

**HOHENZOLLERN REDOUBT  
AUCHY-LES-MINES  
FRANCE**

**ARCHAEOLOGICAL  
EXCAVATIONS**



**February 2005**

**NML Report No. 4  
No Man's Land – YAP Films**

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## 1. INTRODUCTION

### ***Background***

- 1.1 In February of 2005 *No Man's Land* (NML) carried out a programme of archaeological works at the site of the former Hohenzollern Redoubt, a part of the German defensive lines from the Battle of Loos, in 1915-1916. The work was carried out on behalf of *Yap Films* of Toronto Canada, as part of the production of a television series, "Finding the Fallen", examining the First World War, and in particular telling the story of the war through the medium of archaeological excavation.
- 1.2 The excavations took place between 9-12 February 2005. The work was carried out in accordance with a project design prepared by NML and approved by M. Gerard Fosse, Conservateur Regional de l'Archaeologie for the Region Nord/Pas-de-Calais (DRAC). A site visit was made by M. Fosse during on-site works.

### ***Location and topography***

- 1.3 The site is located within the Commune of Auchy-les-Mines, a small town to the west of La Bassee and Lens in the Pas-de-Calais Departement of Northern France. The excavation area lies in an area known as le Mont d'Auchy, (UTM WGS84 Grid reference 0484.2 5593.9) a short distance to the south of the town, adjacent to the Cite Madagascar housing development (See Fig. 1). The site falls within cadastral plan parcel nos 33, 48, and 49, and at the time of excavation was in the ownership of M. Eugene Bernus, a local resident.
- 1.4 The site lies on the crest of a very slight hill at a height of 36m above sea level. The surrounding countryside is particularly flat giving this location a commanding view despite the slight change in elevation. The area is dominated by a chain of large mine craters dating from the Great War. The immediate area surrounding these is planted with woodland used as cover for game-birds, while the surrounding land is under agricultural cultivation. The local geology consists of clay and chalk, overlying coal measures, which until recently provided the basis of the local economy.

### ***Historical background***

- 1.5 The excavation area lies on the site of the Hohenzollern redoubt. Between 1915 and 1918 the German front-line trench system (the 'Western Front') passed immediately

to the north-east of the excavation area on a line north-west to south-east. In the course of 1915 an outlying defensive position was constructed, on the crest of the Mont d'Auchy in front of the main German line in order to take advantage of the increased observation possible from the higher ground. This work was known as the 'Hohenzollern Redoubt' (Fig. 8). Subsequently trenches were dug from the shoulders of the redoubt back to the German line producing a distinct salient in their defences. This position was the focus of a series of British attacks, beginning during the Battle of Loos in September-October 1915. A summary of the fighting in this area from the German perspective is provided as Appendix 3.

- 1.6 The position continued to be contested in 1916, and the fighting was characterised by mining and counter-mining by both sides. This resulted in the creation of a series of large mine craters along the front line. Many of these were exploded more than once, creating a large connected area of cratering which obliterated many of the defenses originally constructed in 1915. Most of these craters were back-filled after the war, but those immediately on the crest of Mont d'Auchy, in the area of the archaeological excavations, remain open.

#### ***Aims and objectives***

- 1.7 The site had become the subject of some controversy since it was claimed in the British press in November 2004 that the site was under threat from rubbish dumping. The damage to the site to date does not appear to have been significant, and no dumping was taking place at the time of the project, but should such work resume in the future this may damage surviving First World War features.
- 1.8 Thus the project was intended to examine selected areas of the site in order to assess the presence or absence of First World War features, and the degree of preservation of any features which may be present. The examination of these features would not only inform any decisions on the future management of the site itself, the results would also have wider interest as a contribution to the understanding of Great War archaeology as a whole. The work would also provide subject matter for the television production upon which funding of the project was based.
- 1.9 Four areas were excavated (Fig. 2);
- *Trench 1* was positioned in the northern part of the site in an area the landowner intended to be surfaced and used as a car park for visitors to the site. It is also

proposed to be the location for a memorial. The work in this area consisted of a watching-brief on the removal of topsoil, in order that any significant archaeological remains uncovered could be identified and recorded before construction of the car park.

- *Trenches 2 and 3* were placed along the northern edge of the wooded area occupied by the surviving craters. No immediate threat to this area was present, but it lay within the core of the Hohenzollern position. Trench maps suggested that significant activity had taken place in this area, and historical sources reported that this was the scene of particularly bitter fighting. Large numbers of soldiers are recorded missing in the Hohenzollern area, and as this part of the site was one of the most heavily fought over, the possibility of human remains surviving in this area was high. Anecdotal reports also suggested the presence of such remains. This area was therefore considered to have the greatest potential for surviving archaeology, and results from here could be considered to reflect the densest likely survival on the site.
- *Trench 4* was placed on the southern lip of the existing crater. This trench was intended to examine the depositional structure of the crater itself, and to reveal whether defensive structures around the crater rim survived.

### ***Methodology***

- 1.10 The four trenches were excavated by tracked mechanical digger to remove topsoil and other overburden until deposits judged to contain archaeological material were exposed. Excavation of features thus exposed continued by hand. It was not possible to continue mechanical excavation to expose the upper surface of undisturbed natural geology (locally chalk), as the whole area was covered with deep deposits of mine explosion up-cast, into which subsequent archaeological features had been cut.
- 1.11 All trenches were planned and recorded in accordance with normal UK archaeological practice, including the allocation of unique context numbers to individual deposits. The site was photographed both digitally and on colour print film. All artefacts recovered from the site were examined in the course of the excavation and catalogued. Most objects were of generic types and of little intrinsic merit (shell fragments, cartridges etc.). These were left on site after recording. Any objects considered to be of greater interest, and in particular those associated with human remains were taken to the UK for further analysis, and for specialist conservation where required. This was carried out at the laboratories of the Institute of Archaeology, University College, London.

- 1.12 Where human remains were uncovered this was reported immediately to the local police, who were given the opportunity to visit the site in accordance with French legal procedure. All human remains uncovered in the course of the excavations were planned and recorded in detail *in-situ*, and then removed and delivered to the Commonwealth War Graves Commission. Arrangements were made subsequently with the CWGC for full pathological examination of these remains, before their re-interment by the relevant national authorities, CWGC or the German war-graves authority; the VDK.
- 1.13 As a former battlefield, the site had the potential to contain dangerous unexploded munitions. No Man's land is acutely aware of the risk to the group and to the public from such munitions. Work was monitored at all times by professionally qualified EOD staff. All areas to be excavated were swept with ordnance detecting equipment in advance of and during any excavation work.

## 2. RESULTS

### ***General***

- 2.1 Four trenches were excavated in the locations shown on Fig. 2. The individual features uncovered in each excavation trench are described in the following sections. The artefacts recovered from each trench, not directly associated with human remains, are detailed in Appendix 1, details of the human remains uncovered in trenches 2 and 3 and their associated artifacts are provided in Appendix 2.

### ***Trench 1***

- 2.2 An area 60m long and up to 10m wide, was excavated to the west of the current access track to the north of the craters (Fig. 2). At the northern end of this area below the plough-soil (101), clay subsoil (103) was observed at a depth of 0.2-0.3m. At the southern end this was overlaid by a mixture of chalk fragments and clay interpreted as up-cast from the explosion of several mine craters (now back-filled) to the south-west (102).
- 2.3 Only one archaeological feature was identified in this area. A back-filled trench approximately 1.5m wide was observed crossing the centre of the excavated area from east to west (104)/[105]. Along the line of this trench were two collapsed areas

interpreted as dugout entrances. One of these had collapsed previously and had been back-filled with modern farm debris, the second collapsed at the time of machine excavation. As the work in this area was limited to a watching brief, and given the possible safety risks of working in areas of partial collapse, no further examination of these features was attempted. The line of the trench and the collapse locations were recorded in plan.

- 2.4 No stratified artifacts were recovered from this trench, however a number of objects were recovered during machining. These are listed in Appendix 1, and included several British shrapnel shell casings, as well as other artillery bombardment debris.

### ***Trench 2***

- 2.5 Two long narrow excavations were placed along the southern edge of the agricultural field immediately to the north of the plot containing the craters. A total length of 75m was excavated, 2m wide. It was necessary to break the line of this excavation as a pre-existing collapse ('crown-hole') was encountered 35m from the western end. The western portion of this excavation was recorded as Trench 2 (see Fig. 3).
- 2.6 Below a layer of modern ploughsoil (201), this area proved to be a complex deposit of mine up-cast material containing both in-situ items, and debris thrown up by the various mine explosions (202). No deliberately constructed features such as trenches or dugouts were observed in this trench but several backfilled shell-holes were evident within the more general deposit of mine upcast.
- 2.7 Two groups of partial human remains were found. In the central part of the trench the partial remains of one individual were uncovered, consisting of feet, and disarticulated leg bones as far as the upper thigh, lying within two interconnecting shell craters, (203)/[204] and (205)/[206] (Body 7). Associated with these remains were British style boots (on the feet) and the decayed remains of a 'small pack', containing a small rectangular tin. The tin was removed for analysis by UCL but was unmarked and proved to contain a rifle cleaning kit only. Thus apart from the fact that the casualty was wearing British boots, no further identification was possible. No regimental or personally marked items were found, and since the remains could have been displaced by a mine explosion no useful locational information was available.
- 2.8 Secondly, further to the west along the trench, an articulated, but disembodied hand was also uncovered (Body 8). There is no indication that this was part of the same



individual as the legs to the east, the two areas were stratigraphically separate. The hand itself was identified within otherwise undifferentiated mine upcast material (202). Details of both these sets of remains and associated artifacts are contained in Appendix 2.

- 2.9 Besides those objects associated directly with the human remains, a number of other artifacts were recovered from this trench. These are listed in Appendix 1, and included both a British SMLE and German Mauser rifles, as well as small arms ammunition, equipment fragments and a variety of larger caliber munitions. Unfortunately, the trench was looted by metal-detectorists before excavation and recording was complete, thus not only were a number of these objects stolen, but also uncontrolled excavations by the looters disturbed several stratigraphic relationships, making a detailed interpretation of the deposits very difficult.

### ***Trench 3***

- 2.10 Trench 3 was excavated immediately to the east of Trench 2, and was 28m in length (Fig. 4). An offset was incorporated in the central part of the trench in order to avoid another area of pre-existing collapse along the field edge.
- 2.11 After the removal of modern topsoil (301) a layer of mine up-cast similar to that apparent in Trench 2 was exposed (302). Cut into this material was a linear feature up to 0.3m wide and uncovered along a length of 8m (304)/[305]. Within this, a wooden box approximately 0.5m square had been set. This was interpreted as a junction box within a cable trench. Another two similar, but less distinct features were uncovered a few metres to the west (306)/[307] and (313)/[314].
- 2.12 In the western part of the trench a square chalk-filled feature approximately 1.5m square was uncovered (308)/[309]. On excavation this feature appeared to be the start of the entrance to a dugout or similar feature, shored with timber on its west side. This feature was also dug through the mine up-cast layer (302). However, at a depth of approximately 1.5m below the modern surface the skulls of two sets of human remains were uncovered. This was initially interpreted as two individuals buried within the entrance to a deep dugout.
- 2.13 Due to pressure of time, and the need to fully investigate the two sets of human remains, the area surrounding the two skulls was reduced using a mechanical excavator. Rather than exposing the entrance to a dugout, it became apparent that

the remains were the uppermost of a series of at least five sets of remains, contained within a linear cut, possibly a disused trench (310)/[311]. Several of these appeared to have been placed deliberately, and were thus likely to be part of a mass burial. The deposit (312) into which this lower feature [311] was cut was distinct from the overlying mine up-cast (302), being a cleaner yellow clay. An interpretation of these deposits is that the trench [311] was an earlier feature, used in October 1915 as an impromptu grave. This was then sealed by a layer of mine up-cast; (302) (possibly from early 1916). Subsequently the cable trenches were excavated, and the entrance to a deep dugout was begun which was abandoned when the excavators encountered the human remains in the deposit below.

- 2.14 Four complete articulated individuals were removed from the fill (310) of feature [311]. The feature had at least one straight sharp edge on its east side. This could have been a grave, trench, or even collapsed dug-out, though the positioning of Body 10, draped over the straight edge cut would not suggest the latter. Significant quantities of German clothing and military equipment, as well as personal items were recovered associated with these individuals (there was also a significant amount of British equipment mixed with them). The items associated with these individuals were removed to the UK for cleaning and analysis. The results of this analysis, as well as associated historical research, a detailed account of the positioning of each individual, and the possible identification of one of the individuals are contained in Appendices 2-4.
- 2.15 On removal of the German casualties discussed above, there were indications that further human remains were present in the same location. Unfortunately NML was not able due to pressure of time to continue working (we had been on site continuously in shifts for over 40 hours at that point). A decision was therefore taken to mark and backfill the site, with a view to returning when resources and time were available in the future.

#### ***Trench 4***

- 2.16 An area 10m long and 2m wide was excavated immediately adjacent to the southern lip of the surviving crater complex in the wooded part of the site. It was initially intended to extend this excavation down the internal face of the crater itself but the extreme steepness of the slope made this impractical. As a result the excavation was limited to a section through the up-cast crater rim. Natural chalk was uncovered *in-situ* at a depth of 0.3m below the modern surface, overlaid by a series of layers of

mine up-cast consisting of clay and chalk fragments. This up-cast rim deposit was up to 1.5m thick. No further features were uncovered cutting into this up-cast and very few artifacts were recovered.

