

The Paddock

The Royal Naval Hospital

Haslar

Gosport



## Archaeological Evaluation Report



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# THE PADDOCK, ROYAL NAVAL HOSPITAL HASLAR, GOSPORT, HANTS.

## *ARCHAEOLOGICAL EVALUATION REPORT*

### CONTENTS

Summary .....	1
1 Introduction .....	2
1.1 Location and scope of work .....	2
1.2 Geology and topography .....	2
1.3 Archaeological and historical background .....	2
Acknowledgements .....	6
2 Evaluation Aims .....	6
2.1 The aims of the evaluation appear below: .....	6
3 Evaluation Methodology .....	7
3.1 Scope of fieldwork .....	7
3.2 Fieldwork methods and recording .....	7
3.3 Artefacts .....	8
4 Results: General.....	8
4.1 Soils and ground conditions .....	8
4.2 Distribution of archaeological deposits .....	9
5 Results: Descriptions .....	9
5.1 Description of deposits .....	9
5.2 Finds .....	21
6 Discussion And Interpretation .....	22
6.1 Reliability of field investigation.....	22
6.2 Overall interpretation.....	22
7 Impact of the Development .....	27
8 Archaeological Potential in Relation to Outline Research Design .....	27
8.1 Periods represented.....	27
8.2 Possible taphonomic issues .....	27
8.3 Range and preservation of finds .....	27
8.4 Summary of anticipated significance/ potential .....	28
9 Conclusion.....	28
Appendix 1 Archaeological Context Inventory .....	29
Appendix 2 Summary of the excavated burials.....	1
Bibliography .....	2
Summary of Site Details.....	3

### LIST OF FIGURES

- Fig. 1 Site location
- Fig. 2 Site location
- Fig. 3 Location of the trenches within the Paddock
- Fig. 4 Trench 1, plan and section
- Fig. 5 Trench 4, plan and section
- Fig. 6 Trench 5, plan and section
- Fig. 7 Trench 6, plan and section
- Fig. 8 Trench 8, plan and section
- Fig. 9 Trench 9, plan and sections
- Fig. 10 Trench 10, plan and section

- Fig. 11 Trench 11, plan and sections  
Fig. 12 Trench 12, plan and section  
Fig. 13 Trench 13, plan and section  
Fig. 14 Trench 14, plan and section  
Fig. 15 Trench 15, plan and section  
Fig. 16 Trench 16, plan and section  
Fig. 17 Trench 17, plan and section  
Fig. 18 Trench 18, plan and section  
Fig. 19 Trench 19, plan and sections  
Fig. 20 Trench 20, plan and section  
Fig. 21 Trench 22, plan and section  
Fig. 22 Trench 23, plan and section  
Fig. 23 Trench 9, Grave 906 containing skeletons 912, 913 and 914, and Trench 12, Burial 1221  
Fig. 24 Trench 14, Intercutting burials 1401 and 1402, and Trench 15, Grave 1523 containing skeletons 1510, 1511 and 1512

## SUMMARY

*In August 2005, Oxford Archaeology (OA) carried out a field evaluation in the Paddock, Royal Naval Hospital Haslar, Gosport, Hants. (NGR: SZ 6150 9849), on behalf of Defence Estates of the Ministry of Defence. The evaluation revealed 169 graves within 11 trenches, all located towards the eastern half of the site. There appeared to be a western limit to the burials, broadly correlating with a fall-off in the natural topography towards what appears to have been a small waterway that originally bounded the western limit of the Paddock. Considerable levelling of the modern ground surface had occurred in recent times, with the depth of modern backfill exceeding 3 m in the north-western part of the site (Trench 4).*

*The graves were closely spaced but largely parallel suggesting a short time period between the excavation of adjacent burials and/or the use of above-ground grave markers. Intercutting was very uncommon. In general, the grave alignment did not follow the traditional Christian west-east orientation. Instead, most graves were aligned north-west - south-east or north-east - south-west. No mass graves were discovered. However, three exposed graves revealed multiple burials within the same grave cut, with one grave containing the remains of four individuals. The excavated graves revealed that the majority of the dead had been interred within plain wooden coffins, and not in their hammocks, as was previously believed.*

*Skeletal preservation was generally fair to poor with marked leaching of bone mineral. Nevertheless, it was possible osteologically to ascertain the age, sex and stature of most excavated skeletons, and to discern a number of dental and skeletal pathologies. There is considerable potential for future osteological and funerary archaeological analysis of this assemblage.*

*One brick-built structure (2 m x 2 m) was discovered within Trench 11. Brick typologies suggest an 18th-century date. The structure had a brick floor laid directly upon the natural geology, and three brick-and-mortar walls. The function of the structure is unclear but may relate to the use of the Paddock as a garden (eg a gardener's or grave-digger's shed) or may have had a more military function (eg an ammunition store).*

## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 In August 2005, Oxford Archaeology (OA) carried out an archaeological evaluation at the Paddock, Royal Naval Hospital Haslar, Gosport, Hants., on behalf of the Ministry of Defence in accordance with a brief set by Martin Brown of Defence Estates, Environmental Support Team, and a WSI produced by OA. Both were agreed with the County Archaeologist Steven Appleby.

### 1.2 Geology and topography

- 1.2.1 The site is located within the precincts of the Royal Naval Hospital Haslar in the parish of Alverstoke, Gosport, Hampshire. The hospital grounds extend between the Minister of Defence restricted area of Fort Blockhouse to the north-east, Haslar Road to the north-west, Dolphin Way to the south-west, and Spithead and the Solent to the south-east. (Figs 1 and 2). The Paddock is an area of open ground, measuring 3.1 hectares, located to the south-west of the Haslar Hospital buildings, and south and west of a row of Georgian houses known as the Terrace. The area formerly included the buildings and gardens of the Terrace (built in 1798) as well as the Garden of Remembrance, a walled cemetery established in 1826. Today the Paddock is bounded by wire fencing and an outer boundary wall to the south, west and north, its limits defined by the Haslar Road and Dolphin Way. It adjoins the brick boundary wall of the Garden of Remembrance to the north-east, and the garden walls of the Terrace to the north. Its eastern limit is defined by another brick wall.
- 1.2.2 The geological formation of the Haslar Hospital site consists of the fluvio-alluvial beds of Hampshire and the Isle of Wight. Five geological strata have been identified at Haslar, the uppermost being surface soils, gravelly beds, sand and clay to a depth of approximately 40 m (National Geographic Survey).
- 1.2.3 The Haslar Hospital and associated grounds are situated upon former salt marsh and agricultural land. The hospital was originally constructed on the site of a farm owned by one Hazelworth. In the past two centuries, considerable drainage and reclamation of the land has occurred on the peninsula, greatly altering the natural topography. Several early prints of the hospital published at the end of the 18th-century show the water approaching much nearer to the hospital than in the present day (Tait 1906, 6). Early maps of 1754 and 1867 show an inlet of Haslar Creek and mud flats directly to the north-west of the Paddock, which appears to have been blocked off. Two small bodies of water lay just beyond the western limit of the Paddock. The irregular shape of the Paddock boundary to the south and south-west suggests that the original field boundary was defined by a waterway emptying into the Solent.

### 1.3 Archaeological and historical background

- 1.3.1 The archaeological background to the evaluation has been the subject of a separate desk-based study (OA 2005), the results of which are presented below. The site itself has produced significant archaeological evidence of 18th- and 19th- century burials.
- 1.3.2 The Haslar Hospital was one of three major naval hospitals commissioned by the Royal Navy in an attempt to address the widespread problems of death and desertion of large numbers of sick and injured seamen. Previously, sick and injured seamen were sent on shore to recuperate, put up in mean lodgings with minimal nursing care and poor diets, often ‘intoxicating themselves with strong liquors at the height of their distempers’ (Navy Board memorial to His Majesty 1744, cited in Tait 1906, 4). The seamen of the Royal Navy were largely pressed men or criminals obtained from the country’s gaols, and many took the opportunity of being on shore to desert. The Royal Naval hospitals were designed to combine improved medical care with imprisonment of the rankings. Sited on a spit of land at the mouth of Portsmouth harbour and facing Spithead, the Haslar Hospital ideally combined accessibility by sea and relative isolation by land. The first part of the hospital opened in 1753. Two subsequent wings were completed in 1762. Constructed of local clay (reputedly obtained during the digging of the hospital cellars), in its day the Haslar was the largest red brick-built structure in Europe. Due to a shortage of funds, the southern wing (originally designed to complete the quadrangle) was never built. Instead, a 12-foot high fence of iron railings was erected to contain the patients. A sentry post built to observe patients taking the air is still present immediately to the south of the hospital block.
- 1.3.3 Numerous later buildings were added to the Haslar Hospital site, including residences for the surgeon and commanding officer (1756), St Luke’s church (1762), the Terrace (1798), the water tower (1885), messes for the nursing sisters (1899) and medics (1901), the fever blocks (including the Zymotic Hospital (1902), a sick officers’ block (1910) and Canada block (1917) (Birbeck and Holcroft 2004). The modern hospital wing, the Crosslink, opened in 1984 (Ward 2003).
- 1.3.4 Between 1753 and 1826, the whole of the area to the south-west of the hospital, including the Paddock, was utilised indiscriminately as a burial ground for those sailors and marines who died in the hospital (Lloyd and Coulter 1963, 223). In addition, the bodies of those who died on the ships in or near Portsmouth were also buried in this unconsecrated ground. It was only with the appointment of Superintendent and Residential Commissioner Henry Garrett in 1820 that a formal consecrated cemetery was set aside for burials. Garrett was appalled at the lack of respect shown to the dead before, during and after burial, save in cases where the deceased was of sufficient rank and status to be accorded some ceremonial display and memorial. The 18th- century hospital admissions lists reveal that the latter were buried at private expense, the funerals of naval officers being paid for by family or friends, rather than by the Royal Navy. For a brief period in the early 1820s, burial in the hospital grounds was prohibited, and Garrett arranged for patients to be buried in the parochial burial ground of Alverstoke. However, in 1826 the north-eastern area of the Paddock was enclosed by brick walls and was consecrated. Until its closure in 1859, the cemetery served as the sole burial ground of the hospital. This area today is

known as the Garden of Remembrance. After 1859, Clayhall cemetery replaced the Garden of Remembrance as the Royal Naval cemetery of Haslar. To this day, the road between the Haslar Hospital and the Clayhall cemetery is known locally as 'Deadman's Mile'.

- 1.3.5 Historical reports of the early 19th-century record that the Paddock was 'thick with buried bodies and scattered tombstones' (Lloyd and Coulter 163, 224), and that it was common to unearth skeletons a few feet beneath the ground surface. It would appear that the area held many thousands of burials, but more precise quantification of the burials within the Paddock is problematic on a number of counts.
- 1.3.6 Firstly, the full extent of the burial ground is unclear from the records, but may well encompass an area far more extensive than the Paddock, possibly extending to the modern hospital wing. Burials were disinterred when the Terrace was built in 1798, and again when a portico was added to the Governor's house in 1904 (Tait 1906, 28). The original burial ground also would have included the Garden of Remembrance and the gardens of the Terrace. Present residents of the Terrace report regularly exhuming human bone when gardening. Modern anecdotal reports state that a number of skeletons were disinterred during the construction of the modern hospital wing, the Crosslink in the 1980s, and that the bone was placed in plastic bags and reburied in the Paddock. Skeletons were also disinterred when the present public entrance gate to the hospital was constructed. When the present road was built immediately to the south-east of the Paddock, more burials were disturbed. There is also an anecdotal report of the discovery of burials during the construction of the sentry post on Dolphin Way.
- 1.3.7 In addition, White (1966, 177) writes that bodies were buried rather casually outside the hospital grounds. Anecdotal reports of the discovery of a large number of skeletons during recent road construction immediately west of the Gun Boat Yard (immediately north-west of the Paddock) does support an interpretation of the dumping of bodies into the mud flats and inlets of Haslar Creek. These skeletons were reported to be densely packed together, and did not appear to have been formally laid out in graves. Many assumed a range of irregular body positions, including the vertical.
- 1.3.8 No burial register exists that specifies the Paddock as the place of burial. Death of seamen registers (PRO Kew) dating between 1756 and 1764 record the deaths of 4870 seamen at Haslar (ranging from 130 to 1092 per year, an average of 609 per year). The only available burial registers date from 1827-1852 (Alderson 1958), and refer principally to interments within the Garden of Remembrance. These record 21-99 burials per year, of which 63.4% were seamen, 34.5% were marines. The remainder were composed of hospital workers, chaplains, surgeons, officers and their families. It is probable that the burial population within the Paddock was similarly composed. Deceased prisoners-of-war were also buried at Haslar, including PoWs from the American War of Independence (Tait 1906). In 1850, crews of Turkish men-of-war who died were buried in a separate burial ground in the hospital grounds 'at the corner of the college field, which is furthest from the sea wall and adjoining the



fences of the lunatics' kitchen garden'. The location of this burial ground is recorded on a 1867 map of the hospital. When the Zymotic Hospital was built in 1902, the Turkish headstones and mortal remains were relocated to Clayhall cemetery (Williams undated, 25).

- 1.3.9 Other documentary sources record vast numbers of interments at Haslar in the late 18th- to early 19th-centuries, a period that included the French and Napoleonic Wars. The Haslar received many of the wounded from the Battle of Trafalgar, and also thousands of survivors of the Battle of Corunna (1809) during the Peninsular War. A gruelling campaign involving forced marches through inhospitable terrain in the depths of winter, disease and battle injuries culminated in the Battle of Corunna, where the commander General Sir John Moore was killed (Crumplin and Starling 2005, 2). The troops were evacuated by ship to England, huddled together in unsanitary, lousy and crowded conditions. Sir James McGrigor (2000, 145), who treated many of these veterans at Haslar records: 'In their retreat the troops suffered extremely from hunger, fatigue, and all the privation incidence of war, while the seeds of contagious fever had made their appearance and by the time they disembarked the typhus fever had spread widely amongst them'. This typhus epidemic was to decimate the troops and to spread throughout the militia of the Portsmouth area and further afield in Hampshire before abating. Of the surviving 28,000 men from Corunna, 5000-6000 were sick or wounded. The ports of Plymouth and Portsmouth were deluged and their medical sources overwhelmed. Of the 2,427 casualties received at the Haslar, 405 died (a mortality rate of 17%) (Crumplin and Starling 2005, 2). Many more died of typhus.
- 1.3.10 Another tragedy involving the loss of hundreds of lives was the sinking of the *Royal George* off Spithead in 1782, when approximately 800 seamen lost their lives. Many of the drowned were washed ashore at Haslar and were buried in the Paddock, whilst others were recovered in Portsmouth harbour and are buried in the town. It is uncertain how many people went down with the ship and were never recovered, and how many did wash ashore at Haslar and are buried in the Paddock.
- 1.3.11 In addition to these specific tragedies, ongoing deaths at Haslar were very high, with men literally dying by the hundreds. Dr James Lind (the 'Father of Nautical Medicine' and discoverer of the cause of scurvy) was Physician-in-Charge at Haslar between 1758-1788. He recorded that in 1780, 909 died in the hospital, and that this was not an exceptional year. In 1779, there were 807 deaths. Other sources state that in three years towards the end of the 18th century, 3600 bodies were buried in the Paddock (Tait 1906). Thus, the death rate in the late 18th-century broadly approximated 1000 per year (or 3 a day). Lind believed that the most significant causes of death were scurvy and 'fevers' (which appears to have included a host of different infections).
- 1.3.12 When Garrett began his burial reforms at the Haslar in the 1820s, the Paddock was littered with tombstones. When the Garden of Remembrance was established in 1826, these tombstones were relocated to the cemetery where they were lined up along the southern wall. Inscription on extant stones were recorded in 1974 by the South East

Genealogical Society. Today most inscriptions are illegible. Many of the tombstones post-date the official cessation of use of the Paddock as a burial ground, the most recent dating to 1858. Either the Paddock continued to be used for burials as late as 1858, or tombstones from the Garden of Remembrance have become mixed with those from the Paddock over time. If the former is the case, it is reasonable to expect a reduction in the number of burials in the Paddock between 1826 and 1859.

- 1.3.13 Six of the tombstones do pre-date the establishment of the Garden of Remembrance, and can be provenanced to the Paddock with a high degree of certainty. These include tombstones of a royal marine Robert McLeod, aged 67, presumably retired; a Lt Henry Blaxton, 'late of this hospital', aged 55; a Lt Alexander McGregor, 'late of this hospital', aged 55 years; a John Barre R.N, 'late of H.M.S. ship *Eagle*', aged 18 years; Edward North Buxton of Earls Colne, Essex, aged 20 years (occupation unknown); Samuel Masterman, aged 20 years (occupation unknown); and Captain James Millard R.N. 'late commander of H.M.S. *San Juan*', aged 39 years. This suggests a great mixture of rank and class within the Paddock's burial population.
- 1.3.14 Previous estimations of the number of burials at the Haslar Hospital are very broad, with numbers ranging from 20,000 to 75,000. From the above information, a very rough calculation reaches a conservative figure of between 40,000-60,000 deaths. However, given our poor understanding of the limits of the total area used for burial at Haslar, it is problematic to predict the numbers buried within the Paddock itself, and those buried elsewhere.
- 1.3.15 It would appear that many individuals were buried in shallow graves. An extract from 'A Walk Around Haslar', a memorial catalogue compiled by South East Genealogical Society, reads 'Only three years ago when a trench was being dug across the paddock for laying pipes, numerous skeletons came to light, some only eighteen inches below the surface'. Anecdotal reports of modern badgers and foxes digging up human bone likewise suggest a depth of burial probably less than 0.5 m.

### Acknowledgements

- 1.3.16 Oxford Archaeology would like to thank the Estates Department, Fort Blockhouse (particularly to Lt Commander Parkinson and to Pauline) for their practical assistance during the evaluation. My thanks also to Lt Col Phil Ward, Eric Burbeck, and Surgeon Commander Peter Buxton for their interest and for sharing their knowledge of the history of the Royal Navy and of the hospital so generously.

## 2 EVALUATION AIMS

### 2.1 The aims of the evaluation appear below:

- To monitor and record any archaeological features and deposits exposed during the excavation of trenches (which constitute a 4% sample of the total area of the Paddock), and to include the results in the evaluation report.

- To establish the presence or absence, the extent, condition, nature, character, quality and date of any archaeological remains, in particular to ascertain the depth and density of burials within the study area.
- To identify and record the type of graves, coffins and grave markers present.
- To expose a small sample of skeletons in order to ascertain the state of bone preservation, and hence, the osteological potential for further analysis.

### 3 EVALUATION METHODOLOGY

#### 3.1 Scope of fieldwork

- 3.1.1 Between 25 July 2005 and 1 August 2005, Oxford Archaeology (OA) carried out a field evaluation of the Paddock, an open area within the precinct of the Royal Naval Hospital Haslar, Gosport, as part of a wider environmental evaluation of Ministry of Defence (MoD) property on the Haslar peninsular.
- 3.1.2 A brief was set by the Environmental Support Team of the MoD Defence Estates, and a project design by OA was approved. The desk-based assessment was also prepared by OA.

#### 3.2 Fieldwork methods and recording

- 3.2.1 The evaluation consisted of the excavation of 19 trenches of the 21 originally specified in the project design (Fig. 3). Considerable alteration of the position of the trenches was necessary due to the presence of a badger set, a metalled road, and the unexpected presence of numerous services. In addition, the great depth of modern hardcore within the north-western part of the Paddock made excavation of all the original trenches in that area impracticable.
- 3.2.2 The 19 trenches that were excavated were 2 m wide and of lengths ranging from 9 to 40 m. The overburden was removed under close archaeological supervision by a 360° mechanical excavator fitted with a 1.8 m toothless bucket. Excavation proceeded to the top of the natural geology, to the top of the first significant archaeological horizon or to the maximum depth that excavation could proceed safely. In most trenches, the overburden included considerable modern made ground, in some places exceeding 3 m deep. Stepping of trenches was undertaken where the depth of excavation exceeded 1.2 m, and three trenches (trenches 4, 7 and 22) were abandoned when working conditions became unsafe due to the excessive depth of the made ground.
- 3.2.3 Trenches were cleaned by hand, and the revealed archaeological features were planned at a scale of 1:20 or 1:50. Sample sections of all trenches were also drawn at a scale of 1:20 or 1:50, as appropriate.
- 3.2.4 A sample of 1-3 skeletons per trench were uncovered but left *in situ*. Body position, bone preservation and presence or absence of a coffin were recorded. All skeletons were assessed by a trained osteologist, and the age, sex and a rough stature estimation were ascertained wherever the bone was sufficiently well preserved. In addition, any dental and skeletal pathologies noted during assessment were recorded.

3.2.5 All trenches and exposed skeletons were photographed using colour slide and black and white print film. Skeletons were also recorded by rectifiable photography using a digital camera, and subsequently plotted using Auto Desk Map 2004 (CAD).

