# LAND ADJACENT TO NEWFOUNDLAND MEMORIAL HAMEL FRANCE

# ARCHAEOLOGICAL EXCAVATIONS



**April 2005** 

NML Report no. 3 No Man's Land – YAP Films

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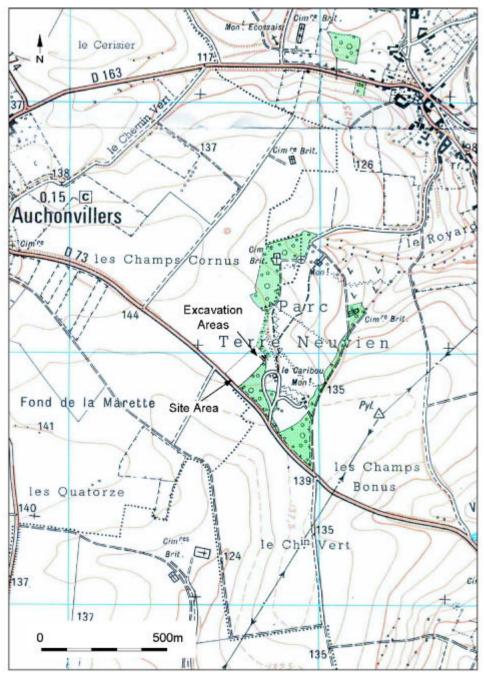


Fig. 1: Site Location (1:10,000)

## 1. INTRODUCTION

## Background

- 1.1 In April 2005 *No Man's Land* (NML) carried out a programme of archaeological works at a site adjacent to the Newfoundland Memorial, Hamel, France, on a part of the British trench lines from the Battle of the Somme, in 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 7-11 April 2005. The work was carried out in accordance with a project design prepared by NML and approved by M. Jean-Luc Collart, Conservateur Regional de l'Archaeologie for the Region Picardie (DRAC).

## Location and Topography

- 1.3 The site is located within the Commune of Beaumont Hamel, a small village to the north of the town of Albert in the Somme Departement of Northern France. The excavation area lies immediately adjacent to the Newfoundland Memorial between the villages of Hamel and Auchonvillers, (UTM WGS84 Grid reference 0474.7 5547.0) (See Fig. 1). The site falls within cadastral plan parcel Nos Auchonvillers 80038 X 116, and Beaumont 80069 S 19, and is in the ownership of M. Delcour, of la Fabrique Ferme, Mailly Maillet.
- 1.4 The site lies on the crest of a hill on the western side of the Ancre river valley at a height of 140m above sea level. The excavation was carried out in a pasture field on the north-western side of the Newfoundland Memorial. Apart from the area of the memorial itself, the surrounding land is under agricultural cultivation. The local geology consists clay 'Liman' overlying chalk, although only clay was encountered in the course of the excavation, which reached a depth of up to 2.5m.

## Historical Background

1.5 The site lies within the network of trenches forming the British front line at the time of the battle of the Somme in July-November 1916. In particular the British second or 'support' line of trenches passed through the excavation area from north-west to south-east. In addition, a communication trench known on trench maps as 'Carlisle Street' was presumed to pass up the length of the field containing the excavation

area. The excavation itself was positioned with a view to uncovering the junction of this communication trench with the support line (Fig. 2).

- 1.6 The area immediately to the south-east of the excavation area (now occupied by the Newfoundland Memorial) is famous as the ground over which the Newfoundland Regiment attacked on 1<sup>st</sup> July 1916, an event which has become a significant episode in Newfoundland, and subsequently Canadian history. The Newfoundland Regiment attacked at 8.45am, as part of the third wave of attacks, following battalions from the South Wales Borderers, and the Border Regiment who had attacked earlier, starting at 7.35am. While the first wave of attackers departed from the front line trenches, or even from positions sapped out into no-man's-land. The Newfoundland Regiment left their trenches in the third line (along St John's Road at the south-west end of the site), and advanced above ground, suffering enormous casualties before even reaching the British front line. One of the reasons for this advance is stated to be that the communication trenches which might otherwise have been used to move up to the front line were choked with troops from earlier waves, and with wounded. This left the Newfoundlanders with no choice but to leave the trenches early and advance over open ground.
- 1.7 While the land enclosed within the Newfoundland Memorial was purchased by the Newfoundland government to form a memorial, and now forms a monument administered by Parks Canada, it does not encompass the whole of the attack frontage of the 87<sup>th</sup> and 88<sup>th</sup> Brigades (including the Newfoundlanders). The frontage of this attack extended to the north-west beyond the bounds of the Memorial. Thus this attack would have passed across the ground investigated by the excavation, as well as some of the cultivated land to the north-west.

#### Aims and Objectives

- 1.8 The principal objective of the excavation was to explore the ground over which the attack of the Newfoundland Regiment had taken place, in order to tell the story of that attack through the medium of archaeology for the 'Finding the Fallen' broadcast. However within that framework a variety of other archaeological objectives were identified;
  - The Newfoundlanders attacked above ground due to congestion in the communication trenches. The examination of the character of a section of one of those communication trenches (in this case 'Carlisle Street') would be helpful in evaluating the authenticity of this story.

- The trenches preserved in Newfoundland Memorial have been altered by erosion and landscaping, as well as by an unknown degree of restoration in the 1930s, of which no records survive. Excavation of a portion of the same trench system in the immediately adjacent field where the trenches were rapidly back-filled after the war would shed light on the probable former character of the trenches within the memorial site.
- It is also a long-term objective of NML to examine sections of battlefield from as many parts of the Western Front, and periods of the war as possible, in order to fulfil their wider academic objective of exploring and analysing the surviving remains of the war over the Western Front as a whole. Little systematic archaeological research has taken place over these battlefields and academic understanding of the archaeology of the conflict remains at an early stage. Thus any excavation of new sites on the western front would provide new and useful archaeological information. The precise character of these discoveries could not be predicted in advance.

