

23 Oaten Hill, Canterbury, Kent

Archaeological watching and recording brief

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Summary

A watching and recording brief was carried out on land at 23 Oaten Hill, Canterbury, Kent (NGR 615234 157264) on behalf of Cardy Construction Ltd. following the unexpected exposure of human remains during groundworks associated with the erection of a new single-storey residential property (planning ref: CA/10/01937/FUL). The work was conducted by the Canterbury Archaeological Trust between 23-28 June 2011, under a Licence for the Removal of Human Remains granted by the Ministry of Justice on 23 June 2011 (licence no. 11-0083).

The development area is located within the grounds of the former nunnery of St Sepulchre's (established c AD 1100). Two short segments of wall, probably representing different phases of the southern boundary wall of the former nunnery, were located in the south-east corner of the development area fronting Old Dover Road. In the north-east corner of the development area, within the grounds of the former nunnery, a soil horizon truncated by some 23 inhumation burials was identified. The burials were aligned approximately east-north-east by west-south-west, and included both adults and children. Seven of the burials had potential timber coffins, represented by iron coffin nails. A small assemblage of pottery recovered from the soil horizon and backfill of the graves indicate a medieval date (c AD 1350–1550), and the burials are likely to form part of a larger cemetery known to have been attached to a parochial church within the nunnery. Comparable burials previously identified at no. 19 Oaten Hill and no. 14 Cossington Road likely represent parts of this same cemetery.

The watching and recording brief confirmed that much of the development area had been heavily truncated during the post-medieval period. This truncation was associated with a series of garden features, including pits, shallow terraces and gravel footpaths, in addition to significant levelling of the southern part of the development area during construction of a former car park and garden retaining wall. However, the results demonstrate that archaeological deposits and features of at least local significance, including further inhumation burials, must extend to the north and east of the observed groundworks within the grounds of no. 22 Oaten Hill and no. 41 Old Dover Road.

1 Introduction

1.1 Project background

- 1.1.1 An archaeological watching and recording brief was undertaken by the Canterbury Archaeological Trust on land at 23 Oaten Hill, Canterbury, CT1 3HY (NGR 615234 157264). The work was commissioned by Cardy Construction Ltd (Maynard Road, The Wincheap Estate, Canterbury, Kent, CT1 3RH), in response to the unexpected exposure of buried human remains during construction groundworks associated with the conversion of an existing Grade II listed building to five residential apartments and the erection of a new single storey residential dwelling in the adjacent former car park (CA/10/01937/FUL revised scheme granted 14/02/2011).
- 1.1.2 The property is located within the Canterbury Area of Archaeological Importance (AAI) as designated by the Secretary of State on 30 March 1984, pursuant to the *Ancient Monuments and Archaeological Areas Act 1979*, and the Canterbury City Conservation Area, as designated by the *Historic Buildings and Ancient Monuments Act 1953* and *Planning, Listed Buildings and Conservation Areas Act 1990*.
- 1.1.3 Archaeological evaluation within the proposed footprint of the single storey dwelling by the Canterbury Archaeological Trust had previously been undertaken as part of an earlier application proposal (CA/09/01330/FUL withdrawn by applicant). The results indicated that the ground level within the former car park area had been truncated to the depth of the underlying chalk bedrock, and had removed all significant archaeological deposits (Helm 2010). In consequence it was recommended that no further archaeological work be required prior to development (Cross 2010).
- 1.1.4 However, groundworks associated with the revised scheme also included the removal of an existing retaining wall between the former car park and adjacent raised garden area, located to the north, and the reduction of the raised garden to the same formation level as the former car park. During this ground reduction it became clear that archaeological deposits had been preserved below the raised garden area, including buried human remains.
- 1.1.5 On 22 June 2011, Cardy Construction Ltd notified the Canterbury Archaeological Trust that a human skull had been exposed in a machine cut section against the boundary with no. 22 Oaten Hill. A site visit was immediately carried out and the presence of human remains confirmed.
- 1.1.6 An application for a *License for the Removal of Human Remains* was submitted by the Canterbury Archaeological Trust on behalf of Cardy Construction Ltd, under section 25 of the *Burial Act 1857*, and a licence subsequently granted on 23 June 2011 from the Ministry of Justice (licence no. 11-0083).
- 1.1.7 Following obtainment of the licence a programme of archaeological excavation was agreed between Cardy Construction Ltd and the Canterbury Archaeological Trust, as the designated investigating authority within the AAI. The works were conducted by Richard Helm (Project Manager), Hayley Jedrzejewksi (Osteoarchaeologist), and Christopher Sparey-Green (Project Officer) between 23–28 June 2011, and were monitored by Richard Cross, Canterbury City Council Archaeological Advisor.
- 1.1.8 The Canterbury Archaeological Trust is a registered organisation with the Institute for Archaeologists (IfA) and conforms to their by-laws, standards and policy statements.

1.2 Location and geology

1.2.1 The development area is located outside Canterbury's city wall, at the junction between Oaten Hill and Old Dover Road (Fig. 1). The property, which has been vacant since 2008, forms the end of a terraced row of early nineteenth-century three storey houses fronting Oaten Hill, situated to the west, with a car parking area fronting Old Dover Road on its southern side, and a raised rear garden, separated from the car park by a mixed flint and brick retaining wall, to the east. The property is bounded to the north by no. 22 Oaten Hill, and to the east by no. 41 Old Dover Road.

- 1.2.2 The existing ground has been terraced, with a notable drop in level between the former car park surface (+21.41m OD) and the adjacent properties at no. 22 Oaten Hill (+22.35m OD) and at no. 41 Old Dover Road (+22.53m OD) to the north and east respectively.
- 1.2.3 The underlying geology is recorded as superficial head deposits, comprising clay and silt (brickearth), overlying Margate Chalk (British Geological Survey 1:50,000 DiGMapGB-50 dataset, accessed 20 September 2011).

1.3 Archaeological potential

- 1.3.1 A summary of the known archaeological resource for the immediate surrounding area has been previously reported, with particular potential for surrounding prehistoric, Roman and medieval activity highlighted (Helm 2010).
- 1.3.2 Evidence for prehistoric activity has been recovered some 280m to the north-west, below Augustine House, comprising early Neolithic and late Neolithic to early Bronze Age worked flints (Helm 2009), and some 60m to the south, at The Hoystings Close, comprising a small assemblage of middle Bronze Age pottery (Helm 2003).
- 1.3.3 The development area is situated adjacent to the route of Roman Watling Street (now Old Dover Road). Evidence from Augustine House, Rhodaus Town (Helm 2009), Canterbury Police Station (Diack 2005; Hicks 2002), 24a Old Dover Road (Hicks 1999), 8 Vernon Place (Houliston 1996) and Vernon Grange (Helm 2004) suggest that extra-mural Roman settlement and associated industrial activity extended from the town either side of the road.
- 1.3.4 Watling Street was also a focus for Roman extra-mural burial. Both inhumation burials and cremations have been recorded at a variety of localities to either side of the development area (Anderson *et al* 1995; Anderson 1996; Andrews 1985, 57; Brent 1861, 28–33; Hasted 1801, 185; Houliston 1996; Pilbrow 1871, 158). In addition, a number of purported Roman burial mounds may have existed on the southeast suburbs of Canterbury, including a potential mound at Oaten Hill (Millett 2007, fig. 5.15); while a polygonal 'shrine' structure and further inhumation burials have recently been excavated at Augustine House, Rhodaus Town (Helm 2009).
- 1.3.5 Occupation of the area during the mid and late Anglo-Saxon period is probable, with domestic settlement and small-scale industry, including metalworking, horn-working and possible textile dyeing, recorded from the Canterbury Police Station (Diack 2005; Hicks 2002) and 24a Old Dover Road (Hicks 1999).
- 1.3.6 During the medieval period the proposed development area would have been situated within the precinct of the former Benedictine nunnery of St Sepulchre, founded *c* AD 1100 and finally dissolved in 1536. The precinct is illustrated on a map of *c*. 1640 (CALC Map 123), and was bounded by Oaten Hill, Old Dover Road and Upper Chantry Lane. The map also indicates that at least some of the nunnery buildings along the Oaten Hill frontage, and immediately to the rear, survived the Dissolution, as well as two entrance gates, one of which was located at the junction of the Old Dover Road and Oaten Hill, and probably provided access to a parochial church and cemetery within the nunnery grounds. Excavation at 1 Oaten Hill Court exposed two medieval cellars and a wall foundation probably associated with a range of outbuildings within the nunnery (Bennett 1983; 1987). At 19 Oaten Hill four medieval skeletons were attributed to a medieval cemetery situated within the precinct (Bennett 1983). A further twelve inhumation burials of probable medieval date, were recently recorded to the rear of 14 Cossington Road (Linklater 2007).
- 1.3.7 During 2010 an archaeological evaluation was undertaken by the Canterbury Archaeological Trust at no. 23 Oaten Hill, comprising one 10m by 1.5m trench excavated within the footprint of the proposed new single-storey building. Underlying chalk bedrock was encountered at an average depth of 400mm below the former car park surface. The chalk had been cut by a single pit which was dated to the late post-medieval period (c AD 1700–1900), and sealed by modern soils, confirming that the existing ground had been artificially levelled in the past (Helm 2010).

2 Project objectives and methodology

2.1 Objectives

2.1.1 The archaeological works were conducted to monitor any impact on the buried archaeological resource, to prevent or minimise damage to any structural remains pertaining to the former Nunnery of St Sepulchre, to preserve by record any other archaeological remains exposed and ensure that no unnecessary damage was done to the archaeological resource, and to deal appropriately with all human remains exposed during the groundworks.

2.2 Field methodology

- 2.2.1 The area of ground reduction associated with the proposed new single storey building measured approximately 105m², located in the south-east corner of the property, extending between Old Dover Road frontage and the southern side of the existing building, and along the eastern boundary with no. 41 Old Dover Road northwards to the existing boundary with no. 22 Oaten Hill (Fig. 2).
- 2.2.2 Prior to identification of human remains, approximately 97 per cent of the new building footprint had already been excavated by machine to the formation level, leaving a small area of surviving ground approximately 2.8m² which was excavated by hand (Plate 1 and 2).
- 2.2.3 Examination of the machine cut section demonstrated disturbance of archaeological deposits including buried human remains.
- 2.2.4 The machine cut section was hand cleaned (Plate 3 and 4). All exposed deposits were recorded using *pro forma* recording sheets. The section was drawn using polyester based drafting film at a scale of 1:20 (Fig. 3).
- 2.2.5 A full digital photographic record of the archaeological investigation works was maintained.
- 2.2.6 The area of ground reduction was located to a digital Ordnance Survey tile (reproduced by permission of Ordnance Survey on behalf of HMSO © Crown Copyright. All rights reserved. Licence No. AL100021009). All site levels were transferred from an Ordnance Survey bench mark located on 44 Old Dover Road (+19.95m OD).
- 2.2.7 Archaeological works did not monitor the conversion of the existing standing Grade II listed building into five residential flats.

2.3 Health and safety

2.3.1 On-site health and safety was conducted in accordance with the Canterbury Archaeological Trust's company *Health and Safety Policy* (2011).