### 3. DISCUSSION

#### *General*

- 3.1 The widespread mining of the Hohenzollern site presents archaeological problems which are not present at other Great War sites. Previous NML projects at Serre on the Somme, and at Ypres, have shown that the potential for the survival of coherent trench systems even in areas which had previously been characterised as completely 'pulverised battlefields' is quite high. Shell damage penetrating to the full depth of a trench feature on these sites was quite rare and thus trench systems could be followed and reconstructed. At the Mont d'Auchy, by contrast, the repeated explosion of mines has had a far more significant impact upon archaeological deposits.
- 3.2 This view has to be tempered however, by the observation that in many areas the excavations did not penetrate the full depth of the up-cast deposits. Although the mines may have completely destroyed large areas of trench, the up-cast may equally have rapidly buried other areas of trench peripheral to the crater and this led to very good preservation, complete with whatever and whoever was in the trench at the time. Later trenches would obviously be dug through the up-cast itself.
- 3.3 The original front-line or 'nose' of the redoubt has been completely obliterated, indeed much of its former location is within the unfilled crater complex, and is now effectively empty air. The area to the rear of the craters contains a sequence of layers of re-deposited up-cast material, through which trenches have been cut, only to be in turn destroyed and re-deposited by further mining. The result of this is that only the very last stages of the fighting are represented as coherent features near the surface. It is possible that features associated with the early stages of the fighting are represented on the site, but deeply buried under subsequent up-cast. It is probable that the German remains uncovered in Trench 3 are one such deposit. Not only was the trench used for these burials not subsequently re-used but it was also buried under a significant weight of overburden.
- 3.4 The result of this process is an archaeological deposit of extreme complexity. It would be possible to de-construct such a deposit given sufficient archaeological

resources, but in relatively narrow trenches, and with limited time, this level of detail was not practical for NML in this case. Only in the northern end of Trench 1, in an area away from the focus of mining, were trench remains uncovered more typical of those revealed at other sites, with discrete trenches cutting at least in part through undisturbed natural deposits.

- 3.5 An attempt was made to associate the possible trench containing the German remains with those depicted on contemporary trench maps. Unfortunately the early maps available from 1915 are generally metrically very poor, being little more than hand sketches. Subsequently, the degree of mining activity in the area meant that by the time more accurate maps were being produced (from later 1916 onwards) the trench layout was so altered as to be of little relevance to the fighting of 1915. A German map is included for reference as Figure 8, but no attempt has been made to relate this directly to the modern topography.

### ***Human remains***

- 3.6 The mass burial of German soldiers uncovered in Trench 3 provides clear evidence supporting the historical and anecdotal record of the substantial loss of life in the area of the Hohenzollern. Eyewitness accounts record trenches choked with dead and wounded and it is possible that this is what was partially uncovered here (although there is evidence that at least some of the burials were deliberate). It can also be stated with some certainty that further (probably German) casualties are present in that known location. In addition, the discovery of the partial British soldier, and the disembodied hand in Trench 2, suggest that the implication of the historical record – that large numbers of missing casualties remain in the vicinity, is borne out by the archaeology thus far. It is highly likely that further excavation would reveal further sets of human remains both Allied and German, although the precise location of these is unknown.

## **4. ACKNOWLEDGEMENTS**

- 4.1 NML would like to thank M. Fosse and the staff of the Service Regional d'Archaeologie, the landowner M. Bernus, M. Clarisse Mayor of Auchy, and the staffs of the CWGC and VDK for their assistance with this project. Fieldwork was carried out by members of NML. Finds processing was managed by Luke Barber of NML, with conservation services provided by the laboratories of the Institute of

Archaeology, University College London. Illustrations were produced by Justin Russell, Peter Moore and Lorna Grey, and this report was compiled by David Kenyon, with contributions from Ralph Whitehead, and Luke Barber. Fieldwork and post-excavation was funded by YAP Films of Toronto Canada.

**APPENDIX 1 Finds not associated with human remains**

NB: Full details are housed on pro forma record sheets in the archive

<b>Context</b>	<b>Trench 1, Machining/unstratified</b>
<b>Large calibre ammunition</b>	<p><b>British</b>            X3 18pdr shrapnel shell cases (empty/fired)            X1 18pdr shrapnel shell case fragment (fired)            X1 13pdr shrapnel shell case (empty/fired)            X1 Fe base plate from 18pdr shrapnel shell with cu al flash tube            X2 Cu Al 18pdr driving band frags</p> <p><b>British</b>            X3 Pb shrapnel balls</p> <p><b>German</b>            X1 Cu Al 77mm driving band frag</p> <p><b>Uncertain nationality</b>            X9 Fe shell splinters            X2 Fe fuze fragments            X8 Fe &amp; white metal fuze frags (probably German)</p>
<b>Grenades and Mortars</b>	<p><b>British</b>            X1 No. 5 Mills grenade (live: pin in)            X1 Fe tube from 'toffee apple' mortar</p>
<b>Small arms ammunition</b>	<p><b>German</b>            7.92mm fired cases: illegible x1; Jan 1915 x1</p>
<b>Trench related</b>	<p><b>Uncertain nationality</b>            X1 Fe 5mm diameter wire            X1 Fe reel for cable (empty)            X1 Cu Al hose fitting from pump</p>

<b>Context</b>	<b>Trench 2, Machining/unstratified</b>
<b>Large calibre ammunition</b>	<b>Uncertain nationality</b> X3 Fe shell splinters
<b>Grenades and Mortars</b>	<b>British</b> X1 No. 5 Mills grenade still with pin in X1 3" Stokes mortar (unscrewed/empty)  <b>German</b> X1 stick grenade (later type – 1916/17?)
<b>Small arms ammunition</b>	<b>British</b> .303 unfired complete: illegible x1

<b>Context</b>	<b>Trench 2, Context 202 General mine upcast</b>
<b>Large calibre ammunition</b>	<b>British</b> X11 Pb shrapnel balls X1 18pdr shrapnel shell base X1 Cu Al timer fuze frag  <b>German</b> X1 77mm shrapnel shell base  <b>Uncertain nationality</b> X32 Fe shell splinters X1 Cu Al driving band frag
<b>Grenades and Mortars</b>	<b>British</b> X1 No. 3 rifle grenade (live) X1 No. 20 rifle grenade top cap (dated July 1916) X1 3" Stokes mortar (live: fired but lever still in place) X1 3" Stokes mortar base (fired) X1 Cu Al base from No. 23 rifle grenade (dated July 1916) X1 Fe base from a 4" Stokes mortar (fired)
<b>Small arms ammunition</b>	<b>British</b> .303 unfired complete: illegible x33 (in 6 chargers, probably in bandolier); 1914 x3; 1915 x1 .303 fired cases: 1914 x3; 1915 x6 .303 unfired bullets: x2 .303 unfired cases: illegible x1  <b>German</b> 7.92mm fired cases: illegible x3; Sept 1907 x1; 1908 x1; Nov. 1911 x1; Mar 1912 x1; May 1914 x1; Jun 1914 x2; Aug 1914 x2; Oct 1914 x4; Jan 1915 x1; Feb 1915 x2; Mar 1915 x1; May 1915 x4; Jun 1915 x1; Jul 1915 x4; 1915 x2; Aug 1915 x1; 1915 x3 X1 Fe base of flare cartridge (32mm di) X1 Cu Al base of flare cartridge (32mm di)  <b>French</b> 8mm unfired complete: Jan/Mar 1909 x1 8mm fired bullet: Oct-Dec 1914 x1

<b>Trench construction</b>	<p><b>Uncertain nationality</b>  X1 Fe strip frag.  X5 Fe nails  X2 clumps of chicken wire  X1 Fe nail</p>
<b>Military Equipment</b>	<p><b>British</b>  X1 Fe .303 charger  X1 Cu Al disc from ammunition box  X1 1" brass strap from 08 webbing  X1 Fe heel-plate and leather from boot  X1 Long Lee Enfield rifle complete with sling (brass fittings for sling stamped 1914) and P1888 or P1903 bayonet fixed (stolen) (SF 15)  X1 Fe charger  X1 Fe front volley site from Lee Enfield rifle  X1 brass 1" strap-end from 08 webbing  X2 brass 2" tongue less buckles from 08 webbing (one still with strap-end in)  X1 brass snake buckle from 1914 webbing  X1 Cu Al eye-let from groundsheet</p> <p><b>German</b>  X1 Mauser G98 rifle (stolen)  X3 Cu Al chargers  X1 Cu Al belt buckle plate with plain cartouche  X1 crushed base and lid handle from Fe mess tin  X1 Fe throat from bayonet scabbard  X1 leather sole from right boot with heavy Fe hobnails</p> <p><b>Uncertain nationality</b>  X1 Cu Al rivet  X1 Fe rifle fitting  Fragments from a groundsheet with brass eye-lets (probably British)  Fragments of leather ammunition pouch with brass suspension loop (?1914 British webbing)</p>
<b>Domestic items</b>	<p><b>Uncertain nationality</b>  X1 complete and x10 frags of tin cans (food refuse?)  X1 clear glass bottle (158mm tall)  X1 round tin can lid</p>
<b>Miscellaneous</b>	<p><b>Uncertain nationality</b>  X1 Fe rectangular buckle  X1 Cu Al fitting  X1 Roman jar rim</p>



<b>Context</b>	<b>Trench 3, Machining/unstratified</b>
<b>Large calibre ammunition</b>	<p><b>British</b> X3 Cu Al fuse frags (timer/shrapnel) X1 Cu Al flash tube and Fe base plate from 18pdr shrapnel shell X6 Pb shrapnel balls</p> <p><b>Uncertain nationality</b> X1 Fe shell splinter (H.E.) X1 Cu Al driving band frag</p>
<b>Small arms ammunition</b>	<p><b>British</b> .303 unfired complete: illegible x21 (in x6 chargers in bandolier); 1915 x1 .303 unfired case: illegible x2</p> <p><b>German</b> 7.92mm fired case: illegible x1; June 1907 x1; May 1915 x2; 1915 x1 7.92mm unfired case: illegible x1</p>
<b>Military Equipment</b>	<p><b>British</b> X1 crushed blue enamelled canteen with cork</p> <p><b>German</b> X1 spoon/fork combination</p>
<b>Domestic items</b>	<p><b>Uncertain nationality</b> X1 sardine tin, peeled open with key still in place</p>
<b>Miscellaneous</b>	<p><b>Uncertain nationality</b> X1 24mm di Fe cap</p>
<b>Human</b>	<p><b>Uncertain nationality</b> X1 loose vertebra and x1 loose rib</p>

<b>Context</b>	<b>Trench 3, Context 302 (mine upcast)</b>
<b>Large calibre ammunition</b>	<p><b>British</b> X1 Cu Al timer fuze frag X3 Pb shrapnel balls</p> <p><b>German</b> X2 Cu Al/white alloy fuze frags from 77mm shell X1 Cu Al driving band from 77mm shell</p> <p><b>Uncertain nationality</b> X11 Fe shell splinters (inc. H.E.) X1 Fe base plate from shrapnel shell</p>
<b>Grenades and Mortars</b>	<p><b>British</b> X1 Fe fly-off lever from No. 5 Mills grenade X1 Cu Al striker from No. 3 rifle grenade X1 lower section of No. 3 rifle grenade (Fe &amp; Cu Al)</p> <p><b>German</b> X1 Fe stick grenade (live)</p>

<b>Small arms ammunition</b>	<p><b>British</b> 303 fired cases: illegible x1; 1914 x1; 1915 x1</p> <p><b>French</b> 8mm fired bullet: Jul-Sept 1912 x1</p> <p><b>German</b> X1 Fe base of flare cartridge 7.92mm unfired complete: Dec 1914 x5 (all in one charger); 1915 x1; May 1915 x5 (all in one charger); July 1915 x1; Aug 1915 x1 7.92mm unfired cases: 1915 x1; Jun 1915 x1 7.92mm fired cases: illegible x2; July 1911 x1; Apr 1914 x1; May 1914 x2; 1915 x3; Jan 1915 x2; Feb 1915 x1; Mar 1915 x1; May 1915 x1; June 1915 x1; Aug 1915 x2; Sept 1915 x1</p>
<b>Trench related</b>	<p><b>Uncertain nationality</b> X9 frags of barbed wire (German?)</p>
<b>Military Equipment</b>	<p><b>British</b> X1 SMLE Mk 3 rifle (with magazine cut-off) X1 1907 pattern bayonet (no quillon) X1 brass large General Service button with tunic frag X1 brass 1" strap-end and tongue-less buckle from 08 webbing X1 brass lace-end X1 remains of rubberised cape/groundsheet with x6 17mm di cu al eye-lets X1 blue enamelled canteen with cork X1 blue enamelled canteen (crushed with no cork) X1 Fe entrenching tool head with part of wooden handle (assembled for use)</p> <p><b>German</b> X1 Mauser G98 rifle X1 Cu Al charger X1 remains of leather OR picklehaube with brass Prussian eagle plate and traces of cloth helmet cover X1 aluminium mess tin lid (painted black). Hand inscribed 'Brockard' '13/18' (SF 10) X1 Fe lid from mess tin Frag from 1909 pattern leather ammunition pouch stamped 'BERLIN 1912'</p> <p><b>Uncertain nationality</b> X1 Cu Al handle X1 rubber tyre from bicycle</p>
<b>Domestic items</b>	<p><b>Uncertain nationality</b> X1 complete green wine bottle X1 brown glass frag X1 frag of wooden tobacco pipe stem with cu al ferrule X14 tin can frags (mainly cylindrical)</p>
<b>Miscellaneous</b>	<p><b>Uncertain nationality</b> X6 tin sheet frags (possibly ammunition box lining)</p>