3.2.6 Recording followed procedures laid down in the *OA Fieldwork Manual* (ed D Wilkinson, 1992).

### 3.3 Artefacts

3.3.1 Finds were recovered by hand during the course of the excavation and were bagged by context.

## 4 RESULTS: GENERAL

### 4.1 Soils and ground conditions

4.1.1 This is located on a ridge of higher ground falling away to Haslar Creek to the north and the Solent to the south. The natural geology at the level of excavation was a sandy clay (808, 911, 1207, 1302, 1405, 1507, 1715, 1828 and 2305) overlain by a fine sandy sub-soil (904, 1102, 1203, 1301, 1506, 1827 and 2304) and a thin layer of topsoil (100, 400, 500, 600, 801, 901, 1000, 1100, 1200, 1300, 1403, 1501, 1601, 1701, 1826, 1900, 2001, 2200 and 2300). The natural ground surface fell away towards the north-west (Fig. 15), such that a difference of more than 4.5 m in altitude exists between the top of the natural in the eastern and the north-western areas of the Paddock. In Trench 4, the natural was not clearly seen, but the deposit in the base of the trench (404 and 405) appeared to be an interface between a compact grey-blue clay natural and the overlying made ground (403). Given this part of the field's proximity to the old waterway originally bounding the field, and the mud flats and inlet of the Haslar Creek immediately to the north, it is highly probable that the natural geology in the north-western part of the Paddock is indeed clays or silts.

4.1.2 Considerable quantities of dumped gravel and building rubble (401-3, 501-2, 602-4, 802-4, 902, 1001-3, 1104, 1206, 1404, 1502-4, 1601-2, 1713-4, 1825, 1901-5, 2003-4, 2201 and 2301-2) were evident across the Paddock in all trenches except Trench 13, immediately adjacent to the Garden of Remembrance. In Trenches 16, 19 and 20, several layers of redeposited gravel overlay the original ground surface, but were cut by graves. As these levelling layers clearly pre-date the burials, the dumping must have occurred prior to 1826, and probably after hospital construction had begun in 1756.

4.1.3 The bulk of the redeposited material appears to have been relatively recent in date, with deposits containing plastic, modern brick and concrete. It is probable that much of the dumping occurred during the construction of the modern hospital wing, the Crosslink, in the 1980s. There appears to have been attempts at levelling the field, as this made ground becomes deeper and deeper towards the north and west. In Trench 4, the depth of these deposits approximately 2.8 m. This attempt at levelling the ground surface accords with anecdotal reports that the Paddock was being levelled for use as playing fields. This never came to fruition, and despite the considerable deposition of made ground across the

site, there still exists a downward gradient between the east and the north-west of the field, with a difference of more than 4 m in present ground levels.

## 4.2 Distribution of archaeological deposits

- 4.2.1 The archaeology discovered within the Paddock consisted of 169 burials dating broadly between 1753-1826, and one brick-and-mortar structure (1101) of unknown function, dated to the 18th to early 19th centuries.
- 4.2.2 The burials were all located within the eastern half of the Paddock. The western limit of burial was observed within Trenches 9, 12 and 15. Spatially, the most westerly burials fall in a line extending north-west-south-east across the Paddock in a line broadly parallel, but west of the south-western enclosure wall of the Garden of Remembrance. The western limit of burials also correlates with the break of slope observed in section in these trenches. Thus, it appears that only the higher ground of the Paddock was utilised for burial.

## 5 RESULTS: DESCRIPTIONS

### 5.1 Description of deposits

#### *Trench 1 - Fig. 4*

- 5.1.1 This north-south aligned trench (22.5 m x 2 m) lay in the northern corner of the Paddock, immediately adjacent to the Garden of Remembrance. The trench was excavated to a depth of 1.2 m. Four deposits of modern made ground (101-104), composed of gravel and ceramic building materials (CBM) were revealed. These were cut by a number of service trenches, including three water drains and one electrical cable. Excavation was abandoned at this depth due to the presence of these services.

#### *Trench 4 - Fig. 5*

- 5.1.2 Trench 4 was located in the north-western part of the Paddock. The trench was mechanically excavated to a maximum depth of 3 m (1.09 m OD), and further excavation was abandoned due to Health and Safety considerations. The sides were stepped three times, each step ranging between 0.5 m -1 m in depth. The total area excavated was 8.7 m x 8.6 m, with the deepest area measuring 2.5 x 5 m.
- 5.1.3 The trench contained several deposits of modern made ground. The lowest layer at the base of the trench (405) was composed of solid blue-black clay containing fragments of CBM, and was heavily contaminated with hydrocarbons. Layer 404 was very similarly composed, and probably constituted the same deposit. However, hydrocarbon contamination was less marked in this deposit, and the clay was lighter in colour as a result. This layer was 0.20 m deep. Layer 405 was excavated to a depth of 0.60 m. No natural was seen, but it is likely that these levels represent an interface layer between the made ground above and the clay natural below. The presence of clay within this north-western area of the Paddock is unsurprising given its close proximity to the palaeochannel and mud flats seen on 18th- and 19th-century maps of the area. There was considerable ground water seepage into the base of the trench.

- 5.1.4 Overlying layer 404 and 405 were three layers of made ground (401, 402 and 403), consisting of gravel, very modern brick, bitumen and concrete fragments. These represent three successive and considerable dumps of building rubble and gravel, the deposits measuring 0.72 m, 0.80 m and 0.60 m in thickness, respectively.

***Trench 5 - Fig.6***

- 5.1.5 Trench 5 was located immediately south-west of the Garden of Remembrance. The trench was orientated north-south, measuring 12.8 m x 2 m. The trench was excavated to a maximum depth of 1.2 m. There was considerable modern disturbance, with large concrete slabs and modern backfill (501) in the northern half of the trench. This may be part of a small demolished stable block reputedly located in this area of the Paddock. The southern half of the trench contained only modern made ground containing brick, plastic, tarmac and concrete (502). A small amount of diesel contamination was present in this layer.

***Trench 6 - Fig.7***

- 5.1.6 Trench 6 was located broadly in the centre of the Paddock. Trench 6 was aligned east-west, and measured 22.8 m x 2 m. The length of the trench was stepped in accordance with Health and Safety regulations. A 2.6 m deep sondage was dug in the western end of the trench, approximately 6 m in length. The additional depth in the area required two levels of stepping, which encompassed a total area of 6 m x 7 m.
- 5.1.7 No archaeology was found within the trench. Nor was the natural geology revealed. The fill within Trench 6 was composed of four overlying layers of modern dumped material (601, 602, 603 and 604), composed principally of gravel and building rubble (including brick, concrete slabs and kerb stones). The layers measured depths of 0.82 m, 0.46 m, 0.50 m and 0.22 m, respectively. Further excavation was abandoned as the made ground at the southern end was unconsolidated hard core, and it was deemed unsafe to continue.
- 5.1.8 These deep deposits of modern hardcore probably occurred during construction of the Crosslink hospital wing in the 1970-80s. There appears to have been a fairly short time between successive deposits, as there was no build-up of topsoil between successive layers.

***Trench 8 - Fig.8***

- 5.1.9 Trench 8 was centrally located in the Paddock. It was orientated north-south, and measured 25 m x 2 m, and was deepest to the south, with a maximum depth of 1.8 m. The trench was stepped along its length, the total width of excavation being 5.5 m. Brown-orange sandy clay natural (808) was reached approximately 1.5 m below the current ground level.
- 5.1.10 No grave cuts could be discerned despite excavating at least 0.2 m into the natural (808). Three possible features did cut the natural but were not excavated. Two circular features, possibly small pits or large postholes (805 and 810) were located close together in the southern half of the trench. Their diameters measured 0.20 m and

0.28 m respectively. Slightly to the north of these was a square feature (811), also possibly a small pit or posthole, measuring 0.36 x 0.32 m.

### ***Trench 9 - Fig.9 and Fig. 23***

- 5.1.11 Trench 9 was located just south of the Garden of Remembrance. It was orientated east-west, and measured 28 m x 2 m. The natural brownish orange sandy clay (911) was reached at an average depth of 1.5 m, the gradient of this layer sloping noticeably downwards towards the west.
- 5.1.12 Five graves (905-910) cut into the natural at the eastern end of the trench. Three graves (907, 908 and 909) were fairly evenly spaced and all orientated north-east - south-west. The skull of burial 908 was revealed at the northern end of the grave. The remaining two burials (905 and 906) were aligned north-west-south-east, at right angles to the other three graves.
- 5.1.13 Burial 906 was partially excavated, and three skeletons (912, 913 and 914) were revealed at a level approximately 1.4-1.5 m below the present ground surface. The skeletons lay directly one on top of the other with their heads towards the north-west. The uppermost (912) and lowermost (914) skeletons lay supine and extended in the ubiquitous Christian burial tradition, however, skeleton 913 was extended but prone. Iron nails found within the grave fill (906) suggest that at least one individual was buried in a plain wooden coffin. The small number of nails makes it probable that only one coffin was present. It was impossible to associate the coffin nails with one particular skeleton. The remaining two burials were probably buried in shrouds or their hammocks, as was the traditional naval method of burial at sea (Fremont-Barnes 2005, 43). All three skeletons were adult males. Skeletons 912 and 913 were aged 20-24 years and 18-25 years, respectively. The base of the grave was not observed and earlier burials may be present below.

### ***Trench 10 - Fig.10***

- 5.1.14 Trench 10 was located in the south-west of the Paddock. This short east-west aligned trench (9.2 m x 2 m) was excavated to a maximum depth of 1.2 m. Further excavation was abandoned due to the presence of a number of electrical cables and sewers in this area. The entire fill of the trench was composed of three layers of modern made ground (1001, 1002 and 1003). Layer 1003, the deepest, was a loose black-brown sandy silt containing large quantities of modern building rubble (bricks and cement fragments). Overlying this deposit was layer 1002, a 0.4 m deep lighter deposit of compact dark brown sandy silt also containing considerable quantities of modern demolition debris. Layer 1001 was the uppermost layer of made ground, composed of loose gravel in a matrix of mottled reddish-brown and dark grey-brown sandy silt, containing twisted metal and modern bricks.

### ***Trench 11 - Fig.11***

- 5.1.15 This short east-west aligned trench (3 m x 2 m) was located near the southern perimeter fence of the Paddock in a central position. Further extension of the trench towards the west was abandoned when the service trench of a major sewer (1106) was uncovered.
- 5.1.16 A small brick-and-mortar structure (1101) was discovered in the eastern part of the trench within foundation cut 1108. The structure measured 1.76 m x 1.72 m, and was composed of three brick-and-mortar walls forming three sides of a quadrangle on the northern, southern and eastern aspects. The walls consisted of six to seven courses of pointed bricks and mortar of English bonding. The bricks were pinky orange in colour, measured 210 mm x 90 mm x 60 mm, and were clearly hand-made. Typologically, they date to the 18th-century, and hence, are broadly contemporary with the hospital and the Terrace. The bond was yellow, sandy mortar. The southern wall was constructed of a double thickness of brickwork, whereas the walls to the east and north were single thickness. The eastern wall had two small voids (the dimensions of one brick each), which were positioned above a small ledge extending into the interior of the structure to the depth of one brick. The northern wall was set at a slightly obtuse angle to the eastern wall, and was not straight but gently concave.
- 5.1.17 A single thickness floor composed of bricks laid directly onto the fine brownish yellow silty sand subsoil (1102) had been laid out within the three walls. The bricks were not bonded. The level of this floor was 1.34 m below the present ground level. A small area in the floor had been deliberately left void, with brickwork shaping its limits. The void was no deeper than one course of bricks. Presumably, it had been shaped as a container or base of an upright structure. Remnants of thick, whitewashed plaster on the floor and walls suggest that originally both surfaces had been plastered and painted.
- 5.1.18 The structure had been excavated into the subsoil (1102) to a depth of 0.48 m. Thus, at least in part, the structure must have been below the contemporary ground level, and may have functioned as a shallow cellar, store or subterranean defensive position.
- 5.1.19 The structure was demolished after it had gone out of use for some time. The floor was covered by a firm mid-grey brown clay loam deposit containing occasional brick fragments (1105). The structure was reduced to the contemporary ground surface and overlaid with a 0.42 m thick deposit of firm dark grey-brown clay loam containing occasional gravel inclusions, brick and plaster fragments (1103).
- 5.1.20 The cut of a large service trench (probably the sewer recorded on service maps of the area) cut the subsoil (1102) and made ground (1103) immediately to the west of the brick structure (1101).
- 5.1.21 The structure and associated deposits were overlaid by a 1.34 m deep deposit of modern made ground, composed principally of gravel in a matrix of fairly compact mid-grey silty sand. In turn, this was overlaid by modern topsoil (1100).

***Trench 12 - Fig.12 and Fig.23***



- 5.1.22 Trench 12 was located towards the centre of the Paddock. This east-west orientated trench measured 25.2 m x 2 m, with a maximum depth of 1.65 m. The trench was stepped at both ends in accordance with Health and Safety regulations. Natural geology of firm brownish-orange sandy clay (1207) was revealed approximately 1.5 m below the modern ground surface. Twelve graves (1208-1221) cut the natural. All graves, bar burial 1221, were aligned north-west - south-east. Burial 1221 was orientated south-west - north-east. Bone fragments were observed on the machined surface of eight graves, suggesting that there was little consistency in the orientation of the body within the grave. No intercutting of graves was observed. However, spacing between graves was less regular than that seen in other trenches (eg trenches 13 and 20).
- 5.1.23 Graves varied in shape from cigar-shaped to sub-rectangular. The full extent of each of the graves was not revealed, all bar one (1215), are of a size suggestive of adolescent or adult burials. The grave of burial 1215 was closely associated with that of burial 1216, and may represent a child and its parent (although the graves were not excavated to confirm this).
- 5.1.24 The upper two-thirds of near complete skeleton 1221 was revealed within a sub-rectangular grave cut. The legs extended beyond the northern baulk. Six iron nails within the grave cut indicated that the individual had been buried in a plain wooden coffin. The skeleton was positioned supine and extended with the hands together over the pelvis, and the head turned towards the east. The base of the grave was clearly seen, and it is apparent that this was a single burial.
- 5.1.25 The bone preservation was fair, but some leaching of bone mineral had occurred. The skeleton was of an adult male, aged 40+ years. Stature was estimated at  $1.68 \pm 0.041$  m (5'6"). Healed cribra orbitalia Type 3 (Stuart Macadam 1991, 109) was present bilaterally in the eye orbits. The sacrum and coccyx were fused, with the coccyx slightly angulated towards the left of the midline. This may be due to a well healed fracture of the coccyx (which usually occurs when an individual falls heavily onto the buttocks). However, sacro-coccygeal fusion may occur as part of the natural ageing process in advanced old age (Gray 1993, 166).

### ***Trench 13 - Fig.13***

- 5.1.26 This north-west - south-east orientated trench, measuring 19.4 m x 2 m, was located immediately to the south of the Garden of Remembrance. The brownish orange sandy clay natural (1302) lay at a depth of approximately 0.6 m beneath the present ground surface. Trench 13 was the only trench that did not contain made ground.
- 5.1.27 The pale yellow silty sand sub-soil (1301) overlay the natural to a depth of 0.4 m. Both these layers were cut through by 22 graves (1309-1330), two possible graves (1331 and 1332) and a modern linear (1303). The subsoil was also cut by two shallow modern pits (1305 and 1307) containing modern building debris and burnt organic matter. All contexts were overlaid by a thin layer of modern topsoil (1300).

- 5.1.28 The graves were fairly evenly spaced and appeared to form two rows of parallel grave cuts, orientated south-west - north-east. Possible grave 1331 is the only exception to this rule, being orientated north-west - south-east, and appears to have been cut by graves 131 and 1314. No other intercutting of graves was present. Human bone was visible on the surface of six graves at an approximate depth of 0.8 m below ground level, and in all cases it appeared that the head was positioned towards the south-east end of each grave. This was likewise true of the three skeletons revealed by excavation (1310, 1311 and 1312).
- 5.1.29 These three skeletons were laid out extended and supine, with arms at their sides. Iron nails recovered within the grave fills of 1310 and 1311 suggest the presence of a coffin, whilst no such finds were found in burial 1312. It is probable that this individual was buried in only a shroud or hammock. Of the three graves, this was narrowest, being only 0.4 m wide. Iron nails were seen on a number of other graves in Trench 13, and the grave fills of burials 1311 and 1327 retained heavily decayed remnants of coffin wood. In Trench 13, grave shape varied from narrow and cigar-shaped, to broader sub-rectangular or tapered. It is more probable that the latter two shaped grave cuts contained coffined burials, whilst the former contained hammock burials.
- 5.1.30 The bone preservation of the three excavated skeletons was very poor, with much of the bone very demineralised and largely destroyed. It could be established that the skeletons were adult, with skeleton 1311 aged 25-30 years. The sex of skeletons 1310 and 1311 was male, but sexually diagnostic bones, such as the skull and pelvis, had not survived in skeleton 1312. The bone was too poorly preserved to assess pathology although the dentition was well preserved.
- 5.1.31 Because the backfill of the graves closely resembled the subsoil (1101), it was problematic to identify graves cutting this layer. In section, small rounded heaps of darker soil appeared to directly overlie the skeletons. Whilst this darkening may be due to organic decomposition of the body and the coffin, it may also be the result of covering the corpse with a layer of organic material, such as bran or sawdust. These materials were widely used within coffins of the 18th- and 19th-centuries to reduce the odour of putrefaction and to soak up body fluids (Litten 1996, 11; Stock 1998, 135). Tait (1906, 37) mentions a complaint that corpses landed from ships for burial were often left lying the whole day at the landing place, owing to the neglect of the hospital labourers. Stacking of unburied corpses also occurred at Haslar because the vicar of Alverstoke parish refused to officiate at single burials, but would only ride over to the Haslar when there was a 'job lot' to bury. Thus, the use of sawdust may have been a practical necessity. Being very acidic, sawdust and bran have a very detrimental effect on bone preservation. This may explain why the bone preservation in trench 13 was the worst on site.

#### ***Trench 14 - Fig.14 and Fig 24***

- 5.1.32 This north-south trench was located centrally in the Paddock, and measured 30 m x 2 m, with an average depth to the natural geology of 0.7 m from ground level. This firm

brownish-orange sandy-clay layer (1405) was cut by 25 graves (1406-1415 and 1417-1429) and one probable grave (1416). The burials in this trench are less regularly spaced and had a wider variation in alignment than in other trenches. In the southern half of Trench 14, the graves were uniformly on a north-east - south-west alignment. Skulls were visible on the machined surface of three graves, all the skulls located towards the south-western end of the cut. However, in the northern half of the trench, orientation became more varied. Three definite graves (1406, 1420 and 1426) and one possible grave (1416) were aligned east-west, with the position of the exposed tibia of burial 1406 indicating a west-east body orientation. Six burials were aligned north-west - south-east (1401, 1402, 1407, 1408, 1411 and 1414), with burial 1414 being cut by two later graves (1413 and 1415).

- 5.1.33 The graves were a mixture of sub-rectangular and narrow cigar-shaped cuts, tentatively suggesting a mixture of hammock and confined burials, although this will need to be confirmed by excavation.
- 5.1.34 Rectangular north-west - south-east orientated graves 1407 and 1408, and 1401 and 1402 appear to have been recut. The latter two burials were partially excavated. The head end of burial 1402 had been disturbed by the cutting of later grave 1401, with the skull and left humerus of 1402 redeposited as charnel within the later grave fill. Skeleton 1402 was an adult male of unknown age. Skeleton 1401 was intact. He was laid out supine and extended, with his arms at his sides. Six iron nails were recovered within the grave fill, indicating that he had been interred within a plain wooden coffin. Bone preservation was poor, being very spongy and brittle. Most of the less dense bones of the torso and hands had been destroyed completely. The skeleton was male, aged 25-40 years. There was little potential for identification of pathology given the poor bone preservation.
- 5.1.35 The graves and natural geology (1405) were overlaid by a 0.35 m thick layer of made ground (1404), comprising a mid-grey brown clay loam containing gravel (25% of fill). This was sealed by modern topsoil (1403).

#### ***Trench 15 - Fig.15 and Fig.24***

- 5.1.36 This east-west orientated trench (33.3 m x 2 m) was located in the southern central part of the Paddock, parallel to the southern perimeter fence. The brownish orange sandy clay natural (1507) was encountered at a depth of 0.7-0.9 m below the present ground surface. There was a marked slope of the natural and overlying subsoil (1506) and topsoil (1505) towards the west.
- 5.1.37 Ten graves (1514-1523) and one possible grave (1524) were cut into the natural (1507) and the fine pale yellow silty sand subsoil (1506). These graves were located towards the eastern half of the trench. No graves were discovered in the western-most 14 m of Trench 15, despite machining well into the natural to a maximum depth of up to 1.7 m from ground level. Stepping of the trench to a total width of 5.3 m was necessary in this section.