2.4 Archive methodology

- 2.4.1 Following completion of the fieldwork a project archive was prepared in accordance with Appendix 3 of Management of Archaeological Projects 2 (English Heritage 1991, 30–31). The project archive conforms with the Guidelines for the preparation of excavation archives for long term storage (UKIC 1990), Standards in the museum care of archaeological collections (Museums and Galleries Commission 1992) and the Selection, Retention and Dispersal of Archaeological Collections: guidelines for use in England, Wales and Northern Ireland (The Society of Museum Archaeologists 1993).
- 2.4.2 All artefacts recovered during the project have been catalogued, processed and packaged in accordance with the *United Kingdom Institute for Conservation Guidelines* No. 2 (UKIC 1983). A designated receiving museum will be determined following completion of the post-excavation analysis through consultation with the Canterbury City Council Archaeological Advisor.
- 2.4.3 No soil samples were collected for environmental analysis.

2.4.4 The project archive is presently held in the offices of the Canterbury Archaeological Trust (92a Broad Street, Canterbury, Kent CT1 2LU). A digital copy of the archive is entered on the Integrated Archaeological Database (IADB), a secure password protected online resource available at http://www.iadb.co.uk/cat/ under the project code OHC: 23OHC WB 11.

2.5 Assessment methodology

2.5.1 Post-excavation assessment has been prepared in accordance with the Canterbury Archaeological Trust's manual on *Assessment and Analysis: a guide to post-excavation methodology* (1995) and follows national guidelines in accordance with the principles of *Management of Research Projects in the Historic Environment: The MORPHE Project Managers' Guide* (English Heritage 2006).

3 Results

3.1 Geology

3.1.1 Underlying geology was encountered across the area of ground reduction, surviving at a depth of between +20.96m OD in the north-west corner, and +21.88m OD in the south-east corner. The geology comprised Margate Chalk bedrock (1129) below remnant superficial head deposits formed of light to mid yellow orange silty clays and sub-rounded flints (1126, 1127 and 1128).

3.2 Roman

3.2.1 No features or deposits of Roman date were identified within the area of ground reduction. A small assemblage of 15 residual sherds of Roman period pottery, with a broad date range spanning the late first to fourth century AD, was recovered from six contexts (1001, 1048, 1049, 1064, 1067 and 1082), and a single fragment of a Roman *imbrex* tile from context 1001. The low quantity of Roman material is too limited to be interpreted as evidence for direct activity within the proposed development, despite the site's proximity to Roman Watling Street.

3.3 Medieval

- 3.3.1 During the medieval period the development area would have been encapsulated within the grounds of St Sepulchre's Nunnery. Two short wall segments, located on the south-eastern edge of the development area (Group 1), are likely to represent the nunnery's former southern precinct boundary wall. To the north-east, surviving archaeology comprised a remnant soil horizon (Group 2), truncated by some 24 inhumation burials (Group 3). Both the soil horizon and burials comprise part of a formal lay burial ground most probably associated with a parochial church within the former nunnery precinct, and probably extending north-east as far as Cossington Road.
- 3.3.2 Boundary wall segments (Group 1)
- 3.3.3 Two short segments of wall (1123 and 1124) were recorded in the south-eastern corner of the development area, cut into the underlying chalk bedrock (1129). The two wall segments were seen to have been preserved behind an existing flint boundary wall (1125) fronting Old Dover Road, and were exposed following its partial demolition (Plates 16 and 17).
- 3.3.4 Wall 1123 was composed of roughly coursed chalk with occasional sub-rounded to sub-angular flints, in a light yellow sandy mortar with common chalk inclusions. The visible segment measured at least 0.25m wide, extending north-east into the grounds of 41 Old Dover Road, and had a surviving standing height of 0.54m (+22.41m OD). No wall face was visible, the southern edge being abutted by wall 1124.
- 3.3.5 Wall 1124 was composed of roughly coursed sub-rounded flints, dressed on its southern face, and bonded with a light yellow sandy mortar. The wall had a visible width of 0.30m, its northern face abutting wall 1123, and had a surviving standing height of 0.70m (+22.36m OD).

- 3.3.6 Dating of the wall segments is uncertain, but it would seem probable that wall 1123 is of medieval date, potentially associated with the original foundation of St Sepulchre's nunnery *c* AD 1100, with wall 1124 being a later addition/rebuilding of the boundary in the later medieval period.
- 3.3.7 Soil horizon (Group 2)
- 3.3.8 A remnant of mid olive grey brown silty clay loam (1048), up to 0.19m thick, survived to a depth of +21.50m in the north-east corner of the proposed development area, extending beyond the excavated section. The deposit, which was formed directly above the geological head deposit 1126, possibly represented the remnants of a former soil horizon, which was seen to have been truncated by later graves (Group 3).
- 3.3.9 A number of disarticulated human bones were recovered from this deposit, representing a minimum 2 adults and 5 non-adults (see section 5.4.1 below). The human bones are likely to represent disturbed inhumation burials which have been intermixed through digging of the soil horizon.
- 3.3.10 Pottery recovered from the deposit included three sherds of Tyler Hill sandy ware of medieval date (c AD1350-1450), in addition to five sherds of residual Roman pottery. Other finds included a fragment of animal bone, a fragment of medieval roof tile, and three lumps of iron slag.
- 3.3.11 *Cemetery (Group 3)*
- 3.3.12 Twenty-three inhumation burials cut through the soil horizon (Group 2), concentrated within the north-eastern corner of the development area. The burials were focused in an area approximately 7.1m (north-east to south-west) by 4.3m (north-west to south-east), with the surface of backfilled graves varying between +21.38m OD and +21.84m OD. All 23 inhumation burials were affected by the groundworks.
- 3.3.13 Articulated human skeletal (HS) remains from 15 individuals were recovered, of which 12 were sufficiently exposed to record in plan (see section 5 below; Figs 4 and 5; Plates 5–15). The remaining 8 burials were visible in section only, continuing beyond the groundwork extents, and left *in situ* (Table 1).

Skeleton	Context	Grave cut	Filled by	Excavated	Age (years)	Sex	% complete
HS1	1050	1051	1049	Yes	45-50	Male	80–100
HS2/13	1053	1054	1052	Yes	60+	Female	20–40
HS3	1056	1057	1055	Yes	>18	?	0–20
HS4	1059	1060	1058	Yes	30–35	Male	20–40
HS5	1062	1063	1061	Yes	35–40	Female	0–20
HS6	1065	1066	1064	Yes	<18	?	0–20
HS7	1068	1069	1067	Yes	>18	?	20–40
HS8	1071	1072	1070	Yes	<18	?	0–20
HS9/16	1074	1075	1073	Yes	35–40	Female	20–40
HS10	1077	1078	1076	Yes	24-30	Female	20–40
HS11	1080	1081	1079	Yes	>18	?	0–20
HS12	1083	1083	1082	Yes	5–8	?	60–80
HS14	1089	1090	1088	Yes	>18	?	0–20
HS15	1092	1093	1091	Yes	14–18	?	20–40
HS17	1095	1096	1094	Yes	5–8	?	0–20
HS18	1098	1099	1097	No	?	?	?
HS19	1101	1102	1100	No	?	?	?
HS20	1104	1105	1103	No	?	?	?
HS21	1107	1108	1106	No	?	?	?
HS22	1110	1111	1109	No	?	?	?
HS23	1113	1114	1112	No	?	?	?
HS24	1116	1117	1115	No	?	?	?
HS25	1119	1120	1118	No	?	?	?

Table 1. List of articulated human skeletal remains

- 3.3.14 Of the excavated skeletons, 6 skeletons were between 0–20% complete, 7 skeletons between 20–40% complete, 1 skeleton between 60–80% complete, and 1 skeleton between 80–100% complete. Two skeletons were originally treated as 4 separate individuals, as a result of being excavated in two separate stages dictated by the groundworks. These were then integrated during post-excavation analysis, but the original numbers retained for clarity (HS 2/13 and HS 9/16).
- 3.3.15 Where visible, burials were laid in an extended supine position, aligned approximately east-north-east to west-south-west. Seven burials (HS1, HS6, HS7, HS10, HS12, and HS15) contained iron nails within their backfills, indicating the potential presence of former timber coffins. No other grave goods were identified.
- 3.3.16 The population comprised both male and female burials, and ranged in age from non-adult to adult, with one female individual (HS 2/13) potentially of 60+ years.
- 3.3.17 Dating of the burials is problematic. The intensity of burial has resulted in a sequence of intercutting graves with no clear differentiation possible between burial groups or stratigraphic phases. Similarly, finds within the backfilled graves exhibited evidence for residuality, with pottery comprising both Roman and medieval material, giving a broad *terminus post quem* of *c* AD 1350–1550.

3.4 Post-medieval to modern

- 3.4.1 Following the dissolution of St Sepulchre's Nunnery in AD 1536 the development area was utilised as gardens situated to the rear of new tenement properties fronting Oaten Hill. The earliest features included two intercutting pits (Group 4), cut by a later garden terrace surfaced with a chalk bedding material and flint gravel metalling (Group 5). This was sealed by a garden soil (Group 6), which was cut by a low garden wall and two further pits (Group 7). A further garden soil layer (Group 8) sealed the pit features, and possibly abutted against the garden wall. A shallow feature (Group 9) was cut into the garden soil, and backfilled with a chalk bedding material, and this was cut by a later pit containing reburied human bone (Group 10). A series of bedding layers and gravel metallings formed a probable raised garden footpath, with a brick border on its southern side (Group 11), and this was sealed by a series of later garden soils and two possible pits or post-holes (Group 12). Finally, the southern edge of the garden was terraced and a brick and flint retaining wall inserted, associated with the levelling and construction of the existing tarmac car park (Group 13).
- 3.4.2 *Pit features (Group 4)*
- 3.4.3 Two pits (1035 and 1029) were identified at the western end of the machine cut section. Pit 1035 was sub-rectangular, 1.5m long by 1.25m wide, with a visible depth of 0.49m deep, and was filled by a series of mid grey brown to dark olive grey, silty clay loams (1030, 1031, 1032). This was cut by sub-circular pit 1029, 1.22m in diameter by 0.43m deep, filled by a dark olive grey brown silty clay loam with lenses of dark grey ash (1027 and 1028).
- 3.4.4 Fragments of post-medieval brick were noted from pit (1035).
- 3.4.5 *Terrace with metalled surface (Group 5)*
- 3.4.6 Pit 1029 was truncated by a shallow cut 1045, forming a garden terrace approximately 0.20m deep. The terrace had a 0.05m thick layer of crushed chalk (1040) laid on its base, forming a bedding layer, sealed by a compacted layer of flint gravel (1026 and 1039), up to 0.10m thick, forming a metalled surface across the terraced area.
- 3.4.7 Finds recovered from the metalled surface (1026) comprised two sherds of Staffordshire Stoneware (*c* AD 1750–1825) and a fragment of post-medieval roof tile.
- 3.4.8 Garden soil (Group 6)
- 3.4.9 A dark olive grey brown silty clay loam soil (1038) formed over the metalled surface (Group 6), represent a garden soil. The soil was truncated by later features, but had a surviving thickness of up to 0.32m.