Context	Trench 3, Context 310 (general fill in feature containing bodies)
<b>Large calibre ammunition</b>	<p><b>British</b>  X5 Pb shrapnel balls  Uncertain nationality  X4 Fe shell splinters (inc. H.E.)  X2 Cu al driving band frags</p>
<b>Grenades and Mortars</b>	<p><b>British</b>  X1 Cu Al tube frag. – possibly from Mills grenade</p> <p><b>Uncertain nationality</b>  X1 Cu Al cylindrical ?detonator</p>
<b>Small arms ammunition</b>	<p><b>British</b>  303 unfired complete: illegible x8 (in x2 chargers)</p> <p><b>German</b>  7.92mm unfired complete: illegible x10 ( x5 in chargers); Mar 1915 x1; June 1915 x1; Sept 1915 x1  7.92mm unfired cases: Sept 1915 x1 (burnt);  7.92mm fired cases: illegible x4; July 1914 x1; 1915 x1; Jan 1915 x2; Feb 1915 x1; March 1915 x1; April 1915 x6; May 1915 x16; June 1915 x5; July 1915 x3; Aug 1915 x12; Sept 1915 x31</p>
<b>Trench related</b>	<p><b>Uncertain nationality</b>  Various frags of chicken wire</p>
<b>Military Equipment</b>	<p><b>British</b>  X1 Fe D-shaped mess tin with lid  X4 brass 2" tongue less buckles from 08 pattern webbing  X6 brass 2" strap-ends from 08 pattern webbing  X9 brass 1" tongue less buckles from pattern 08 webbing  X4 brass 1" strap-ends from 08 pattern webbing  X4 brass General Service buttons (large): some with cloth attached  X6 brass General Service buttons (small): some with cloth attached  X5 khaki uniform frags</p> <p><b>German</b>  X11 Cu Al chargers  X4 Fe chargers  X1 brass cockade from Mutze (soft cap)  X1 19mm di rimmed brass tunic button with Bavarian lion (SF 19)  X1 20.8mm di rimless brass plain domed tunic button  X1 Fe wire handle from mess tin  X1 spoon/fork combination (SF 38)  X1 brass loop and leather strap from tornister  X1 Fe 'D' ring with leather strap</p> <p><b>Uncertain nationality</b>  X2 brass 15mm di eye-lets with heavy string running through. Possibly British groundsheet? Same as the one associated with Body 10.  X2 brass 19mm di and x1 brass 35mm di eye-lets (fused together)  X1 Fe 95mm long penknife  X1 brass rivet with cloth covered brass strip (possibly start of machine gun belt)</p>

<b>Domestic items</b>	<p><b>British</b> X1 plastic comb stamped 'superior quality' (SF 14)</p> <p><b>German</b> X1 round-sectioned tin of Cambembert cheese (made in Germany) (SF 13)</p> <p><b>Uncertain nationality</b> X1 green plastic 44mm di round mirror X2 green wine bottle frags X1 round-sectioned tin</p>
<b>Miscellaneous</b>	<p><b>Uncertain nationality</b> X1 white metal stud X1 leather frag X1 folded card frag X1 84mm long piece of 2-ply card</p>

<b>Context</b>	<b>Trench 3, Context 310 (around Body 12)</b>
<b>Small arms ammunition</b>	<p><b>British</b> 303 unfired complete: illegible x35 (some in x7 chargers, probably from bandolier) 303 unfired case: illegible x1</p> <p><b>German</b> 7.92mm fired cases: illegible x2; 1915 x1</p>
<b>Domestic items</b>	<p><b>Uncertain nationality</b> X1 round-sectioned tin can</p>

<b>Context</b>	<b>Trench 4; Unstratified</b>
<b>Large calibre ammunition</b>	<b>Uncertain nationality</b> X3 Fe shell splinters X1 Cu Al driving band frag
<b>Grenades and Mortars</b>	<b>British</b> X1 No. 5 (?) Mills fragment
<b>Small arms ammunition</b>	<b>British</b> 303 unfired bullet: x2 303 fired bullet: x1
<b>Trench related</b>	<b>Uncertain nationality</b> X1 frag of 1-strand barbed wire
<b>Domestic items</b>	<b>Uncertain nationality</b> X3 cattle ribs X5 frags of window glass (post WW1) X2 frags of strengthened glass
<b>Miscellaneous</b>	<b>Uncertain nationality</b> X1 Fe tube X1 Fe coiled strip/spring (post WW1)

**APPENDIX 2 Human remains and associated artefacts (by Luke Barber)****Body 7**

The remains of this body were stratigraphically positioned thus: A small shell-hole (207)/[208] was blown into the general mine upcast (202). This had the remains of a loose tibia in its fill (207). This small early shell-hole had been 'cut' by two later shell-holes; one large (southern) (203)/[204] and one small (northern) (205)/[206]. The larger shell-hole contained the right foot (still in the boot), lower right leg, knee-cap and the first 160mm of the right femur. Although these leg elements were in the correct position to each other there were notable gaps between the bones at both the ankle and knee suggesting the leg was held together by flesh/sinews and totally disjointed. It had been dragged into the shell-hole. In this shell-hole there were also the remains of the left femur – also sheared off some 160mm up from the knee. In the same shell-hole were the remains of a British small-pack with contents but this cannot be positively associated with the leg.

In the second, smaller shell-hole (205) was the left foot (still in boot) and lower leg.

Stature: Femur length: 160mm+. Tibia length: 410mm. Suggested height c. 182cm (5ft 11 ½ inches). (After Trotter 1970)

Visible pathology during excavation: Legs blown off some 160mm above knee.

<b>Group/ Small find No.</b>	<b>Item/s Descriptions</b>	<b>Comment</b>
<b>Large Shell-hole (203)</b>	X1 leather ankle boot (British) with 8 brass lace-holes and hobnail sole. (Right boot) Remains of cape/gas-sheet? X1 remains of British 08 webbing small-pack (x4 brass 1 in tongue less buckles, three of which are twisted/damaged); x3 brass 2 in strap-ends; x2 brass 2 in strap guides) with contents Inside small-pack X1 brass split pin. 2 ¾ in long X1 iron lump with .303 fired case adhering X1 crushed tin	
<b>SF 12</b>	X1 green-painted tin with part of name? painted along lower right corner (only parts of four letters visible). Inside tin parts of a rifle cleaning kit (weighted rope, folded cloth, a smaller cloth and brush with wooden handle – not standard issue)	
<b>SF 11</b>	Various iron objects adhering with spare lace and bottle top adhering. On x-ray iron corrosion hides tubular elongated object and circular one X1 fragment of candle X1 .303 case Fired. Headstamp: E? VII	
<b>Smaller Shell-hole (205)</b>	X1 leather ankle boot (British) with 8 brass lace-holes and hobnail sole. (Left boot). Laces done up in 'oblique' pattern	

### **Body 8**

The remains of this body were located in the general mine upcast (202). It consisted of the remains of an articulated, but obviously dislocated/shattered hand (4 articulated and one non-articulated but closely scattered fingers). Although it was next to a trench-board no other finds were close-by and the nationality remains uncertain.

**(NB. Body 9 – number not used)**

## Body 10

This body was the uppermost in the multiple burial and was the first to be discovered during the excavation works. The body was lying on top of the right hand side of Body 11 and wedged hard against the south-eastern edge of a sharp vertical cut [311], possibly representing the south edge of a trench or dug-out entrance. The body had the head to the south-west and feet to the north-east. The other side of this cut was not looked for/located. Body 10 lay tilted onto his left side with right arm tightly flexed with hand over the chest and left arm partly under the body. His legs were together, the right one on top of the left one. Both feet were tilted sharply downward as if hanging vertically.

Stature: Femur length: 420mm. Tibia length: 325mm. Suggested height c. 1.6m (5ft 3in.). (After Trotter 1970)

Visible pathology during excavation: Articulated but completely broken left lower (tibia and fibula) and upper (femur) leg.

Group/ Small find No.	Item/s Descriptions	Comment
<b>SF 7</b>	X12 small (21mm diameter) brass eye-lets some with traces of cord surviving.	Probable remains of groundsheet – possibly not German. Part of same found with Body 11
	X2 large (40mm diameter) brass eye-lets with remains of woolen cloth adhering	Probable remains of groundsheet – possibly not German. Part of same found with Body 11
	X2 iron buckles/adjusters	From braces
	X8 white metal 3-hole drop-back buttons	Probably from trousers (fly and braces fittings). NB. Some from quite high up on chest
	X3 iron rectangular buckles (35 x 24mm; 35 x 30mm and 41mm x 21mm)	Possibly from trousers/braces
	X2 leather strap fragments (9mm and 15mm wide). One with slit for fixing. Also x1 scrap of leather	Probable fragments of braces
	X3 iron studs/rivets	Possibly from braces
	Remains of x1 tunic including: various pieces of 'felt-like' cloth; brass hook and eye from neck; x2 brass button-type belt hooks from rear of tunic (both with Imperial crown motif); x1 brass belt-hook from side of tunic; x13 brass 21.1mm diameter buttons with Imperial crown motifs; x3 brass buttons (18.6, 18.7 and 20.59mm diameter) with Imperial crown motifs and x2 brass 21.1mm diameter buttons, again with crown motif - possibly from epaulettes? (SF 7)	Remains of a Prussian tunic located immediately below Body 10. Probably Brandenburg cuff
	Fragments of heavy woolen cloth	Jumper/cardigan?



<b>SF 6</b>	Small fragment of white metal dog-tag (early type)	From mid chest area. Totally rotted – only area around suspension hole in better condition
	X1 small wooden bristle brush. 76mm long	
	X4 lead shrapnel balls	
	X4 amorphous iron pieces. One definitely a shell splinter	
	X1 100mm diameter round-sectioned food tin	Found to ?SW of body, close to head but probably not associated.

### General Comment

It would appear this individual was possibly wearing trousers and a shirt with braces. He was definitely not wearing boots or tunic and was carrying no equipment or weapons. However, this individual was certainly resting on top of a ?Prussian tunic which may have been his own (virtually all metal parts of the tunic are represented – minus a side belt hook and a few buttons). There were no cuff-arrangements of buttons near the wrists. This tunic also covered the face of Body 11 below (represented by an organic dark layer across the face) and may even have partly underlain Body 11). This is why some items from this tunic were recovered with Body 11. The presence of the brass eye-lets suggest that Body 10 may have been wrapped/covered in a groundsheet. If this is the case, the tunic may be associated with Body 11.

Metal finds (inc. lead) were generally heavily corroded with extensive corrosion products and mineralization. However, much of the brass was still in good condition below the corrosion and condition was very variable – some items have virtually no corrosion and are in very good condition. It is possible this differential preservation is due to the presence of fats from the body or chemical corrosion.

## Body 11

This body was the second down in the multiple burial and was the second to be discovered during the excavation works. It was fully exposed at the same time as Body 10 although its right side was partially obscured by Body 10. The body had the head to the south-west and feet to the north-east. Body 10 lay on his back with the left arm sharply flexed with the left hand across the mouth. The right arm was down the right hand side (?). His legs were flexed up and splayed but with his feet together.

Stature: Femur length: 460mm. Tibia length: 370mm. Suggested height c. 1.71m. (5ft 7 ½ in.). (After Trotter 1970)

Visible pathology during excavation: The left lower arm was completely broken.

Group/ Small find No.	Item/s Descriptions	Comment
<b>Labeled Tunic</b>	X1 button-type rear belt hook from rear of tunic with Imperial crown motif X8 brass rimmed buttons with Imperial crown motif, some with grey 'felt-like' tunic cloth adhering (x5 20.8mm diameter; x1 20.5mm; x1 21.2mm; x1 21.4mm) Various pieces of 'felt-like' tunic cloth, some with red piping on seams	NB. The tunic cloth was tightly folded in 'antiquity' often stuck together with corrosion from the buttons. This suggests it may not have actually been fully worn.
<b>Labeled 'Found under Body'</b>	X3 brass side belt hook from tunic X3 brass plain domed 20-21mm di. buttons with dark red/brown 'felt-like' cloth adhering	The fact these parts of the tunic were found under the body confirms Body 11 was not fully wearing the garment.
<b>SF 5</b>	X8 brass rimmed buttons with Imperial crown motif with grey 'felt-like' tunic cloth (x2 20.6mm di.; x3 18.4-18.8mm; x1 20.9mm; x1 21.3mm; x1 21.6mm) Some cloth with red piping.	The cuffs were definitely not associated with the hands/wrist area.
<b>SF 2</b>	X3 brass rimmed buttons (20.8mm di) with Imperial crown motifs and part of tunic sleeve. Buttons arranged in Brandenburg cuff pattern. Tunic with red piping X1 brass rimmed button (21mm di) from second cuff with remains of red piping Various pieces of 'felt-like' grey/dark grey tunic cloth  Various pieces of heavy woolen cloth.	However, it should be noted that at least two tunics are represented here as two different types of belt side hooks are represented (totaling three): one is almost certainly from Body 10's tunic which only has one side-hook.  From jumper/cardigan (found around chest area and from below body)
<b>Labeled 'Found under Body' SF 3</b>	Pack of playing cards (95 x 65mm). Some with beetle/lice cases adhering? Cards with backs decorated with black weave criss-cross pattern. Maker's mark in top right of some cards: Deer's head and 'Schutz-Marks' written underneath. On ace of diamonds writing: 'SPIELRARTEN FABRIK brK FROMMANN & BOUTE (??), DARMSTADT  Wad of hair (short, brown). Probably horse hair	Possibly in tunic pocket  Possibly wadding/padding from ?tunic

<p><b>SF 4</b></p>	<p>X3 leather strap fragments (14mm wide), one with cu. al. M1891 chin-strap mount</p> <p>X3 iron amorphous lumps (not shell splinters) X1 German 7.92mm bullet (unfired)</p>	<p>Chinstrap from pickelhaube but no other pieces of helmet found</p>
<p><b>Boots</b></p> <p><b>Labeled 'associated' finds</b></p>	<p>Pair of leather jack boots</p> <p>X1 fragment of 'felt-like' tunic cloth</p> <p>X6 brass small 19mm diameter eye-lets X3 brass large 35mm diameter eye-let</p> <p>X4 white metal 3-hole 17mm di. drop-back buttons</p> <p>X2 white metal 19mm diameter eye-lets X1 white metal 34mm diameter eye-let</p>	<p>Still on feet</p> <p>German tunic frag.</p> <p>From same 'groundsheet' associated with Body 10?</p> <p>Probably from trousers</p> <p>From German groundsheet?</p>
<p><b>SF 8</b></p>	<p>X1 copper alloy spoon (broken in three)</p> <p>X1 complete 300mm tall green glass wine bottle</p> <p>X1 3.5mm thick glass window fragment measuring 71 x 60mm with curved chipped top</p> <p>X2 15mm wide leather strap fragments each with a securing slit for a button and securing iron rivet</p> <p>X1 leather 'tab' with copper alloy rivet</p> <p>X1 iron strap-guide (43.2 x 18.5mm)</p>	<p>Found to ?NW of skull – possibly British/not associated</p> <p>Found protruding from under ribcage, right side Function? Could be for signaling</p> <p>Lower sections from braces?</p> <p>From German ?bread bag</p>
<p><b>Labeled 'associated' finds</b></p>	<p>X5 small brass General Service button with khaki fabric X3 large brass General Service button with khaki fabric Various pieces of British khaki cloth from tunic</p> <p>X1 British charger containing x5 .303 rounds one of which is dated K14 (1914) – possibly from pocket of tunic (cloth adhering)</p> <p>X4 .303 rounds in charger with the remains of newspaper adhering</p> <p>X1 white metal 4-hole domed-back button</p> <p>X1 lead shrapnel ball X1 German 7.92mm case. Fired. Dated June 1915 X1 German 7.92mm case. Unfired. Dated 1915 X1 German 7.92mm complete round. Dated Jan 19?</p>	<p>British – not associated Possibly the remains of a tunic dumped in the hole with the Germans. Other British webbing items were found in the general fill of this feature (see Context 310)</p> <p>Kept in tunic pocket?</p> <p>?British shirt button</p> <p>Not necessarily associated</p>

**General Comment**

It would appear this individual was possibly wearing trousers and a ?shirt with a jumper/cardigan. He was definitely wearing boots but was carrying no equipment or weapons. However, this individual was certainly partially wrapped in a tunic which may have been his own: the cuffs lay in part under him with part of the tunic covering him (where it lay below the tunic associated with Body 10). Virtually all the metal parts of the tunic are represented (minus one button-type rear belt hook) and the extra side belt hook may be from No. 10 tunic. The presence of the brass eye-lets suggest that the groundsheet associated with Body 10 directly overlay Body 11.