#### Methodology

- 1.9 The three excavation areas were excavated by tracked mechanical digger fitted with 1.8m wide toothless bucket to remove topsoil and other overburden until deposits judged to contain archaeological material were exposed. (Fig. 2) Excavation of features thus exposed continued by hand. In most cases surviving archaeological features were identified at a level equivalent to the base of the plough-soil and the top of the natural clay 'Liman', although in some areas a mixed subsoil layer had to be removed below the topsoil in order to clearly define buried features.
- 1.10 All trenches were planned and recorded in accordance with normal UK archaeological practice: a unique context number was allocated to each individual cut or deposit and full written descriptions of these were recorded on *pro-forma* context sheets. All deposits were also recorded on measured plans (at 1:50 scale) and section and elevation drawings (at 1: 20 or 1:10 where appropriate). 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 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.

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- 1.11 Provision was made so that if 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 would be planned and recorded in detail *in-situ*, and then removed and delivered in the first instance to the Commonwealth War Graves Commission, who would in turn contact the relevant national authorities and pass on the remains. Arrangements were made with the CWGC for full pathological examination of these remains, before their re-interment by the relevant national authorities, CWGC or VDK. In the event no human remains were uncovered in the course of this excavation.
- 1.12 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 Explosive Ordnance Disposal EOD staff. All areas to be excavated were swept with ordnance detecting equipment in advance of and during any excavation work.

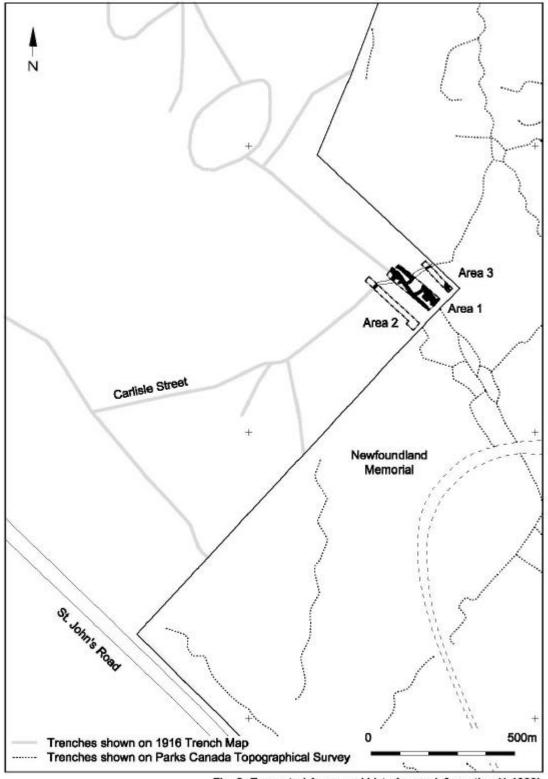


Fig. 2: Excavated Areas and historic map information (1:1000)

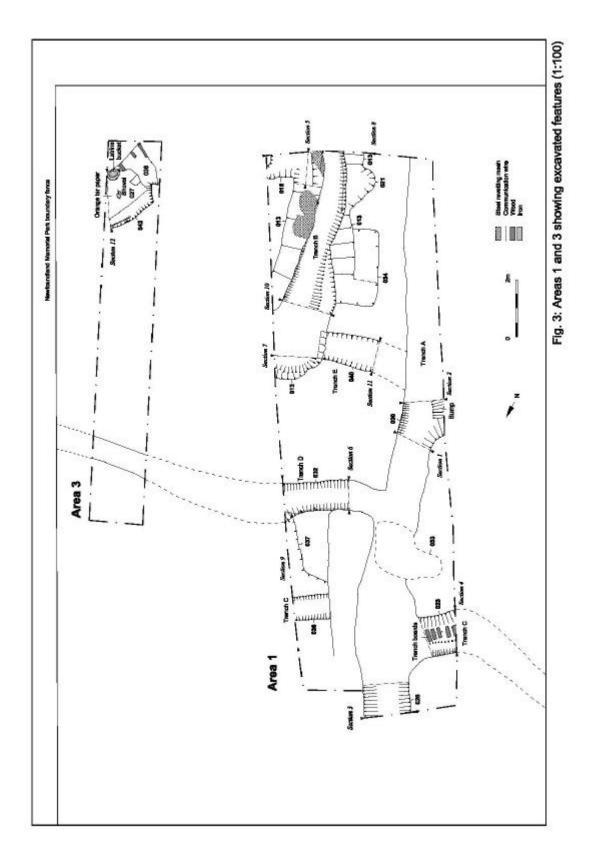
## 2. RESULTS

#### General

2.1 Three areas were excavated in the locations shown on Fig.2. The individual features uncovered in each excavation are described in the following sections. The artefacts recovered from each are detailed by context in Appendix 1. Numbers in brackets refer to the individual context numbers allocated to cuts and deposits as excavated. In all areas up to 0.5m of overburden was removed mechanically. This consisted of 0.3-0.4m of modern topsoil, and a layer of mid brown clayey subsoil which overlay clearly defined features.

## Area 1

2.2 An area 20m long and up to 6m wide, was excavated at the location of the junction of the support line and Carlisle Street, as plotted from historic maps (Fig. 6). This formed the principal excavation area. A network if interconnecting trenches as well as other features was uncovered in this area (see Fig. 3). These trenches were provided with arbitrary identifying letters, and are discussed individually below.