- 3.4.10 No finds were recovered from this deposit.
- 3.4.11 *Garden wall and pits (Group 7)*
- 3.4.12 Two pits (1034 and 1037) cut through the garden soil (Group 6) and metalled surface (Group 5), at the west end of the machine cut section. Pit 1034 measured 0.65m in diameter by 0.43m deep, and was filled with a dark olive grey silty clay loam with fragments of late post-medieval brick (1033). Pit 1037 measured 0.60m in diameter by 0.56m deep and was filled with a dark olive grey silty clay loam (1036).
- 3.4.13 To the east, the garden soil (Group 6) was cut by a foundation trench (1047), 0.26m wide by 0.35m deep, for a brick garden wall (1046). The wall, aligned approximately north-east to south-west, was formed of coursed, frogged red stock bricks (230mm by 65mm by 114mm) bonded with a light yellow sandy mortar. The function of the wall is uncertain, but potentially represents a low dividing wall within the garden plot.
- 3.4.14 No finds were recovered from these features.
- 3.4.15 *Garden soil (Group 8)*
- 3.4.16 A mid olive grey silty clay loam soil (1025), up to 0.49m thick, sealed the two pits, and potentially abutted the west face of the garden wall (Group 7).
- 3.4.17 The deposit contained a single fragment each of post-medieval tile and brick.
- 3.4.18 Shallow cut feature (Group 9)
- 3.4.19 A shallow cut feature (1024), truncated the garden soil (Group 8). The cut, which measured approximately 5.8m long (NW-SE) and up to 0.30m deep, had a flat, gently sloping base, and was filled with re-deposited chalk (1023 and 1022), the later mixed with lenses of dark olive grey silty clay loam.
- 3.4.20 The function of this shallow cut feature is uncertain, but the redeposited chalk fill might suggest it had been formed as a foundation/bedding for a garden structure.
- 3.4.21 No finds were recovered from this feature.
- 3.4.22 *'Charnel'* pit (Group 10)
- 3.4.23 A large pit (1021), with a visible minimum radius of 0.95m and a surviving depth of 0.39m, cut the south-western edge of the shallow cut feature (Group 9), extending into the north-west and north-east sections. The pit was backfilled with a deposit of dark grey brown silty clay loam (1020), containing disarticulated human skeletal material. This deposit was sealed by a layer of crushed chalk (1019), and capped by a layer of dark olive grey silty clay loam (1018).
- 3.4.24 The presence of disarticulated human skeletal material in the lower fill of this pit, and its purposeful backfilling with a layer of redeposited chalk, would suggest this feature functioned as a 'charnel' pit, used to rebury disturbed human remains associated with the medieval nunnery, presumably recovered during landscaping of the garden.
- 3.4.25 No datable finds were retrieved from this feature, and the disarticulated human bone visible in the machine cut section was left *in situ*.
- 3.4.26 *Garden footpath (Group 11)*
- 3.4.27 A layer of compacted dark olive grey silty clay loam with abundant flint gravel (1017), formed a 0.17m thick bedding layer above the 'charnel' pit (Group 10), extending 6.81m to the south-east, and possibly continuing a further 1.4m as deposit 1044. Both deposit 1017 and 1044 were sealed by a layer of compacted flint gravel (1016 and 1043 respectively), up to 0.12m thick, forming a metalled surface. To the south, the metalled surface was edged with a low brick wall (1005), formed of dry-laid, coursed frogged red stock bricks (220mm by 65mm by 114mm), standing 0.38m high by 0.22m wide.

- 3.4.28 The north-face of the brick edging was abutted by a series of layers up to 0.88m wide, comprising a layer of mid grey brown silty clay loam (1004), 0.17m thick, sealed by a layer of re-deposited chalk (1003), 0.05m thick, and capped by a layer of flint gravel (1002), 0.08m thick. These appear to represent a sub-base, bedding and metalled surface, running approximately north-west to south-east, perhaps for a raised garden footpath.
- 3.4.29 Three sherds of London Red Ware (c AD 1750–1825) were recovered from the chalk bedding layer 1003.
- 3.4.30 *Miscellaneous pit, garden soils and post-hole (Group 12)*
- 3.4.31 The garden footpath (Group 11) was truncated by a sub-circular pit (1015), 0.56m in diameter by 0.36m deep, filled with two deposits of dark olive grey silty clay loam (1013 and 1014). Pit 1015 was sealed by a layer of dark olive grey silty clay loam (1012), forming a 0.39m thick garden soil, abutting against the north side of the raised metalled footpath (1002). To the south, a comparable garden soil (1011), abutted the footpath's brick edging (1005) to the south. A possible post-hole (1041), 0.66m in diameter by 0.63m deep, cut through the garden soil (1012) to the south-east.
- 3.4.32 No finds were recovered from these features and deposits.
- 3.4.33 Retaining wall and modern tarmac (Group 13)
- 3.4.34 At some point after the 1930s, when the existing building was converted into office use, the southern edge of the garden was terraced (cut 1008) to make a level ground surface for the existing car park. A roughly coursed retaining wall (1006), formed of dressed sub-rounded flints and frogged red stock bricks bonded with a light grey yellow lime mortar, was built against the terraced face, the gap between backfilled with a dark grey brown silty clay loam (1007). The terraced ground to the south-west was levelled using a layer of mid olive grey silty clay loam soil (1010), above which was laid a tarmac surface (1009). To the north-east of the retaining wall, a layer of topsoil (1001) was laid over the remaining garden area, sealing the former garden soils (Group 12) and footpath (Group 11).
- 3.4.35 Finds recovered from the backfill 1007 and topsoil layer 1001 comprised one prehistoric flint flake, three sherds of Roman pottery, a fragment of Roman *imbrex* tile, and three sherds of medieval pottery, in addition to later post-medieval brick and roof tile fragments, glass, iron slag, and two unidentified iron objects.

4 Finds

4.1.1 Finds were recovered during cleaning of the machine cut section and hand excavation of the small area of surviving ground. All finds have been processed and catalogued into the Integrated Archaeological Database (IADB), either as Bulk Finds (prefixed BF) or as registered small finds (prefixed SF). None of the finds assemblages warrant further specialist analysis. All of the finds have been retained and are presently stored at the offices of the Canterbury Archaeological Trust (92a Broad Street, Canterbury, Kent CT1 2LU).

4.2 Worked flint

4.2.1 One prehistoric waste flint flake was recovered from context 1001 (Table 2). The flake is not chronologically diagnostic and is residual, recovered from a post-medieval/modern topsoil deposit.

Group	Context	Material	Keywords	Count	Weight (g)	Find No.
13	1001	Flint	Worked Flint	1	3	BF13

Table 2. Prehistoric worked flint

4.3 Pottery

- 4.3.1 The site yielded 37 sherds (221g) of pottery from 13 contexts. These sherds include Roman, medieval and post-medieval material. The pottery assemblage was quantified by numbers of sherds and their weights per fabric. Fabric identification was carried out by Andrew Linklater and Andrew Savage.
- 4.3.2 All of the context groups are small, containing less than ten sherds of pottery. None of the assemblage is large enough for further quantification by Estimated Vessel Equivalents (EVEs).
- 4.3.3 *Roman pottery (c AD 70–400)*
- 4.3.4 The Roman period assemblage comprised 15 pottery sherds from six contexts (Table 3). The fabrics comprised Black Coarse Ware (5 sherds), Grey Coarse Ware (1 sherd), Black Burnished Ware (1 sherd), Oxfordshire Ware (3 sherds), Nene Valley Ware (1 sherd), and Upchurch Ware (3 sherds).

Group	Context	Count	Description	Date range	Find No.
2	1048	2	Black Coarse Ware	c 2nd–3rd century AD	BF18
2	1048	1	Grey Coarse Ware	c mid 2nd-mid 3rd century AD	BF18
3	1049	1	Black Coarse Ware	c 2nd–3rd century AD	BF19
3	1049	1	Colour Coated Oxfordshire Ware		
3	1064	1	Nene Valley Ware	c mid 2nd-mid 3rd century AD	BF21
3	1064	1	Upchurch Ware	c late 1st-2nd century AD	BF39
3	1067	1	Upchurch Ware	c late 1st-2nd century AD	BF22
3	1067	1	Black Burnished Ware	c 2nd–3rd century AD	BF22
3	1067	1	Black Coarse Ware	c mid 2nd-mid 3rd century AD	BF22
3	1082	1	Upchurch Ware	c late 1st-2nd century AD	BF23
3	1082	1	Colour Coated Oxfordshire Ware	c 3rd-4th century AD.	BF23
13	1001	1	Upchurch Ware	c late 1st-2nd century AD	BF07
13	1001	1	Black Coarse Ware	c 2nd-3rd century AD	BF07
13	1001	1	Oxfordshire Ware	c 3rd-4th century AD	BF07

Table 3. Roman pottery

- 4.3.5 *Medieval pottery (c AD 1200–1550)*
- 4.3.6 Seventeen sherds of medieval period pottery were recovered from 7 contexts (Table 4). The fabrics comprised Tyler Hill Sandy Ware (12 sherds), London/North Wealden Red Ware (1 sherd), and Shelly Sandy Ware (4 sherds).

Group	Context	Count	Description	Date range	Find No.
0	1000	2	Tyler Hill Sandy Ware	c AD 1350–1450	BF05
2	1048	2	Tyler Hill Sandy Ware	c AD 1350–1450	BF18
2	1048	1	Tyler Hill Sandy Ware	c AD 1200–1500	BF35
3	1049	3	Shelly Sandy Ware	c AD 1250–1325	BF19
3	1049	1	London/North Wealden Red	c AD 1480–1550	BF19
			Ware		
3	1049	1	Tyler Hill Sandy Ware	c AD 1350–1450	BF24
3	1049	1	Shelly Sandy Ware	c AD 1250–1325	BF24
3	1060	1	Tyler Hill Sandy Ware	c AD1350–1450	BF37
3	1063	1	Tyler Hill Sandy Ware	c AD 1350–1450	BF33
3	1075	1	Tyler Hill Sandy Ware	c AD 1350–1450	BF40
13	1001	3	Tyler Hill Sandy Ware	c AD 1350–1450	BF07

Table 4. Medieval pottery

- 4.3.7 *Post-medieval pottery (c AD 1750+)*
- 4.3.8 The post-medieval pottery assemblage comprised 5 sherds from 2 contexts (Table 5). The fabrics comprised Staffordshire Stoneware (2 sherds), London Red Ware (1 sherd), and Rockingham Ware (2 sherds).

Group	Context	Count	Description	Date range	Find No.
5	1026	2	Staffordshire Stoneware	c AD 1750–1825	BF16
11	1003	1	London Red Ware	c AD 1750–1825	BF01
11	1003	2	Rockingham Ware	c AD 1800–1850	BF01

Table 5. Post-medieval pottery

4.4 Ceramic building material

4.4.1 An assemblage of 13 (827g) fragments of ceramic building material was recovered from 7 contexts (Table 6). The material comprised 1 fragment of Roman *imbrex*, 9 fragments of post-medieval roof tile, and 3 fragments of post-medieval brick.

Group	Context	Material	Description	Count	Weight (g)	Find No.
2	1048	Ceramic Building Material	Tile	1	22	BF35
3	1049	Ceramic Building Material	Tile	2	1	BF20
5	1026	Ceramic Building Material	Tile	1	39	BF17
8	1025	Ceramic Building Material	Tile	1	18	BF14
8	1025	Ceramic Building Material	Brick	1	12	BF15
11	1005	Ceramic Building Material	Tile	1	380	BF04
13	1001	Ceramic Building Material	Tile, Imbrex	1	50	BF10
13	1001	Ceramic Building Material	Tile	3	117	BF08
13	1001	Ceramic Building Material	Brick	1	26	BF09
13	1007	Ceramic Building Material	Brick	1	162	BF03

Table 6. Ceramic building material

4.5 Animal bone

4.5.1 An assemblage of 23 (530g) fragments of animal bone was recovered from 9 contexts (Table 7). The animal bone assemblage is too small to provide meaningful data on subsistence, and has not been examined for species identification or taphonomy.