Metal finds (inc. lead) were generally heavily corroded with extensive corrosion products and mineralization. However, much of the brass was still in good condition below the corrosion and condition was very variable – some items have virtually no corrosion and are in very good condition. It is possible this differential preservation is due to the presence of fats from the body or chemical corrosion.

## Body 12

This body was the third down in the multiple burial and was discovered during the final cleaning of the lower legs of Body 11. It was only exposed after the removal of Bodies 10 and 11. The body had the head to the north-east and feet to the south-west. Body 12 lay on his back with legs outstretched and head tilted onto the left side. His arms were flexed with the hands on the chest.

Stature: Femur length: 470mm. Tibia length: 390mm. Suggested height c. 1.75m (5ft 9in.). (After Trotter 1970)

Visible pathology during excavation: a hole in the left temple is visible on the photos which may have been a contemporary wound.

Group/ Small find No.	Item/s Descriptions	Comment
<b>Head</b>	X5 white metal 18.6mm di. eye-lets X1 large white metal 32.6mm di. eye-let X2 white metal 17mm di. 3-hole drop-back buttons	All in v. good condition. Possibly from German groundsheet (folded?) and placed to cover Body 12's face?
<b>Thorax Finds</b>	X1 iron ?eye-let/buckle c. 35 x 40mm. Heavily corroded. X1 brown woolen cloth fragment. Possibly from mittens	
<b>Tunic/shirt below thorax</b>	X2 copper alloy button-type belt hooks still attached to a large portion of 'felt-like' cloth from German tunic. Part of liner surviving together with bits of dark brown/black heavy weave jumper/cardigan (similar to that found with Body 11) X1 mother of pearl 4-hole shirt button	This clearly shows a cardigan being worn below the tunic. The mother of pearl button is certainly from a shirt. Motif on belt hooks uncertain. Could be associated with Body 12 or 13.
<b>Right shoulder</b>	Large piece of heavy weave woolen cloth from jumper/cardigan with x7 leather 4-hole disc buttons (di. 17-17.4mm) attached  X3 fly crystalis from woolen cloth	Remains of jumper/cardigan with evidence of slight fly activity
<b>SF 21</b>	Large piece of 'felt-like' grey German tunic cloth with red piping and black 'silk-like' lining in part. Also x1 17mm wide strip of cloth 'braid' -	The fine black cloth suggests some of the cloth is from the tail of the tunic(?).
<b>SF 22</b>	x4 brass rimmed buttons (di. 20.7mm) still with tunic cloth from down front of tunic. Bavarian Lion motif x4 brass rimmed buttons (di. 20.9mm) – loose. Bavarian lion motif	The presence of the buttons from the front of the tunic too strongly suggest this tunic was not being worn by Body 12 but dumped by his right/left shoulders

	<p>x3 white metal 17mm di. 3-hole drop-back buttons  x1 white metal eye-let (small-type)  x1 brass safety pin</p>	<p>More remains of German groundsheet from head area.</p>
<b>Left shoulder</b>	<p>Large quantity of 'felt-like' German tunic cloth, some with black 'silk-like' liner from tunic tail  Remains of woolen jumper/cardigan inside tunic cloth  X1 brass belt-hook from side of tunic (thin-type)  X1 iron ?strap guide  X1 leather tab-end with copper alloy stud</p>	<p>Presence of all parts of the tunic around right and left shoulder suggests tunic may have ridden up high on the body.</p>
<b>SF 28</b>	<p>Small book with aniline pencil (printed writing visible)  Mainly printed but possibly with personal letters.</p>	<p>Labeled by left shoulder</p>
<b>SF 29</b>	<p>German printed book of old and contemporary songs for soldiers. Inside book are a number of personal letters.</p>	<p>Location not given</p>
<b>Chest SF 30</b>	<p>Pocket book/notepad (140 x 80mm) with x2 aniline pencils</p> <p>Various pieces of 'felt-like' tunic cloth</p> <p>Various pieces of heavy weave woolen cloth</p> <p>X1 complete pair of leather braces with remains of heavy weave woolen cloth OVER leather. The braces consist of a tapering 'Y' strap, split into two thinner straps at the base, each with a slit to take the buttons from the rear of the trousers. The arms of the 'Y' run over the shoulders with each strap ending in a slit to take more buttons. Two further small 'Y' straps, each with iron adjusting buckles fit onto the terminals of the main straps. The arms of the small 'Y' straps all have slits to link braces onto four buttons on the front of the trousers.</p> <p>X1 brass side belt-hook (thin non-tapering type) from tunic</p>	<p>Braces were being worn by Body 12, and clearly under a woolen jumper/cardigan</p> <p>Could be unassociated?</p>
<b>Uniform SF 24</b>	<p>Very large part of M1910 German tunic (complete back with decorative tail and sides). Red piping on seams.  X2 brass button-like belt supports from rear of tunic (still in tunic)  X2 brass side-hook belt supports (still in tunic)  X3 brass rimmed 20.5mm di. buttons with Bavarian lion motif (still on tail of tunic – x1 missing)  X1 brass hook and eye collar fastening  X1 epaulette with 16 embroidered and  X1 20.3mm di. brass rimmed button with No. 11?</p>	<p>The second set of rear and side belt supports indicates at least two Bavarian tunics are present and possibly bits of another (see below). The precise location of this tunic back (labeled 'uniform') is uncertain – the fact it cannot be seen on the photos suggests it also lay under Body 12.</p>
<b>SF 25</b>	<p>X3 brass rimmed buttons. One numbered '11'?</p>	
<b>SF 26</b>	<p>Piece of tunic cloth with Iron Cross ribbon (2<sup>nd</sup> Class) worn lapped over tunic edge and pinned in place with iron pin. Tunic with red piping.</p>	

<b>SF 27</b>	Soldbuch. Soldier's book in with tunic. Both official printed text and hand-written text in ink. Muller issuing officer?	
<b>From amongst uniform</b>	<p>X3 brass plain 21.3mm di. domed buttons (replacements?)  X5 brass rimmed 20.4mm di. buttons with Bavarian lion motif  X3 brass rimmed 18.4mm di. buttons with Bavarian lion motif  X2 brass button-like rear belt hooks with tunic cloth adhering  X2 brass side belt hooks from tunic (narrow type with rear 8-hole fixing plates)</p> <p>Wood scraps – from backpack?  X1 11.3mm wide leather strap fragment  X1 17.8mm wide leather strap fragment  X1 18.6mm wide leather strap fragment  X1 piece of leather trim/edging</p> <p>X1 iron wire frag.  X1 iron square buckle from backpack?  X1 leather strengthener/surround from pack?  X1 copper alloy square sheet (15 x 15mm) with four rivets</p>	<p>The presence here of another set of rear and side belt hooks demonstrates a third Bavarian tunic is represented here. One of these is certainly Leopold's, the others could be from Bodies 13 and 14 – all dumped in together?</p> <p>Straps, trim and wooden bits definitely from a backpack – could this be from one down side of bodies associated with Body 13?</p>
<b>Around Ribs</b>	X4 unfired German 7.92mm unfired rounds. Headstamps: [6:15:S67:?:], [6:15:S67:S], [illegible – iron concretion], [8:15:?:H]	Dated June 1915 (x2) and August 1915 (x1) – probably not associated.
<b>Hands Area</b>	X1 brass 2 inch webbing strap-end (British 1908 webbing) Patch of medium weave cloth – cuff of jumper/cardigan?	British webbing not associated.
<b>Pelvic Area SF 23</b>	X2 (poss. more) copper alloy coins with 'felt-like' trouser cloth adhering. Coins: 5 centimes of Napoleon III (dated – illegible); 10 centimes (dated – illegible)	Probably in trouser pockets
<b>Left Leg</b>	X2 white metal 17mm di. 3-hole drop-back buttons	Almost certainly from trousers
<b>Right knee</b>	X1 copper alloy button-type belt hook from rear of tunic. Rimmed, 21.2mm di. With Imperial crown motif.  Frag of heavy woolen jumper/cardigan with 'felt-like' tunic cloth	Either loose, or possibly from Body 10 or 11 tunic?
<b>Knee area</b>	X1 58mm long aniline pencil X1 fired German 7.92mm case. Headstamp: 6:15:S67:?  Remains of shoe/boot of uncertain type. Fragments of leather uppers and inner-sole only – no sole.  X1 fired German 7.92mm case. Headstamp: 8:15:?:N	Case dated June 1915  Boot possibly not associated with Body 12 but at same level. Case dated August 1915

<b>Feet area</b>	X2 heels with parts of leather uppers from German M1866 'Jack-boots'	From level of Body 12 but not directly associated. Boots to SW of feet and upside down Location not listed
<b>SF 9</b>	X2 white metal eye-lets	
<b>General</b>	X2 white metal 17mm di. 3-hole drop-back buttons X1 white metal 18mm di 4-hole dome-back button X1 lead shrapnel ball	
	X1 large brass British General Service Button with khaki tunic fragments	Possibly from same tunic located to side of Body 11
	X1 iron 80mm diameter, 93mm high can with two internal discs, each with five circular perforations. Lid missing. Container for transportation of grenade fuzes?	Down to side of body – probably not associated
	X5 chargers containing .303 unfired rounds	To SW of feet

### General Comment

It would appear this individual was wearing trousers held up by leather braces over a shirt but under a woolen jumper/cardigan. He was definitely not wearing boots though those close to his feet may have been his. He was carrying no equipment or weapons: the remains of the backpack may be from those to one side of Body 13. There appears to be the remains of three Bavarian tunics with this body. One appears to be around his shoulders – either this was dumped in this area or he was wearing it but it had been pulled up, possibly when the body was dragged into the hole? However, this seems unlikely considering the lack of buttons from around the cuff close to the arms. The other two tunics lay totally under the body – one consisted of a large part of the rear of a tunic, while the presence of extra belt support hooks demonstrates a third tunic is also present (bits labeled 'amongst tunic'). This suggests these two tunics were lying together under the body. Whatever the case, it is likely that whichever tunics were not Body 12's belonged to Body 13 and possibly Body 14 below, who were not associated with any tunics as such. The presence of the German white-metal eye-lets and 3-hole buttons from around the head and shoulder areas suggests the individual's face may have been covered by a ground-sheet. The presence of some coins and a soldbuch suggests the body/ies was/were stripped of useful equipment quickly and only a partial search was made of the deceased pockets to recover personal items.

Metal finds (inc. lead) were generally heavily corroded with extensive corrosion products and mineralization. However, much of the brass was still in good condition below the corrosion and condition was very variable – some items have virtually no corrosion and are in very good condition (esp. the ground-sheet fittings from around the head). It is possible this differential preservation is due to the presence of fats from the body or chemical corrosion.



### Body 13 (Leopold Rothärmel?)

This body was the fourth down the multiple burial and was discovered during the cleaning and excavation associated with Body 12. The body was lying below Body 12, but partly over Body 14. The body had the head to the north-west and feet to the south-east. Body 13 lay on his back with upper arms by his side (lower arms not visible). His legs were outstretched and parallel with each other.

Stature: Femur length: 450mm. Tibia length: 350mm. Suggested height c. 1.67m (5ft 5 ½ in.). (After Trotter 1970)

Visible pathology during excavation: None noted but lead shrapnel ball found hard against left tibia..