Trench A

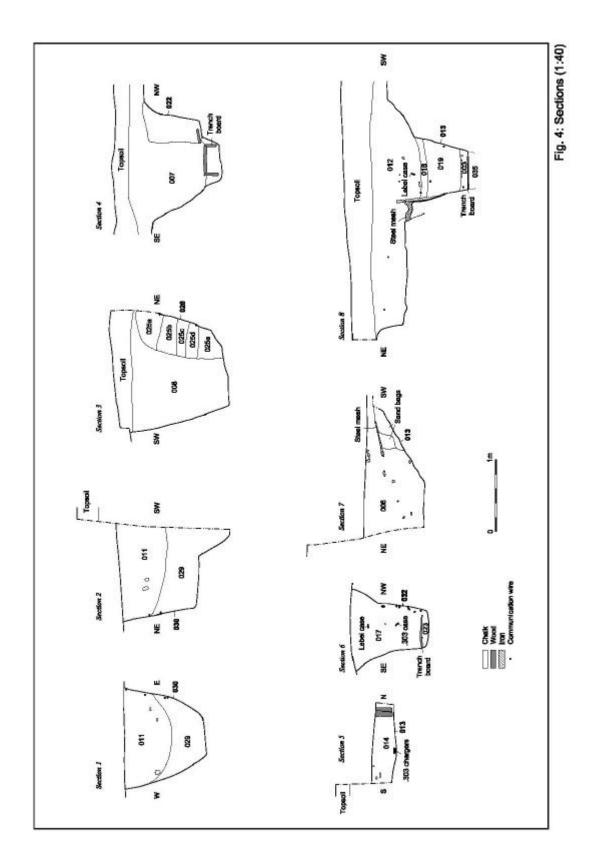
- 2.3 A broadly straight trench up to 1.5m wide and 1.6m deep (measured from the modern ground surface) was uncovered running the length of the excavation area from north-west to south-east (Cut 026/030) (Fig. 7). In plan this trench was notable for its lack of any significant traverses. Two transects were excavated across this feature (Fig. 4, Sections 1 and 2, Section 3). The trench was found to be back-filled with a mixture of clay liman and chalk fragments, probably reflecting post-war sleighting of the former parapet/parados (008, 011). Evidence of sandbagging was also present. A series of contrasting sandbag fills were apparent *in situ* against the northern face of the trench in Section 3 (025), while in the area of Sections 1 and 2, a collapsed layer of material retaining sandbag impressions within it was found in the bottom third of the trench (029). Three lines of signal cable were also found stapled to the northern face of the trench.
- 2.4 In the area of Section 2 the trench widened to the south, although the full extent of this was not uncovered as it lay beyond the edge of the excavated area. The lip of a step down was also revealed in the floor of the trench (Fig. 7). It is possible that this reflected a junction with a trench approaching from the south, but a gully was also observed running along the southern side of the floor of the trench and discharging into this lower area. It is therefore more likely that this feature was a sump, built into a bay on the southern side of the trench. A semi-circular bay [033] was also uncovered in the southern side of Trench A to the west of the sump. This latter was probably the result of shell damage.
- 2.5 A British blue enamel water-bottle was recovered from the fill of this trench, as well as a French-issue metal cup. At least three full cotton bandoliers of British .303 ammunition were found, along with significant quantities of loose British and French ammunition, and one Mills grenade. Fragments of a set of British 1908 Pattern webbing were also identified.

## Trench B

2.6 A second trench was uncovered running broadly parallel with Trench A, but a few metres to the north (Cut 013) (Fig. 10). This trench entered the excavated area from the east and ran north-west for approximately 8 metres before apparently turning abruptly northward out of the excavated area. A substantial length of this trench (nearly 6m) was excavated, and its profile recorded in Section 8 to the east and

Section 10 to the west (Figs 4 and 5). Along most of its length the trench was up to 1m wide and typically was excavated to a depth of 1.7m where a continuous layer of *in situ* trench boards were uncovered. A short section of these boards was removed at the western end and the cut of the trench was observed to continue down at least 0.5m deeper, with further layers of trench-boards, although it was not possible to fully excavate this area as standing water was encountered. Several distinctive fills of the trench were observed in Section 8 (012, 018, and 019). It is likely that these reflect various stages of backfilling, with natural silting after abandonment at the base (003), overlaid by deliberate postwar back-filling when the field was reclaimed for agriculture. The majority of the fill of the trench however was recorded as (003) (see Section 10) as these layers could not be distinguished during excavation.

- 2.7 The northern face of the trench had been revetted with expanded metal mesh and angle-iron pickets. Some of these were found *in situ* but others had slumped inwards, and in all cases the expanded mesh bulged inward between the pickets due to soil pressure/slumping behind. Substantial bundles of communications wire were found, stapled to both sides of the trench. The upper parts of the cut of the trench were splayed outwards, and on the north side it appeared that the trench edge had been damaged, possibly by shell-fire, and that this had been repaired by packing material behind the expanded metal forming the trench side. On the south side of the trench two shallow shelf-like areas were uncovered ([034] and [021]). The easternmost of these appeared to have been lined with a waterproof sheet. It is not clear what function these areas originally served. A shallow sap [015] was also uncovered extending towards the north-east from Trench B in the corner of the excavation area, again not enough of this feature was exposed to determine its function.
- 2.8 Finds recovered from Trench B included the remains of a large wooden box containing smaller rectangular metal tins (003). These were interpreted as containers for grenade fuses. A pocket knife, fragments of a mirror and both British and French buttons were also found, along with a rifle grenade, and large amounts of both ammunition in bandoliers as well as loose rounds. Of particular interest was a tunic button of the New Zealand Forces.