Group	Context	Material	Description	Count	Weight (g)	Find No.
2	1048	Animal Bone	Unidentified	1	165	BF41
3	1049	Animal Bone	Unidentified	8	36	BF25
3	1060	Animal Bone	Unidentified	1	3	BF36
3	1064	Animal Bone	Unidentified	3	7	BF27
3	1069	Animal Bone	Unidentified	1	0	BF34
3	1082	Animal Bone	Unidentified	2	1	BF29
3	1085	Animal Bone	Unidentified	3	10	BF28
3	1093	Animal Bone	Unidentified	1	5	BF32
13	1007	Animal Bone	Unidentified	3	303	BF02

Table 7. Animal bone

4.6 Glass

4.6.1 One fragment of clear window pane glass of post-medieval date was recovered from context 1001 (Table 8).

Group	Context	Material	Description	Count	Weight (g)	Find No.
13	1001	Glass	Glass	1	3	BF11

Table 8. Glass

4.7 Iron objects and slag

4.7.1 A number of objects of iron were recovered, comprising some 23 (19g) nails, and 5 (5g) unidentified objects, in addition to 12 (127g) fragments of slag (Table 9). Concentrations of iron nails were noted in the backfill of 7 grave cuts (Group 3), and potentially represent the remnants of timber coffins.

Group	Context	Material	Keywords	Count	Weight (g)	Find No.
0	1000	Iron	Unidentified	1	1	SF07
0	1000	Metal working residue	Slag	1	7	BF06
2	1048	Metal working residue	Slag	3	26	BF31
3	1049	Iron	Nail	1	1	SF11
3	1064	Iron	Nail	3	1	SF03
3	1067	Iron	Nail	2	1	SF08
3	1075	Metal working residue	Slag	1	4	BF30
3	1076	Iron	Nail	2	1	SF04
3	1076	Iron	Nail	1	1	SF09
3	1076	Metal working residue	Slag	1	12	BF26
3	1078	Iron	Nail	3	1	SF06
3	1082	Iron	Nail	10	10	SF02
3	1091	Iron	Nail	1	1	SF01
13	1001	Iron	Unidentified	1	1	SF10
13	1001	Iron	Unidentified	3	1	SF05
13	1001	Metal working residue	Slag	6	78	BF12

Table 9. Iron objects and slag

5 Human skeletal remains (by Hayley Jedrzejewksi)

5.1 Introduction

5.1.1 This report describes the analysis of 15 articulated human skeletons (HS) excavated at no. 23 Oaten Hill, Canterbury. The skeletons were removed from a machine cut section, bounded to the north by the rear garden of no. 22 Oaten Hill, and to the east by no. 41 Old Dover Road. The articulated remains were recovered from earth-cut graves, and lay in extended supine positions, aligned approximately east-north-east by west-south-west. Disarticulated bone, potentially comprising some 9 adults and some 11 non-adults, was also recovered, some of which was intermixed with the articulated skeletons. The skeletons are believed to date to the medieval period (*c* AD 1350–1550), and probably form part of a parochial cemetery located within the former precinct of St Sepulchre's Nunnery.

5.2 Methods

5.2.1 The skeletons were washed by an osteologist and sorted into correct anatomical order with each bone recorded as present or absent. Each skeleton was assessed for age at death, sex, and any pathology or bone abnormalities were recorded. The methods used follow standard guidelines in accordance with Brickley and Mckinley (2004).

5.2.2 Age at death

5.2.3 Age at death was assessed through a number of methods where applicable. For adults the methods applied included dental attrition (Brothwell 1981), auricular surface (Lovejoy *et al* 1985) and pubic symphysis method (Brooks and Suchey 1990), sternal rib end (Iscan and Loth 1986), cranial suture closure (Meindl and Lovejoy 1985), and epiphyseal fusion summary illustrations (Schaefer *et al* 2009).

- 5.2.4 The methods used for non-adults were as follows: stages of dental growth (Morrees *et al* 1963 and Ubelaker 1989) and epiphyseal fusion summary illustrations (Schaefer *et al* 2009).
- 5.2.5 As particular bone elements are required for these methods, it is often not possible to age individuals when the necessary bones are not available. If this was the case then the individual was categorised broadly as an adult (over the age of 18 years) or non-adult (under the age of 18 years).
- 5.2.6 Broad age bands have been applied to accommodate ageing methods, and to prevent specific and potentially inaccurate ages being applied. The first adult age starts at 17 years to accommodate the dental attrition method. The age categories are shown in Table 10.

Category	Age
Non-adult <18	Birth–2 months
	2 months-2 years
	2–5 years
	5–8 years
	8–10 years
	10-14 years
	14–18 years
Adult >18	17–25 years
	25–29 years
	30–35 years
	35–40 years
	40–45 years
	45–50 years
	50–60 years
	60+ years

Table 10. Age categories

5.2.7 Sex determination

5.2.8 Sex of the individual was determined using a number of methods where applicable. The main method used was the examination of sexually dimorphic traits of the cranium and pelvis (Buikstra and Ubelaker 1994). The pelvis was also used for sexing by applying the Phenice technique (Phenice 1969). Metric traits from the long bones were also used (Bass 2005). It is not possible to determine sex for the non-adults.

5.2.9 Pathology

5.2.10 Pathology and any bone abnormality were assessed according to broad categories outlined from standard reference texts on palaeopathology (Aufderheide and Rodriquez-Martin 1998; Ortner 1981; Roberts and Manchester 2005). Any pathology will be recorded under the following headings; trauma, infectious disease, metabolic disease, joint disease, congenital disease and neoplastic disease.

5.2.11 *Dental recording and pathology*

5.2.12 Each tooth was recorded as present or absent. Dental pathology broadly includes ante-mortem tooth loss and periodontal disease, caries, abscesses and calculus. The identification was based on standard reference texts (Brickley and Mckinley 2004; Hillson 2000; 2005). Any dental pathology or abnormalities were recorded on a general presence or absence basis, with the exception of calculus where a grading system was used (Brothwell 1981)

5.2.13 Disarticulated bone

5.2.14 The disarticulated bone was assessed within each context. Disarticulated bone was recovered from context 1048, associated with the soil horizon (Group 2), and from context 1000 which was allocated to all unstratified material. Disarticulated bone was also noted within the backfill of individual graves.

- 5.2.15 The disarticulated bone was sorted according to bone element and then sided. Any non-adult bones were separated from adult bones. The bones were recorded for age and sex where possible and then the minimum number of individuals (MNI) was calculated. MNI is calculated by identifying the number of bone elements with the highest count. This provides an idea of how many individuals were present within the sample. The bone type with the highest count will be considered the minimum number of individuals within that context.
- 5.2.16 Completeness and preservation
- 5.2.17 Completeness has been determined on a grading system of percentages, as shown in Table 11.

Percentage	Definition
0-20%	Where there is very little bone, or one or two bone elements (i.e. left and/or right arm)
20–40%	
40–60%	More than half of the skeleton is present (i.e complete lower limbs, with feet and pelvis. Includes even if other bones are present but fragmented)
60-80%	
80–100%	Where most of the bones are present and skeleton is almost complete to complete. This includes the skull with most of the axial and appendicular skeleton

Table 11. Completeness of articulated skeleton

5.2.18 Preservation was based on a graded system of excellent, good, fair or poor, which was dependant on how well the surface and cortical bone was preserved and if the skeleton was fragmented. Each skeleton was categorised as follows:

Excellent	Most surfaces are visible/not much bone fragmented/cortical bone visible and well preserved
Good	Surfaces are visible/ some bone fragmented but won't affect analysis/cortical bone visible and well preserved
Fair	Surfaces are visible/some surface erosion that may affect analysis/ some cortical bone preserved
Poor	heavily fragmented/ heavy surface erosion that will affect analysis/ little cortical bone preserved.

5.3 Articulated human bone

- 5.3.1 *HS 1* (1050) (Fig. 4; Plates 5–6)
- 5.3.2 This was the most complete skeleton in the sample at 80–100% complete with excellent preservation. It was a male aged 45–50 years. There was a great deal of osteophytes forming on this skeleton mainly on the left proximal ulna that was mirrored on the distal left humerus. There was no right arm available for comparison. The lower thoracic vertebrae had osteophyte formation around the vertebral discs and on the left side that had formed a cupped shape. There was also a compression fracture present on the 10th thoracic vertebra. There was porosity on the lumbar vertebrae which are schmorl's nodes that are a result of the degeneration of the vertebral discs. The exact etiology is unknown, but the osteophytes and degeneration seen on the vertebrae are most likely due to the fact that this is an older individual. There was also bone formation present on the sternal ends of the ribs and the xiphoid process had fused to the sternum, which again is associated with older individuals.
- 5.3.3 Dentition: there was heavy attrition present on the occlusal surface of the canines and incisors, which was also the same on the maxilla incisors and canines. There was evidence of slight calculus on the left and right mandibular canines. There were caries present on both the mandibular left and right 1st molars, and the left 2nd molar on the maxilla also had a carie on the bucchal surface.
- 5.3.4 There was an extra sesamoid bone found with the left hand. It resembled a metacarpal but the left hand was complete. It is sometimes known for there to be extra bones in the skeleton, and it is not therefore considered pathology.

- 5.3.5 *HS 2/13 (1053) (Fig. 4; Plate 7)*
- 5.3.6 This was an adult female, aged 60+ years and was 20–40% complete with fair preservation. There was an unhealed transverse fracture present on the distal end of the shaft of the left ulna. It has caused some damage to the distal part of the radius. This might have been caused by a fall, but a fall would more commonly affect the radius resulting in a colles fracture. There were osteophytes present on the lumbar vertebrae bodies with two of them forming a 'cupped' shape on the left side of the vertebral discs which might be from osteophytosis, and could also be due to the degeneration of the vertebrae as a result of age as this is an older individual.
- 5.3.7 *HS 3 (1056) (not illustrated)*
- 5.3.8 This was an adult (>18 years) of undetermined sex, and was 0–20% complete. There was no pathology on this individual.
- 5.3.9 *HS 4* (1059) (Fig. 4; Plate 8)
- 5.3.10 This individual was an adult male, aged 30–35 years. It was 20–40% complete, as all the axial skeleton was missing, and the overall preservation of this skeleton was poor. There was no pathology present.
- 5.3.11 HS 5 (1062) (Fig. 4; Plate 9)
- 5.3.12 This was an adult female, aged 35–40 years. The skeleton was about 0–20% complete and the preservation was poor and fragmented. There was one thoracic vertebra that had spondylolysis. This is when the vertebra is separated into two parts, the body and the neural arch, which can be caused by stress fractures (Roberts and Manchester 2005). As this was a vertebra in isolation it is difficult to glean any further information from this.
- 5.3.13 *HS* 6 (1065) (Fig. 4; Plate 10)
- 5.3.14 This was a non-adult (<18 years) with left and right legs with some fragmented tarsal bones making this skeleton 0–20% complete with fair preservation. Due to the lack of completeness, it was difficult to age accurately, but there were no fused epiphyses which suggest it was under the age of 14 years. There was no pathology.
- 5.3.15 *HS 7 (1068) (Fig. 4; Plate 11)*
- 5.3.16 This skeleton was an undetermined adult (>18 years) with an undetermined sex. It was about 20–40% complete with good preservation. This skeleton had a deformed mandible with ante-mortem tooth loss covering most of the mandible, with the exception of two alveolar processes visible on the right side. These were possibly to accommodate the canine and 1st premolar (that were not *in situ*). There was heavy attrition on the occlusal surfaces of these teeth, and there was heavy calculus present on the subgingival bucchal surfaces. The mandible itself appeared stretched and thinner compared to a normal mandible, and the coronoid processes looked sharpened and not rounded. The pathology and deformation on the mandible suggests that it was an 'elderly' individual (White and Folkens 2005), but no specific age could be assigned as this alone cannot be used as an indicator of age. Similarly, it was not possible to assign a sex and was categorised as undetermined. There was also eburnation present on oval articulation of the dens process on cervical one vertebra suggestive of a joint disease. The vertebral bodies were very porous suggesting a degeneration of the joint surface.
- 5.3.17 *HS* 8 (1071) (Fig. 5)
- 5.3.18 There was very little bone with this individual. There were tibia and fibula epiphyses and a calcanaeus making it 0–20% complete with good preservation. It was a non-adult (<18 years) and the unfused epiphyses would suggest an age below 14 years, but there were no other markers to indicate age and would therefore be undetermined. There was no pathology.