Group/ Small find No.	Item/s Descriptions	Comment
<b>Pelvis Finds</b>	<p>X1 ?tinned iron German mess tin complete with lid and remains of two 20mm wide leather straps (one through handle, one around base of lid) used to attach the mess tin to the backpack. Imprint of backpack cloth/canvas on mess tin corrosion. Left side of tin has dent and slit pushed in from outside – probably shell splinter damage.</p> <p>X1 German backpack represented by numerous leather straps, tabs (onto which the mess tin was secured) and trim. Only one shoulder strap present, complete with brass rectangular buckle, ammunition pouch support and 'triangular' terminal. On rear section of leather maker's stamp '?ERNKLAS Co ?NEVULM 1914'. Some wooden framing surviving as well as some of the small iron internal buckles.</p> <p>X3 remains of German wooden tent pegs with iron ends X2 remains of wooden tent poles Originally in tent-pole canvas bag (some canvas preserved as well as leather straps)</p> <p>X1 heavy iron fork with solid iron handle (not standard issue)</p> <p>X1 brass side belt hook from tunic (non-tapering with 8-hole rear fixing plate) X1 brass hook from collar fixing from tunic (some tunic cloth adhering)</p>	<p>Mess tin was obviously attached to backpack and damaged by shell-fire. The presence of this equipment in the pelvic area suggests the pack was not actually being worn by Body 13 (it could be associated with Body 12).</p> <p>The backpack was missing a strap and the cloth may have been torn. This and the damage to the mess tin suggests it was not worth salvaging.</p> <p>Tent-poles obviously attached to backpack.</p> <p>Loose? Or from one of tunics excavated with Body 12?</p>

<b>Pelvis: Pocket Area SF 17</b>	X1 piece of trench art consisting of criss-cross of three bullets (all with lead removed). The vertical bullet is 8mm French and has a suspension loop on tail end. Two .303 British bullets cross the French example.	Probably in pocket
<b>SF 18</b>	X1 bone toothbrush (complete – 155mm long). A few bristles remaining and copper alloy staining from bristle fixing wire. Stamped 'KENT' '1914' on handle Several fragments of 'felt-like' cloth – from trousers?	
<b>General</b>	X3 white metal 3-hole 17.2mm di. Drop-back buttons X1 white metal 19.8mm di. eye-let X1 white metal 34mm di. eye-let	Parts from a groundsheet and ?trousers.
<b>SF 16</b>	X1 black plastic comb fragment  X1 leather 16.9mm di. 4-hole button (from cardigan with Body 12?) X1 lead shrapnel ball	Comb by left side of pelvis so probably in trouser pocket  From hard against left tibia

**General Comment**

It would appear this individual was probably wearing trousers with some items still in the pockets. He was definitely not wearing boots or tunic and was carrying no equipment or weapons. Associated with him were the remains of a probably damaged backpack complete with mess tin and tent pegs though if this was his or Body 12's cannot be certain. His tunic was almost certainly one of those excavated with Body 12. The presence of a few white metal eye-lets may be from the same groundsheet which was covering Body 12. Basically it would appear the body had been rapidly stripped of useable military equipment prior to burial.

## Body 14

This body was the lowest reached in the multiple burial and was the last to be discovered during the excavation works. Only part of the body could be extracted and its lay-out is uncertain. The body was lying with the head to the south-west and feet (not fully exposed) to the north-east. The exact lay-out of the body is uncertain as much was not exposed. Body 14 lay under the chest of Body 13.

Stature: Femur length: 465mm. Tibia length: - Suggested height c. 1.72m (5ft 7-8in.). (After Trotter 1970)

Visible pathology during excavation: None noted during excavation.

Group/ Small find No.	Item/s Descriptions	Comment
SF 1	Several fragments of 'felt-like' cloth – from trousers? X1 bone handled pocket knife. Traces of textile on either side of handle suggest it was in a pocket	
SF 20	X1 Copper alloy French 5 centimes. Dated 1903  X6 leather strap fragments (8, 12, 14, 15 (x2), 20mm wide) X1 14mm wide leather strap terminal from backpack X1 complete 21mm wide, 215mm long leather strap – main securing strap from backpack	Straps from backpack – possibly the same one as associated with Body 13?
	X2 frag. of khaki cloth from British uniform?	Not associated?

### General Comment

Too little of this body and associated finds were recovered to be certain of the regiment, or even nationality – though it is almost certainly German. The German backpack fragments may be derived from Body 13 and there were both British and German cloth fragments present. The pocket knife and coin are not indicative of nationality.

### References:

Trotter 1970. 'Estimation of stature from intact long limb bones' in T. D. Stewart (ed.) *Personal identification in mass disasters* National Museum of Natural History, Washington, 71-83.

**Observations:**

The feature the bodies were buried in was quite large with a vertical edge on the East side. Unlikely to be a grave as too neatly cut and somewhat large – trench or dug-out?

The upper two bodies had been unceremoniously placed/thrown into the hole – either buried in a hurry by their own side (may give reason for lack of equipment) OR by the British and the soldiers had been caught out and were partially dressed/equipped.

The presence of British equipment amongst the bodies certainly demonstrates the mixed nature of the backfill.

The upper two bodies appear to be associated with Prussian? tunics.

The lower two (or three) bodies appear to be associated with Bavarian tunics and have much more equipment associated with them. There was some evidence of fly activity on the lower bodies suggesting they may have been exposed/dead for longer. This may also explain why there was more equipment with them (though most of this equipment may not have been worth salvaging). It is probable the lower three bodies were killed at a slightly earlier date than the upper two, but this may have only been a matter of a few days.

### **APPENDIX 3 German historical background**

*This section compiled by Ralph Whitehead, on the basis of German Regimental Histories in his collection, and other sources.*

Historic Background information on the Hohenzollern Werk (Hohenzollern Redoubt)

September/October 1915

The following information is an abbreviated account of the German units that were involved in defending the series of trenches that formed the Hohenzollern Werk (Hohenzollern Redoubt) in September/October 1915. In preparing this account use has been made of the German designations for the trenches that formed the strongpoint (Fig. 8).

On 25 September 1915 the Hohenzollern Werk was occupied by units from the 11th RIR (117th Division). The preliminary British bombardment had driven out the garrison and the Hohenzollern Werk was occupied by British troops on 25 September.

The German command brought up reinforcements immediately in order to retake the lost trenches including the Hohenzollern Werk. The initial forces used for this purpose consisted of the III Bn 17th I.R. (3rd Bavarian Division), I Bn 18th I.R. (3rd Bavarian Division) and Battalion Franck (5th, 6th, 9th and 12th Coy, 9th Bavarian I. R., 4th Bavarian Division). The composite unit was called Regiment Staubwasser after the officer commanding, Oberstleutnant Staubwasser, 9th Bavarian I.R. Regiment. Staubwasser was joined by elements of Jäger Battalion 11 under Major Graf von Soden.

The counterattack against the Hohenzollern Werk and adjoining trenches began at 6.30 a.m. on 27 September and concentrated in the area where the West Graben and Südflankengraben joined the main German defensive line. Stiff resistance and heavy losses stopped the counterattack before any portion of the Hohenzollern Werk could be retaken. Additional troops were required to assist Regiment Staubwasser. The I Battalion, 104th (Saxon) I.R. (40th Division) was brought up from Quesnoy.

The counterattack continued on 29 September with Battalion Franck moving along the West Graben into the Kohlmüller Graben. A shortage of hand grenades and enemy resistance forced the men of Battalion Franck back to its starting point in the afternoon. Additional attacks in the evening managed to maintain a hold in the Kohlmüller Graben and Südflanken Graben.

The exhausted units were reorganized on 30 September and several units were withdrawn to the rear. Enemy bombing attacks against the West Graben were repulsed in the night from 30 September/1 October. Early on 1 October Oberstleutnant Staubwasser received orders to recapture the last parts of the Hohenzollern Werk from the enemy. Unfortunately his forces were too weak for the task.

The British attacked the 9th and 5th Coy, 9th Bavarian I.R. in the West Graben late on 1 October forcing the 9/9th Bav toward the main German line and taking approximately 2-300 meters of the trench.

On 2 October a German counterattack was scheduled against the West Graben with the 5th and 9th Coy, 9th Bav IR supported by the 3/104 from the north. The 12th Coy, 9th Bav IR supported by the 2/104th I.R. would attack the opposite end of the West Graben through the Kohlmüller Graben. Prior to the attack the 2/104th I.R. participated in the defense of the Kohlmüller Graben when the British attempted to advance from the Popp Graben.

At daylight the German attack took place from both ends of the West Graben. The British garrison was slowly forced back between the two forces until they were forced to retire to the main British trench in the late afternoon. The West Graben and surrounding trenches were then targeted by the British with heavy shrapnel fire.

New troops were required to relieve the men holding the Hohenzollern Werk. Reinforcements came from the 16th Bavarian and 17th Bavarian Reserve Regiments under the command of Hauptmann Popp. The battalion consisted of the 9th and 12th Coy, 16th Bav RIR and the 10th and 12th Coy, 17th Bav RIR.

Battalion Popp arrived at the Hohenzollern Werk and were put into position in the morning of 3 October. The 10/17 Bav RIR occupied the western part of the Kohlmüller Graben with the wing against the West Graben. The 9/16th Bav RIR occupied the eastern part of the Kohlmüller Graben and projected into the Südflanken Graben. The 12/16th Bav RIR occupied the Südflanken Graben while the 12/17th Bav RIR remained further to the rear as a reserve in the Alte Elfer Stellung. Elements of the 104th IR occupied the West Graben

The attack against the Popp Graben took place at 7 a.m. 3 October with the 10/17th Bav RIR attacking from the right hand part of the Kohlmüller Graben and the 9/16th Bav RIR attacking from the left of the Kohlmüller Graben. Within 25 minutes the Popp Graben had been captured. The trench was occupied by the 9/16th Bav RIR and 10/17th Bav RIR that were subjected to heavy shrapnel fire for the remainder of the day.

Battalion Popp remained in the Hohenzollern Werk with daily skirmishes and artillery fire until relieved on the night of 8/9 October when elements of the 55th RIR arrived (2nd Guard Reserve Division). The Hohenzollern Werk was then occupied as follows: West Graben: 2/104th I. R., Popp Graben 2/55th RIR, Südflanken Graben: 9/55th RIR, Nehr Graben and left portion of Popp Graben 12/55th RIR.

11 October the British captured a barricade located at the left hand portion of the Popp Graben from the 12/55th RIR. 13 October the Popp Graben and Nehr Graben came under concentrated British

artillery fire that was followed by an attack in the afternoon. The attack against the Nehr Graben was repulsed however the attack against the Popp Graben was successful, forcing out the 2/55th RIR that withdrew into the West Graben and Kohlmüller Graben. The units from the 55th RIR were relieved in the morning of 15 October by the III Battalion, 15th RIR (2nd Guard Reserve Division).

Ralph J. Whitehead

No Man's Land Archaeology Group

June 2005

## APPENDIX 4 Identification and biographical information Leopold Rothärmel

*This section compiled by Ralph Whitehead, on the basis of German Army casualty lists, and research carried out in the Bavarian military Archives, Munich, by Torsten Halsey and Dr Achim Fuchs, as well as other sources.*

Gefreiter Leopold Rothärmel  
9th Coy, 16th Bavarian Reserve Infantry Regiment

Several clues indicated that one set of human remains uncovered near Auchy in February 2005 were those of Gefreiter Leopold Rothärmel. The uniform remains recovered included an embroidered shoulder tab showing a figure '16' and Bavarian buttons, indicating a Bavarian regiment, either the 16th Bavarian IR or 16th Bavarian RIR. Records indicated that the 16th Bavarian IR had not been present in the Hohenzollern Redoubt leaving the 16th RIR as the most probable unit.

A review of the casualty records for the period of 3 October – 8 October when that unit was in the trenches near Auchy, indicate that 33 members of this regiment were killed in action or died from wounds suffered during this period. Of these 17 have no known burial location.

Several documents were recovered with the bodies that were later restored and portions remained legible. One document was a Soldbuch. Several dates could still be made out including 16.4.1915. The recovered Soldbuch also had a section 'depot 6. Bayer',

Possibly the strongest evidence came from a partially preserved postcard mailed in München (Munich) that contained 'Gefreiter Leopold Rothä...' in the address section. This postcard matches only one of the missing men from the 9th Company by rank, first name and a good portion of the family name; Gefreiter Leopold Rothärmel. A military songbook also recovered.

The archives in Munich revealed that Leopold Rothärmel was born on 20 October 1892 in Munich, Bavaria. He was one of two sons and four daughters of Leopold and Emma Rothärmel. He was the second youngest and his brother Otto was the youngest. Otto, too, enlisted. He was with the Bayerische RIR 4 and was killed on April 4, 1915 in the Wood of Ailly, Somme. His burial place is unknown. Their father, Leopold Sr. was a registered installer of water and gas pipes The family also ran a small corner shop - the mother was the shopkeeper. The family appeared to move every couple of years, always to rental apartments, and always in the center of Munich. The last known address for the family was Salvatorstraße 4/2 which they moved into in July of 1915. The last address Leopold Jr. lived at with his family was Westenriederstraße 32/3 just prior to enlistment. Unfortunately these premises were bombed in the Second World War and no longer exist.

Leopold was a concertmaster by profession and had completed his military service prior to August 1914. He spent some time in Augsburg (Jan 13-June 26 1912) He is registered in Berlin in April 1914. As a musician, his work would have been somewhat itinerant.



On 25 February 1915 Reservist Rothärmel was recalled to the army and was sent to the Infanterie Leibregiment Rekruten Depot III located at the Türkenkaserne in Munich. On 17 March 1915 he was assigned to the 1st Field Company. On 16 April he was sent to the depot of the 6th Bavarian Reserve Division in Santes. This date '16.4.1915' and 'depot 6. Bayer' correspond with the information recovered from the Soldbuch

On 17 May Rothärmel was assigned to the 9th Company, 16th Bavarian R.I.R. On 5 July he was awarded the Iron Cross II Class and two days later he was promoted to the rank of Gefreiter. Gefreiter Rothärmel was apparently involved in forming the music section of a choir within the ranks of the 9th Company in August 1915. This would correspond with his civilian occupation, and the presence of a songbook among his effects. Part of an Iron Cross ribbon was also identified on one of the excavated tunics.

The 9/16th Bav RIR was sent to the Hohenzollern Redoubt on 3 October as reinforcements along with one additional company from the 16th Bavarian RIR and two companies from the 17th Bavarian RIR. The 9/16th Bav RIR participated in an attack against an enemy occupied trench, what was to be called the Popp Graben in the Hohenzollern Redoubt along with the 10/17th Bav RIR. Gefreiter Rothärmel participated in this attack as company records will show. The attack began at 7 a.m. and within 25 minutes the trench was taken. Both companies came under heavy artillery fire for the remainder of the day.

The records from the 9/16th Bav RIR include a report, signed by Isidor Neher, Leutnant der Infanterie and company commander 9/RIR 16, Santes, 11 October 1915, indicating that on the 3rd October 1915 Rothärmel was killed at Auchy from a Gun Shot Wound to the abdomen. His place of burial was not known. From this description of his death it is quite probable that he was killed during the 25 minute assault against the British defenders of the Popp Graben. There was no further infantry fighting on this date, the two Bavarian companies were subjected to concentrated shrapnel fire for the remainder of the day.