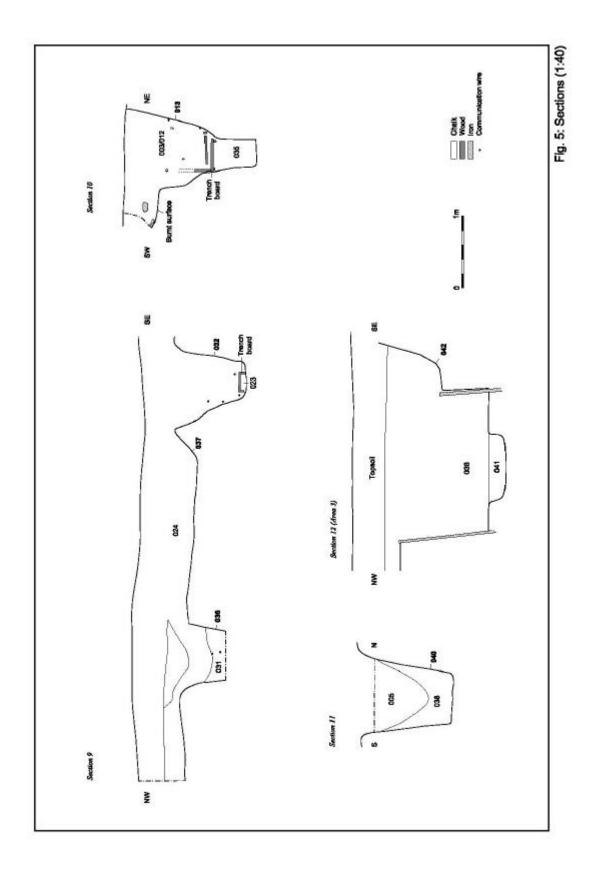


Trench C

- 2.9 A further trench 1.5m wide and 1.5m deep from the modern ground surface was identified extending southwards from Trench A (Cut 023) (Fig. 8). It is possible that this formed part of the communication trench shown on trench maps as Carlisle Street. *In situ* trench boards were found in the base of this trench, and a communication cable was stapled to the western side. In section (see Fig. 4, Section 4) there appeared to be a step on the western side of the trench, with a distinct separate fill above it. It is possible that this was a deliberate feature, similar to the sandbagging apparent in Section 3 of Trench A, or it may be that this reflected the cut of an earlier back-filled trench, through which Trench C was constructed.
- 2.10 A second section of trench [036] was partially excavated on the northern side of the excavation area (Fig. 5, Section 9). Although somewhat narrower than Trench C, it is possible that this represents a continuation, either of Trench C itself, or of the possible earlier trench represented by the cut on the western side. Both French and British small arms ammunition was recovered from this trench, as well as food cans and other battlefield debris.

## Trench D

- 2.11 Parallel to the possible continuation of Trench C, a few metres to the east, was a further section of narrow trench, 0.8m wide and 1.1m deep from the base of the plough-soil (Cut 032) (Fig. 11). At its southern end this trench joined Trench A, and its northern end extended beyond the excavation area. It is possible that this trench represents a communication trench depicted on trench maps as 'Praed Street'. The dominant feature of this trench was the enormous number of communication wires strung along the sides, five separate sets of bundled cables were identified, stapled to the western side of the trench.
- 2.12 On the western side of Trench D was an area similar to those found on the south side of Trench B, a shallow feature, possibly a former shell-hole, lined with waterproof sheeting (Context 010). It is not known what purpose this area served. To the north of this, running along the edge of the excavated area, and apparently cut by Trench D was a linear feature [037], possibly a back-filled earlier trench. Unfortunately limited time, and the closeness of this feature to the edge of the excavated area did not allow for its complete investigation.



2.13 A quantity of both French and British small arms ammunition was recovered from this area, as well as typical trench debris, shell fragments and tin cans. Of particular interest, however were an RAMC button found in this area during machining (context 000), and a sterile suture in a glass ampoule, found in the shelf/crater area (010). The coincidence of several medical items like this may represent specific medical activity in this area.

#### Trench E

2.14 Connecting the western corner of Trench B with Trench A to the south was a narrow communication trench, 0.8m wide and 1.2m deep from the base of the plough-soil (Cut 040; Fig. 5, Section 11). No revetment or cabling was found in this trench, and the impressions of a number of sandbags were found in the northern end, suggesting that this trench had been deliberately blocked-off and back-filled while Trench B was still in use (Fig. 4, Section 7). French and British small arms ammunition was recovered from this trench along with a single.38" revolver round (005).

#### Area 2

- 2.15 A second area was stripped of topsoil to the south of Area 1. This was initially dug to a width of 3m at its east end, but this was abandoned after 4m and the remainder of the area, 20m in length, was stripped one machine bucket width; 1.8m. Having located the trench line in Area 1, Area 2 was intended to sample an area outside and behind the trench line, in order to examine shell damage and to explore the state of the ground in between the trenches.
- 2.16 In the event virtually nothing was found in this area. Clean natural 'liman' was uncovered below the modern cultivation soils, and this showed little evidence of the impact of the war. The base of one shell-hole was identified, but this had penetrated into the liman only to a depth of around 0.1m and the surviving crater in the liman was only 0.3m across. It can be inferred from this that the majority of the crater created by this shell impact was confined to the plough-soil layers, or that deeper post-war ploughing has obliterated much of the damage. At the western end of the area, the line of a trench was identified crossing the area from north-east to southwest. It is possible that this represented the continuation of Trench C in Area 1; 'Carlisle Street'. No further excavation was carried out on this section of trench. The only artefact to be recovered from this area was the base plate of a Livens Projector, found in the upper layer of the back-fill of the communication trench. It is unlikely that this item was *in situ* and therefore its presence is not diagnostic.



Fig.6



Fig.7

#### Area 3

- 2.17 A further area was excavated to the north of Area 1 immediately adjacent to the boundary fence of the Newfoundland Memorial (Fig. 3). This area was 12m long and 1.8m (one machine bucket width) wide. Examination of trench maps suggested that the headquarters of the two attacking brigades on 1 July 1916; 87<sup>th</sup> Brigade and 88<sup>th</sup> Brigade, lay in this area, and several earthworks immediately beyond the memorial fence were indicative of possible collapsed dugouts. Therefore Area 3 was excavated in order to try and uncover possible features associated with these headquarters.
- 2.18 At the western end of Area 3 the line of a communication trench was uncovered. It is probable that this represented the continuation of Trench D 'Praed Street'. No further excavation of this trench was undertaken. At the eastern end of the area a rectangular feature was uncovered, approximately 2m wide east to west and 3m long north to south (042). On excavation this proved to be 1.9m deep from the modern ground surface, and revetted on the exposed faces with corrugated iron sheeting held in place by angle-iron pickets (Fig. 5, Section 12; and Fig. 9). Two phases of occupation were identified within this feature;
- 2.19 At the base of the feature the floor consisted of natural liman. In the centre of this a rectangular recess 0.25m deep and 0.9m square was uncovered. Sandbag impressions were present in the fill of this recess (Fig. 5, Section 12, Context 041). Such a feature was typical of trench mortar pits, the sandbagged recess serving as a stable platform for the mortar base-plate. The substantial depth of the feature (nearly 2 metres) was also characteristic of a mortar pit. Several items were recovered from within the recess (041), these included .303 rounds and a table knife as well as several ampoules of iodine, and part of a medical thermometer.
- 2.20 At a later date, the sandbagged recess, and the whole of the base of the feature were covered by a floor consisting of wooden boards and tar-paper, fragments of both were uncovered *in situ*. A standard British army pattern latrine bucket was uncovered in the north-east corner of the feature, and on the opposite side an upright section of iron tubing, approximately 0.15m in diameter and 0.75m long was uncovered, set into a 'posthole' cut in the floor of the pit. It seems likely therefore that the pit was subsequently converted into a trench latrine, with the bucket for solid waste and the upright pipe serving as a urinal.