- 5.3.19 *HS 9/16 (1075) (Fig. 5; Plate 12)*
- 5.3.20 This individual was a female aged 35–40 years. It was 20–40% complete with good preservation. There was a ridge on the plantar side of the 4th right metacarpal, which could have resulted from a fracture, although this is not a common place for it to occur. It could also be due to a muscle attachment. There was also bone formation present on the greater trochanter of the femur which is most likely a result of it being a muscle attachment site.
- 5.3.21 HS 10 (1077) (Fig. 5; Plate 13)
- 5.3.22 Skeleton 10 was a female adult, aged 25–30 years. It was 20–40% with poor preservation as the bone was very brittle and fragmented easily. There was no pathology.
- 5.3.23 *HS 11 (1080) (not illustrated)*
- 5.3.24 There were left ulna and radius shaft fragments and a rib fragment recovered from this skeleton making it 0–20% complete with good preservation. It was an adult (>18 years) with an undetermined sex.
- 5.3.25 HS 12 (1083) (Fig. 5; Plate 14)
- 5.3.26 This individual was a non-adult aged 5–8 years and was 60–80% complete with good preservation. There was heavy attrition on the deciduous 2nd mandibular molar, which is unusual for an individual at a young age and is suggestive of a gritty diet. The mandible itself was very porous which could be due to preservation. There were four symmetrical small holes on the interior surface of the mandible under the incisors, which is unusual but there is no published literature available that can suggest the cause.
- 5.3.27 HS 14 (1089) (Fig. 5)
- 5.3.28 This skeleton was an adult (>18 years), but there was an incomplete right arm only making the skeleton 0–20% complete with fair preservation. The sex is undetermined. There was no pathology.
- 5.3.29 HS 15 (1092) (Fig. 5; Plate 15)
- 5.3.30 Skeleton 15 was a non-adult aged between 14–18 years. The skeleton was 20–40% complete with poor preservation and was very fragmented. There was no pathology.
- 5.3.31 *HS 17 (1095) (not illustrated)*
- 5.3.32 This was a non-adult aged 5–8 years, and the skeleton was 0–20% complete with good preservation. There was no pathology.

5.4 Disarticulated human bone

- 5.4.1 *Soil horizon 1048 (Group 2)*
- 5.4.2 There were a total of 2 adults and 5 non-adults within this context. The adults were of undetermined sex and age. One non-adult was aged 5–8 years, another was aged 2–5 years, one aged 2 months–2 years and one aged 14–18 years. There was also a pars petrosa from a non-adult, possibly from late fetal livebirth. There was an unusual growth present on this bone, which might be a new bone formation resembling the hemorrhaging similar to lesions that occur in scurvy. There is no published literature that suggests that scurvy can be found in this region, although it does occur in the skull vault (Stuart-Macadam 1989). The rest of the skull, particularly the orbits would be needed to diagnose this as scurvy. Pathology found in the adults included a possible healed rib trauma occurring on the mid-shaft, and an ulna shaft exhibited active infection.
- 5.4.3 *Unstratified material 1000 (Group 0)*
- 5.4.4 There were a total of 2 adults based on two mandibles and 1 non-adult aged 5–8 years. One mandible suggested an age of 17–25 years. There was a pelvis fragment of an adult male. The left adult mandible

fragment had very heavy attrition with the 2^{nd} molar crown completely worn with the root exposed. There was an abscess present under the canine and 1^{st} premolar, and active infection around the abscess stretching to the 2^{nd} pre-molar.

- 5.4.5 Disarticulated bone associated with articulated human skeletons
- 5.4.6 Disarticulated bone associated with HS 1 (1049) contained 1 adult and 1 non-adult, both had undetermined age and sex.
- 5.4.7 Disarticulated bone associated with HS 3 (1055) contained 1 non-adult with an undetermined age, but it is under the age of 14 years as the epiphyses were not fused.
- 5.4.8 Disarticulated bone associated with HS 7 (1067) contained 1 non-adult aged 14–18 years.
- 5.4.9 Disarticulated bone associated with HS 12 (1083) contained 1 adult with an undetermined age and sex.
- 5.4.10 Disarticulated bone associated with HS 13 (1085) contained 2 adults based on 2 left ulnae, and 1 non-adult aged 14–18 years.
- 5.4.11 Disarticulated bone associated with HS 17 (1095) contained 1 adult with undetermined age and sex and 1 non-adult aged from birth–2 months based on a mandible fragment where the tooth crowns were visible but no roots had formed.
- 5.4.12 Overall, there was a total of 9 adults and a total of 11 non-adults among the disarticulated bone in this sample.

5.5 Conclusion

- 5.5.1 The human skeletal material exhibited a mixed demographic, comprising five non-adults, five adults over the age of 30 years, and one elderly individual over the age of 60+. Age could not be determined for four individuals. There were more females than males, although there were some restrictions with determining the sex of some individuals as the necessary bones were not available.
- 5.5.2 Completeness was an issue as most of the skeletons were between 0–20% and 20–40% complete. There was also poor preservation among the sample with only one skeleton (HS 1) being 80–100% complete with excellent preservation. Not much more can be inferred from this population as it is a small sample size, and there was not a great deal of pathology that could provide any further insights. Most of the observed pathology was age related, and individuals where teeth were present provided some interesting dental pathology. HS 2/13 was particularly interesting and it would be beneficial to radiograph the fracture and check for osteoporosis.

6 Environmental data

6.1.1 No potential for the recovery of environmental data was identified during the archaeological works and no bulk soil samples were collected.

7 Discussion and recommendations

7.1 Discussion

- 7.1.1 Archaeological deposits and features of local significance were identified within the proposed development. These features appear to be associated with the former St Sepulchre's Nunnery (founded c AD 1100 and dissolved in 1536), and comprised a short segment of the nunnery's former southern boundary wall (Group 1), a soil horizon (Group 2), and some 23 inhumation burials (Group 3). Finds included a small assemblage of medieval pottery with a broad date range of c AD 1350–1550, in addition to residual Roman material.
- 7.1.2 Assessment of the human remains demonstrated that the cemetery population was composed of males and females, as well as children and adults, indicating a mixed demographic. All of the burials were

aligned approximately east-north-east by west-south-west. Seven burials contained iron nails in their backfill, potentially the remnants of timber coffins. The cemetery is likely to relate to a parochial church located within the nunnery, which was later assimilated into the Parish of St Mary Bredin (Bennett 1987, 41; Urry 1967, 211). Medieval burials identified at no. 19 Oaten Hill, and at no. 14 Cossington Road, are likely to be parts of the same cemetery (Bennett 1983; Linklater 2007).

7.2 Recommendations

- 7.2.1 No further analysis of the data is proposed.
- 7.2.2 A summary report (*c* 2,000 words) of the results will be published in *Canterbury's Archaeology*, the annual report of the Canterbury Archaeological Trust.
- 7.2.3 The archaeological works have provided new data which will be of help in informing the local planning authority on any future mitigation requirements. Medieval archaeological deposits and features, including human burials, survive between +21.38m OD and +22.41m OD. These deposits and features extend beyond the present development area into adjacent properties to the north and east, including no. 22 Oaten Hill and no. 41 Old Dover Road.
- 7.2.4 It is recommended that the results from this watching and recording brief be integrated with any new data that might be recovered from future investigations within the area of the former St Sepulchre's Nunnery precinct.

References

- Anderson, T. 1996. Post-excavation and research. II human bone studies: 8 Vernon Place. *Canterbury's Archaeology* 1994–1995, 41.
- Anderson, T. Andrews, J. and Houliston, M. 1995. *Archaeological watching brief: 8 Vernon Place, Canterbury*. Unpublished report, Canterbury Archaeological Trust.
- Andrews, G. 1985. *The archaeology of Canterbury: an assessment*. Unpublished report, Historic Buildings and Monuments Commission for England.
- Aufderheide, A. C. and Rodriquez-Martin, C. 1998. *The Cambridge Encyclopedia of Human Palaeopathology*. Cambridge University Press.
- Bass, W M. 2005. *Human Osteology. A Laboratory and Field Manual.* 5th Edition. Missouri Archaeological Society.
- Bennett, P. 1983. 1 Cossington Road. Canterbury's Archaeology 1982–1983, 27.
- Bennett, P. 1987. 1 Oaten Hill Court. In Frere, S., Bennett, P., Rady, J. and Stow, S. (eds), *Canterbury excavations intra- and extra-mural sites 1949–55 and 1980–84*. The archaeology of Canterbury 7, Kent Archaeological Society, Maidstone, 41–43.
- Brent, J. 1861. Roman cemeteries in Canterbury, with some conjectures concerning its earliest inhabitants. *Archaeologia Cantiana* 4, 27–34.
- Brickley, M and Mckinley, M. 2004. Guidelines to the Standards for Recording Human Remains. *IFA*, *Paper No.7*.
- Brooks, S and Suchey, J M. 1990. Skeletal Age Determination on the Os Pubis: Comparison of the Ascadi-Nemeskeri and Suchey-Brooks Methods. *Human Evolution* 5, 227–238.
- Brothwell, D. 1981. *Digging up Bones*. 3rd Edition Cornell University Press.
- Buikstra, J.E. and Ubelaker, D.H. 1994. *Standards for Data Collection from Human Skeletal Remains*. Arkansas Archaeological Survey Report Number 44, Feyetville, Arkansas.
- Cross, R. 2010. *CA/09/01330/FUL 23 Oaten Hill, Canterbury. Archaeological notes and recommendation.* Memorandum ref: 10/3/2 to Ben Young, Development Control, dated 1/02/2010, Canterbury City Council.
- Diack, M. 2005. Archaeological investigations at Canterbury Police Station. Archaeologia Cantiana 125, 27–42.
- Hasted, E. 1801. The history of the ancient metropolitan city of Canterbury. Canterbury.
- Helm, R. 2003. The Hoystings. Canterbury's Archaeology 2000–2001, 19–20.
- Helm, R. 2004. Vernon Grange, No. 35 Old Dover Road. Canterbury's Archaeology 2002–2003, 17.
- Helm, R. 2009. Rhodaus Town, Canterbury. Canterbury's Archaeology 2007–2008, 1-6.
- Helm, R. 2010. Archaeological evaluation at 23 Oaten Hill, Canterbury. Unpublished report, Canterbury Archaeological Trust.
- Hicks, A. 1999. 24a Old Dover Road. Canterbury's Archaeology 1996–1997, 6-7.
- Hicks, A. 2002. Old Dover Road. Canterbury's Archaeology 1997–1998, 7.
- Hillson, S. 2000. Dental Pathology. In Katzenberg, M.A. and Saunders, S.R. (eds.) *Biological Anthropology of the Human Skeleton*. Wiley-Hiss, New York.
- Hillson, S. 2005. Teeth. Cambridge University Press, Cambridge.
- Houliston, M. 1996. An archaeological watching brief at 8 Vernon Place, Canterbury. *Canterbury's Archaeology* 1994–1995, 13.
- Iscan, M.Y. and Loth, S.R. 1986. Estimation of Age and Determination of sex from the Sternal Rib. In K.J. Reichs (ed.), *Forensic Osteology: Advances in the Identification of Human Remains*. Springfield, Illinois, 68–89.
- Linklater, A. 2007. Watching and recording brief at 14 Cossington Road, Canterbury. Unpublished archive, Canterbury Archaeological Trust.
- Lovejoy, C O, Meindl, R S, Pryzbeck T R and Mensforth R P.1985. Chronological Metamorphosis of the Auricular surface of the Illium: A New Method for Determination of Adult Skeletal Age-At-Death. *American Journal of Physical Anthropology*. 68, 15–28.
- Meindl, R.S. and Lovejoy, C.O. 1985. Ectocranial Suture Closure: A Revised Method for the Determination of Skeletal Age at Death Based on the Lateral-Anterior Sutures. *American Journal of Physical Anthropology* 68, 29–45.