In conclusion there is sufficient evidence to indicate that one set of remains recovered in February 2005 by No Man's Land were those of Gefreiter Leopold Rothärmel. It is likely on the basis the presence of the documentary material between Bodies 12 and 13, (and of skeletal damage to the head of body 12 suggesting an alternative cause of death), that body 13 is that of Gefreiter Rothärmel.

Ralph J. Whitehead (with Additions by David Kenyon)

No Man's Land Archaeological Group

June 2005

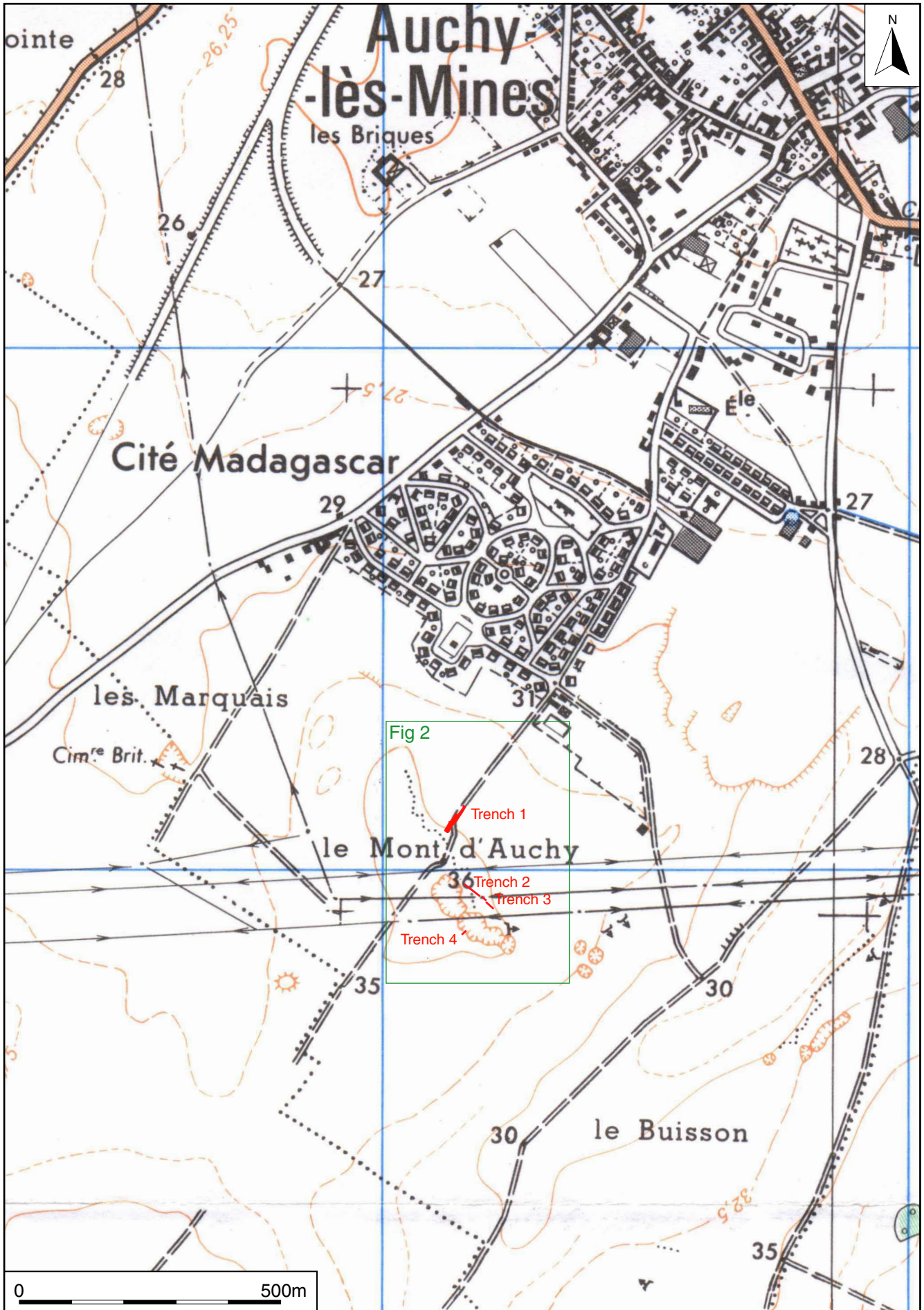


Fig. 1 Site location (1:10,000)

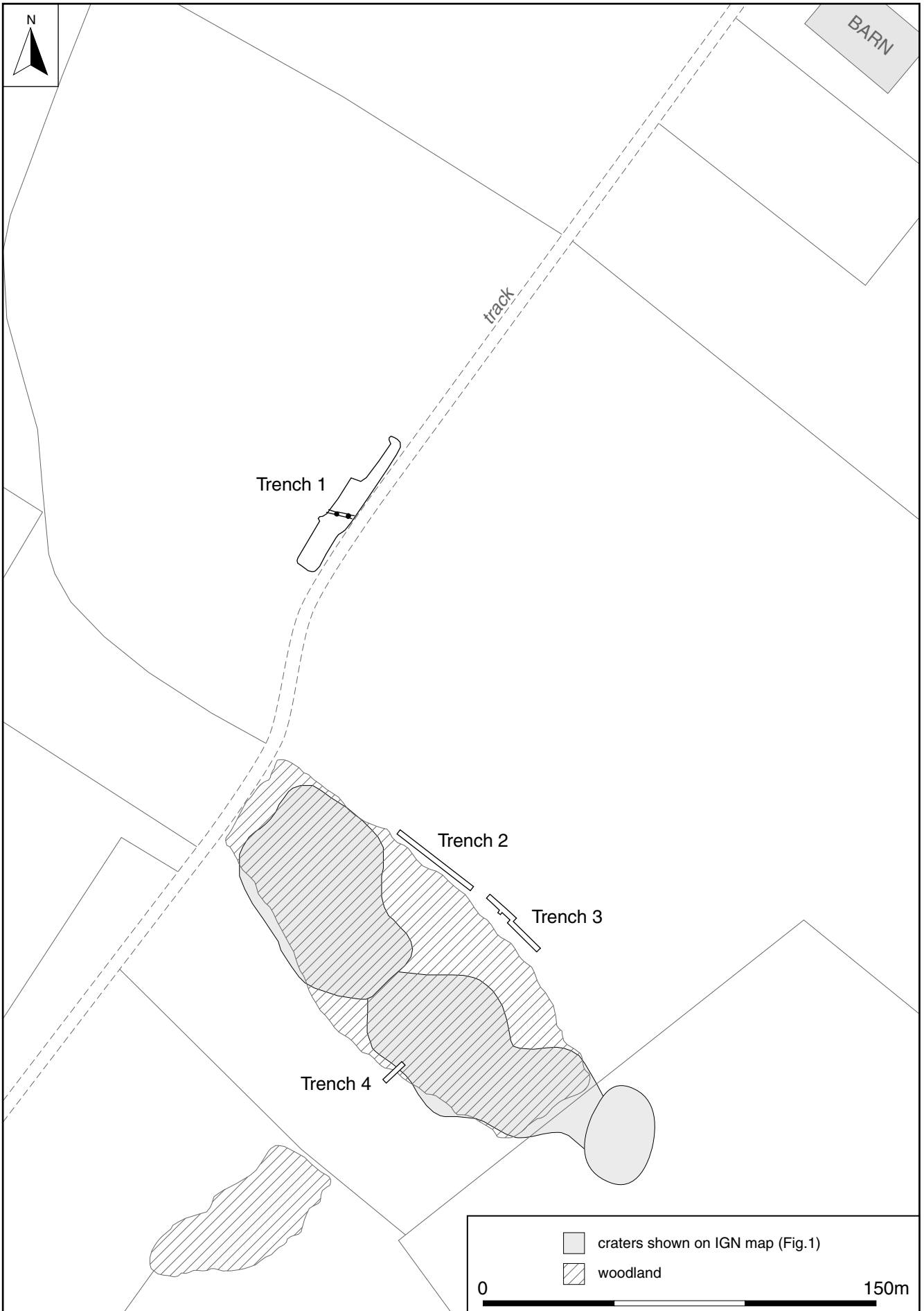


Fig. 2 Site area showing location of trenches (1:2000)