Fig.8





2.21 Large numbers of .303 rounds including several complete fabric bandoliers were found in the fills of the mortar pit (027 and 038), along with several .455" revolver rounds. Interestingly, French ammunition was not present in the quantities typical of other parts of the site. Two other objects of interest were recovered, the copper alloy rim of a pocket-watch case, and a thin metal disc bearing the letters 'ADC' although the precise function of this latter object has not yet been established.

## 3. DISCUSSION

- 3.1 No evidence that could be directly connected to the events of 1 July 1916 was uncovered during this project. This is not particularly surprising given that the trenches were occupied continuously from 1914 until the German retreat of 1917, and then again briefly in 1918. Thus any slight traces of the activity of one day would rapidly be obscured by continuing occupation of the system. However, the dynamic and evolving character of the trench system and the fighting in the area was clearly demonstrated in the excavated results. Table 1 provides a summary of the datable artefacts from the various trenches, as well as other significant finds. (It should be noted that in the table, and in the following discussion no distinction is made between fired and unfired rounds, cartridges and complete rounds, only gross counts are used, and that British rounds are dateable only by year, whereas French rounds carry a mark indicating the quarter of the year. Full details of the dates and ratio of fired to unfired rounds are contained in Appendix 1.)
- 3.2 The first noticeable characteristic of the finds is the large quantity of French ammunition recovered. Nearly a thousand rounds were collected. It is known from historical sources that this part of the front was handed over from the French to the British in the second half of 1915. Of 919 rounds recovered nearly all are 1914 dated or earlier. Only four have manufacturing dates in 1915, and only one from December of that year, after the French had vacated the area. That one round was recovered while machining and was not in a stratified deposit.
- 3.3 A significant number of these rounds were also found surrounded by a 'capsule' of un-decayed grass or straw. It was initially thought that this might be a packing or storage technique, but this view was revised later. It is now thought that the 'capsule' is the result of a taphonomic process whereby rounds are dropped in grassland and

subsequently sealed by soil. The corrosion products of the brass cartridge then serve to preserve the grass stems in the immediate area of the cartridge from decay. A similar phenomenon was found associated with four French tunic buttons from Trench B (003), and a match case found next to Trench D (010). The conclusion drawn from this is that during 1914-15 the French deposited a significant quantity of battlefield debris onto the *surface* of the field while it was grass-covered, and that this material and the grass around it was then buried by the construction of trenches or other fieldworks nearby. Later, when post-war back-filling of the site took place, this material was transferred in turn into the fill of the trenches.

- 3.4 A further inference from this evidence is that not only did a significant amount of fighting take place in the area prior to its hand-over to the British, (the total of French rounds recovered from 1914-15 exceeds that of .303 rounds found from the 1915-18 period). But also that this fighting was at least in part more open and 'above ground' in character. At present this early period is not well understood by NML and more research is needed.
- 3.5 A further legacy of the French presence in the area lies in the layout of the trench system itself. A curious feature of the trenches excavated was the presence of the apparently un-traversed Trench A, very close to the rear of the traversed Trench B, with short lengths of communication trench connecting the two. This arrangement is described in French trench construction manuals; a so-called 'living' trench was constructed a few yards behind the 'Fire' trench, only the latter having conventional traverses and fire-bays. Such a system is described in an English-language source at Serre where a similar system is described constructed by the French in 1915 and later taken over by the British.<sup>1</sup> It is possible that the arrangement found in Area 1 reflects such a French system. If so, it is notable that only the forward or 'fire' trench contained evidence of substantial revetting in the form of expanded metal and pickets, and that at least one of the connecting communication trenches, Trench E, had been deliberately blocked with sandbags. This may reflect a deliberate abandonment of the rearward, un-traversed, Trench A.
- 3.6 A range of medical items were also recovered (Fig. 13). These included the RAMC button (000), and sterile suture (010) found near Trench D, and the iodine ampoules and thermometer found in the mortar pit (041). All of these items are consistent with the kit carried by a Regimental Medical Officer and may reflect treatment of

casualties in the trench system in the immediate area of the excavation. Given that the recess in the base of the mortar pit still contained its original sandbag packing it is difficult to see how the ampoules and thermometer could have arrived in that deposit subsequent to its construction. It is possible that these items were originally deposited nearby, possibly in the area of the other items near Trench D, and that they were inadvertently shovelled into one of the sandbags which was used in the construction of the mortar pit base. If so then the construction of the mortar pit postdates the medical activity. Maps associated with 1 July 1916 do not depict the mortar pit, suggesting that it was constructed later. This then admits the possibility that the medical items were associated with 1 July itself, however such a conclusion remains largely speculative.

- 3.7 As mentioned above, maps associated with 1 July 1916 do not depict the mortar pit. Further documentary research may allow this feature to be more firmly dated, however it is reasonable to infer that this feature was built during the later part of the Somme battle in the Autumn of 1916. The British ammunition recovered from the feature was consistent with this dating, and similar to that of the surrounding trenches. In particular, only 1915 rounds were recovered from the recess and the floor, although many were too corroded to be dated properly. Later 1916manufactured rounds were found in the subsequent backfill (Fill 038). It is curious that relatively few French rounds were found in this feature, relative to the numbers found in other excavated features. This may reflect the fact that unlike the other trenches excavated, the mortar pit was not initially constructed or occupied by the French. Because of their vulnerability to enemy retaliation, trench mortars were moved frequently, each mortar having several firing positions. It is not surprising therefore that this feature changed function and was subsequently converted to use as a trench latrine.
- 3.8 Recovered from within the fill of the mortar pit was an object of as yet unknown function. A thin circular metallic disc was found bearing the large letters 'ADC' in the centre, with around the rim; 'Aide de Camp' and 'Prov. ' followed by several partially legible digits (038) (Fig. 12). It has been suggested that this is part of an electric torch bearing that trade name and a patent number. Alternatively the item may be a badge of some kind, possibly from a staff officer's arm brassard. No such badges were in use in British service so the object may be of French origin. Research continues to identify this item.