- Millett, M. 2007. Roman Kent. In Williams, J. (ed.), The archaeology of Kent to AD 800. Woodbridge, 135-186.
- Morrees, C, Fanning, E and Hunt, E. 1963. Age Variation of Formation Stages for Ten Permanent Teeth. *Dental Research* 42(6), 1490–1502.
- Ortner, D.J. 1981. *Identification of Pathological Conditions in Human Skeletal Remains*. Smithsonian Institute Press.
- Phenice, T.W. 1969. A Newly Developed Visual Method of Sexing in the *Os Pubis. American Journal of Physical Anthropology*. 30, 297–301.
- Pilbrow, J. 1871. Discoveries made at Canterbury in 1868. Archaeologia 18, 158.
- Roberts, C. and Manchester, K. 2005. *The Archaeology of Disease, Third Edition*. Cornell University Press, Ithaca, New York.
- Schaefer, M., Black, S. and Scheuer L. 2009. Juvenile Osteology: A Laboratory and Field Manual. London.
- Stuart-Macadam P.L. 1989. Nutritional Deficiency Diseases: A Survey of Scurvy, Rickets, and Iron Deficiency Anemia. In Iscan, M Y and Kennedy A R K (eds), *Reconstruction of Life from the Skeletons*. Alan. R. Liss, 201–222.
- Ubelaker, D.H. 1989. *Human Skeletal Remains: Excavation, Analysis and Interpretation*. Washington DC, Smithsonian Institute Press.
- White, T.D., and Folkens, P.A. 2005. The Human Bone Manual. Elsevier Academic Press.
- Urry, W. 1967. Canterbury under the Angevin Kings. London.

Appendix 1. OASIS data collection form: England

OASIS ID: canterbu3-111659

Project details

Project name 23 Oaten Hill, Canterbury

Short description of the project

A watching and recording brief was carried out on land at no. 23 Oaten Hill, Canterbury, on behalf of Cardy Construction Ltd, following the exposure of human remains during groundworks associated with the erection of a single-storey residential property (CA/10/01937/FUL). The work was conducted by the Canterbury Archaeological Trust between 23–28 June 2011, under a Licence for the Removal of Human Remains granted by the Ministry of Justice on 23 June 2011 (licence no. 11-0083). The development area is located within the grounds of the former nunnery of St Sepulchre's (established c AD 1100). Two short segments of wall, probably representing different phases of the southern boundary wall of the former nunnery, were located in the south-east corner of the development area fronting Old Dover Road. In the north-east corner of the development area, within the grounds of the former nunnery, a soil horizon truncated by some 23 inhumation burials, was identified. The burials were aligned approximately east-north-east by west-south-west, and included males and females, as well as children and adults. Seven of the burials had potential timber coffins, represented by iron coffin nails. A small assemblage of pottery recovered from the soil horizon and backfill of the graves indicate a medieval date (c AD 1350–1550), and the burials are likely to form part of a larger cemetery known to have been attached to a parochial church within the nunnery. Comparable burials previously identified at no. 19 Oaten Hill and no. 14 Cossington Road likely represent parts of this same cemetery.

Project dates Start: 23-06-2011 End: 28-06-2011

Previous/future work No

Any associated project

reference codes CA/09/01330/FUL - Planning Application No.

Any associated project

reference codes CA/10/01937/FUL - Planning Application No.

Type of project Research project

Site status Area of Archaeological Importance (AAI)

Site status Conservation Area

Current Land use Residential 1 - General Residential

Monument typeNUNNERY MedievalMonument typeGARDEN Post MedievalMonument typeCEMETERY Medieval

Significant Finds POT Medieval

Investigation type' Watching Brief' Prompt Conservation/ restoration

Project location

Country England

Site location KENT CANTERBURY CANTERBURY 23 Oaten Hill

Postcode CT1 3HY

Study area 105.00 Square metres Site coordinates TR 15234 57264

51.2731901447 1.086123350950 51 16 23 N 001 05 10 E Point

Height OD/Depth Min: 20.96m Max: 21.88m

Project creators

Name of OrganisationCanterbury Archaeological TrustProject brief originatorContractor (design and execute)Project design originatorCanterbury Archaeological Trust

Project director/managerRichard HelmProject supervisorRichard HelmType of sponsor/funding bodyDeveloper

Name of sponsor/funding body Cardy Construction Ltd

Project archives

Physical Archive recipient Canterbury Archaeological Trust

Physical Archive ID

Physical Contents 'Animal Bones', 'Ceramics', 'Glass', 'Human Bones',

'Metal','Worked stone/lithics' Canterbury Archaeological Trust

Digital Archive recipient

Digital Archive ID

'Animal Bones', 'Ceramics', 'Glass', 'Human Bones', 'Metal', 'Worked Digital Contents

stone/lithics', 'Stratigraphic', 'Survey'

Digital Media available 'Database', 'Images raster / digital photography', 'Images

vector', 'Spreadsheets', 'Survey', 'Text' Canterbury Archaeological Trust

Paper Archive recipient Paper Contents

'Animal Bones', 'Ceramics', 'Glass', 'Human

Bones', 'Metal', 'Stratigraphic', 'Survey', 'Worked stone/lithics'

'Correspondence', 'Drawing', 'Notebook - Excavation', 'Research', 'General Paper Media available

Notes', 'Photograph', 'Plan', 'Report', 'Section', 'Survey'

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title Archaeological watching and recording brief at 23 Oaten Hill, Canterbury

Author(s)/Editor(s) Helm, R. and Jedrzejewksi, H.

ii + 20 pp text + 5 Figures + 11 Tables + 17 Plates + 2 Appendices Other bibliographic details

Entered by Richard Helm (richard.helm@canterburytrust.co.uk)

Entered on 10 October 2011

Appendix 2. List of contexts

Context	Type	Description	Inclusions	Interpretation
1001	Layer	Dark grey brown, moderate, silty clay loam	common small subrounded flint, rare small to medium glass, common small to medium roots, rare small carbon, rare small chalk	Modern topsoil
1002	Layer	Dark orange brown, firm, silty clay loam	abundant small rounded to subrounded flint gravel, rare small tile	Garden path
1003	Layer	Light yellow grey, firm, chalk		Bedding layer
1004	Layer	Mid grey brown, moderate, silty clay loam	common small rounded to subangular gravel, rare small to medium tile, rare small slate, rare medium subangulalr flint	Subbase layer
1005	Wall	Dry laid, coursed, frogged red stock bricks (230mm x 65mm x 114mm)	·	Garden wall/path border
1006	Wall	Roughly coursed, dressed subangular flint nodules and coursed, frogged red stock bricks (230mm x 65mm x 114mm), bonded with a light grey yellow lime mortar with rare chalk flecks		Retaining garden boundary wall
1007	Fill	Dark grey brown, moderate, silty clay loam	rare small subrounded gravel, common small to medium roots, rare large roots, rare small chalk	Fill of cut 1008
1008	Cut	Linear cut 1.39m depth		Garden terrace
1009	Layer	Tarmacadam		Modern carpark
1010	Layer	Mid olive grey, moderate, silty clay loam	rare small chalk, rare small subrounded to subangular flint, common small to medium brick/tile	Levelling
1011	Layer	Dark olive grey, moderate, silty clay loam	common small roots, rare large roots, common small to medium subangular to subrounded flint, rare small glass, rare small brick/tile, rare small chalk, common small carbon	Garden soil
1012	Layer	Dark olive grey, moderate, silty clay loam	common small roots, rare large roots, common small to medium subangular to subrounded flint, rare small glass, rare small brick/tile, rare small chalk, common small carbon	Garden soil
1013	Fill	Dark olive grey, moderate, silty clay loam	common small roots, rare medium roots, common small to medium subangular to subrounded flint, rare small brick/tile, rare small carbon, rare small bone, rare small glass	Fill of cut 1015
1014	Fill	Dark olive grey, firm, silty clay loam	abundant small to medium chalk, rare small roots, rare small to medium tile, rare small to medium subangular to sub rounded flint	Fill of cut 1015
1015	Cut	Sub-circular cut (0.56m diameter by 0.36m depth)	0	Pit/post-hole
1016	Layer	Mid brownish orange, firm, clay sand	very abundant small to medium rounded to subangular flint gravel	Metalled surface
1017	Layer	Dark olive grey, firm, silty clay loam	abundant small to medium rounded to subangular flint, rare small carbon, rare small to medium tile	Bedding layer
1018	Fill	Dark olive grey, moderate, silty clay loam	common small rounded to subangular grave, rare small carbon, rare small to medium tile	Fill of cut 1021
1019	Fill	Light yellow grey, firm, chalk	rare small mid grey brown silty clay mottles	Fill of cut 1021
1020	Fill	Dark grey brown, moderate, silty clay loam	abundant small to large human bone, abundant small to medium chalk	Fill of cut 1021
1021	Cut	Sub-circular cut (0.95m radius x 0.39m deep)		Charnel pit
1022	Fill	Light yellow grey, firm, chalk	rare small tile, rare small to medium rounded to subangular flint	Fill of cut 1024