- 5.1.38 There appeared to be two groups of parallel graves in the eastern half of the trench. Graves 1514-1516 and 1523 were closely spaced and orientated on a north-west - south-east axis. The skull of 1516 was exposed at the north-western end of the grave. The same orientation was discovered with the three skeletons (1510-1512) excavated within adjacent grave 1523. A tibia of burial 1517, exposed by machining, reveals that this skeleton was laid with the head to the south-east. A tight cluster of three north-east - south-west orientated burials (1520-1522) was located in the eastern end of the trench. The westernmost grave (1519) was similarly orientated.
- 5.1.39 Burial 1523 was excavated to a depth of approximately 1.35 m below the present ground surface. Three articulated skeletons (skeletons 1510, 1511 and 1512) were buried one on top of the other within the grave (1508). They were all laid out supine and extended, with their heads towards the north-west. The lowermost skeleton (1512) was slightly tilted up against the eastern side of the grave. The upper two skeletons (1510 and 1511) lay with their elbows loosely flexed, and their hands over their pelvis in the traditional Christian attitude of supplication. There was little soil between the skeletons, suggesting that they had been placed within the grave in one event. Coffin nails found in the backfill (1509) confirm that at least the upper two burials were interred within plain wooden coffins.
- 5.1.40 In addition to these three individuals, a number of disarticulated bones (including a male pelvis, a femur, a tibia, and two humeri) were found in the grave backfill (1509). A complete but disarticulated skull and mandible overlay the left pelvis of skeleton 1510. These disarticulated remains probably form part of a fourth skeleton disturbed when the grave was re-dug for the insertion of skeletons 1510, 1511 and 1512. The skull and mandible appeared to be part of the same individual. Both were clearly male, and of matching size. The maxillary and mandibular teeth both exhibited moderate to marked dental enamel hypoplasia of 4-5 lines per tooth. The molars showed moderate attrition, and several molars had been lost ante-mortem. Crowding of the incisors was also apparent. Ectocranial suture closure suggests an age-at-death of 22-40 years.
- 5.1.41 The lowermost skeleton (1512) was visually obscured by the two overlying skeletons, with only the femora and left humerus clearly visible. Both femora lacked the greater trochanter, suggesting an age-of-death less than 18-21 years. The sex could not be determined.
- 5.1.42 Overlying skeleton 1512 was skeleton 1511, a young male, aged 16-19 years. No pathology was noted on this skeleton. In turn, he was overlaid by skeleton 1510, a 25-35 years old possible male, with marked muscle attachments on the upper and lower limbs. His mandible displayed an unusual trait: the retention of both deciduous 2nd molars. The 2nd premolar had not erupted bilaterally, but all six permanent molars were present. The left 3rd molar was impacted and had only partially erupted, probably as a consequence of dental crowding.
- 5.1.43 The subsoil (1506) measured a depth of 0.4 m, and was overlaid by a thin buried topsoil (1505). This buried soil was covered by three successive dumps of modern

made ground (1502-1504), which added approximately 0.05 m to the present ground level at the eastern extent of Trench 15, but became considerably deeper towards the west, to a maximum depth of 0.6 m. These deposits were sealed by the modern topsoil (1501).

### ***Trench 16 - Fig.16***

- 5.1.44 Trench 16 was a north-south aligned trench (20 m x 2 m) located in the south-eastern part of the Paddock. The trench was mechanically excavated until grave cuts became visible (approximately 0.7 m below the present ground surface). This layer composed 18th- to 19th-century made ground, comprising a very loose layer of gravel within a matrix of mid-brown silty sand. Twelve graves (1604-1615) cut this layer, and comprised three groups. There was a cluster of four sub-rectangular graves at the southern end of the trench, three orientated north-south and one north-east - south-west (1607). A further three were widely spaced in the centre of the trench, with two (1608 and 1609) orientated north-south, and 1610, north-east - south-west. Towards the northern end of the trench was a closely associated group of north-west - south-east burials in sub-rectangular graves. No skeletons or coffin nails were visible on the machined surface of the graves.
- 5.1.45 Skeleton 1610 was osteologically examined. The skeleton was a male, aged 40+ years. Stature was estimated at  $1.667 \pm 0.033$  m (5'4"). The tibiae showed marked medio-lateral bowing of the shafts, and epiphyseal flaring, whilst the femoral shafts showed only slight anterior-posterior bowing. These changes are indicative of rickets. Skeleton 1610 also displayed moderate to severe Schmorl's nodes on his lower thoracic and lumbar vertebrae. Schmorl's nodes are depressions in the vertebral bodies thought to form as a consequence of pressure exerted on the body by its associated intervertebral disc, as a result of herniation of the disc (Roberts and Manchester 1995). Other signs of degenerative joint disease were absent from the spine, but the humeral heads showed slight lipping of the articular surfaces.
- 5.1.46 Overlying layer 1616 were two successive layers of made ground (1603 and 1602). These comprised largely gravel within a silty sand matrix, with a combined depth of 0.6 m layer 1602 was overlaid by modern topsoil (1601).

### ***Trench 17 - Fig.17***

- 5.1.47 Trench 17 was located in the central eastern part of the Paddock. This east-west orientated trench (25 m x 2 m) was mechanically excavated to the natural (1715) at a depth of 1.1 m below the modern ground surface.
- 5.1.48 Seven sub-rectangular graves (1703-1705, and 1708-12) and one possible grave (1707) were cut into the brown-orange sandy clay natural (1715). Seven were orientated north-east - south-west and one possible grave (1707) was orientated north-west - south-east. No human bone or coffin nails were revealed on the machined surface of the graves. Considerable modern disturbance (probably two large pits) was filled with modern building rubble. Two modern service trenches cut 1706, and trench 1706 truncating possible grave 1707. In turn, the latter cut grave 1708.

- 5.1.49 Grave 1710 was partially excavated, and a single burial of an adult male was revealed. The skeleton was laid out supine and extended within a plain wooden coffin. The arms were flexed at the elbows and hands crossed across the chest. The bone preservation was extremely poor, and estimation of age and skeletal pathology was not possible. However, it was possible to estimate stature as 1.68 m (5'6"). Dentition showed moderate but distinct dental enamel hypoplasia (4-5 lines per tooth), suggesting repeated and prolonged stress events (such as malnutrition and/or illness in childhood). There was slight to moderate calculus present, and dental attrition of the molars was marked.
- 5.1.50 A clay pipe stem found in the grave backfill indicates a date of interment of the 18th- to early 19th-centuries (See Section 5.2).
- 5.1.51 The graves and the natural were overlain by three successive layer of made ground (1714, 1713 and 1702), principally composed of gravels in sandy matrices. The combined depth of these layers was 0.92 m. Layer 1702 was covered by a 0.16 m modern topsoil (1710).

### ***Trench 18 - Fig.18***

- 5.1.52 Trench 18 was located in the eastern part of the Paddock, just south of the garden wall of the Terrace. The north-south orientated trench (29 m x 2 m) was excavated to a depth of 1.1 m below the modern ground surface (5.6 m OD) to the level that the grave cuts were visible. These graves cut the buried subsoil (1829), a pale yellow silty sand, a layer of gravel (1829) in the centre of the trench, and the brown-orange sandy clay natural (1828 and 1831).
- 5.1.53 Nineteen graves (1800-1818) were revealed. A variety of orientations were present. Fourteen were aligned north-west - south-east, but interspersed between them was one south-north orientated grave (skeleton 1803, visible on the machined surface), two west-east graves (1816 and 1813) and two (1811 and 1812) north-east - south-west graves. Bone fragments were noted on the machined surface of five graves. Most graves were sub-rectangular in shape.
- 5.1.54 One burial (1800) was excavated at a depth of 5.6 m OD. The burial was of a single young adult male,  $1.626 \pm 0.037$  m (5'3") in stature. He was laid out supine and extended with his arms at his sides. Six iron nails and a small chunk of heavily decomposed wood revealed that he had been buried in a plain wooden coffin. Bone preservation was poor and it was not possible to assess the skeleton for pathology. The dentition showed greater attrition than would be expected for his age, particularly of the molars, and dental enamel hypoplasia grooves were marked on a number of teeth.
- 5.1.55 The burials were overlain by a buried topsoil (1826) and a 0.28 m deep layer of compact made ground, comprised principally of gravel in a yellow sandy matrix (1825). A modern topsoil layer (1824) overlay all contexts.

### ***Trench 19 - Fig.19***

- 5.1.56 Trench 19 was orientated north-west - south-east (39.2 m x 2 m) within the eastern part of the Paddock. The trench was mechanically excavated until grave cuts were seen at approximately 0.38 m below the present ground surface (c. 6.7 m OD). These were cut into a layer of redeposited gravel (1904), presumably an 18th- to 19th-century levelling layer. A sondage was dug in the northern end of the trench to a depth of 1.7 m (5.71 OD) in order to gauge the depth of the irregular modern feature (1906). The trench was stepped in this area. However, only made ground of loose reddish orange gravel containing occasional brick (1905) was revealed. The depth of the natural in this area is unknown.
- 5.1.57 Eleven graves (1907-1918) and one possible grave (1919) were revealed. Burials were widely spaced in the northern half of the trench, but became more compact in the south of the trench. Six burials were orientated north-west - south-east, and six north-south. No bone or coffin nails were visible on the machined grave surfaces.
- 5.1.58 Grave 1907 was partially excavated, and the skeleton revealed at an approximate depth of 6.4 m OD. The skeleton was laid out supine and extended with the head facing east, and the arms at the sides. Six iron nails within the backfill attest to the presence of a plain wooden coffin. The base of the grave was observed, indicating that this was a single burial within the grave.
- 5.1.59 Bone preservation was fair to poor. The skeleton was of a male, aged 25-35 years, and of a stature of  $1.614 \pm 0.033$  m (5'3"). No skeletal pathology was observed, but the presence of periodontal disease, calculus and ante-mortem tooth loss of a lower 1st molar was observed. There was little dental attrition in this individual.
- 5.1.60 Burials 1913 and 1918 were truncated by later features. Three modern service trenches and a further area of modern disturbance were located within Trench 19. The graves and layer 1904 were sealed with four successive layers of made ground (1901-1903), consisting principally of gravels with a combined depth of 0.46 m. These were overlaid by modern topsoil (1900).

### ***Trench 20 - Fig.20***

- 5.1.61 Trench 20 was located in the south-eastern area of the Paddock. This north-south trench (25 m x 2 m) was mechanically excavated to a depth of 0.75 m below the present ground level (5.7 m OD). Thirty-one closely and very regularly spaced graves cut two levelling layers of compact gravel (2003 and 2004). It is assumed that this made ground was deposited as levelling layers in antiquity. The graves were all aligned north-east - south-west. The skulls of three burials were revealed by machining (2006, 2009 and 2029), and showed that these individuals had been buried with their heads towards the north-west. The regularity and tight clustering of the burials, particularly in the northern half of the trench does suggest that these individuals were interred within a short space of time of one another.
- 5.1.62 Burial 2011 was excavated. The skeleton had been laid out supine and extended with arms extended at the sides, and head towards the north-west. Five iron nails attest to the presence of a plain wooden coffin. Bone preservation was fair to poor. The

skeleton was male, aged 20-40 years, and his stature was  $1.661 \pm 0.024$  m (5'5"). Healed cribra orbitalia was present in the right orbit, indicative of iron deficiency anaemia in childhood. Slight dental attrition was also noted.

- 5.1.63 The burials and layer 2003 were overlaid by a 0.26 m deep layer of gravel (2002). One modern electrical service trench cut across the centre of Trench 20, truncating burials 2020 and 2019. This in turn was covered by modern topsoil (2001).

#### ***Trench 22 - Fig 21***

- 5.1.64 Trench 22 was located in the extreme east of the Paddock, parallel with the eastern wall. This north-east - south-west aligned trench was excavated to a depth of 1.2 m without discovering the natural geology. Given its proximity to the eastern wall and the Terrace wall, it was decided not to continue further excavation. No archaeological features were revealed. Three overlying layers of made ground (2201), composed principally of gravel with inclusions of modern building rubble (bitumen, concrete and brick) probably date to the 1980s construction of the Crosslink hospital wing. One modern service trench for an electrical cable was discovered at a level of 7.62 m OD towards the northern end of the trench.

#### ***Trench 23 - Fig.22***

- 5.1.65 Trench 23 was located in the south-east of the Paddock. This 15 m x 2 m trench was excavated to a depth of 1.2 m (6.2 m OD), revealing 11 graves in two rows cut into the brown-orange sandy clay natural (2305). The graves (2306-2308 and 2310-2317) were regularly spaced and all were orientated north-west-south-east. Most graves were sub-rectangular in plan, but graves 2306 and 2312 were trapezoid. The skulls of four burials were revealed by machining. All were located in the north-western end of the grave.
- 5.1.66 Grave 2308 was partially excavated to reveal the legs and hands of an adult inhumation. The legs were extended with the feet together. The hands were at the sides. The skeleton was adult, but could not be sexed due to the lack of sexually diagnostic body parts. However, the legs looked robust and had marked muscle attachments, and hence, are more probably male. Male stature was estimated at  $1.66 \pm 0.029$  m (5'4½"). Bone preservation was fair. The right tibial shaft showed mark thickening and considerable new bone formation on the bone surface. The lesion appears to be osteitis, possible osteomyelitis (although no sinus was seen from the *in situ* position). It is probable that this infection was secondary to a soft tissue injury and local infection of the right lower leg. Having less soft tissue covering than most bone, the tibia is the most common skeletal location for osteitis.
- 5.1.67 Beneath the burial of 2308 was a layer of backfill, and at a level approximately 0.1 m beneath the skeleton, the stain and nails of an earlier coffin were seen. The right humerus of this earlier burial was also glimpsed but could not be investigated further.
- 5.1.68 The sandy clay natural (2305) was slightly contaminated by hydrocarbons in the eastern part of the trench. It was overlaid by layer 2304, a reddish brown clay sand subsoil containing a small proportion of gravel (5%). This 0.36 m layer also appeared to have



been cut by the graves. Overlying the subsoil was a buried topsoil (2303), which in turn was overlaid by two successive layers of modern made ground (2301 and 2302) with a combined depth of 0.4 m. These layers were principally composed of gravel with occasional brick inclusions. In turn, these were overlaid by modern topsoil (2300). Foundation trenches had been cut into the upper layers in the recent past for the footings of portacabins. One concrete slab just beneath the topsoil was discovered in Trench 23, and was left *in situ*.

### ***Funerary monuments***

- 5.1.69 Only one upstanding grave memorial was present in the Paddock, all tombstones having long since been relocated to the Garden of Remembrance, where a number are still lined against the south wall. These stones were much weathered and largely illegible. The only *in situ* memorial within the Paddock is located in the eastern section on raised ground immediately adjacent to the Terrace garden wall. The stone memorial was covered in ivy, but this was removed to record the inscription. This low monument with a gabled top (Mytum (2000) type 0530) was undecorated. Both side panels were inscribed with considerable text. Unfortunately, the surface of the stone is very worn and largely illegible. A rubbing was attempted but only occasional words could be made out, such as ‘*Capel*’ and ‘*chaplain*’. The burial is thought to be that of a Royal Naval chaplain, the Hon. Randolph Alfred Capel (born 28/3/1832, died 24/12/1857 (Lodge 1860) or 1858 (Burkes 1860), the third son of Arthur Capel, 6th Earl of Essex, listed as a lieutenant in the Royal Navy. Randolph Capel had no offspring. He is recorded as a chaplain in the Navy List, receiving his lieutenancy on the 10th of December 1852. He was last entered in the List in 1858. It is held that the reason he was buried in the Paddock at this late date was that he had taken his own life, and as a suicide he was excluded from burial within the consecrated grounds of the Garden of Remembrance or Clayhall cemetery. He is reputed to have thrown himself from the Water Tower, an improbable feat given that the tower was not erected until almost three decades later in 1885 (Birbeck and Holcroft 2004).
- 5.1.70 The memorial is enclosed at the head and sides by iron railings. The sawn-off stumps of railings at the foot end of the grave attest that originally the memorial was enclosed on all sides.

## **5.2 Finds**

### ***Post-medieval pottery***

*by John Cotter*

- 5.2.1 Trench 6, (unstratified). 1 sherd (36g). Spot-date: Late 19th to early 20th Century. Staffordshire-type refined white earthenware. Thick-walled cup base with a shallow footring. Covered in a thick, crazed, clear glaze. A fairly heavy duty piece perhaps part of a standard issue. On the underside is an underglaze green transfer-printed maker’s mark consisting of two separate elements. One of these is hoop or ring containing the words ‘BOVEY POTTERY LTD’ in a circle. The middle word is blurred and may say ‘potteries’. The other element appears to be an anchor symbol

with a chain coiled around the shank. The Bovey Pottery Co. Ltd operated under this name from c. 1894 to 1957. They were based at Bovey Tracey in Devon (long renowned as a source of pure white pipeclay). Their location in the south-west of England, away from the main potteries in Staffordshire, allowed them to exploit the demand for pottery in the south-west. They were suppliers to the Navy in her ports along the Channel (Internet source [www.asiaticpheasants.co.uk/makers/bovey](http://www.asiaticpheasants.co.uk/makers/bovey)). This very probably explains the presence of the cup described here - a Bovey product supplied to a naval hospital. On general style the piece could date as late as the 1940s.

### ***The clay pipes***

- 5.2.2 Six clay pipe stems weighing 15 g were recovered from three contexts (900, 1710 and 2309). These appear to date mostly to the 18th- early 19th-centuries, with one piece possibly dating to the late 18th- to 19th-century (2309). Most of these pieces were small, weathered and probably redeposited.

### ***The brick***

- 5.2.3 A single complete brick sample (<1>) was taken from the floor of structure 1101. Weight: 2210 g. Light orange coloured sandy fabric. Unfrosted, with creased faces. Length 217 mm., width 101 mm., thickness 65 mm. Date probably 18th- or early 19th-century.

### ***Recommendations***

- 5.2.4 No further work is recommended.

## **6 DISCUSSION AND INTERPRETATION**

### **6.1 Reliability of field investigation**

- 6.1.1 Percentage sample, distribution and positioning of the 19 trenches within the Paddock are believed to have given a good reflection of the overall archaeological potential of the site. However, given that the trenches in the north-western area were relatively small in area, and did not encounter the natural, it is possible that archaeology of earlier periods may yet exist but were not encountered in the evaluation.

### **6.2 Overall interpretation**

- 6.2.1 The eastern half of the Paddock contains a considerable density of burials. Burials were discovered within trenches 12, 13, 14, 15, 16, 17, 18, 19, 20 and 23. In total, 169 grave cuts were seen. The western limit of burial was noted in trenches 9, 12 and 15. The line of this limit was broadly parallel with the south-western wall of the Garden of Remembrance and the brick wall dividing the Paddock from the hospital grounds to the east. None of the early maps record the existence of a wall, fence or path demarcating this limit. It does however correlate broadly with the gentle break of slope at which the land surface originally fell away towards the north-west. Thus, it appears that the burials were restricted to the higher ground.

*Funerary practices*

- 6.2.2 The graves did not follow the ubiquitous Christian tradition of west-east burial orientation. Most graves were aligned north - west-south-east or north-east - south-west, with considerable variation in the direction in which the body was laid out within the grave. It would appear that the graves were aligned either parallel or at right angles to the eastern boundary wall of the Paddock and the line of the Terraces. Indeed, the whole hospital complex, including the hospital buildings is orientated along a north-east-south-west axis. It appears that the burials also respected this orientation.
- 6.2.3 Overall, there appeared to have been considerable organisation in the management of the burial ground. Graves were laid out in rows of evenly spaced and parallel graves. This was most evident in Trench 20. However, in a number of other trenches, the grave orientation did change abruptly between adjacent groups of burials, often with two groups of adjacent burials orientated at right angles to one another. This suggests that a number of graves were dug as one event. This 'job lot' approach was then repeated at a later time, but on a different alignment. Given the high mortality rate at the hospital, and the unwillingness of the Alverstoke parish vicar to officiate at individual burials, it does appear that an *en masse* approach to burial may have been employed.
- 6.2.4 The impression gained from Governor Garrett's outrage at the treatment of the dead at Haslar and from subsequent anecdotal accounts is that dead servicemen were interred with little care or ceremony. This is not borne out archaeologically. All but one individual had been laid out with care in a supine and extended pose with their hands either crossed over the pelvis or chest, or laid neatly at their sides. Coffin nails were found in 11 graves of the 17 excavated graves, and seen on the machined surfaces of numerous others. This contradicts Tait's (1906) assertion that the dead sailors at the Haslar were given a quasi-sea burial, being buried in no more than their hammocks. Instead, it appears that the majority were encased within plain wooden coffins. However, the complete lack of coffin fittings (so prevalent in this period, even amongst poorer burials) is synonymous with the coffins of pauper burials.
- 6.2.5 Despite the large number of deaths in the hospital and specific tragedies, such as the sinking of the *Royal George* and the typhus epidemic amongst the veterans of Corunna, no mass burial pits were discovered. Individual graves often only contained single burials, but in three, several corpses were interred within one cut. Because the skeletons were left *in situ* in this evaluation, it was often impossible to establish the full depth of these graves and the total number of individuals per grave. The practice of multiple burials stacked within a single grave cut was also revealed during excavation of the Royal Naval Infirmary burial ground at Greenwich, London (excavated by OA in 2000). Here up to four individuals per grave cut were stacked on top of one another. Many of these had been buried within wooden coffins (Wilkinson pers. com.).