<sup>&</sup>lt;sup>1</sup> Samuels, A, (Capt), Und, *With the Ulster Division in France* (Mullen & Sons. Belfast) pp24-6



Fig.10





- 3.9 The trench system in the Hamel area was abandoned after the German retreat of spring 1917. However at least parts of the system were re-occupied during the German March offensive of 1918. A trench crossing the centre of the Newfoundland Memorial site in fact dates from this later fighting. Evidence of re-occupation of the excavated site in 1918 comes from the eastern end of Trench B, where three 1917-manufactured British .303 rounds were recovered, as well as a New Zealand button (012). The latter is significant as it was troops of that corps which defended the area in 1918. In the light of these objects it is possible to suggest that some of the other features of Trench B such as the repaired revetting may reflect a 1918 refurbishment of the trench, rather than 1916 work.
- 3.10 No features directly associated with the Brigade headquarters depicted on the 1916 trench maps were uncovered. It is likely that these features are located in the areas of collapse identified within Newfoundland Memorial. However the significant quantity of signal cable strung in all the excavated trenches leads to the inference that some form of communications hub was nearby. The vulnerability of such cables to damage during battle, which is a feature of most historical accounts, was also easy to appreciate given their method of attachment to the trench sides, and the thinness of the cable used in many cases just a single copper strand.
- 3.11 One way that the project did shed light on the events of 1 July 1916 was in the excavation of several sections of communication trench. The extreme narrowness of these features, typically in the case of Trenches C and D little over 0.5m wide at the base shows the difficulty that would be experienced in even two men heavily encumbered with equipment trying to pass one-another. It is easy to see how when several battalions of men were placed in this trench system it rapidly became hopelessly overcrowded and congested.
- 3.12 The dynamic nature of the depositional processes on the site are also apparent. Evidence of four years of war is present. This evolution is significant when the excavated trenches are compared with those preserved as earthworks in the adjacent Newfoundland Memorial. Clearly as has been described, the trenches remaining at the end of the war, whether back-filled in the excavation area, or left open in the Memorial are a composite of four years of fighting. In addition the final phase; 1918, is likely to be the best preserved with all previous activity obscured to a greater or lesser extent. It is therefore evident that the trenches 'preserved' within the

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Memorial only reflect the trenches of 1 July 1916 in a very incomplete sense and are inevitably viewed through a veil of later activity. It is one of the objectives of NML to reveal through archaeology this dynamic character of the war, and to seek to overturn the traditional view of an entirely static 'stalemated' conflict.

3.13 One other notable feature of the excavated areas was a lack of significant numbers of large calibre shell fragments, particularly in comparison with other areas excavated by NML. This may well reflect the fact that the area did not sustain substantial bombardment by artillery. This may also have been a contributory factor in the relatively good, well preserved condition of the excavated trenches

## 4. ACKNOWLEGEMENTS

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Fig.12





Cont No.	Description	British .303	Latest date	French 8mm	Latest date	Other objects
NO.		rounds	uale	rounds		
000	Unstratified	78	3 x 1916	276	Dec 1914 (1 x Dec '15)*	Mills Bomb Aug 1916 RAMC button***
800	Trench A Principal fill	196	1916	3	Dec. 1912	August 1916 mills bomb
011	Trench A Principal fill	45	illegible	21	March 1914 (1 x Mar '15)*	
016	Trench A Principal fill	21	1916	55	Sept. 1914	
009	Trench A Shell damage	1	1916	-	-	
003	Trench B Principal fill	72	1916	71	Dec. 1914 (1 x Jun '15)*	Fuse box
006	Trench B West End	4	illegible	90	Mar 1914	
012	Trench B upper fill, East end	103	3 x 1917**	49	Sept 1914	British Rifle Grenade New Zealand Button**
018	Trench B mid fill, East end	2	1915	6	Mar 1914	.22" cartridge (illegible)
019	Trench B lower fill, East end	1	1915	18	Sept 1914	
004	Trench B Shelf	1	Illegible	61	Dec 1914 (1x Mar 15)*	
020	Trench B Shelf	-	-	1	Illeg.1912	
007	Trench C Principal fill	5	1915	6	Dec 1913	
031	Trench C North	7	1915	17	Sept 1914	
017	Trench D upper fill	8	1915	52	Sept 1914	French Boot
023	Trench D below boards	16	1915	7	Sept 1914	
010	Trench D Shelf	21	1915	86	Dec 1914	Match Case Suture in Alcohol***
005	Trench E	9	1915	40	Sept 1914	1 x .38" cartridge
027	Mortar pit upper fill	166	1916	7	June 1914	2 x .455" cartridges
038	Mortar pit floor	111	1915	6	Sept 1914	1 x .455" bullet 'ADC' Disc
041	Mortar pit recess	6	1915	-	-	lodine ampoules Thermometer***
028	Early trench cut by Trench D	3	1915	47	Sept 1914	
TOTAL		879		919		