Context	Туре	Description	Inclusions	Interpretation
1023	Fill	Light yellow grey, firm, chalk	abundant small to medium dark olive grey silty clay loam lenses, common small to medium tile, rare small to medium rounded to subangular flint, very rare large subrounded flint	Fill of cut 1024
1024	Cut	Shallow sloping terrace	subrounded finit	Shallow terrace
1025	Layer	Mid olive grey brown, moderate, silty clay loam	common small chalk, rare small subangular to tounded flint, rare small roots, rare small to medium brick and tile, very rare small coal	Garden soil
1026	Layer	Mid olive grey brown, moderate, silty clay loam	abundant small rounded to subrounded to subangular flint gravel, rare small chalk, rare small to medium pottery, rare small to medium tile	Metalled surface
1027	Fill	Dark olive grey brown, moderate, silty loam	common small chalk, rare small roots, rare small subrounded to subangular flint, common dark grey ash	Fill of 1029
1028	Fill	Dark olive grey brown, moderate, silty loam	common small chalk, rare small roots, rare small subrounded to subangular flint, common dark grey ash	Fill of 1029
1029	Cut	Subcircular cut (1.22m diameter x 0.43m deep)		Pit
1030	Fill	Mid grey brown, moderate, silty clay loam	very abundant small chalk, rare small to medium subangular to rounded flint	Fill of cut 1035
1031	Fill	Dark olive grey, moderate, silty clay loam	common small chalk, rare small subangular to rounded flint, rare small to medium tile	Fill of cut 1035
1032	Fill	Dark olive grey, moderate, silty clay loam	abundant small chalk, rare small roots, rare small subangular to rounded flint	Fill of cut 1035
1033	Fill	Dark olive grey, moderate, silty clay loam	common small rounded to subangular flint, common medium to large brick, common medium to large chalk, rare small to medium tile	Fill of cut 1034
1034	Cut	Subcircular pit (0.65m diameter x 0.43m deep)		Pit
1035	Cut	Subrectangular pit (1.50m long x 1.25m wide x +0.49m deep)		Pit
1036	Fill	Dark olive brown, moderate, silty clay loam	common small roots, common small to medium rounded to subrounded flint, rare medium mortar, rare large bone, rare small carbon	Fill of cut 1037
1037	Cut	subcircular cut (0.60m diameter x 0.56m deep)		Pit
1038	Layer	Dark olive grey brown, moderate, silty clay loam	rare small to medium coal, common small chalk, common small CBM, rare medium subangular flint, rare small subrounded flint, rare small roots	Garden soil
1039	Layer	Dark olive grey brown, moderate, silty clay loam	abundant medium rounded to subrounded flint, rare small chalk, rare small coal	Metalled surface
1040	Layer	Light yellow grey, firm, chalk		Bedding layer
1041	Fill	Dark grey black, loose, silty loam	common small roots, common small subrounded to rounded flint, rare large tile, very rare large frogged yellow brick	Fill of cut 1042
1042	Cut	Circular cut (0.66m diameter x 0.63m deep)	. 55	Post-hole
1043	Layer	Mid orange yellow, firm, clay sand	very abundant small subangular to rounded flint	Metalled surface
1044	Layer	Mid grey brown, firm, silty clay loam	very abundant light grey yellow chalk, rare medium brick	Bedding layer
1045	Cut	Shallow terrace cut (0.20m deep)		Terrace
1046	Wall	Coursed, frogged red stock bricks (230mm x 65mm x 114mm), light yellow sandy mortar with common small chalk		Garden wall

Context	Type	Description	Inclusions	Interpretation
1047	Cut	Linear cut (0.26m wide x 0.35m		Foundation
		deep)		trench wall 1046
1048	Layer	Mid olive grey brown, moderate,	common, medium to large subrounded flint,	Cemetery soil
	,	silty clay loam	rare small chalk, rare small to medium roots, very rare large roots	,
1049	Fill	Mid olive grey brown, moderate,	100ts, very rare rarge roots	Fill of cut 1051
		silty clay loam		
1050	Skeleton	Human skeleton		Skeleton HS1
1051	Cut	Subrectangular cut		Cut of grave HS1
1052	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1054
1053	Skeleton	Human skeleton		Skeleton HS2/13
1054	Cut	Subrectangular cut		Cut of grave HS2/13
1055	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1057
1056	Skeleton	Human skeleton		Skeleton HS3
1057	Cut	Subrectangular cut		Cut of grave
		-		HS3
1058	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1060
1059	Skeleton	Human skeleton		Skeleton HS4
1060	Cut	Subrectangular cut		Cut of grave HS4
1061	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1063
1062	Skeleton	Human skeleton		Skeleton HS5
1063	Cut	Subrectangular cut		Cut of grave HS5
1064	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1066
1065	Skeleton	Human skeleton		Skeleton HS6
1066	Cut	Subrectangular cut		Cut of grave HS6
1067	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1069
1068	Skeleton	Human skeleton		Skeleton HS7
1069	Cut	Subrectangular cut		Cut of grave
1070	Fill	Mid olive grey brown, moderate,		HS7 Fill of cut 1072
		silty clay loam		
1071	Skeleton	Human skeleton		Skeleton HS8
1072	Cut	Subrectangular cut		Cut of grave HS8
1073	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1075
1074	Skeleton	Human skeleton		Skeleton
1075	Cut	Subrectangular cut		HS9/16 Cut of grave HS9/16
1076	Fill	Mid olive grey brown, moderate,		Fill of cut 1078
1077	Skeleton	silty clay loam Human skeleton		Skeleton HS10
1077	Cut	Subrectangular cut		Cut of grave
				HS10
1079	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1081
1080	Skeleton	Human skeleton		Skeleton HS11
1081	Cut	Subrectangular cut		Cut of grave
				HS11

Context	Type	Description	Inclusions	Interpretation
1082	Fill	Mid olive grey brown, moderate,		Fill of cut 1084
1002	G1 1 .	silty clay loam		G1 1 . IIG10
1083	Skeleton	Human skeleton		Skeleton HS12
1084	Cut	Subrectangular cut		Cut of grave HS12
1088	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1090
1089	Skeleton	Human skeleton		Skeleton HS14
1090	Cut	Subrectangular cut		Cut of grave HS14
1091	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1093
1092	Skeleton	Human skeleton		Skeleton HS15
1093	Cut	Subrectangular cut		Cut of grave
				HS15
1094	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1096
1095	Skeleton	Human skeleton		Skeleton HS17
1096	Cut	Subrectangular cut		Cut of grave
1007	D'11	N. 1. 1.		HS17
1097	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1099
1098	Skeleton	Human skeleton		Skeleton HS18
1099	Cut	Subrectangular cut		Cut of grave HS18
1100	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1102
1101	Skeleton	Human skeleton		Skeleton HS19
1102	Cut	Subrectangular cut		Cut of grave HS19
1103	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1105
1104	Skeleton	Human skeleton		Skeleton HS20
1105	Cut	Subrectangular cut		Cut of grave HS20
1106	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1108
1107	Skeleton	Human skeleton		Skeleton HS21
1108	Cut	Subrectangular cut		Cut of grave HS21
1109	Fill	Mid olive grey brown, moderate,		Fill of cut 1111
1110	Skeleton	silty clay loam Human skeleton		Skeleton HS22
1111	Cut	Subrectangular cut		Cut of grave
1112	Fill	Mid olive grey brown, moderate,		HS22 Fill of cut 1114
1114	1 111	silty clay loam		1 m 01 out 1114
1113	Skeleton	Human skeleton		Skeleton HS23
1114	Cut	Subrectangular cut		Cut of grave HS23
1115	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1117
1116	Skeleton	Human skeleton		Skeleton HS24
1117	Cut	Subrectangular cut		Cut of grave HS24
1118	Fill	Mid olive grey brown, moderate, silty clay loam		Fill of cut 1120
1119	Skeleton	Human skeleton		Skeleton HS25
1120	Cut	Subrectangular cut		Cut of grave
				HS25

Context	Туре	Description	Inclusions	Interpretation
1121	Layer	Dark olive grey, moderate, silty clay loam	common small roots, rare large roots, common small to medium subangular to subrounded flint, common small to medium brick, common small chalk	Deposit
1122	Wall	Coursed, frogged red stock bricks (230mm x 65mm x 114mm), light yellow grey sandy mortar with common small chalk		Brick buttress
1123	Wall	Roughly coursed subrounded chalk and subrounded to angular flint in a light yellow sandy mortar with common chalk		Wall
1124	Wall	Roughly coursed subrounded flint, external face dressed, light yellow sandy mortar		Wall
1125	Wall	Roughly coursed subrounded flint, external face dressed, light yellow sandy mortar		Wall
1126	Layer	Light yellow orange, moderate, silty clay	rare small to medium subrounded flint	Geology
1127	Layer	Light yellow orange, moderate, silty clay	common small to medium subrounded to subangular flint, rare large subrounded flint	Geology
1128	Layer	Mid yellow orange, moderate, silty clay	rare medium to large subrounded flint	Geology
1129	Layer	Light yellow white, firm, chalk		Geology
1130	Wall			Boundary wall



Plate 1. Machine excavation of raised rear garden area, looking north-east



Plate 4. South-east facing section after hand cleaning (scale: 1.0m)



Plate 2. General view of proposed building footprint after groundworks, looking north-east



 $Plate\ 5.\ Excavation\ of\ HS1\ in\ progress,\ looking\ north$



Plate 3. South-west facing section after hand cleaning (scale: 1.0m)



Plate 6. HS1, grave 1051, looking north-east (scale: 0.20m)



Plate 7. HS2/13,grave 1054, with HS10 and HS14 visible below, looking north-east (scale: 0.10m)



Plate 8. HS4, grave 1060, looking east (scale: 0.20m)



Plate 9. HS5, grave 1063, looking north-east (scale: 0.20m)



Plate 10. HS6, grave 1066, looking north-east (scale: 0.10m)



Plate 11. HS7, grave 1069, looking north (scale: 0.10m)



Plate 12. HS9/16, grave 1072, looking north-west (scale: 0.10m)



Plate 13. HS10, grave1078, looking north-east (scale: 0.10m)



Plate 14. HS12, grave 1084, looking north-east (scale: 0.10m)



Plate 15. HS15, grave 1093, looking north-east (scale: 0.10m)



Plate 16. North-west facing section, showing walls 1123, 1124 and 1125, looking south-east (scale: 1.0m)



Plate 17. Detail showing walls 1122, 1123, 1124 and 1125, looking south-east (scale: 1.0m)