- 6.2.6 The depth of burials ranged between 0.75 m and 1.2 m below the present ground surface. Taking into account the considerable build-up layers, the burials would have only laid at a depth of approximately 0.5 m below the contemporary land surface. The shallowness of these graves does argue a lack of care for the dead, but in the context of their time, such a depth of burial was not uncommon in non-military burial grounds of this period. The 'six foot deep' rule was introduced much later in the 1850s in response to Victorian fears of contagion following the devastation of repeated cholera epidemics in British cities.
- 6.2.7 Re-use of a pre-existing grave was seen in two cases. Charnel of at least one individual within grave 1508 indicates that the skeletonised remains of the original occupant of this grave had been disturbed during the insertion of three further interments into the grave at a much later date. Recutting of an earlier grave was also seen in burial group 900.
- 6.2.8 Interestingly, there was very little evidence for intercutting of graves (burials 1401 and 1402 being the exceptions). This suggests that the graves were marked above ground. Historical reports indicate that many graves were marked by tombstones. It is probable that the majority of burials were too humble to receive such memorials, but may well have been identified by areas of raised ground, painted stones or wooden grave markers. The only upstanding funerary monument within the Paddock today is the much later burial of Lt Randolph Capel, dating to 1858.
- 6.2.9 Given the density of the graves seen in this evaluation, it is unlikely that all the tens of thousands of historically reported deaths at Haslar were buried within the eastern half of the Paddock. It is highly probable that the total area of burial extended well beyond its limits, including much of the ground between the Terraces and the original hospital building.

#### *Osteological assessment*

- 6.2.10 The remains of 19 individuals were assessed *in situ*. Bone preservation was poor to fair, with considerable leaching of the bone mineral. Bone condition was noticeably poorer in graves dug into the sandy clay natural than graves truncating the redeposited gravels (trenches 16, 19 and 20). Less dense bone, such as ribs and vertebrae, and small bones of the hands and feet were poorly preserved. Skulls and pelves survived sufficiently well to be useful in age and sex estimation. Long bones survived well enough to estimate stature in nine skeletons. Much of the cortical bone was too poorly preserved to allow identification of many minor pathologies (such as periostitis or woven bone formation), and some peri-mortem trauma (such as unhealed fractures) may have been missed in skeletons where there was considerable fragmentation of the bones. It is probable that considerably more pathology would have been visible if the skeletons had been excavated and washed.
- 6.2.11 In the excavated assemblage (n = 19), the sex of 15 skeletons was male, one was a possible male and three could not be determined. Two late adolescents (1511 and 1512) with unfused femoral epiphyses were present, both aged approximately 16-18 years. The remainder were adults aged 18-45 years. The preponderance of young to

prime adult males is to be expected given the military nature of the burial ground, and the high levels of deficiency and infective diseases can readily be associated with life aboard a Royal Naval vessel.

- 6.2.12 Of the approximately 100,000 sailors and marines who died during the French Revolutionary and Napoleonic Wars, it is estimated that only 1.5% died in action; 12% as a result of shipwreck and other natural disasters; 20% from accidents, and almost  $\frac{2}{3}$  died from disease (Fremont-Barnes 2005, 42). It is thus probably not surprising that trauma was not immediately apparent in the small sample of skeletons excavated in the Paddock. One skeleton (2308) did show considerable thickening of the right tibial shaft due to new bone formation. It appeared that he was suffering severe osteitis or osteomyelitis, an advanced infection of the bone tissue. Although a systemic aetiology (such as syphilis) is occasionally responsible for such infection, most commonly the infection spreads from a localised lesion of overlying soft tissue. The tibial shaft is one of the most common locations of osteitis in skeletal populations, largely because the overlying tissue is so thin in this region (the bone often being overlain only by skin) and because of the exposed position of the appendicular skeleton to trauma. It is probable that the infection noted on skeleton 2308 was secondary to sores, injuries or cuts in the soft tissue of the shin - a common occurrence in the physically demanding and often dangerous existence aboard a naval vessel. No other evidence of trauma or infection was noted in the skeletal sample, although it should be stressed that many such lesions are not visible when bone is in its unwashed state.
- 6.2.13 Many skeletons did display osteological and dental lesions consistent with physical depravation during their growing years - an unsurprising finding given that most rankings were drawn from the working classes of the time, amongst whom profound poverty and physical hardship within rapidly developing industrialised cities and depressed rural areas was widespread. Indeed, much is made of the poor food and harsh conditions experienced by the rankings aboard ship, but the regular 'three square meals a day' of naval life would have been an undreamed of luxury for many of the working classes in civilian life.
- 6.2.14 Rough estimations from long bone lengths calculated using equations developed by Trotter and Gleser (1958) revealed stunting of normal growth. Stature is determined by the interplay of inherited and environmental factors. Whilst we all have a maximum genetic potential to reach a certain adult stature, physical and emotional stressors during childhood and adolescence may prevent us achieving this potential. If such stressors (eg. malnutrition, infection or chronic illness) are too severe or prolonged for the growing body to 'catch-up' growth later, the individual will become permanently stunted. Thus, stature has been used as a rough yardstick to indicate the overall health of individuals during the growing years. In the Haslar sample, statures ranged from 1.54- 1.68 m, with mean stature of 1.64 m or 5'4". Interestingly, this height falls 5 cm below the mean male stature of the contemporary pauper population of the Cross Bones burial ground, Southwark, London (Brickley *et al* 1999) and 7 cm below the working class population of the Newcastle Infirmary, Newcastle-upon-Tyne (Boulter *et al* 1998). This would suggest that those interred in the Paddock

suffered even more depravation than the poor in one of the most destitute areas of 18th- to 19th-century London. However, it must be remembered that stature estimation of the Haslar sample was very crude, and that greater accuracy of measurement of the long bones in controlled laboratory conditions is necessary to reach any firm conclusions.

- 6.2.15 Other indications of physical stress during childhood were present. Three individuals showed marked dental enamel hypoplasia (DEH) lines on their tooth crowns. DEH is a malformation of enamel formation during dental development that occurs as a consequence of prolonged periods of disease or malnutrition during the first seven years of life (Goodman and Rose 1990). Unlike bone, enamel does not remodel during life, and hence, DEH remains as a permanent indication of such a stress episode. In the Haslar sample, most affected teeth showed between two and five lines, indicating that these individuals suffered repeated episodes of illness or malnutrition in childhood.
- 6.2.16 Deficiency diseases were present in three individuals. The eye orbits of two skeletons (1221 and 2011) showed lesions indicative of healed cribra orbitalia. This condition is the result of iron deficiency anaemia, most commonly due to poor oral intake of iron and/or parasitic infestations (Stuart-Macadam 1991). Skeleton 1610 showed flared epiphyses and bowing of the tibiae and femora typical of rickets. This condition results from a deficiency of vitamin D, with resultant failure of normal mineralisation of bone and cartilage in juvenile bone. Vitamin D forms when the skin is exposed to ultraviolet rays in sunlight. In the great smoky cities of Europe's industrial revolution, and amongst child workers labouring indoors or underground, the prevalence of rickets was extremely high, with autopsy analyses of infants and children revealing rates of 85-97% (Steinbock 2003, 281). It is thus not surprising to find evidence of this disease in the Haslar sample.
- 6.2.17 An interesting finding amongst the Haslar sample that did contrast with 18th- and 19th- century civilians was the greater extent of dental attrition in the former, even amongst the young. Tooth wear may have been accelerated by the hardness and coarseness of the naval diet, with its heavy emphasis on hard tack and salt beef or pork (Fremont-Barnes 2005, 24-25). Dental disease was uncommon in this group, with little evidence of caries, periodontal disease or calculus (colloquially known as tartar). This was probably due to a diet relatively free of refined sugar, and is in contrast with many skeletal populations of this period (Roberts and Cox 2003, 321). Ante-mortem tooth loss of molars was evident in many of the Haslar sample. Given the good dental health of this group, it is assumed that this tooth loss is due to causes other than carbohydrate consumption, and may well be the result of scurvy, so prevalent amongst sailors of this period.
- 6.2.18 The osteological assessment highlights the potential for further work on this assemblage. It is expected that considerably more pathology will come to light after processing of these remains and examination under controlled laboratory conditions.

## **7 IMPACT OF THE DEVELOPMENT**

- 7.1.1 Due to the density and the shallowness of the burials, any modern development is highly likely to impact on these graves. The build-up layers of modern demolition debris and gravel is unlikely to provide a proportional increase in the depth of the burials below the present ground level, as it is probable that much if not all of this made ground will need to be removed prior to construction.

## **8 ARCHAEOLOGICAL POTENTIAL IN RELATION TO OUTLINE RESEARCH DESIGN**

### **8.1 Periods represented**

- 8.1.1 The 18th- and early 19th-centuries are well represented both in terms of burials and in deposition of gravels in the eastern parts of the Paddock. In addition, the small brick and mortar structure (1101) of unknown function dates to this period.
- 8.1.2 The later 20th century is also abundantly represented by considerable dumping of building rubble and gravel in most areas of the Paddock, and the excavation of occasional pits.
- 8.1.3 No archaeology predating the hospital was discovered.

### **8.2 Possible taphonomic issues**

- 8.2.1 With the exception of service trenches and occasional modern pits, there has been relatively little anthropogenic truncation of the burials. Bioturbation in the form of tree root disturbance is probable in discrete areas, such as the area located between Trenches 9, 12 and 13. However, little was observed in these excavated areas. Maps dating from 1754 to the present day indicate that the Paddock has been used as open grassland or gardens with occasional trees throughout its history, and hence, this form of bioturbation is unlikely to be significant. Anecdotal reports of foxes and badgers disturbing burials suggest that they too may be a minor factor in survival of human remains. Such disturbance was not noted in any of the trenches.
- 8.2.2 Skeletal preservation was fair to poor. Better preservation was observed in the gravel substrate of trenches 16, 18 and 19, than in the sandy clay natural of the other trenches. This poor preservation is probably due to the soil acidity, although the acids from decomposing wooden coffins would have contributed to an unfavourable micro-environment around most of the burials. Nevertheless, most skeletons were sufficiently well preserved to warrant formal osteological examination.
- 8.2.3 The depth of burials from the present ground surface ranged from 0.6 m - 1.0 m. It is highly probable that any development of this site will involve considerable disturbance of burials.

### **8.3 Range and preservation of finds**

- 8.3.1 Few finds were recovered within the trenches. Coffin nails were present in the majority of the excavated graves, but no personal or dress ornaments or grave goods

were found associated with the burials. This is not altogether surprising as this was a common feature of pervading burial practices of this period. In addition, personal effects of the dead and dying (sometimes including considerable sums of money and valued possessions, such as silver buckles) were often stolen from patients by nurses and other hospital staff of the hospital (Tait 1906, 61). For example, in 1756, a complaint to the hospital council lodged against one Nurse Rouse for stripping a dying man, resulted in her dismissal (British Orthopaedic Association clinical meeting, Haslar, 1967). Alternatively, many sailors willed their belongings to messmates and other close friends well before death (Fremont-Barnes 2005).

- 8.3.2 Three contexts contained clay pipe stems dating to the 18th and early 19th centuries, and were probably residual. Brick typology dated the structure 1101 to the 18th-century.

#### 8.4 Summary of anticipated significance/ potential

- 8.4.1 The burials within the Paddock form part of one of the most extensive military cemeteries in Britain. The vast size of the burial population offers huge potential for archaeological research. From a funerary archaeology perspective, there is considerable potential in enhancing our understanding of the treatment of naval personnel in death. Osteologically, although bone preservation is variable across the site, there exists considerable potential for greater refinement in age, sex and stature estimation, and in identification of pathology. A study of bone modification in response to physical activity may offer considerable insights into the effects of life at sea on the physical body. In recent years, there has been a considerable growth in the study of the sociology of maritime societies of the 18th- and 19th-centuries. Osteological study of the Haslar and Greenwich skeletal populations potentially offers exceedingly valuable data when considered alongside documentary sources.

### 9 CONCLUSION

- 9.1.1 The evaluation confirmed documentary reports of a dense distribution of shallow burials within the Paddock area. However, the evaluation revealed that these burials were restricted to the higher ground of the eastern half of the study area. No mass burial pits were discovered, but a number of excavated graves revealed that several individuals were placed on top of one another within a single grave cut. There were no grave goods and the majority of burials had been interred within plain wooden coffins. Osteological potential of the skeletal assemblage is good, although bone preservation did vary across the site. Considerable modern made ground was revealed becoming increasingly deep to the north-west of the field, exceeding 3 m in places.



## APPENDICES

## APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Trench</i>	<i>Ctxt No</i>	<i>Type</i>	<i>Width (m)</i>	<i>Thick. (m)</i>	<i>Comment</i>	<i>Finds</i>	<i>No./ wt</i>	<i>Date</i>
1	100	Layer			Modern topsoil			modern
	101	Layer			Modern made ground			modern
	102	Layer			Modern made ground			modern
	103	Layer			Modern made ground			modern
	104	Layer			Modern made ground			modern
4	400	Layer			Modern topsoil			modern
	401	Layer			20th century made ground			modern
	402	Layer			20th- century made ground			modern
	403	Layer			20th- century made ground			modern
	404	Layer			Interface layer			modern
	405	Layer			Interface layer			modern
5	500	Layer			Modern topsoil			modern
	501	Layer			20th century made ground			modern
	502	Layer			20th century made ground			modern
6	601	Layer			Modern topsoil			modern
	602	Layer			20th century made ground			modern
	603	Layer			20th century made ground			modern
	604	Layer			20th century made ground			modern
8	801	Layer			Modern topsoil			modern
	802	Layer			20th century made ground			modern
	803	Layer			20th century made ground			modern
	804	Layer			20th century made ground			modern
	805	Cut			Pit or post-hole			Unknown
	806	Fill			Fill of (810)			Unknown
	807	fill			Fill of (805)			Unknown
	808	Layer			Sandy clay natural			unknown
	809	Fill			Fill of (805)			Unknown
	810	Cut			Posthole or small pit			Unknown
	811	Cut			Square posthole/pit			unknown
9	900	Burial			Grave with 3 skeletons	Clay pipe		18th -early 19th C
	901	Layer			Modern topsoil			modern
	902	Layer			20th century made ground			Modern

	903	Layer			Buried topsoil			Post-18-19th C
	904	Layer			Subsoil			Post-18-19th C
	905	Burial			Unexcavated burial			18-19th C
	906	Cut			Grave cut			18-19th C
	907	Burial			Unexcavated burial			18-19th C
	908	Burial			Unexcavated burial			18-19th C
	909	Burial			Unexcavated burial			18-19th C
	910	Burial			Unexcavated burial			18-19th C
	911	Layer			Sandy clay natural			unknown
	912	Skeleton			Young adult male			18-19th C
	913	Skeleton			Young adult male			18-19th C
	914	Skeleton			Adult male			18-19th C
10	1000	Layer			Modern topsoil			Modern
	1001	Layer			20th century made ground			Modern
	1002	Layer			20th century made ground			Modern
	1003	Layer			20th century made ground			Modern
11	1100	Layer			Modern topsoil			Modern
	1101	Structure			18th century brick and mortar structure			18th C
	1102	Layer			Subsoil			unknown
	1103	Layer			Demolition layer			Modern
	1104	Layer			20th century made ground			Modern
	1105	Deposit			Silt overlying floor			Post-18th century
	1106	Cut			Modern service trench			Modern
	1107	Fill			Backfill of (1106)			Modern
	1108	Cut			Foundation cut for (1101)			18th century
12	1200	Layer			Modern topsoil			Modern
	1201	Layer			Burnt garden debris			Modern
	1202	Layer			Buried topsoil			Modern
	1203	Layer			Subsoil			Modern
	1204	Fill			Fill of (1205)			Modern
	1205	Cut			Modern linear			Modern
	1206	Layer			20th century made ground			Modern
	1207	Layer			Sandy clay natural			Geology
	1208	Burial			Unexcavated burial			18-19th C

	1209	Burial			Unexcavated burial			18-19th C
	1210	Burial			Unexcavated burial			18-19th C
	1211	Burial			Unexcavated burial			18-19th C
	1212	Burial			Unexcavated burial			18-19th C
	1213	Burial			Unexcavated burial			18-19th C
	1214	Burial			Unexcavated burial			18-19th C
	1215	Burial			Unexcavated burial			18-19th C
	1216	Burial			Unexcavated burial			18-19th C
	1217	Burial			Unexcavated burial			18-19th C
	1218	Burial			Unexcavated burial			18-19th C
	1219	Burial			Unexcavated burial			18-19th C
	1220	Burial			Unexcavated burial			18-19th C
	1221	Burial			Adult male in coffin			18-19th C
13	1300	Layer			Modern topsoil			Modern
	1301	Layer			Subsoil			Modern
	1302	Layer			Sandy clay natural			Geology
	1303	Cut			Modern linear			Modern
	1304	Fill			Fill of (1303)			Modern
	1305	Cut			Modern pit			Modern
	1306	Fill			Fill of (1305)			Modern
	1307	Cut			Modern pit			Modern
	1308	Fill			Fill of (1307)			Modern
	1309	Burial			Unexcavated burial			18-19th C
	1310	Burial			Adult male			18-19th C
	1311	Burial			Adult male in coffin			18-19th C
	1312	Burial			Adult sex unknown			18-19th C
	1313	Burial			Unexcavated burial			18-19th C
	1314	Burial			Unexcavated burial			18-19th C
	1315	Burial			Unexcavated burial			18-19th C
	1316	Burial			Unexcavated burial			18-19th C
	1317	Burial			Unexcavated burial			18-19th C
	1318	Burial			Unexcavated burial			18-19th C
	1319	Burial			Unexcavated burial			18-19th C
	1320	Burial			Unexcavated burial			18-19th C
	1321	Burial			Unexcavated burial			18-19th C
	1322	Burial			Unexcavated burial			18-19th C
	1323	Burial			Unexcavated burial			18-19th C

	1324	Burial			Unexcavated burial			18-19th C
	1325	Burial			Unexcavated burial			18-19th C
	1326	Burial			Unexcavated burial			18-19th C
	1327	Burial			Unexcavated burial			18-19th C
	1328	Burial			Unexcavated burial			18-19th C
	1329	Burial			Unexcavated burial			18-19th C
	1330	Burial			Unexcavated burial			18-19th C
	1331	Burial			Unexcavated burial			18-19th C
	1332	Burial			Unexcavated burial			18-19th C
14	1401	Burial			Adult male in coffin			18-19th C
	1402	Burial			Disturbed adult male burial			18-19th C
	1403	Layer			Modern topsoil			Modern
	1404	Layer			Modern made ground			Modern
	1405	Layer			Sandy clay natural			Geology
	1406	Burial			Unexcavated burial			18-19th C
	1407	Burial			Unexcavated burial			18-19th C
	1408	Burial			Unexcavated burial			18-19th C
	1409	Burial			Unexcavated burial			18-19th C
	1410	Burial			Unexcavated burial			18-19th C
	1411	Burial			Unexcavated burial			18-19th C
	1412	Burial			Unexcavated burial			18-19th C
	1413	Burial			Unexcavated burial			18-19th C
	1414	Burial			Unexcavated burial			18-19th C
	1415	Burial			Unexcavated burial			18-19th C
	1416	Burial			Unexcavated burial			18-19th C
	1417	Burial			Unexcavated burial			18-19th C
	1418	Burial			Unexcavated burial			18-19th C
	1419	Burial			Unexcavated burial			18-19th C
	1420	Burial			Unexcavated burial			18-19th C
	1421	Burial			Unexcavated burial			18-19th C
	1422	Burial			Unexcavated burial			18-19th C
	1423	Burial			Unexcavated burial			18-19th C
	1424	Burial			Unexcavated burial			18-19th C
	1425	Burial			Unexcavated burial			18-19th C
	1426	Burial			Unexcavated burial			18-19th C
	1427	Burial			Unexcavated burial			18-19th C
	1428	Burial			Unexcavated burial			18-19th C

	1429	Burial			Unexcavated burial			18-19th C
15	1501	Layer			Modern topsoil			Modern
	1502	Layer			Modern made ground			Modern
	1503	Layer			Modern made ground			Modern
	1504	Layer			Modern made ground			Modern
	1505	Layer			Buried topsoil			Post-medieval
	1506	Layer			Subsoil			Post-medieval
	1507	Layer			Sandy clay natural			Geology
	1508	Cut			Grave cut			18-19th C
	1509	Fill			Backfill containing charnel			18-19th C
	1510	Skeleton			Uppermost of 3 skeletons in (1508)			18-19th C
	1511	Skeleton			Middle of 3 skeletons in (1508)			18-19th C
	1512	Skeleton			Lowermost of 3 skeletons in (1508)			18-19th C
	1513	Coffin			Iron nails within (1509)			18-19th C
	1514	Burial			Unexcavated burial			18-19th C
	1515	Burial			Unexcavated burial			18-19th C
	1516	Burial			Unexcavated burial			18-19th C
	1517	Burial			Unexcavated burial			18-19th C
	1518	Burial			Unexcavated burial			18-19th C
	1519	Burial			Unexcavated burial			18-19th C
	1520	Burial			Unexcavated burial			18-19th C
	1521	Burial			Unexcavated burial			18-19th C
	1522	Burial			Unexcavated burial			18-19th C
	1523	Burial			Unexcavated burial			18-19th C
	1524	Burial			Possible unexcavated burial			18-19th C
16	1601	Layer			Modern topsoil			Modern
	1602	Layer			Made ground			18th C
	1603	Layer			Made ground			18th C
	1604	Burial			Unexcavated burial			18-19th C
	1605	Burial			Unexcavated burial			18-19th C
	1606	Burial			Unexcavated burial			18-19th C
	1607	Burial			Unexcavated burial			18-19th C
	1608	Burial			Unexcavated burial			18-19th C
	1609	Burial			Unexcavated burial			18-19th C