Notes \* Only four French rounds have manufacturing dates after December 1914

\*\* Objects possibly associated with 1918 fighting

\*\*\* Medical items

## APPENDIX 1 Finds

NB: Full details are housed on pro forma record sheets in the archive
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Context	Context 000: Unstratified: topsoil and natural interface, finds collected during machining and initial cleaning.
Large calibre ammunition	British         X1 Cu al flash tube from 18pdr shrapnel shell         X2 Pb shrapnel balls         German         X2 Cu al and Fe fuses. Gr.Z.04.s? Impact fuses for H.E. shells         X1 Cu al and Fe fuse         X1 Zinc fuse frag         X1 Cu al driving band from a 77mm shell         Uncertain nationality         X23 Fe shell splinters (H.E. and shrapnel)         X2 Cu al fuse frags         X6 Cu al driving bands
Grenades and Mortars	British X2 No. 5 Mills grenades (live) Brass bases dated April 1916 and August 1916
Small arms ammunition	<ul> <li>British .303 unfired complete: illegible x6; 1914 x1; 1915 x3 (in x1 Fe charger some in bandoliers); 1916 x1 (11 unfired complete) .303 unfired cases: illegible x7; 1915 x9; 1916 x1 (17 unfired cases) .303 unfired bullets: x3 (3 unfired bullets) .303 fired cases: illegible x21; 1914 x1; 1915 x27; 1916 x1 (50 fired cases) French 8mm unfired complete: illegible x5; Jan-Mar 1903 x1; Oct-Dec 1903 x1; Jul-Sept 1904 x1; Apr-June 1907 x1; Jan-Mar 1908 x1; Apr-June 1908 x1; Oct-Dec 1908 x1; 1910 x1; Jan-Mar 1910 x1; Oct-Dec 1910 x1; 1911 x2; 1912 x1; Jan-Mar 1913 x1; Jan-Mar 1914 x1; Oct-Dec 1914 x1 (21 unfired complete) 8mm unfired cases: illegible x7; Jan-Mar 1908 x3; Jul-Sept 1908 x1; Jan-Mar 1910 x1; Jul-Sept 1907 x2; Oct-Dec 1907 x1; Jan-Mar 1908 x3; Jul-Sept 1908 x1; Jan-Mar 1910 x1; Jul-Sept 1914 x1; Oct-Dec 1908 x1; Jan-Mar 1914 x3; Jul-Sept 1914 x1; Oct-Dec 1914 x1 (26 unfired cases) 8mm unfired bullet: Jul-Sept 1901 x4; Apr-June 1902 x1; Jul-Sept 1904 x1; Oct-Dec 1904 x2; Apr-June 1907 x1; Oct-Dec 1908 x1; Jul-Sept 1904 x1; 9th x3; Oct-Dec 1914 x3 (17 unfired bullets)</li> </ul>

Small arms	French
ammunition (Contd.)	8mm fired cases: illegible x47; 1901 x1; 1903 x4; Jan-Mar 1903 x6; Apr-June 1903 x1; Jul-Sept 1903 x1; Oct-Dec 1903 x10; 1904 x2; Jul-Sept 1904 x2; 1905 x1; Jan-Mar 1905 x1; Apr-June 1905 x1; Oct-Dec 1905 x3; 1906 x1; Jul-Sept 1906 x2; Oct-Dec 1906 x1; 1907 x8; Jan-Mar 1907 x4; Apr-June 1907 x19; Jul-Sept 1907 x2; Oct-Dec 1907 x8; 1908 x12; Jan-Mar 1908 x1; Apr-June 1908 x5; Oct-Dec 1908 x4; 1910 x3; Apr-June 1910 x6; Jul-Sept 1910 x3; Oct-Dec 1910 x1; 1911 x1; Jan-Mar 1911 x1; Jul-Sept 1911 x2; Oct-Dec 1911 x2; 1912 x4; Jan-Mar 1912 x3; Apr-June 1912 x2; Oct-Dec 1912 x5; 1913 x1; Jan-Mar 1913 x1; Apr-June 1913 x8; Oct-Dec 1913 x4; 1914 x4; Jan-Mar 1914 x7; Apr-June 1914 x3; Jul-Sept 1914 x4; Oct-Dec 1915 (!) x1 (213 fired cases) 8mm base of solid brass case. ?practice round x1
Trench related	Uncertain nationality X1 frag single-strand barbed wire X1 Fe screw picket frag X4 Fe trench staples (complete) X4 Fe trench staple frags X2 angle iron frags X1 Fe corrugated sheet frag X2 Cu al 2mm diam. wire frags (one tied in a 30mm diam. noose at one end) X2 frags of wooden stake (>65mm diam.) X2 Fe hinges X3 Fe reinforcing strip from plank ends X1 Fe reinforcing strip from circular post X7 Fe nails X2 frags of Cu al 3-strand communication wire X1 frag of Fe coated Cu al 4-strand communication wire
Military Equipment	<ul> <li>British X1 brass officer's RAMC 25mm diam. tunic button (Maker: Smith &amp; Wright Birmingham) X1 brass 1" tongue less buckle from 08 webbing X1 143 x 81mm viewing window from gas hood/Hypo-helmet X2 brass oiler bottles for SMLE (lids still on) FrenchX1 spade/pick combo Fe entrenching tool head (traces of cloth bag still surviving) X1 frag of black leather from webbing Uncertain nationality X1 white 'plastic' 2-hole shirt button (11.7mm diam.) X1 81mm long Fe key/split pin X1 120mm long Fe key/split pin (possibly from ammunition crate)</li> </ul>
Domestic items	British         X1 frag from rum jar         French         X5 frags from embossed clear glass bottle         X1 Napoleon III 5 Centimes coin (very worn)

Domestic items	Uncertain nationality
Contd.	X1 Fe trivet frag (for supporting cooking pot over fire)
	X4 animal bones (inc. cattle)
	X1 charcoal frag
	X1 coal frag
	X1 frag china plate
	X3 frags from green glass bottle
Miscellaneous	Uncertain nationality
	X1 Cu al perforated strip