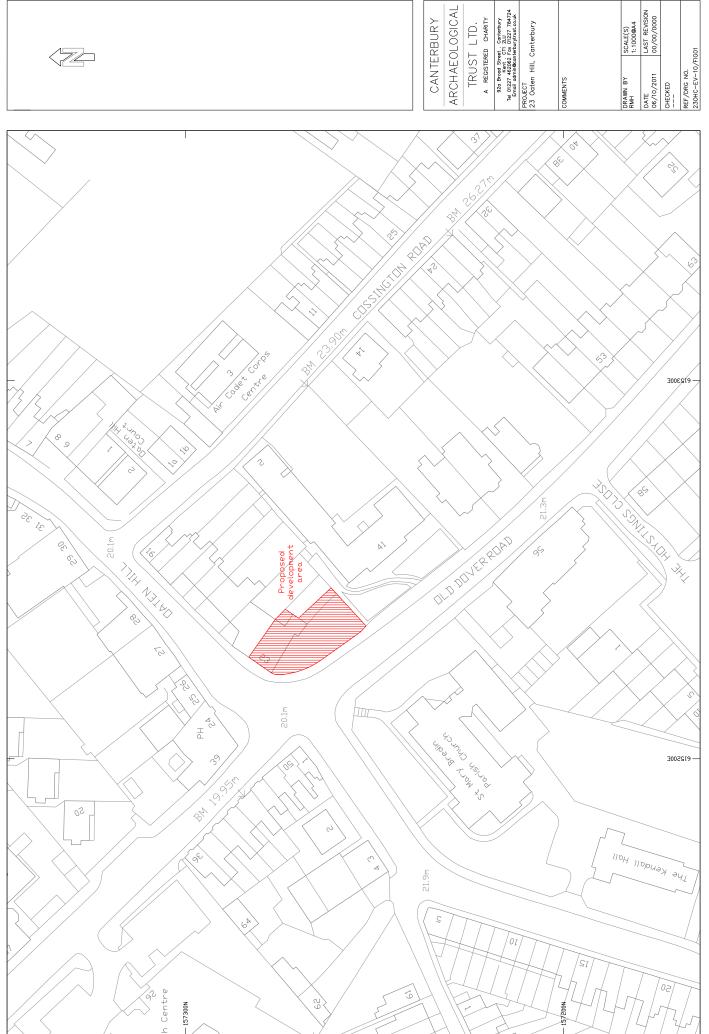


Figure 1. Location of proposed development area

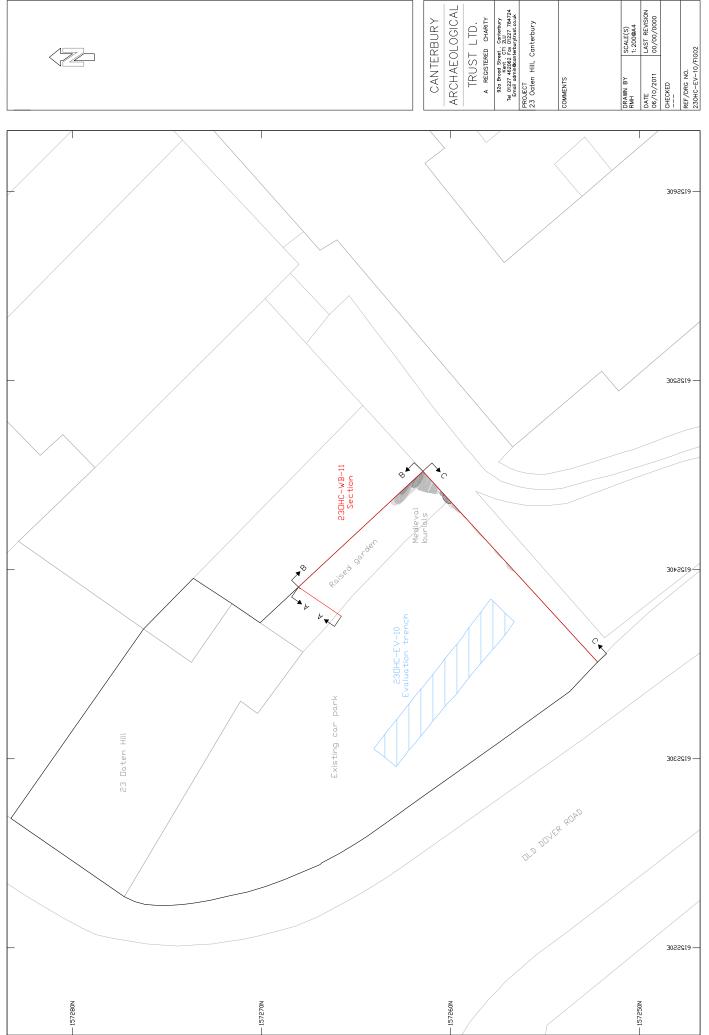
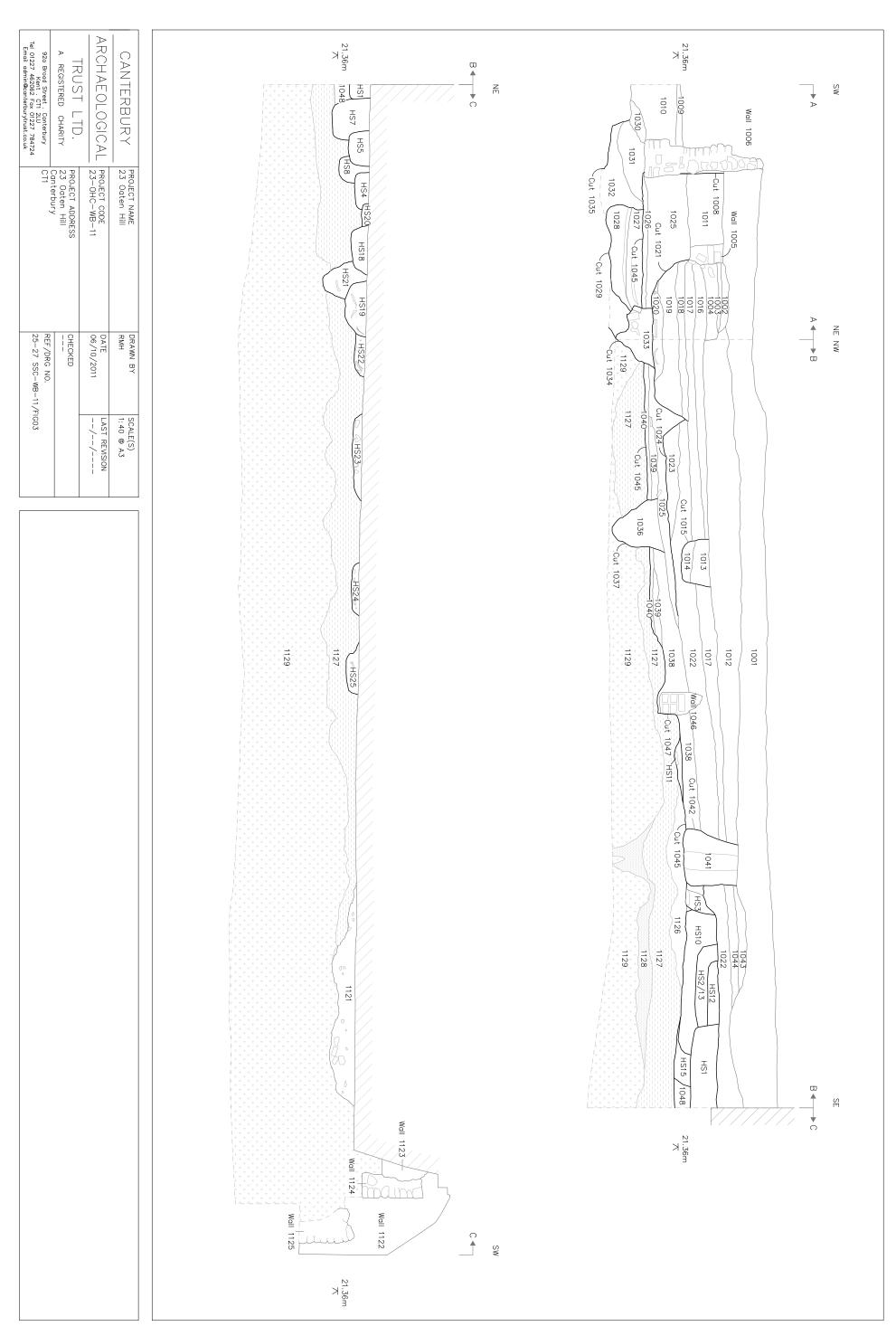


Figure 2. Plan showing location of machine cut section (red), medieval burials (grey) and previous evaluation trench (blue)



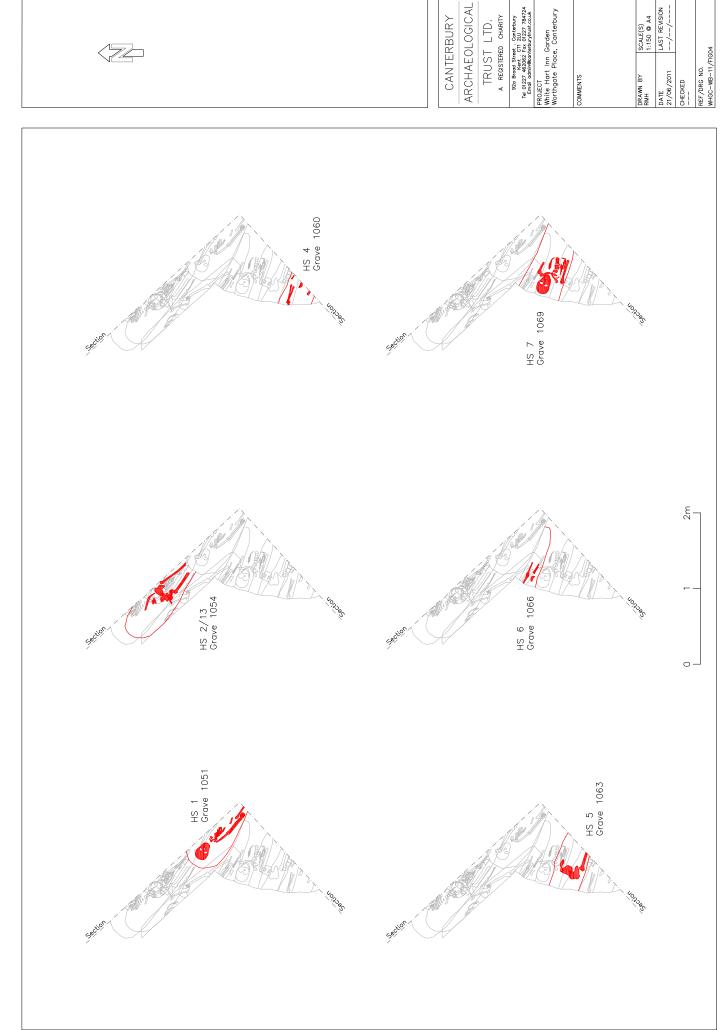


Figure 4. Plan of inhumation burials HS1, HS2/13, HS4, HS5, HS6 and HS7



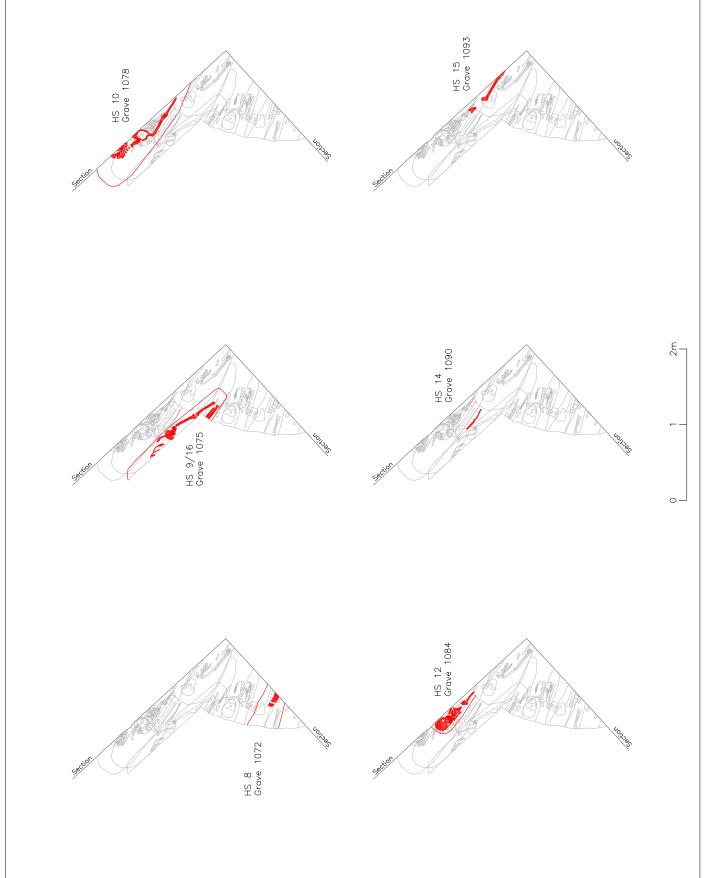


Figure 5. Plan of inhumation burials HS8, HS9/16, HS10, HS12, HS14 and HS15 $\,$