	1610	Burial			Older male burial			18-19th C
	1611	Burial			Unexcavated burial			18-19th C
	1612	Burial			Unexcavated burial			18-19th C
	1613	Burial			Unexcavated burial			18-19th C
	1614	Burial			Unexcavated burial			18-19th C
	1615	Burial			Unexcavated burial			18-19th C
	1616	Layer			Made ground cut by graves			18th C
17	1701	Layer			Modern topsoil			Modern
	1702	Layer			Modern made ground			Modern
	1703	Burial			Unexcavated burial			18-19th C
	1704	Burial			Unexcavated burial			18-19th C
	1705	Burial			Unexcavated burial			18-19th C
	1706	Burial			Unexcavated burial			18-19th C
	1707	Burial			Unexcavated burial			18-19th C
	1708	Burial			Unexcavated burial			18-19th C
	1709	Burial			Unexcavated burial			18-19th C
	1710	Burial			Adult male in coffin	Clay pipe		18-early 19th C
	1711	Burial			Unexcavated burial			18-19th C
	1712	Burial			Unexcavated burial			18-19th C
	1713	Layer			Modern made ground			18-19th C
	1714	Layer			Modern made ground			18-19th C
	1715	layer			Sandy clay natural			18-19th C
	1716	Fill			Fill of (1706)			18-19th C
18	1800	Burial			Young adult male in coffin			18-19th C
	1801	Burial			Unexcavated burial			18-19th C
	1802	Burial			Unexcavated burial			18-19th C
	1803	Burial			Unexcavated burial			18-19th C
	1804	Burial			Unexcavated burial			18-19th C
	1805	Burial			Unexcavated burial			18-19th C
	1806	Burial			Unexcavated burial			18-19th C
	1807	Burial			Unexcavated burial			18-19th C
	1808	Burial			Unexcavated burial			18-19th C
	1809	Burial			Unexcavated burial			18-19th C
	1810	Burial			Unexcavated burial			18-19th C
	1811	Burial			Unexcavated burial			18-19th C
	1812	Burial			Unexcavated burial			18-19th C

	1813	Burial			Unexcavated burial			18-19th C
	1814	Burial			Unexcavated burial			18-19th C
	1815	Burial			Unexcavated burial			18-19th C
	1816	Burial			Unexcavated burial			18-19th C
	1817	Burial			Unexcavated burial			18-19th C
	1818	Burial			Unexcavated burial			18-19th C
	1819	Cut			Modern ditch			Modern
	1820	Fill			Lower fill of modern ditch (1819)			Modern
	1821	Fill			Upper fill of modern ditch (1819)			Modern
	1822	Cut			Possible pit			Modern
	1823	Fill			Fill of (1822)			Modern
	1824	Layer			Modern topsoil			Modern
	1825	Layer			Modern made ground			Modern
	1826	Layer			Buried topsoil			Pre-modern
	1827	Layer			Sandy subsoil			Pre-modern
	1828	Layer			Sandy clay natural			Geology
	1829	Layer			Gravel layer cut by graves			18th C
	1831	Layer			Sandy clay natural (same as 1828)			Geology
19	1900	Layer			Modern topsoil			Modern
	1901	Layer			Modern made ground			Modern
	1902	Layer			Modern made ground			Modern
	1903	Layer			Modern made ground			Modern
	1904	Layer			Modern made ground			Modern
	1905	Layer			Modern made ground			Modern
	1906	Cut			Modern pit			modern
	1907	Burial			Prime adult male within coffin			18-19th C
	1908	Burial			Unexcavated burial			18-19th C
	1909	Burial			Unexcavated burial			18-19th C
	1910	Burial			Unexcavated burial			18-19th C
	1911	Burial			Unexcavated burial			18-19th C
	1912	Burial			Unexcavated burial			18-19th C
	1913	Burial			Unexcavated burial			18-19th C
	1914	Burial			Unexcavated burial			18-19th C
	1915	Burial			Unexcavated burial			18-19th C
	1916	Burial			Unexcavated burial			18-19th C

	1917	Burial			Unexcavated burial			18-19th C
	1918	Burial			Unexcavated burial			18-19th C
	1919	Burial			Unexcavated burial			18-19th C
20	2001	Layer			Modern topsoil			Modern
	2002	Layer			Modern made ground			Modern
	2003	Layer			Made ground			18-19th C
	2004	Layer			Made ground			18-19th C
	2005	Burial			Unexcavated burial			18-19th C
	2006	Burial			Unexcavated burial			18-19th C
	2007	Burial			Unexcavated burial			18-19th C
	2008	Burial			Unexcavated burial			18-19th C
	2009	Burial			Unexcavated burial			18-19th C
	2010	Burial			Unexcavated burial			18-19th C
	2011	Burial			Adult male in coffin			18-19th C
	2012	Burial			Unexcavated burial			18-19th C
	2013	Burial			Unexcavated burial			18-19th C
	2014	Burial			Unexcavated burial			18-19th C
	2015	Burial			Unexcavated burial			18-19th C
	2016	Burial			Unexcavated burial			18-19th C
	2017	Burial			Unexcavated burial			18-19th C
	2018	Burial			Unexcavated burial			18-19th C
	2019	Burial			Unexcavated burial			18-19th C
	2020	Burial			Unexcavated burial			18-19th C
	2021	Burial			Unexcavated burial			18-19th C
	2022	Burial			Unexcavated burial			18-19th C
	2023	Burial			Unexcavated burial			18-19th C
	2024	Burial			Unexcavated burial			18-19th C
	2025	Burial			Unexcavated burial			18-19th C
	2026	Burial			Unexcavated burial			18-19th C
	2027	Burial			Unexcavated burial			18-19th C
	2028	Burial			Unexcavated burial			18-19th C
	2029	Burial			Unexcavated burial			18-19th C
	2030	Burial			Unexcavated burial			18-19th C
	2031	Burial			Unexcavated burial			18-19th C
	2032	Burial			Unexcavated burial			18-19th C
	2033	Burial			Unexcavated burial			18-19th C
	2034	Burial			Unexcavated burial			18-19th C



	2035	Burial			Unexcavated burial			18-19th C
22	2200	Layer			Modern topsoil			Modern
	2201	Layer			Modern made ground			Modern
23	2300	Layer			Modern topsoil			Modern
	2301	Layer			Modern made ground			Modern
	2302	Layer			Modern made ground			Modern
	2303	Layer			Buried topsoil			Post-medieval
	2304	Layer			Sandy subsoil			Post-medieval
	2305	Layer			Sandy clay natural			Geology
	2306	Burial			Unexcavated burial			18-19th C
	2307	Burial			Unexcavated burial			18-19th C
	2308	Burial			Legs of adult in coffin			18-19th C
	2309	Layer			Trample layer	Clay pipe		18-early 19th C
	2310	Burial			Unexcavated burial			18-19th C
	2311	Burial			Unexcavated burial			18-19th C
	2312	Burial			Unexcavated burial			18-19th C
	2313	Burial			Unexcavated burial			18-19th C
	2314	Burial			Unexcavated burial			18-19th C
	2315	Burial			Unexcavated burial			18-19th C
	2316	Burial			Unexcavated burial			18-19th C
	2317	Burial			Unexcavated burial			18-19th C

## APPENDIX 2 SUMMARY OF THE EXCAVATED BURIALS

Skeleton Number	Age (years)	Sex	Stature (m)	Preservation	Completeness	Orientation	Body position	Dental pathology	Skeletal pathology	Single or multiple graves	Evidence for coffin
912	20-24 y	Male	1.542 m	Fair to good	80-90%	NW-SE	Supine, extended			Three skeletons in one grave	Iron nails
913	18-25 y	male	1.638 m	fair	60-75%	NW-SE	Prone, extended			Three skeletons in one grave	Nil
914	adult	male		Fair to poor	40-50%	NW-SE	Left tilt, extended			Three skeletons in one grave	Nil
1221	40+ y	male	1.678 m	fair	Near complete	SE-NW	Supine, extended	AMTL, moderate calculus	Healed cribra orbitalia type 3; ? Fractured coccyx	Single	Iron nails and wood stain
1310	adult	male		Very poor	20-30%	SSE-NNW	Supine, extended			Single	Nil
1311	25-35 y	male		Very poor	50-60%	W-E?	Supine, extended			Single	2 iron nails
1312	adult	unknown		poor	60-70%	SE-NW	Supine extended			Single	Nil
1401	25-40 y	male		Fair-poor	80%	NW-SE	Supine extended			Cut earlier grave 1402	6 iron nails and wood stain
1402	adult	male		fair	10-15%	? NW-SE	unknown			Unknown	Nil
1509	22-40 y	male		good	Skull, femur, pelvis, humeri	disarticulated	unknown	Marked DEH, calculus, AMTL		Three to four skeletons in grave	Not applicable
1510	25-35 y	Male		fair	Near complete	NW-SE	Supine, extended	Retained deciduous molar, DEH		Three to four skeletons in grave	Iron nails
1511	16-18 y	? Male		Fair	Near complete	NW-SE	Supine, extended			Three- four skeletons in grave	Iron nails
1512	16-18 y	unknown		fair	20% visible	NW-SE	Right tilt, extended			Three- to four skeletons in grave	Indeterminable
1610	40+ y	male	1.66 7 m	Fair to good	70-80%	SE-NW	Supine, extended	AMTL	Rickets, Schmorl's nodes, mild DJD of humeral head	Single	Nil
1710	adult	male	1.676 m	poor	60-70%	NW-SE	Supine extended	Moderate calculus, DEH		Single	Coffin nails
1800	20-25 y	male	1.626	Fair to poor	80-85%	NW-SE	Supine, extended	DEH		Single	Nails and wood
1907	25-35 y	male	1.614 m	poor	Near complete	NW-SE	Supine, extended	Pyorrhea, AMTL, calculus		Single	6 iron nails
2011	20-40 y	male	1.661m	Fair to poor	Near complete	NW-SE	Supine, extended		Cribra orbitalia	Single	5 iron nails
2308	adult	unknown	1.66 m	fair	Legs exposed	NW-SE	Supine, extended		Osteomyelitis R tibia	Double	Iron nails

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**Site name:** The Paddock, Royal Naval Hospital Haslar, Gosport, Hants.

**Site code:** A2005.35

**Grid reference:** SZ 6150 9849

**Type of evaluation:** 19 trench evaluation

**Date and duration of project:** 25 July to 5 August 2005 (2 weeks)

**Area of site:** 3.1 hct.

**Summary of results:**

In August 2005, Oxford Archaeology (OA) carried out a field evaluation in the Paddock, Royal Hospital Haslar, Gosport, on behalf of Defence Estates of the Ministry of Defence. The evaluation revealed 169 graves within 11 trenches, all located towards the eastern half of the site. There appeared to be a western limit to the burials, broadly correlating with a fall-off in the natural topography towards what appears to have been a small waterway that originally bounded the western limit of the Paddock. Considerable levelling of the modern ground surface had occurred in recent times, with the depth of modern backfill exceeding 3 m in the north-western part of the site (Trench 4).

The graves were closely spaced but largely parallel suggesting a short time period between the excavation of adjacent burials and/or the use of above-ground grave markers. Intercutting was very uncommon. In general, the grave alignment did not follow the traditional Christian west-east orientation. Instead, most graves were aligned north-west-south-east or north-east-south-west. No burial pits or mass graves were discovered. However, three excavated graves revealed multiple burials within the same grave cut, with one grave containing the remains of four individuals. The excavated graves revealed that the majority of the dead had been interred within plain wooden coffins, and not in their hammocks, as was previously believed.

Skeletal preservation was generally fair to poor with marked leaching of bone mineral. Nevertheless, it was possible osteologically to ascertain the age, sex and stature of most excavated skeletons, and to discern a number of dental and skeletal pathologies. There is considerable potential for future osteological and funerary archaeological analysis of this assemblage.

One brick-built structure (2 m x 2 m) was discovered within Trench 11. Brick typologies suggest a 18th-century date. The structure had a brick floor laid directly upon the natural, and three brick-and-mortar walls. The function of the structure is unclear but may relate to the use of the Paddock as a garden (eg a garden or grave-digger's shed) or may have a more military function (eg an ammunition store).

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the Hampshire County Museum Service in due course, under the following accession number: A2005.35.



Servergo:/oupubs1\_AhruH\*A2005.35\*GOHAHOEV\*Haslar Hospital, Gosport \*GS\*14.10.05



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Figure 1: Site Location







Figure 2: Site location



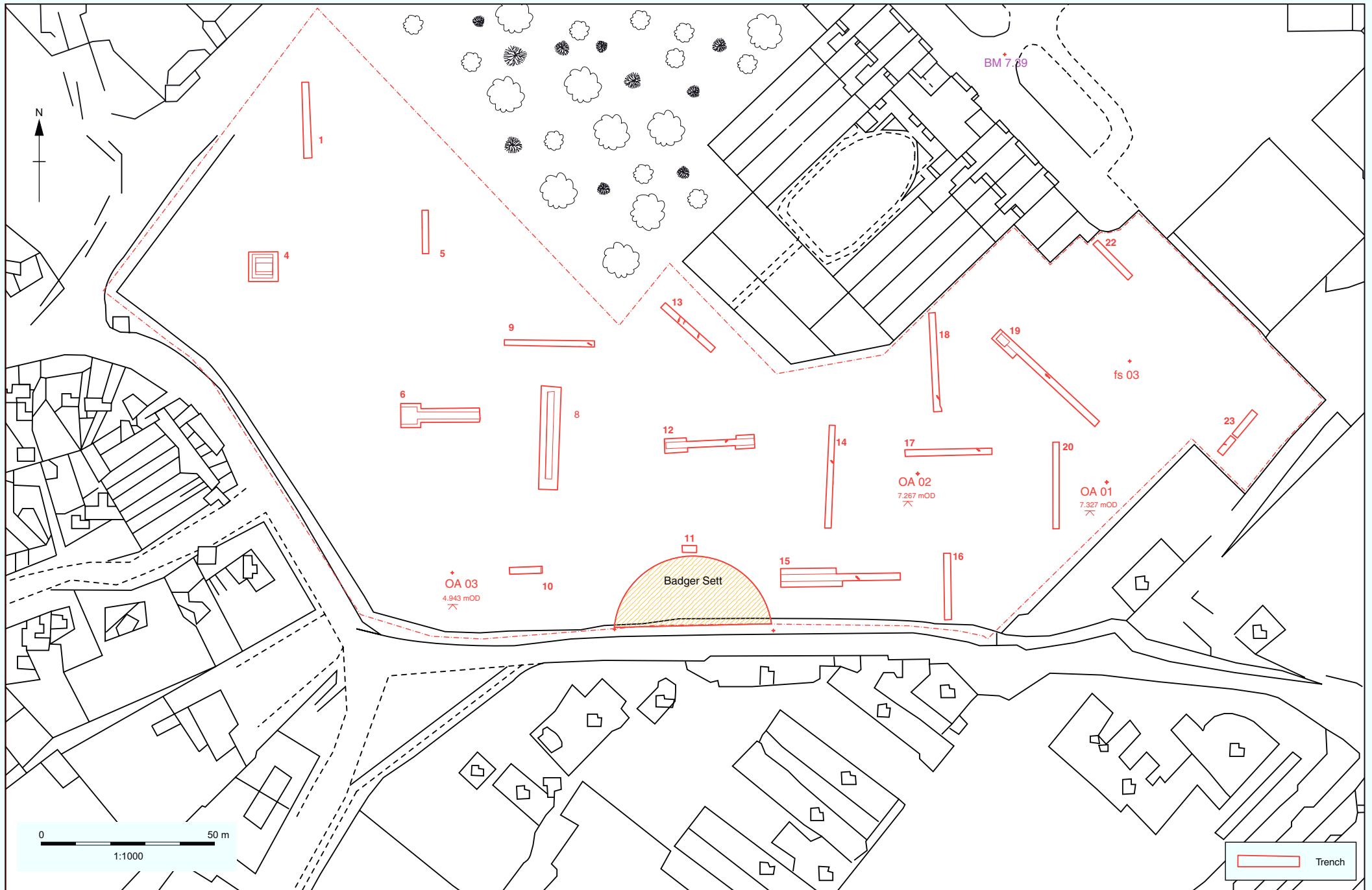


Figure 3: Location of the trenches within the Paddock



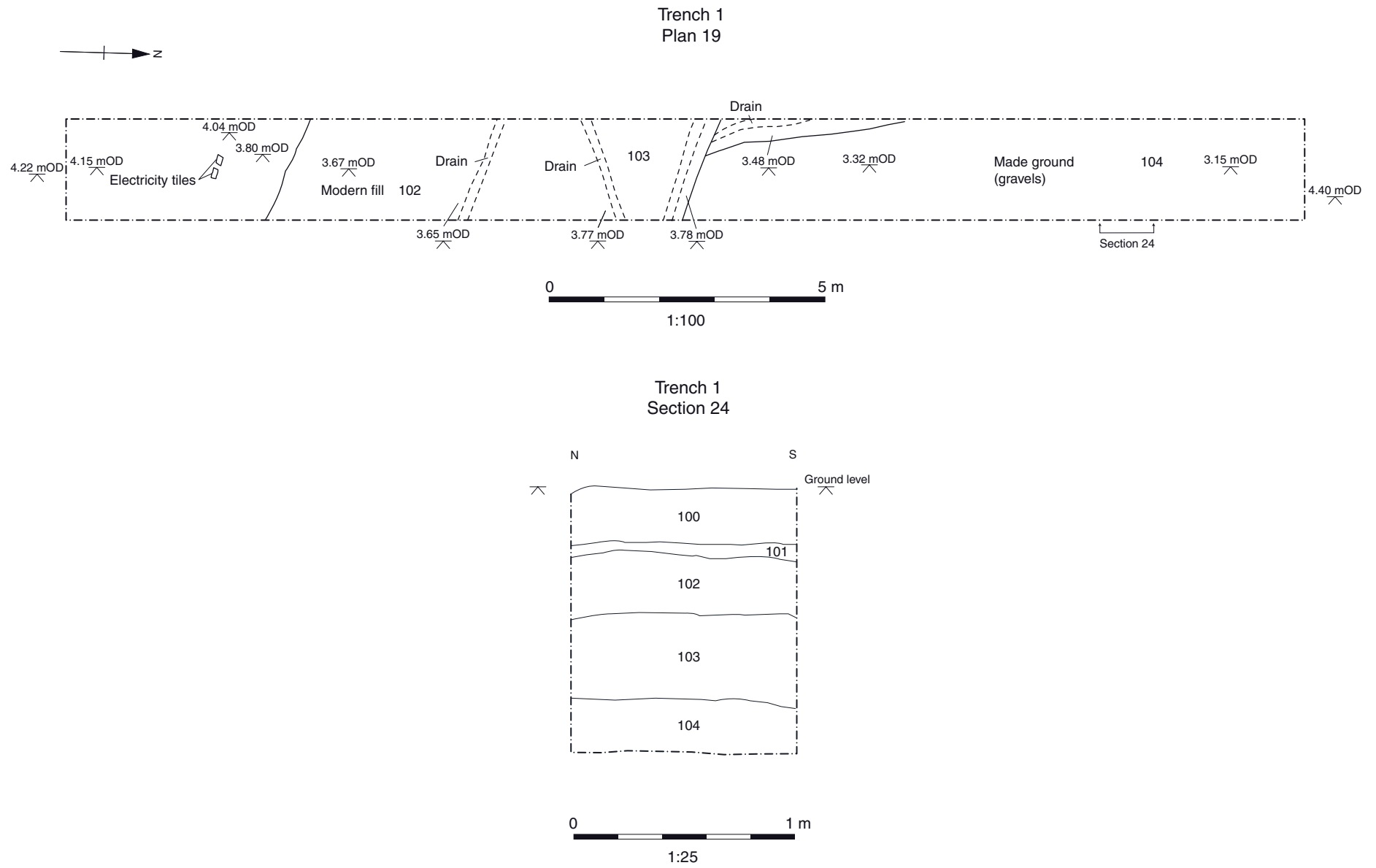


Figure 4: Trench 1, plan and section



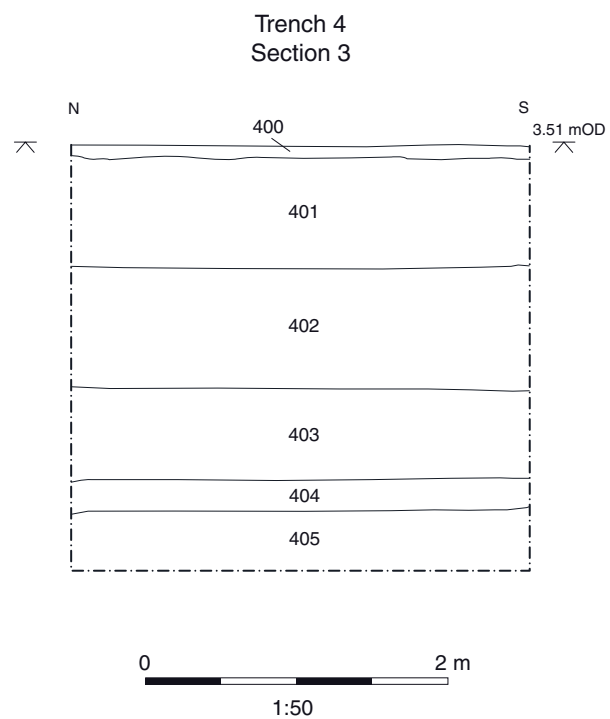
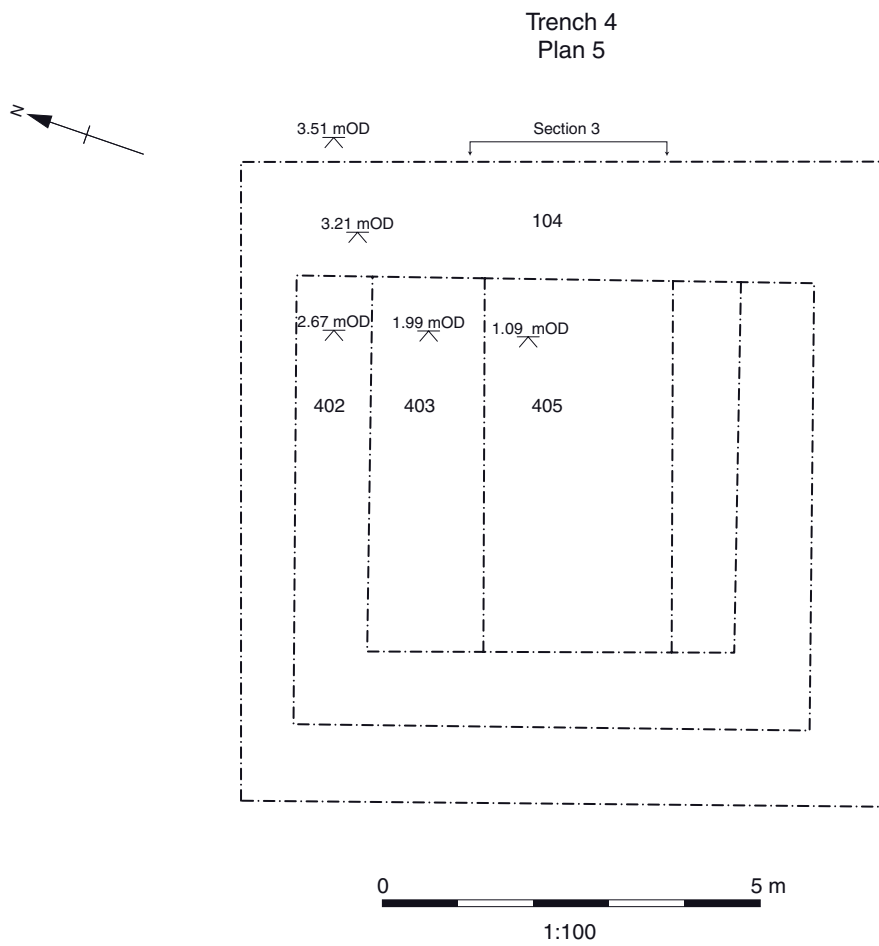