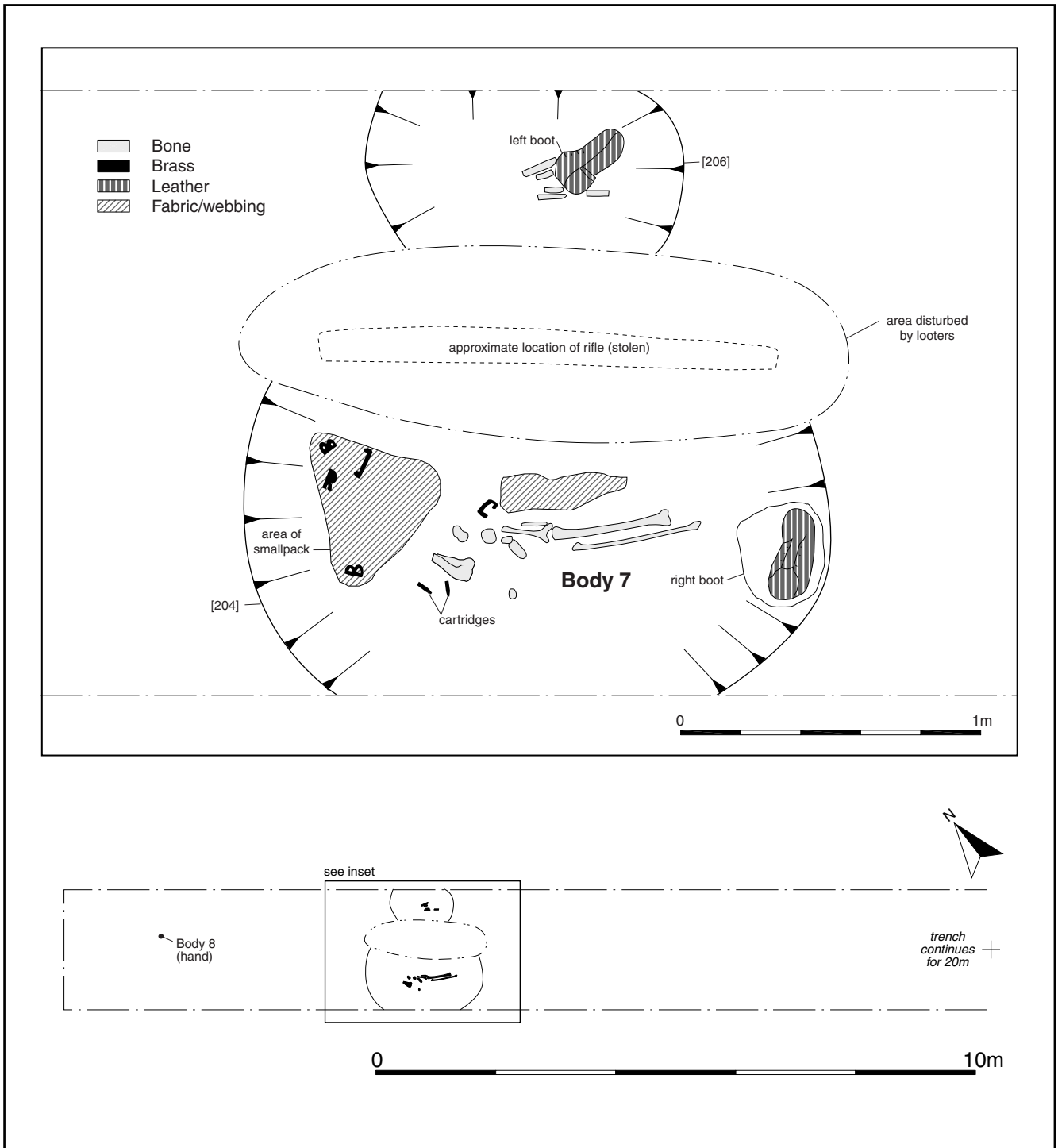


Fig 3 Trench 2; Plan with detail of human remains, Body 7

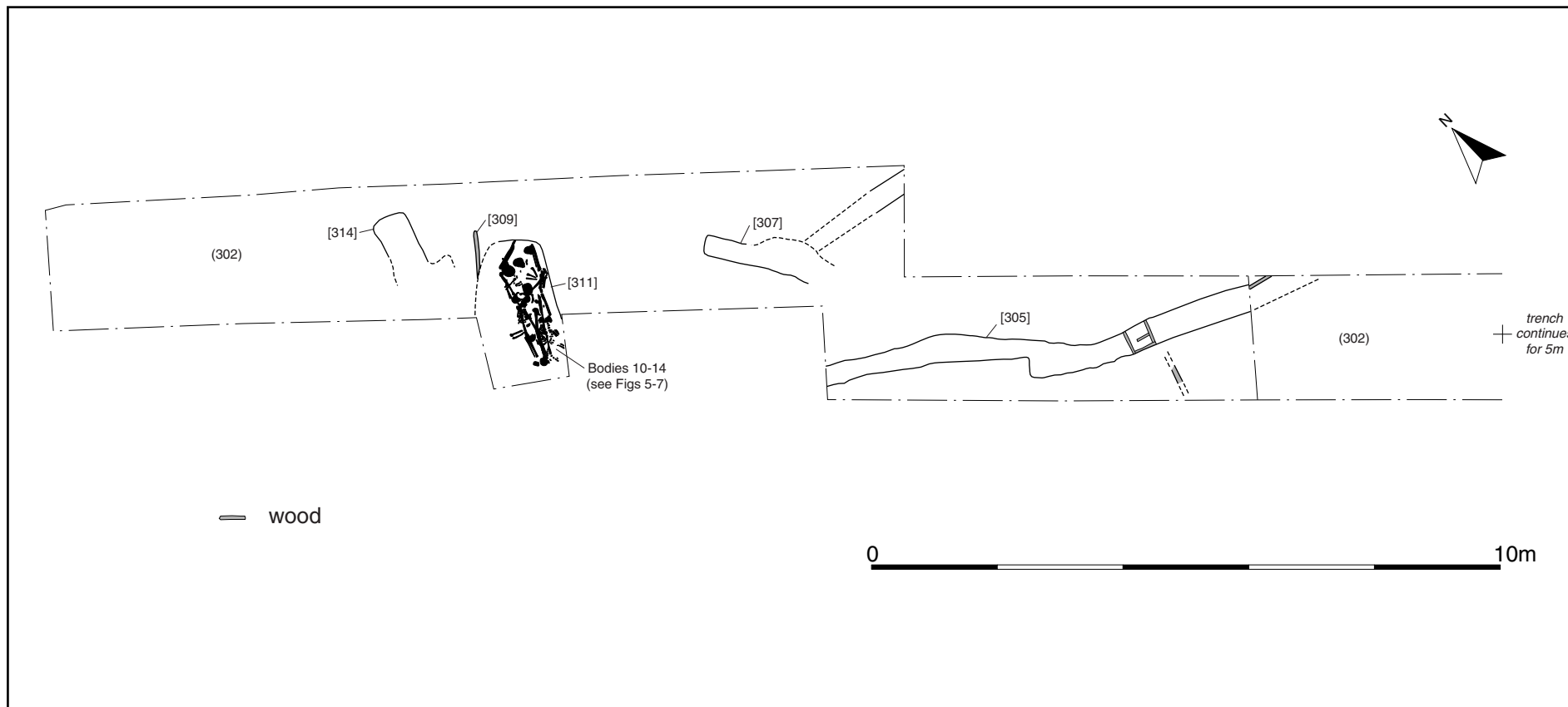


Fig. 4 Trench 3; Plan, showing location of Bodies 10-14

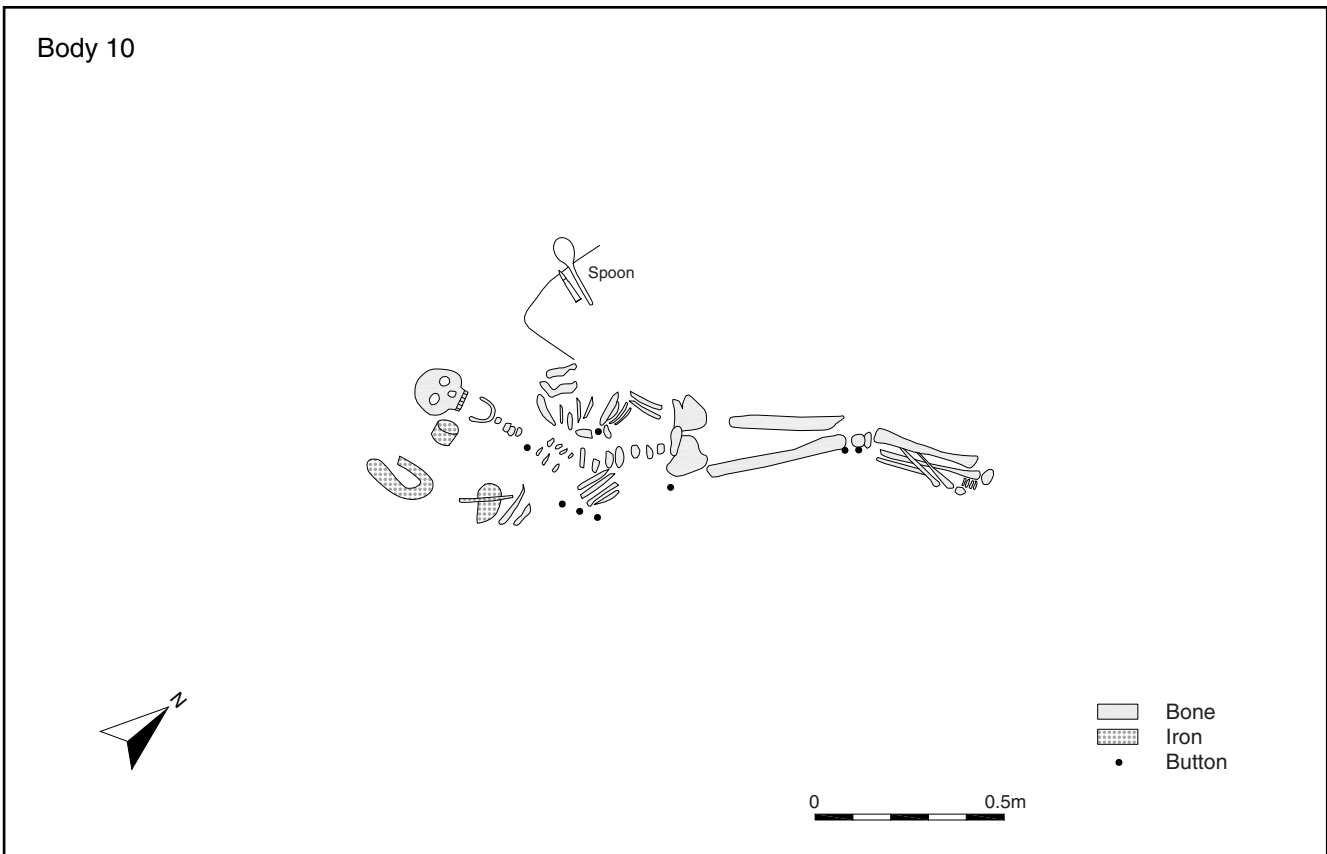
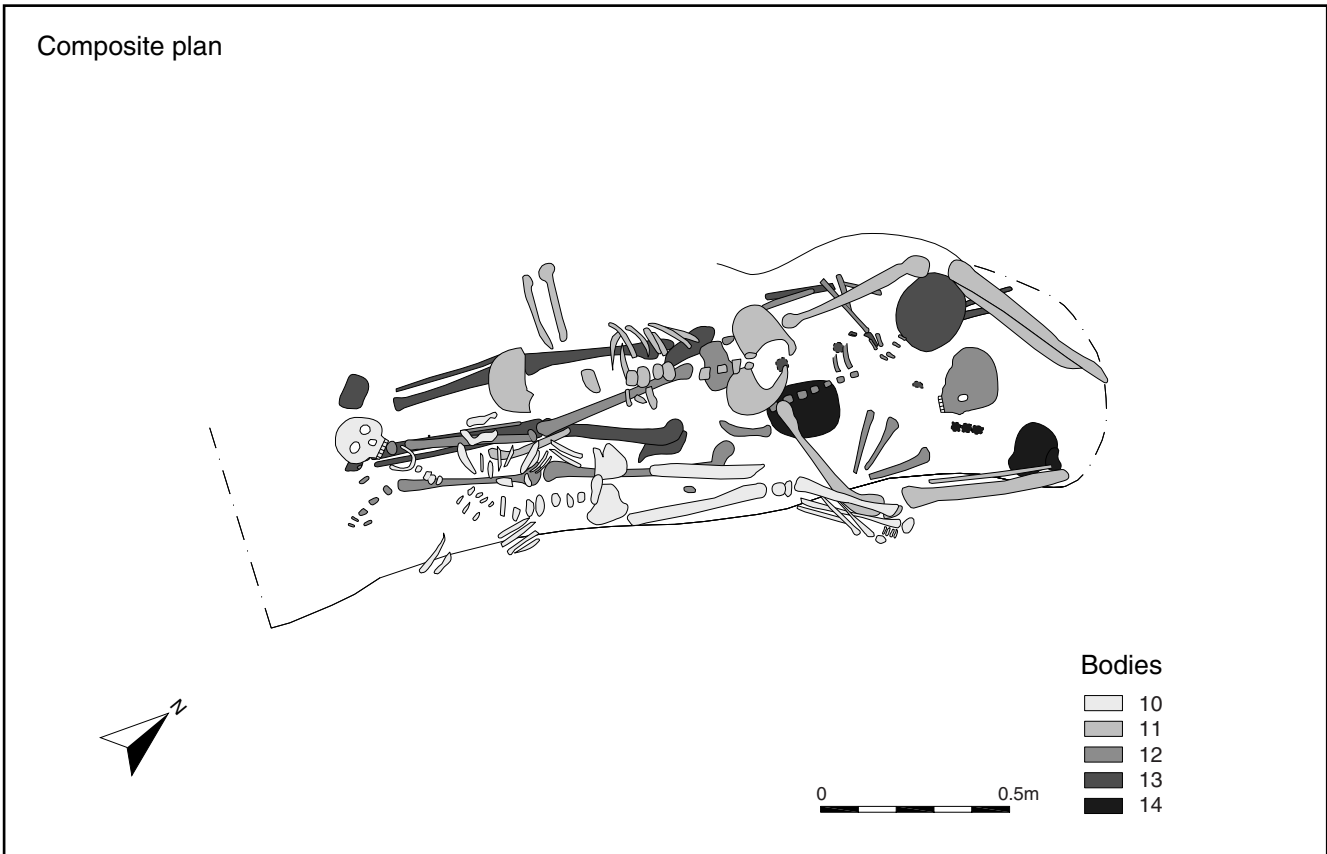


Fig. 5 Trench 3, Human remains; composite plan; Body 10 with associated artifacts (1:20)

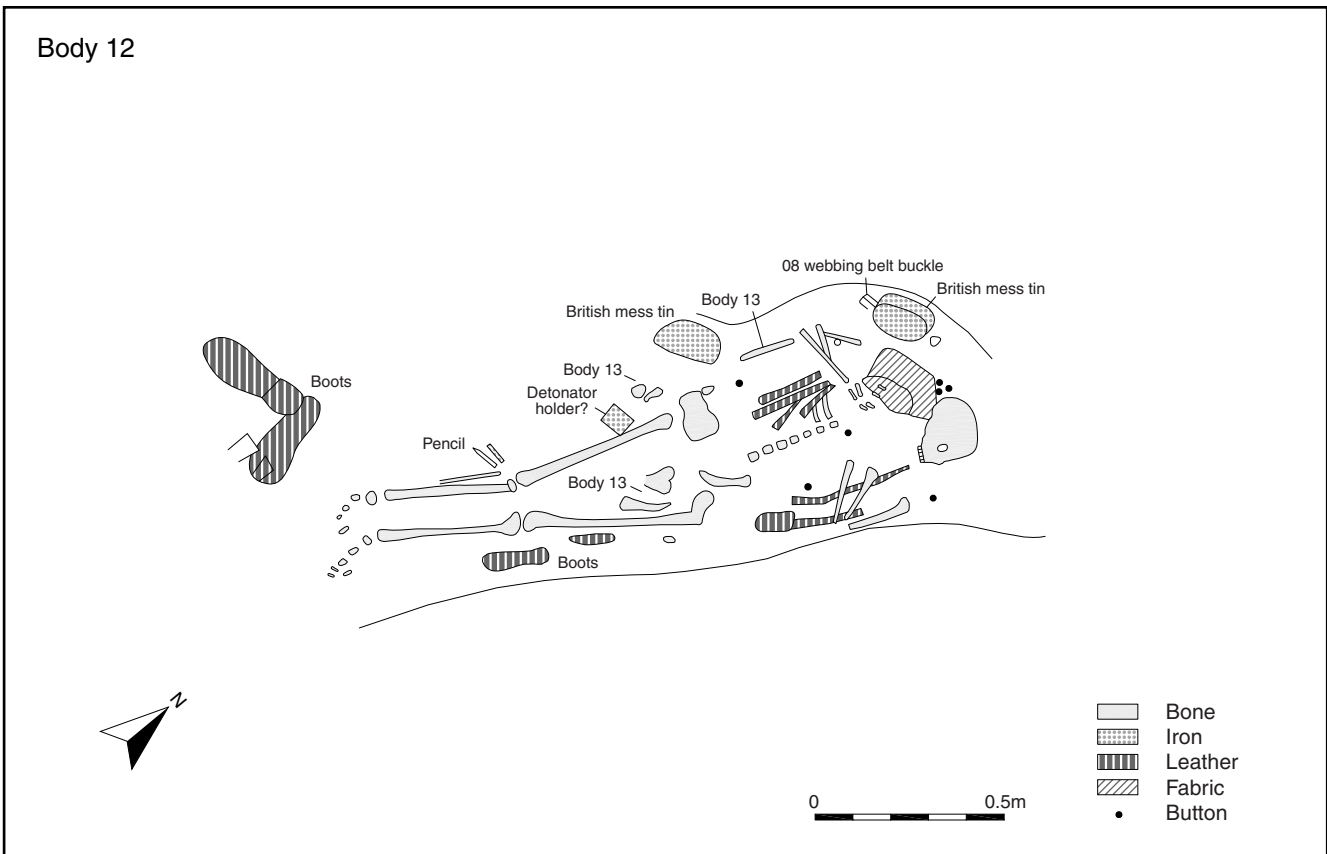
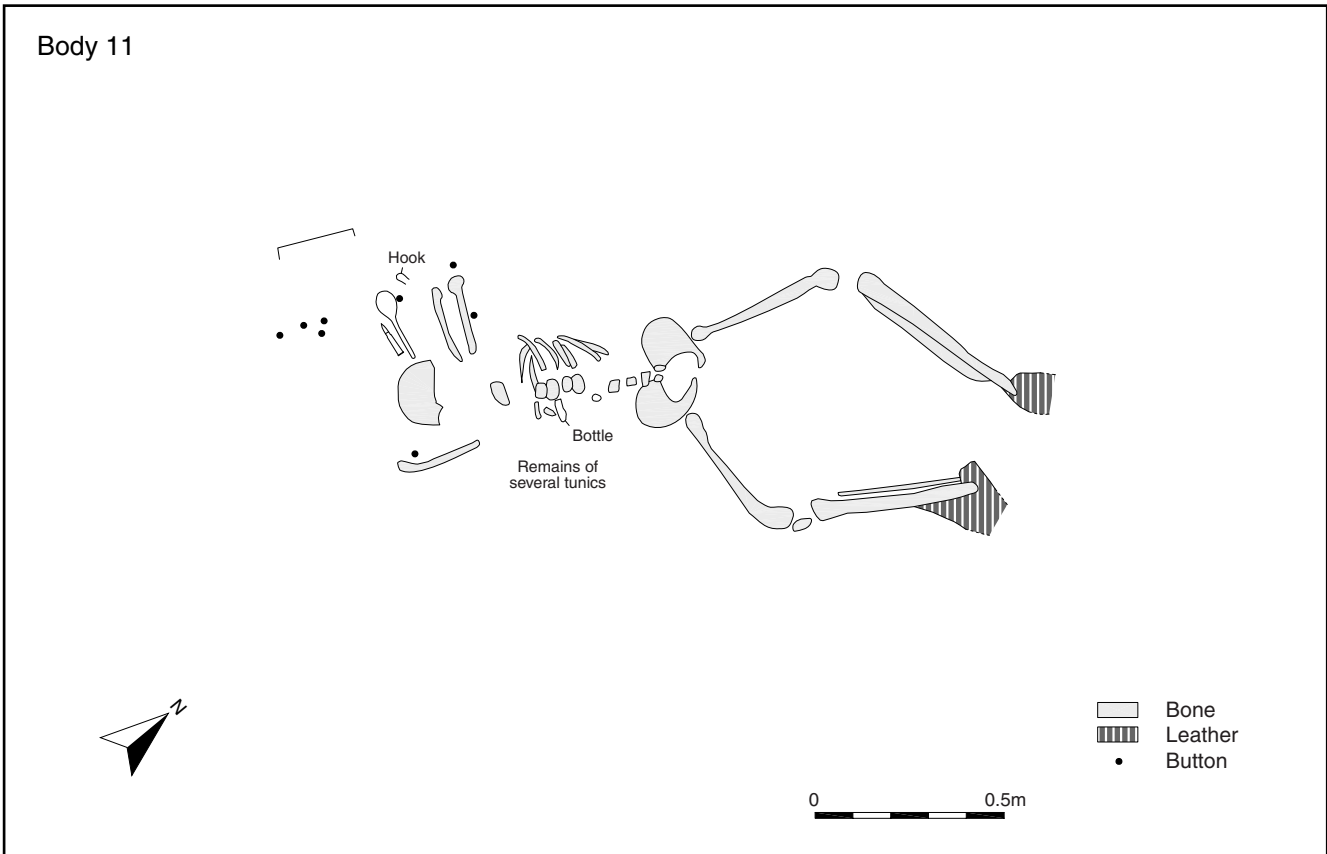


