

Project details

Project name	St Mark's Church, Surbiton
Short description of the project	A watching brief on exhumation of a 19th to 20th century cemetery associated with a CofE church; St Mark's Church, Surbiton.
Project dates	Start: 13-03-2009
Previous/future work	No / Yes
Any associated reference codes	project MKU09 - Sitecode
Any associated reference codes	project Project No. 30218 - Contracting Unit No.
Type of project	Recording project
Site status	None
Current Land use	Other 4 - Churchyard
Monument type	CEMETERY Post Medieval
Monument type	CEMETERY Modern
Investigation type	'Watching Brief'
Prompt	Faculty jurisdiction

Project location

Country	England
Site location	GREATER LONDON KINGSTON UPON THAMES SURBITON St Mark's

	Church
Postcode	KT6 4UG
Study area	1000.00 Square metres
Site coordinates	TQ 1835 6760 51.39457162 -0.298684400355 51 23 40 N 000 17 55 W Point

Project creators

Name of Organisation	AOC Archaeology Group
Project brief originator	Diocesan Archaeologist
Project design originator	Melissa Melikian AOC Archaeology
Project director/manager	Melissa Melikian
Project supervisor	Paul Harris
Project supervisor	Chris Clarke
Type of sponsor/funding body	Diocese
Name of sponsor/funding body	Parochial Council

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Museum of London
Digital Media available	'Database','Images raster / digital photography','Survey'
Paper Media available	'Context sheet','Unpublished Text'

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title St Marks Church, Surbiton, Surrey; An Archaeological Watching Brief Report

Author(s)/Editor(s) Harris, P. Ives, R. Melikian, M

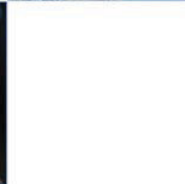
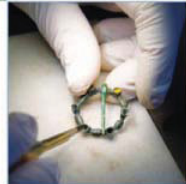
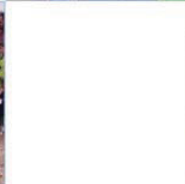
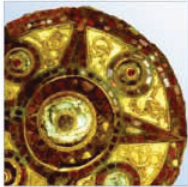
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