Figure 5: Trench 4, plan and section





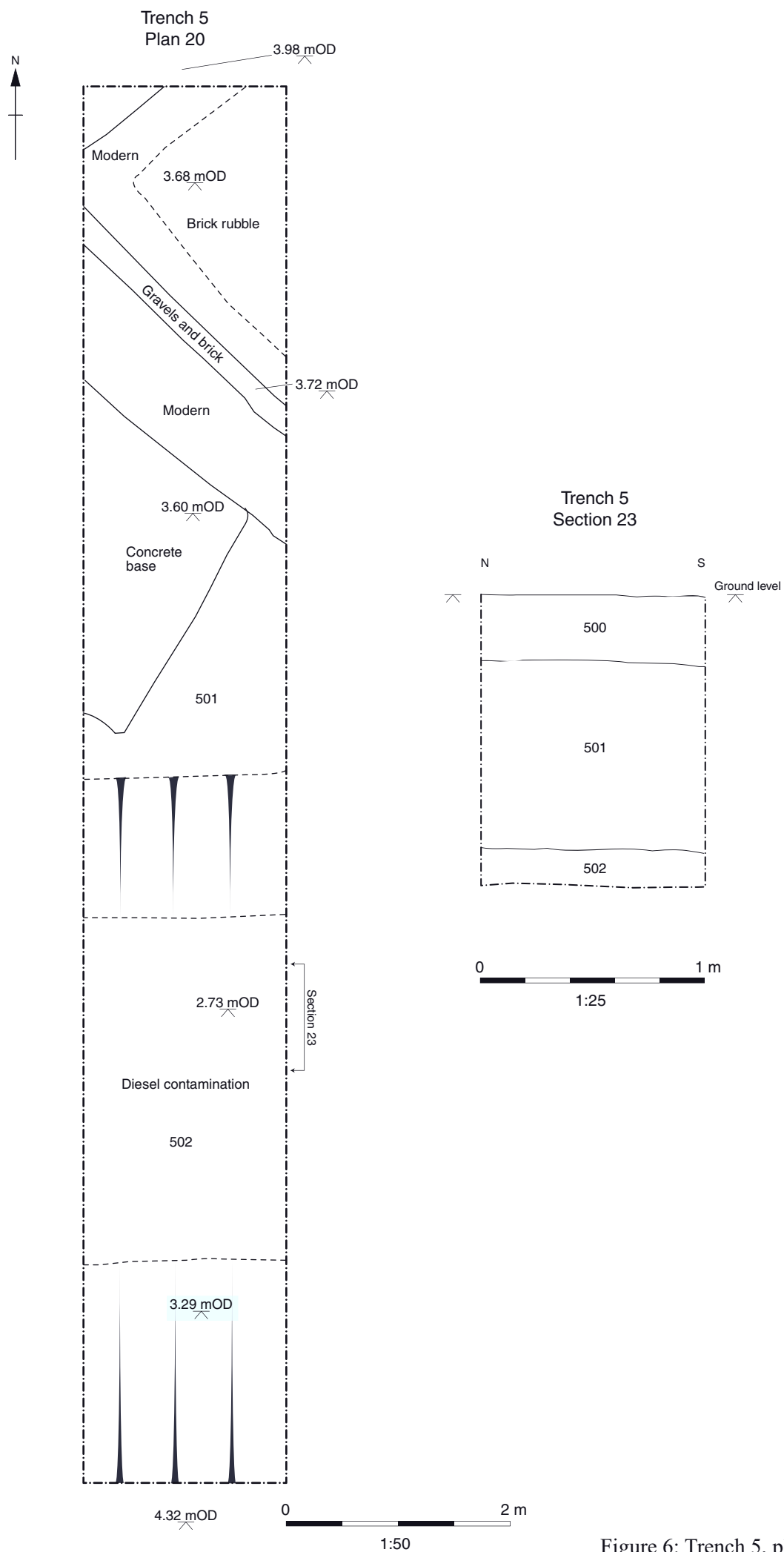


Figure 6: Trench 5, plan and section



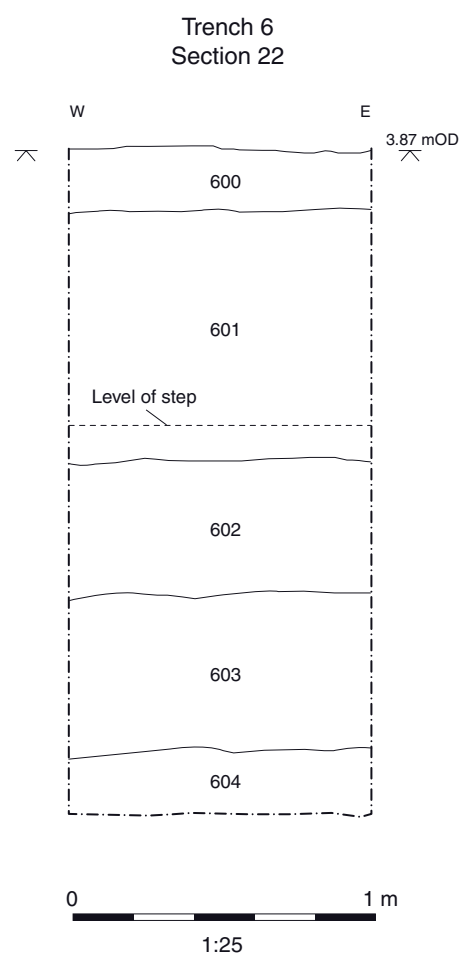
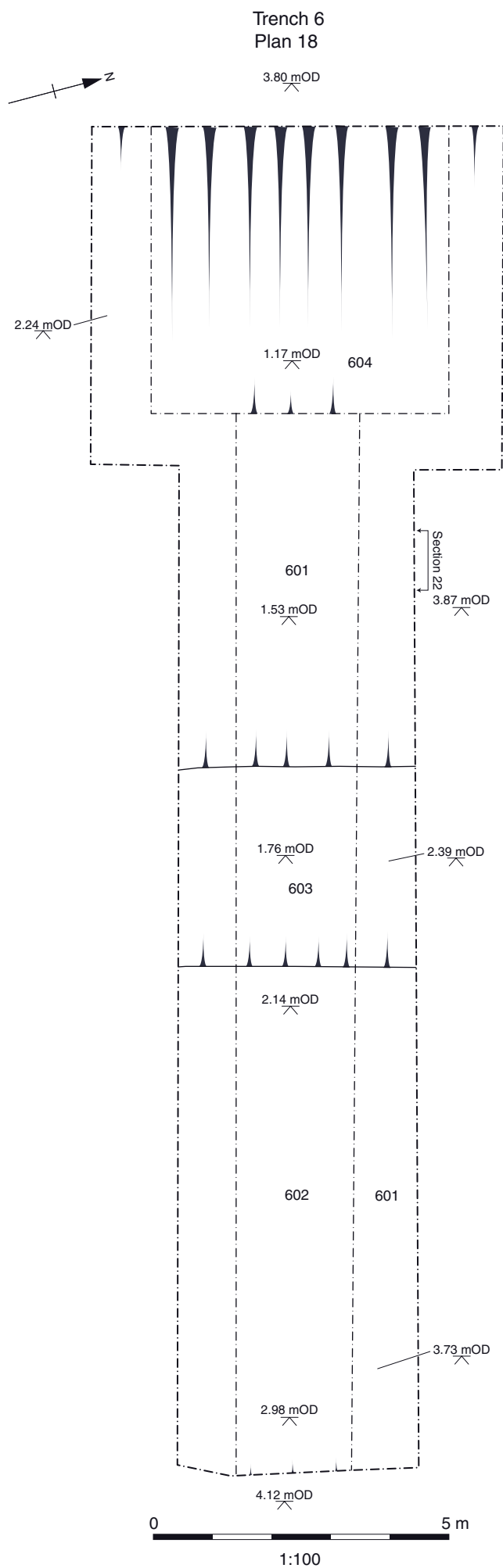


Figure 7: Trench 6, plan and section



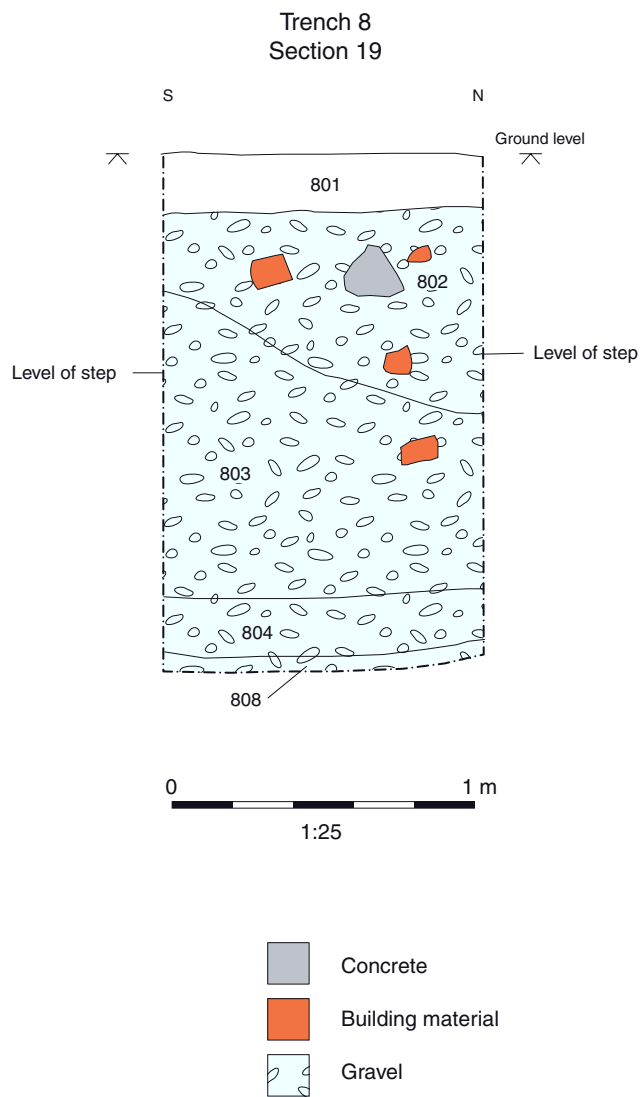
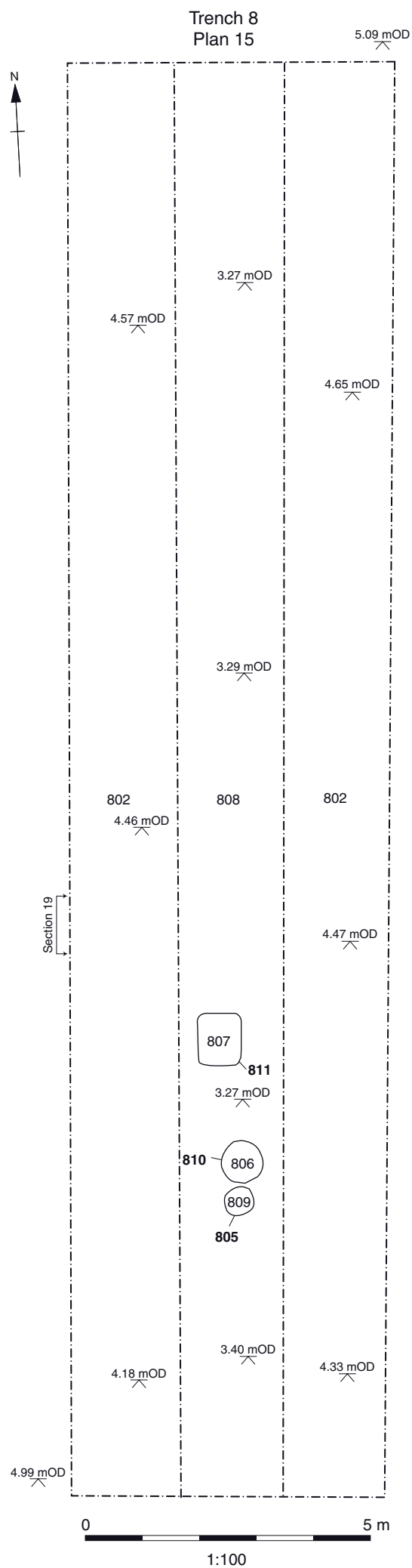