Fig. 6 Trench 3, Human remains; Bodies 11 and 12 with associated artifacts (1:20)

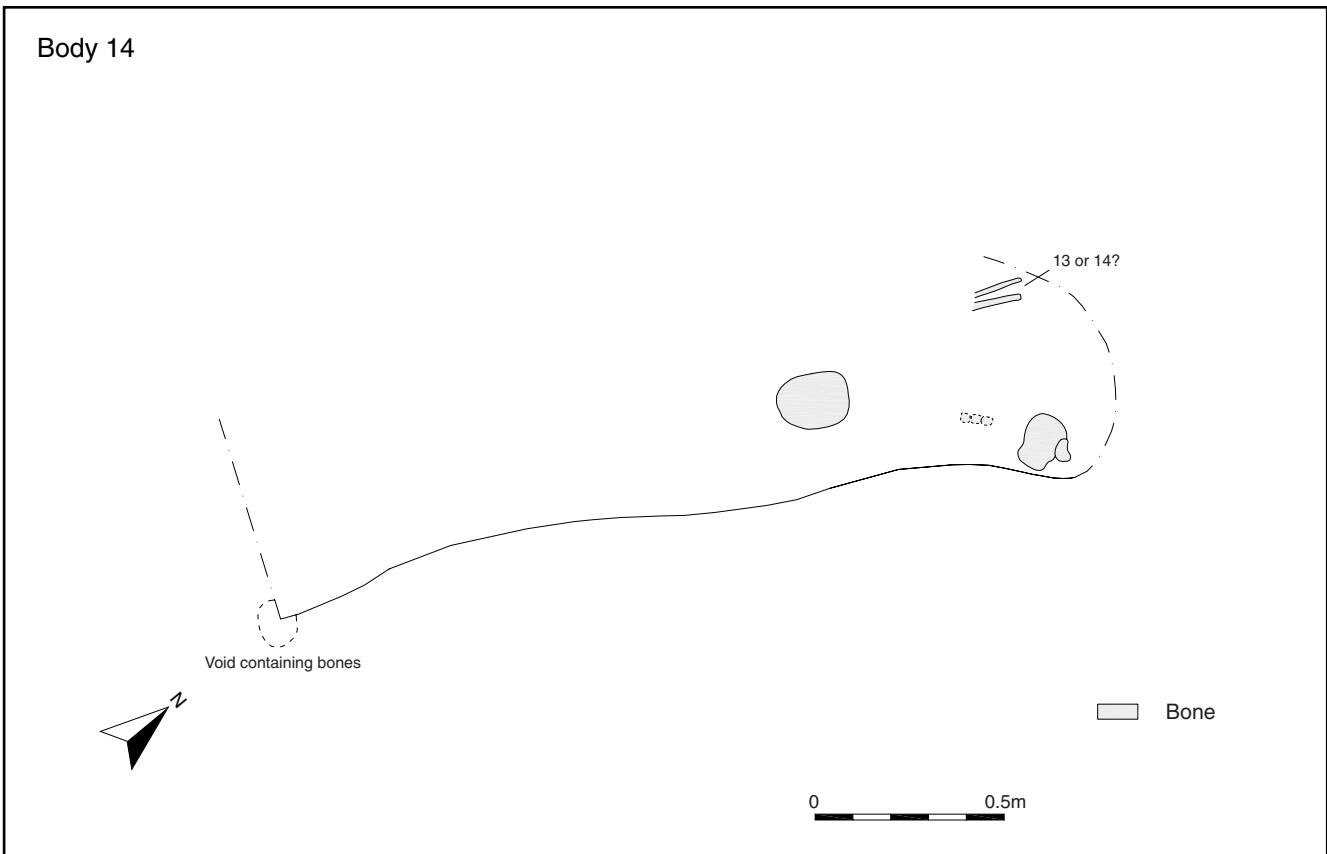
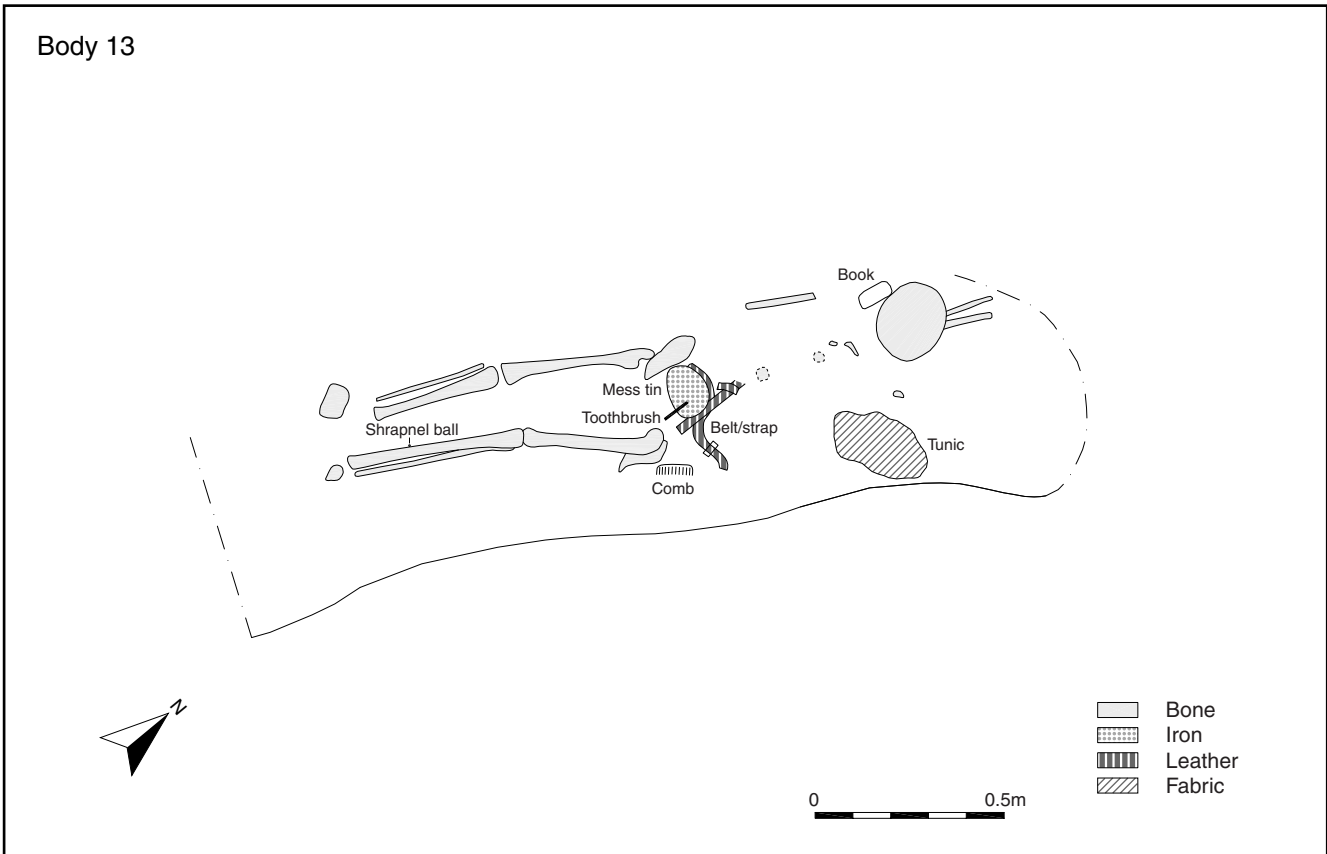


Fig. 7 Trench 3, Human remains; Bodies 13 and 14 with associated artifacts (1:20)



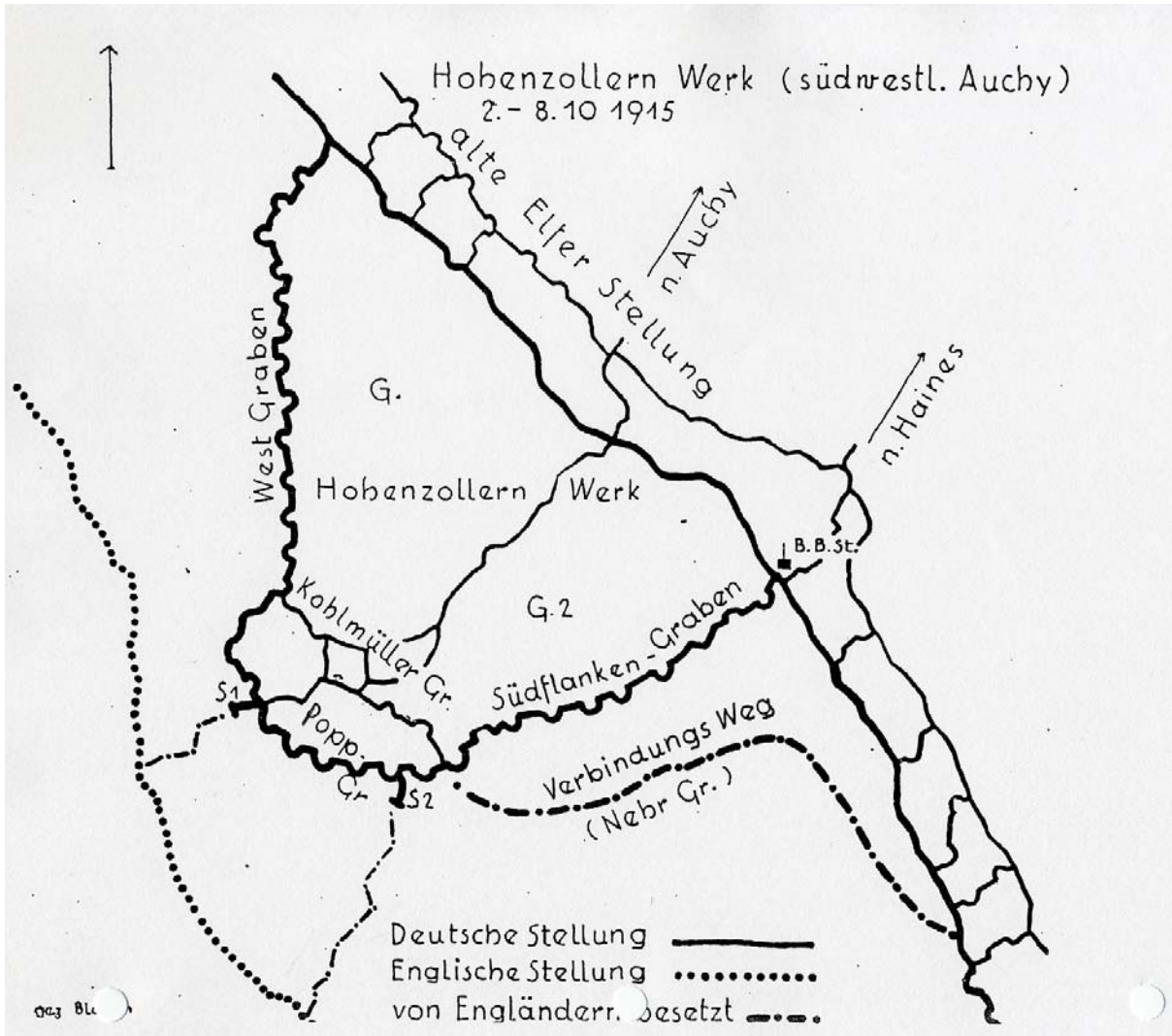


Fig. 8 German trench map illustrating the fighting of October 1915



**Fig. 9**      **Trench 1 viewed from South**



**Fig. 10**      **Trench 2 viewed from West**





Fig. 11 Trench 2, Body 7; Right boot and lower limb



Fig. 12 Trench 2, Body 7?; Left boot





**Fig. 13** Trench 3; Excavation of human remains in progress



**Fig. 14** Trench 3; Bodies 10 and 11 during excavation





**Fig. 15** Trench 3; Body 12 during excavation



**Fig. 16** Trench 3; Body 13 Trench art/Charm?





**Fig. 17** Trench 3; Tunic



**Fig. 18** Trench 3; cloth shoulder title





Fig. 19 Trench 3; Songbook



Fig. 20 Trench 3; Postcard