Figure 8: Trench 8, plan and section



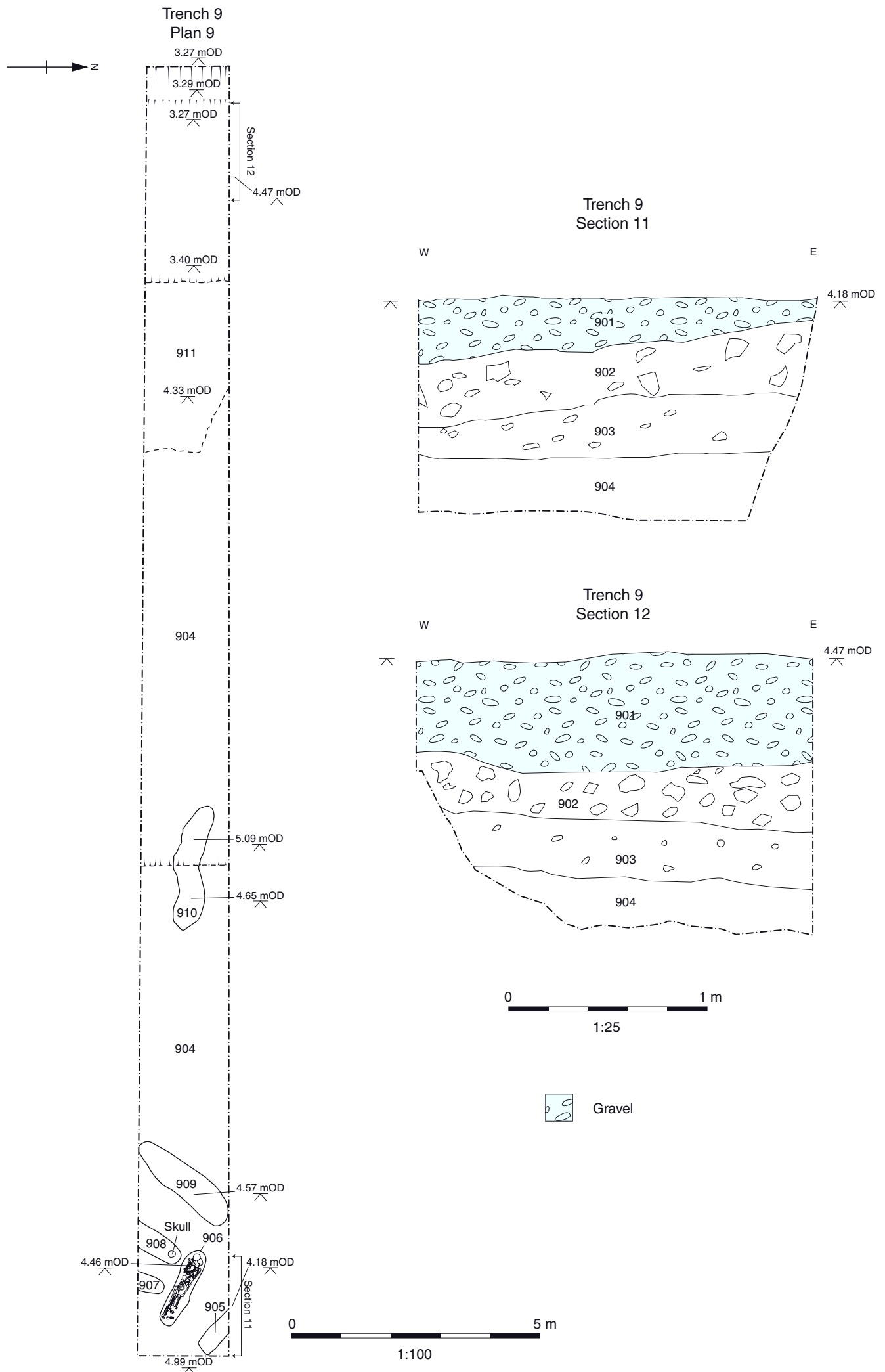


Figure 9: Trench 9, plan and section





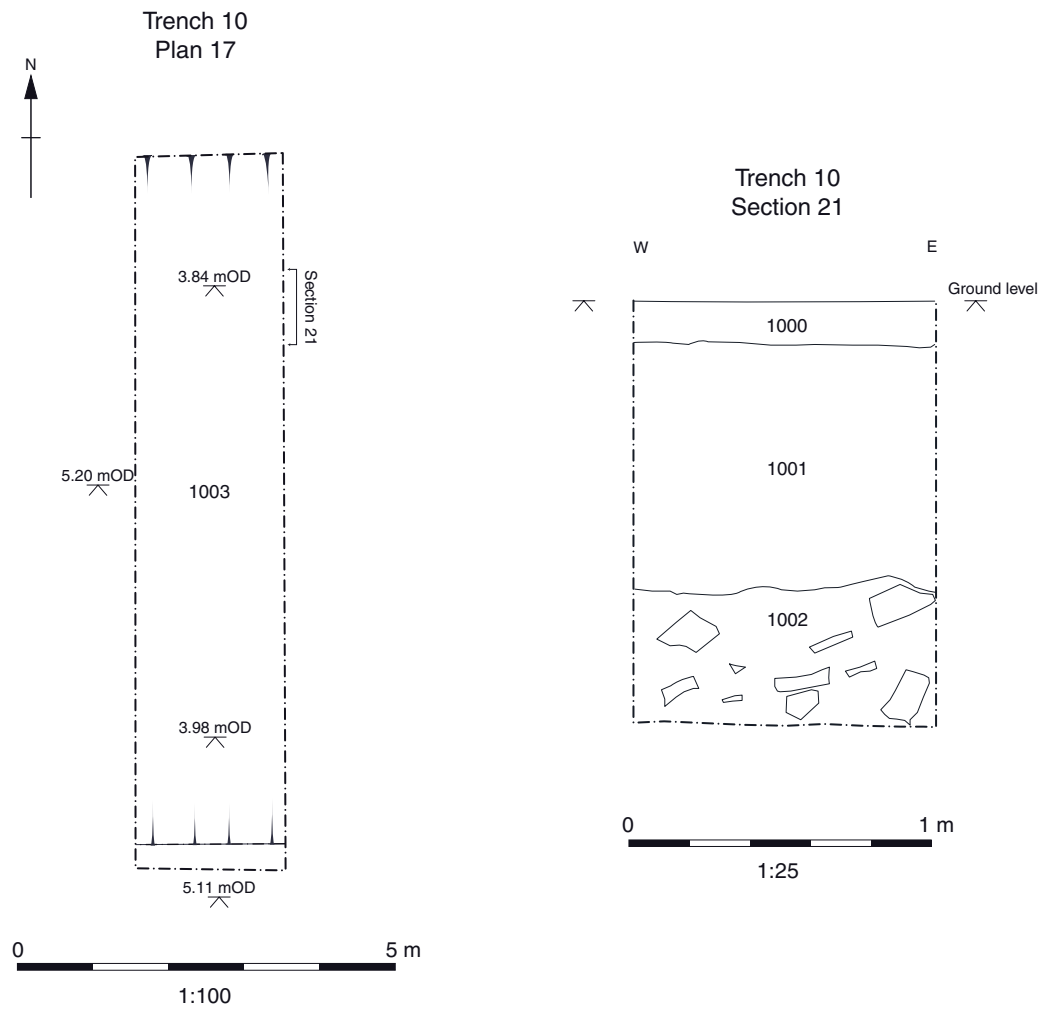


Figure 10: Trench 10, plan and section



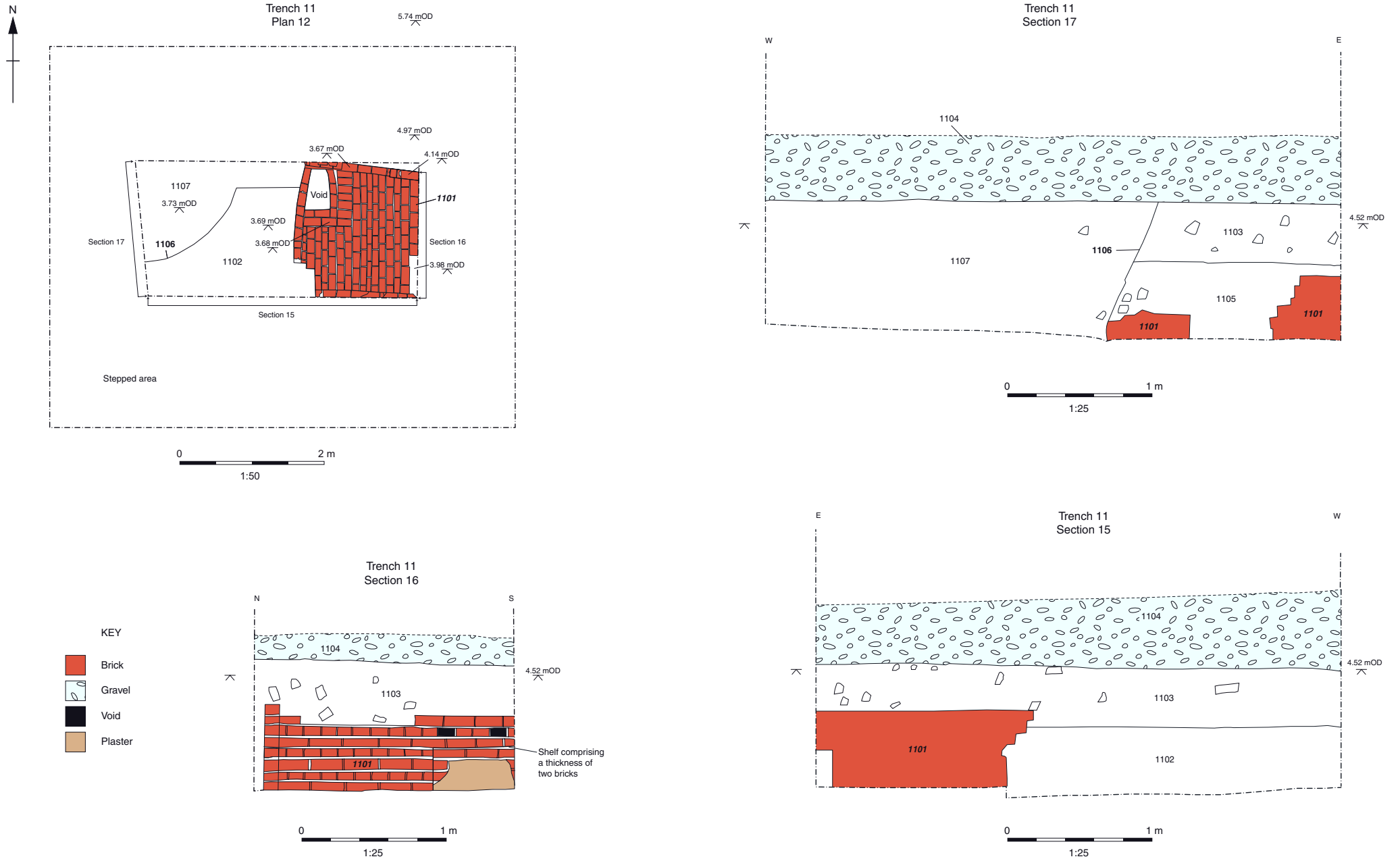


Figure 11: Trench 11, plan and sections



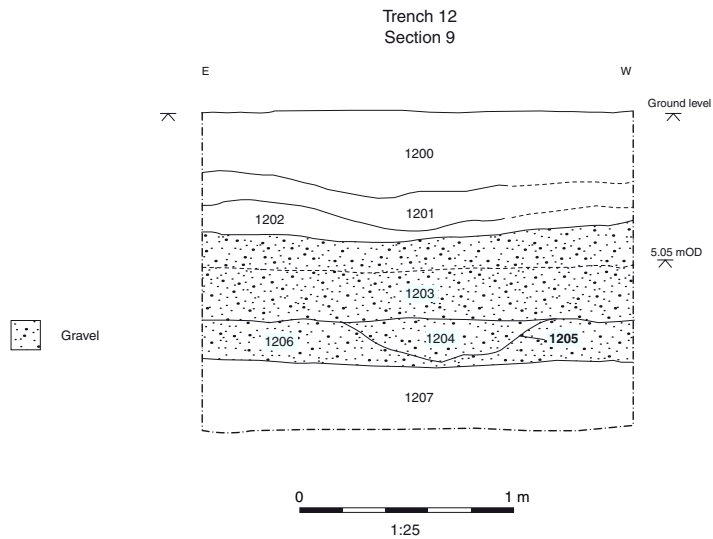
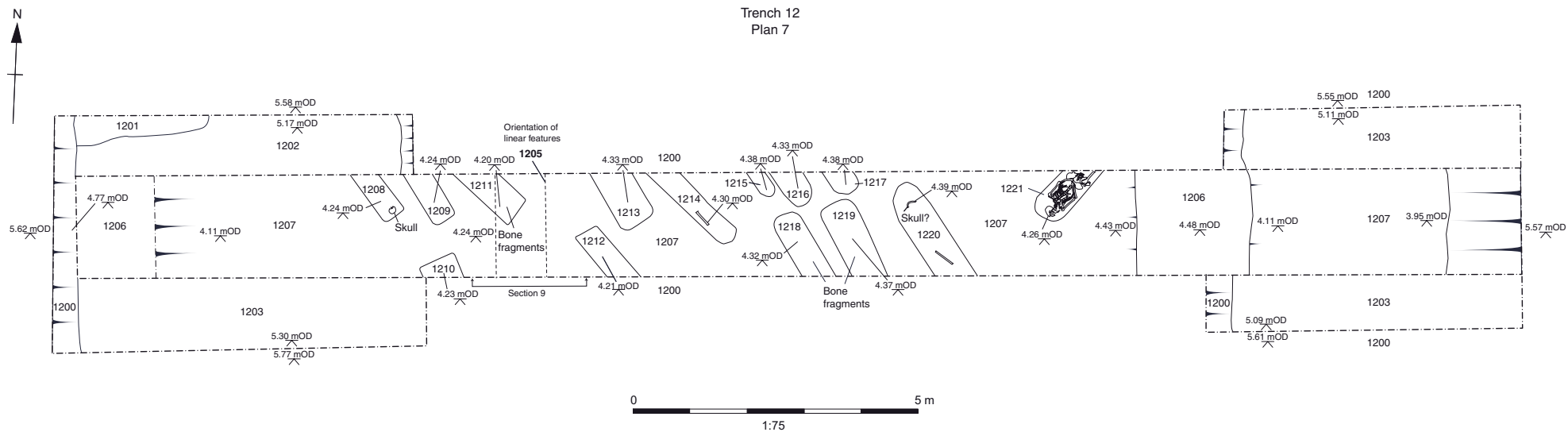


Figure 12: Trench 12, plan and section





Figure 13: Trench 13, plan and section





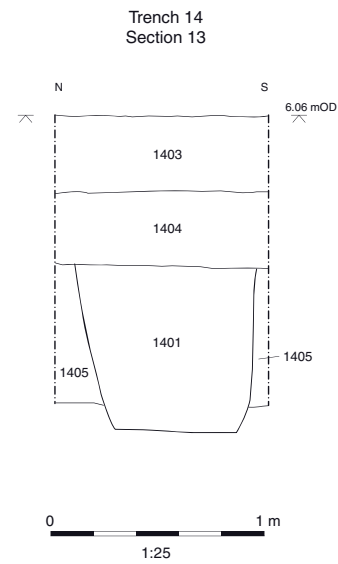
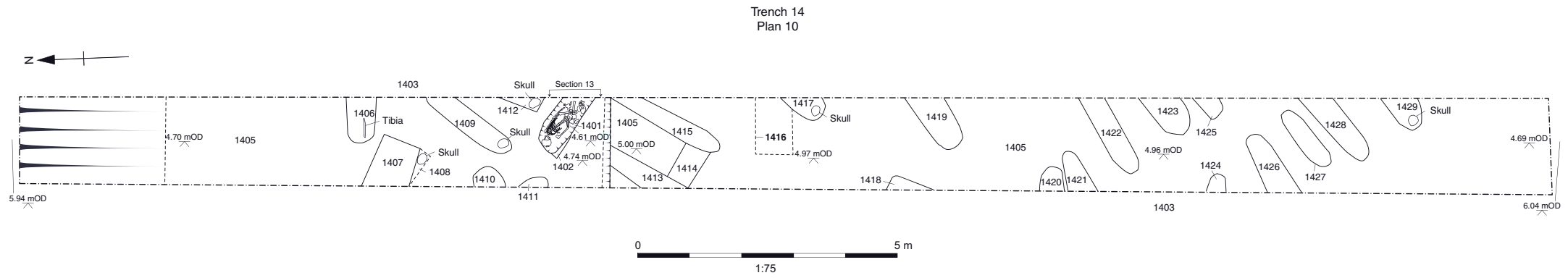


Figure 14: Trench 14, plan and section



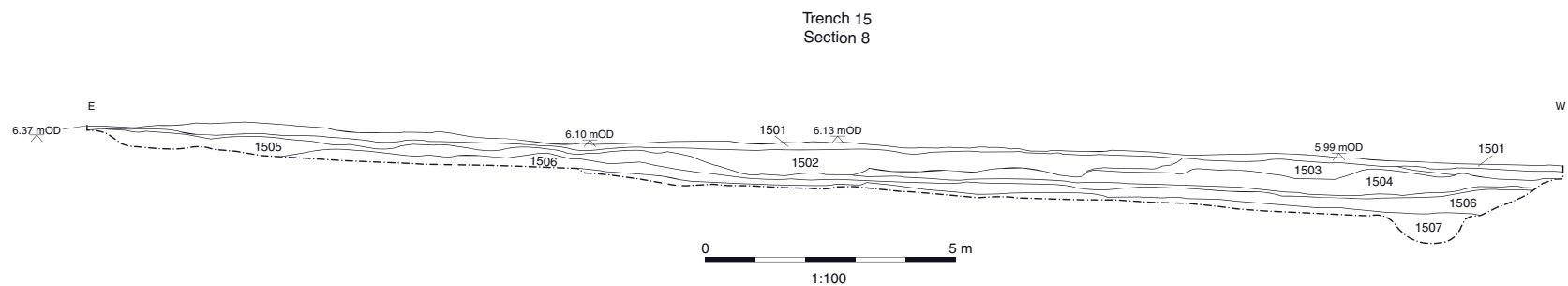
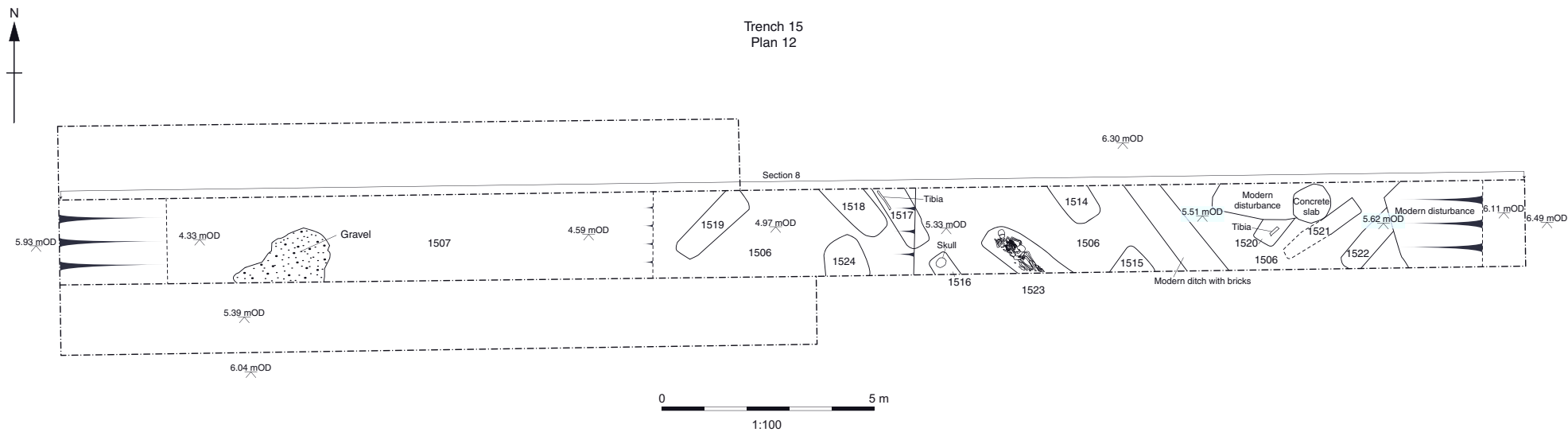


Figure 15: Trench 15, plan and section



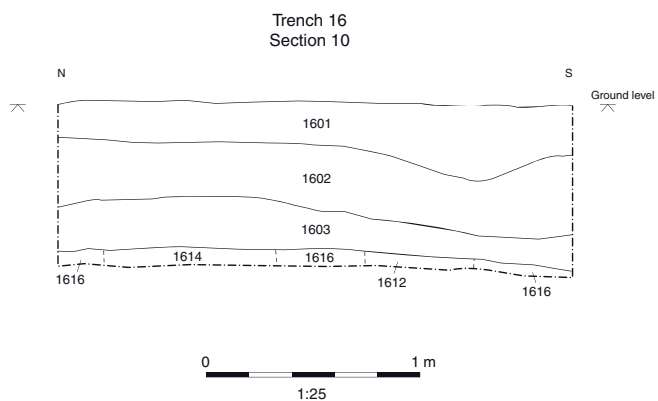
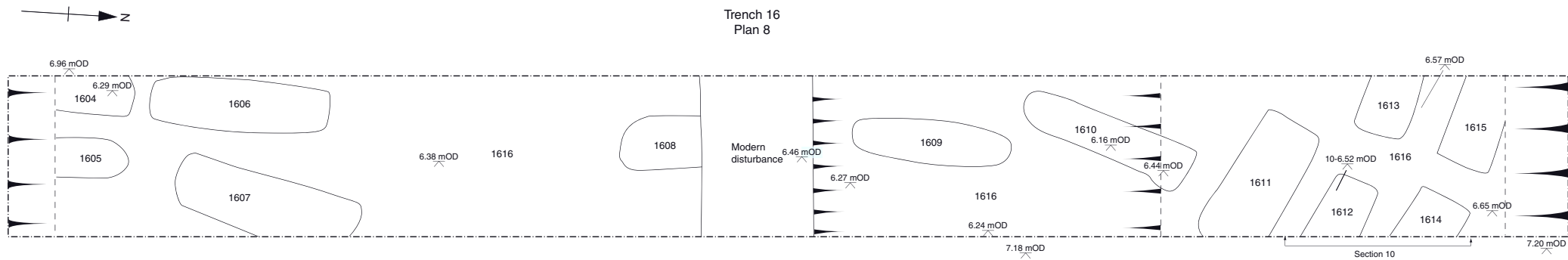


Figure 16: Trench 16, plan and section



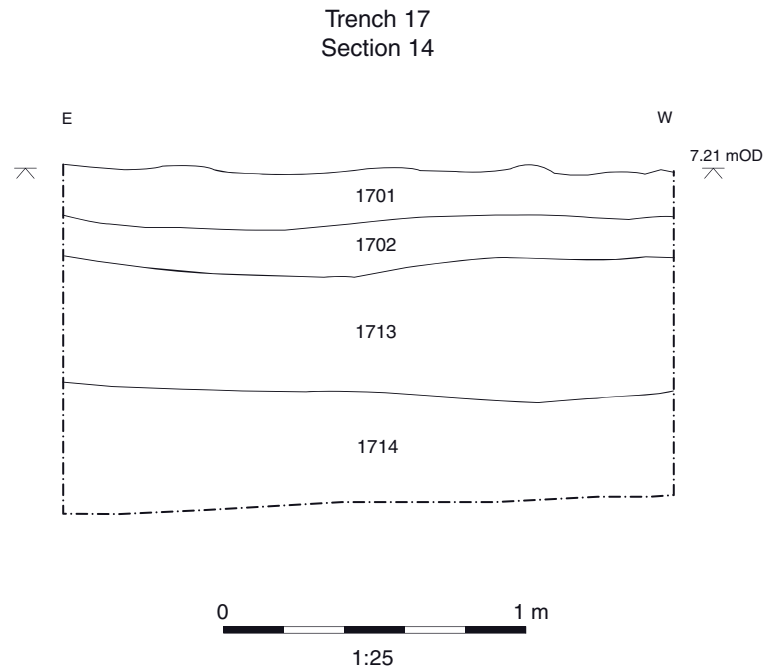
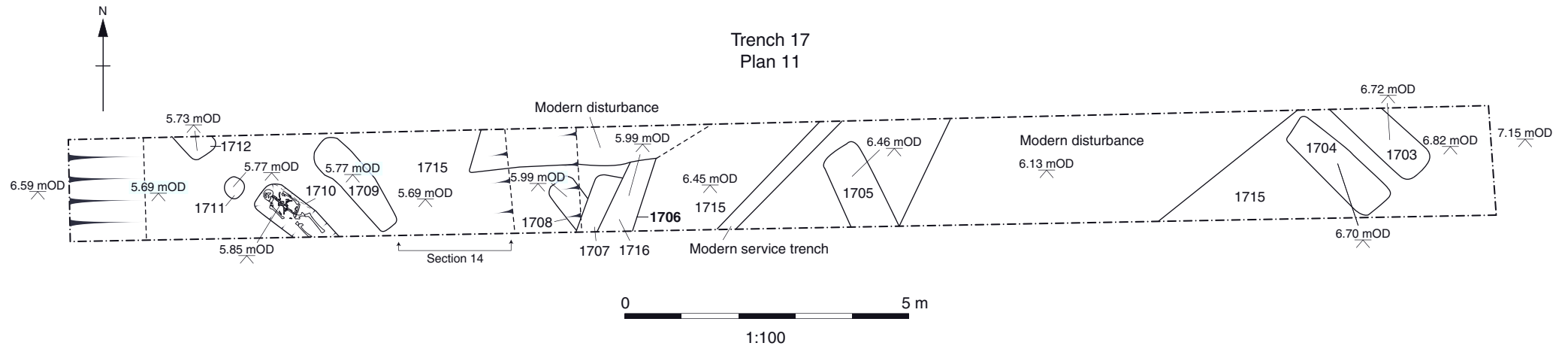


Figure 17: Trench 17, plan and section





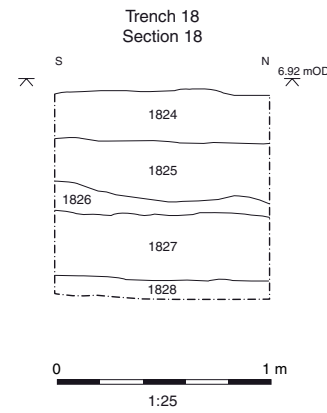
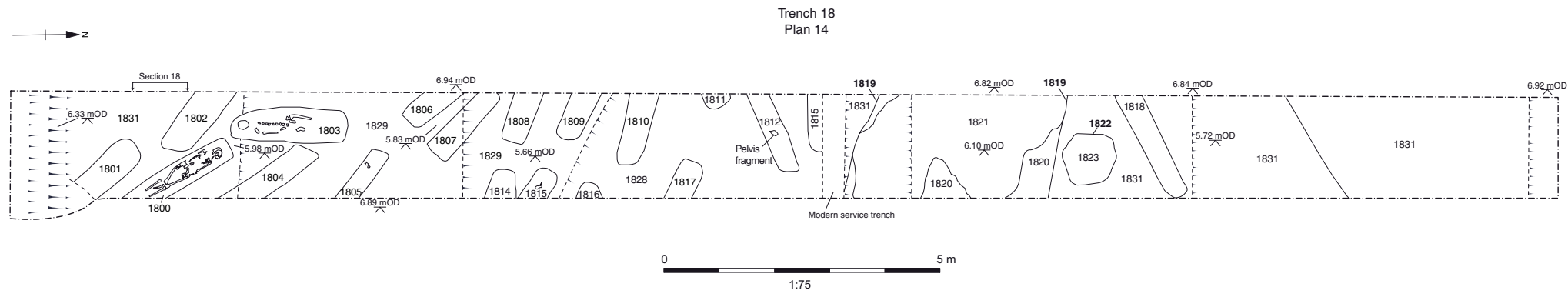


Figure 18: Trench 18, plan and section



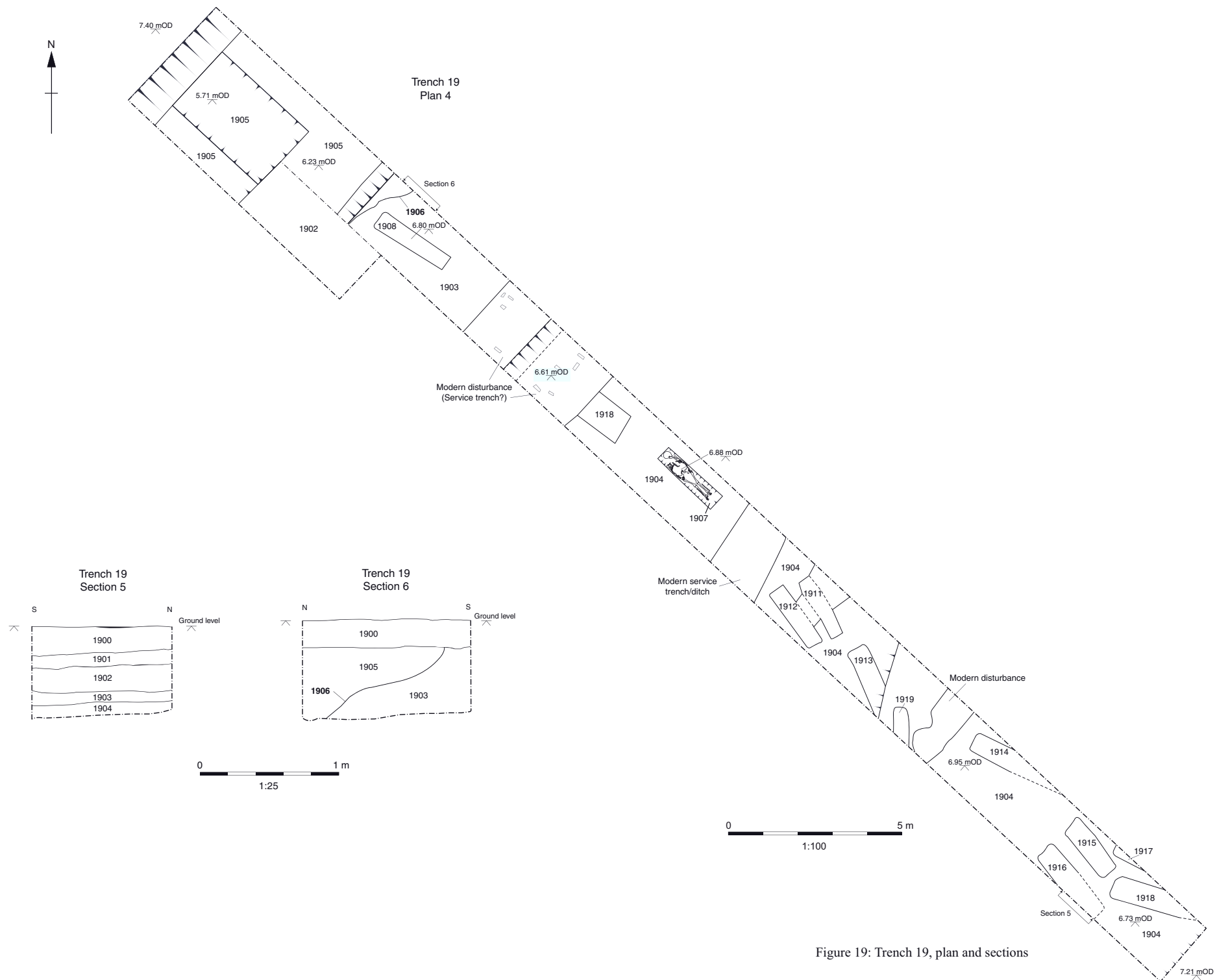
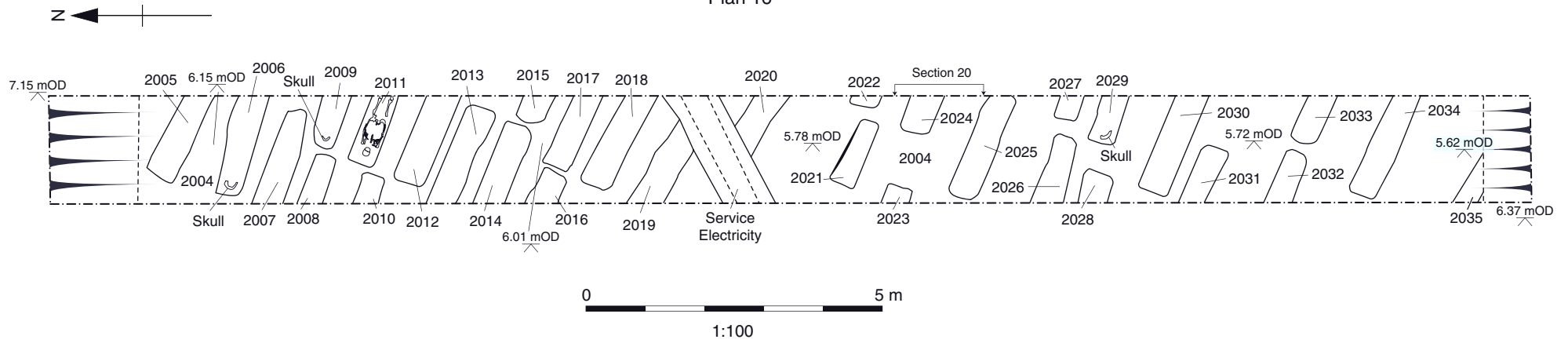


Figure 19: Trench 19, plan and sections



# Trench 20 Plan 16



## Trench 20 Section 20

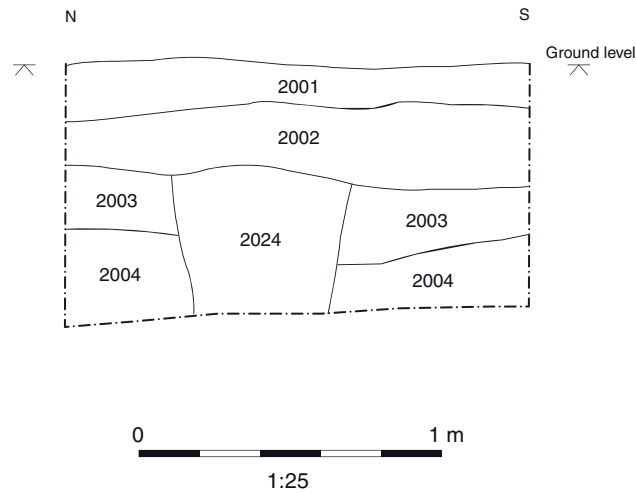


Figure 20: Trench 20, plan and section



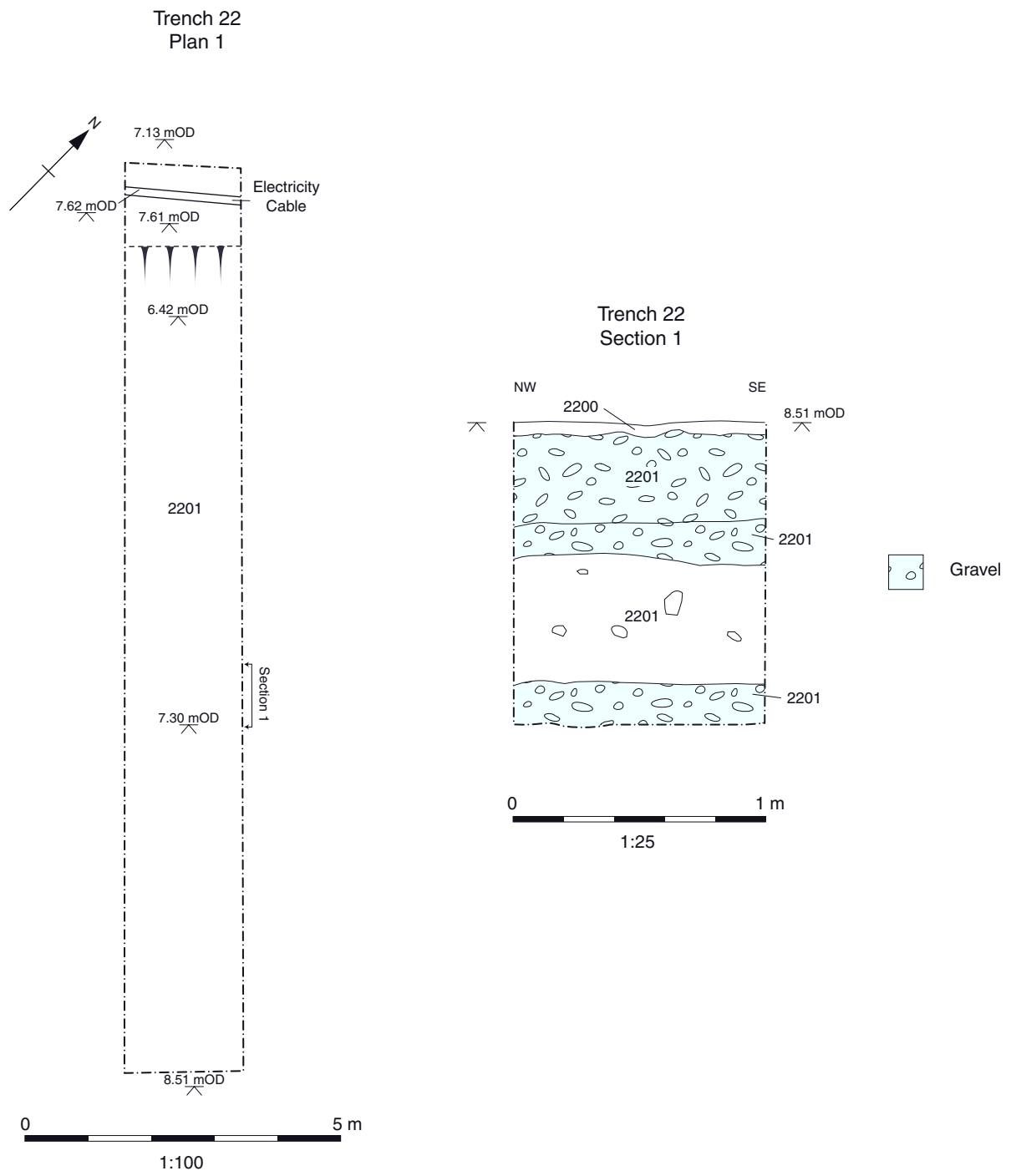


Figure 21: Trench 22, plan and section





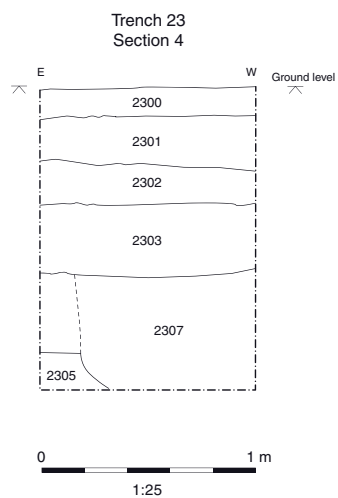
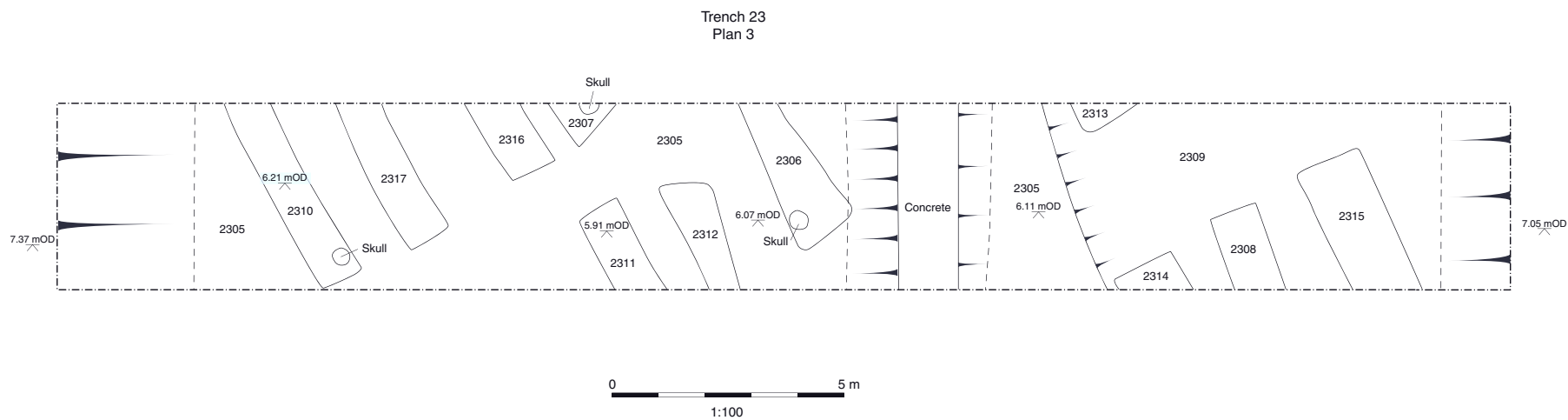


Figure 22: Trench 23, plan and section



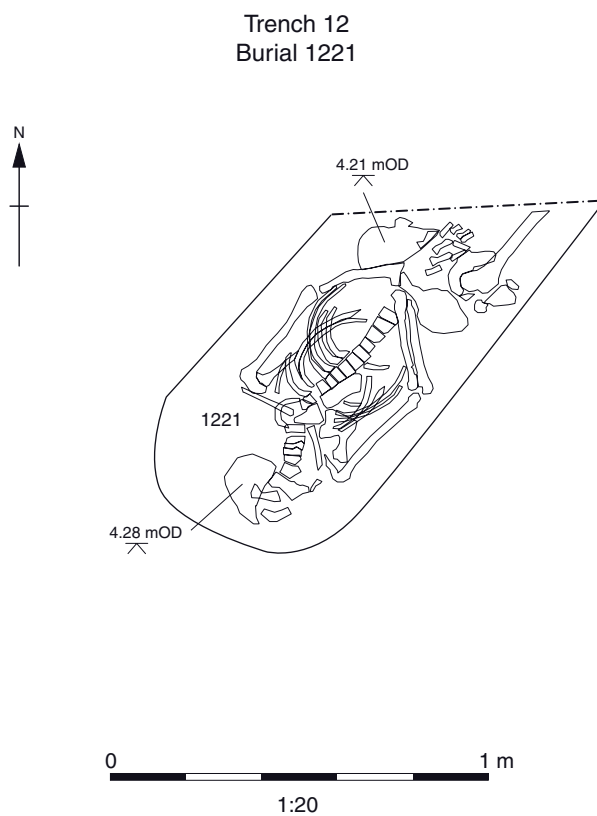
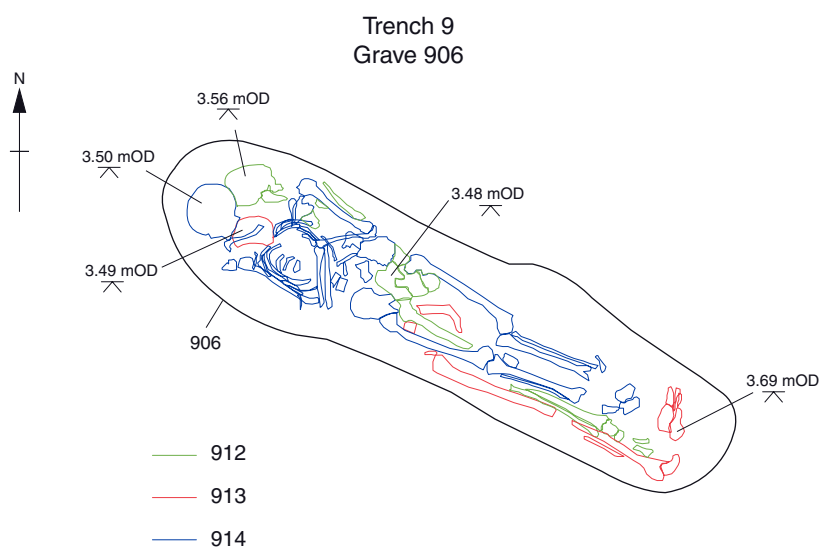


Figure 23: Trench 9, Grave **906** containing skeletons 912, 913 and 914, and Trench 12, Burial **1221**



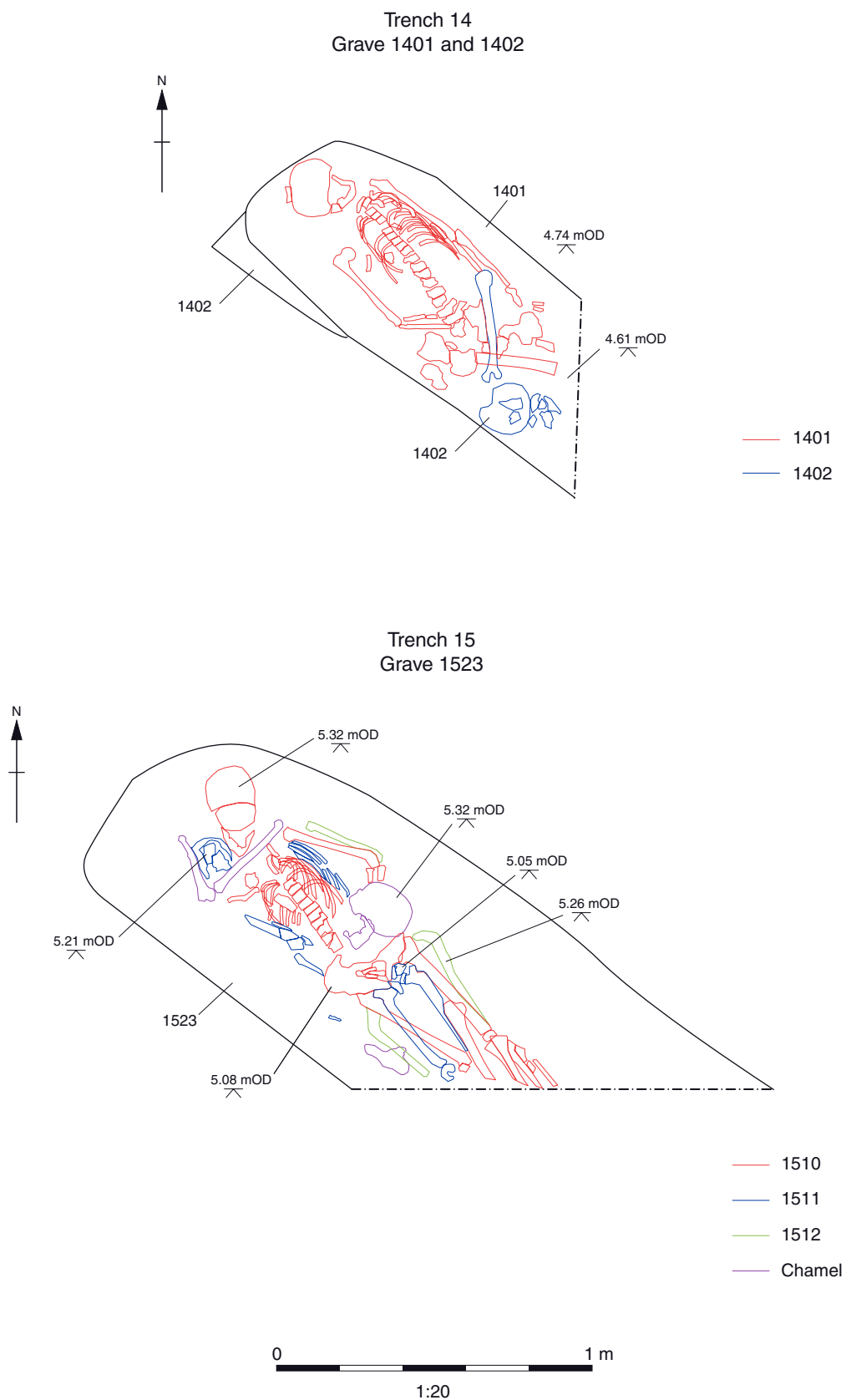


Figure 24: Trench 14, Intercutting burials **1401 and 1402**, and Trench 15, Grave **1523** containing skeletons **1510, 1511 and 1512**







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