Context	Context 003: Principal fill of Trench B (Contexts 012, 013, 019 identified in section)
Large calibre ammunition	German X1 Fe shrapnel ball
	<b>Uncertain nationality</b> X32 Fe shell splinters (H.E. and shrapnel) X1 Cu al fuse frag
	X1 Cu al driving band frag
Small arms ammunition	British .303 unfired complete: illegible x52 (in 11 Fe chargers in a bandolier); 1915 x1; 1916 x1 (54 unfired complete)
	.303 unfired cases: illegible x1; 1915 x1; 1916 x2 (x4 unfired cases)
	.303 unfired bullets: x5 (x5 unfired bullets)
	.303 fired cases: illegible x6; 1914 x1; 1915 x2 (x9 fired cases)
	<b>French</b> (NB. Many French cases were dropped into long grass and straw which has been preserved by corrosion of brass. Summer/autumn fighting in open ground?)
	8mm unfired complete: illegible x2; 1903 x1; Jul-Sept 1903 x2; 1912 x1; 1913 x1; Jul-Sept 1913 x1; <b>(x8 unfired complete)</b>
	8mm unfired cases: illegible x5; 1911 x2; Jan-Mar 1912 x1; 1914 x2; Jan-Mar 1914 x2; Jul-Sept 1914 x1 <b>(x13 unfired cases)</b>
	8mm unfired bullets: Oct-Dec 1906 x1; Oct-Dec 1907 x1; Oct-Dec 1908 x1; Apr-June 1909 x2; Jul-Sept 1912 x2; 1914 x1; Jan-Mar 1914 x2; Jul-Sept 1914 x2; Oct-Dec 1914 x3; Apr-June 1915 x1 (x16 unfired bullets)
	8mm fired cases: illegible x5; Oct-Dec 1905 x2; 1907 x1; Jan-Mar 1907 x1; Apr-June 1907 x2; Jul-Sept 1908 x1; Jul-Sept 1911 x1; Jan-Mar 1912 x1; Oct-Dec 1912 x5; Apr-June 1913 x9; Jul-Sept 1913 x1; Oct-Dec 1913 x1; Jan-Mar 1914 x1; Jul-Sept 1914 x3 <b>(x34 fired cases)</b>
Trench related	Uncertain nationality X1 barbed wire frag X1 Fe screw picket frag X2 complete Fe trench staples X10 Fe nails X12 frags of 10-12mm di Fe wire/rods X3 frags of 5mm di Fe wire X1 frag of Fe coated wire (5mm di) X1 frag of Cu al 2mm di wire (painted black)

Military Equipment	<ul> <li>British</li> <li>X1 brass large General Service button</li> <li>X1 brass small General Service button</li> <li>French</li> <li>X4 brass large (23mm) tunic buttons (matted grass/straw adhering)</li> </ul>
	X3 brass small (17mm) tunic buttons <b>Uncertain nationality</b> Remains of wooden box /crate with 28mm wide binding strips (x21 frags), some from the corners. X25 frags from an Fe 1-2mm thick sheet lining from within the box. Inside are the remains of in excess of 9 rectangular sectioned tins (65 x 58 x 50mm), each with an Fe sheet divider. Probably British. Probably a box to carry detonators.
	X1 Fe 130mm long split pin – possibly from ammunition box
Domestic items	French X1 5 centime coin. Dated 1908 X1 10 centime coin. Dated 1910
	Uncertain nationality X1 bone-handled pocket knife (121mm long) X1 glass frag from circular mirror X1 animal tooth X5 animal bone frags (inc. rib cuts) X7 frags of round-sectioned tin cans X2 frags of coke/clinker
Miscellaneous	Uncertain nationality X4 Fe amorphous lumps X1 Fe 100 x 80mm plate X2 brick frags X1 slate frag

Context	Context 004: Shelf area to the rear (South) of Trench B
Small arms ammunition	British .303 (?) unfired bullet: snub-nose x1 (x1 unfired bullet)
	<b>French</b> (NB. Many French cases were dropped into long grass and straw which has been preserved by corrosion of brass. Summer/autumn fighting in open ground?)
	8mm unfired complete: illegible x9; 1908 x1; Jul-Sept 1913 x1 (x11 unfired complete)
	8mm unfired cases: illegible x8; Jan-Mar 1911 x1; Jul-Sept 1911 x1; Jul-Sept 1914 x1; Jul-Sept 1914 x1 (x11 unfired cases)
	8mm unfired bullets: illegible x1; Jul-Sept 1907 x1; Jan-Mar 1913 x1; Oct- Dec 1913 x1; Apr-June 1914 x1; Jul-Sept 1914 x3; Oct-Dec 1914 x1; Jan- Mar 1915 x1 <b>(x10 unfired bullets)</b>
	8mm fired cases: illegible x5; Oct-Dec 1903 x1; Jul-Sept 1904 x5; Jan-Mar 1907 x1; Apr-June 1907 x6; Jan-Mar 1911 x1; Apr-June 1913 x2; Jan-Mar 1914 x3; Apr-June 1914 x1; Jul-Sept 1914 x4 <b>(x29 fired cases)</b>
Military Equipment	British X2 Fe chargers
	<b>French</b> X2 brass large (23mm) tunic buttons X1 white 'plastic' 12.4mm di 2-hole shirt button X1 green 'plastic' 14.8mm di 2-hole ?shirt button
	<b>Uncertain nationality</b> X1 brass 19mm di 4-hole dome-backed button [?SUSPEND?B?] probably British
Domestic items	Uncertain nationality X2 56mm long batteries X2 animal bone frags (ribs) X3 pieces coke/clinker X1 134mm tall rectangular sectioned clear glass bottle (corked) X4 frags from round mirror
Miscellaneous	Uncertain nationality X22 Fe 'rod' frags 5mm diam Possible binding wire X8 Fe sheet frags/blobs X1 Fe key/split pin frag. X1 Fe twisted rod frag

Context	Context 005: Upper fill of Trench E
Small arms ammunition	British .303 unfired complete: illegible x6 (5 in x1 charger); 1915 x2 (x8 unfired complete)
	.303 unfired bullets: x1 (x1 unfired bullet)
	0.38 unfired complete: x1 (ELEY, undated) (x1 unfired complete)
	French 8mm unfired complete: Jan-Mar 1914 x1; Jul-Sept 1914 x1 (x2 unfired complete)
	8mm unfired cases: illegible x3; 1913 x1; Jan-Mar 1914 x2; (x6 unfired cases)
	8mm unfired bullets: Apr-June 1907 x1; Jul-Sept 1913 x2; Jul-Sept 1914 x1 <b>(x4 unfired bullets)</b>
	8mm fired cases: Oct-Dec 1903 x1; Oct-Dec 1904 x1; Apr-June 1907 x4; Jan-Mar 1908 x2; Oct-Dec 1908 x2; 1912 x1; Apr-June 1912 x1; Jul-Sept 1912 x1; Oct-Dec 1912 x3; Apr-June 1913 x6; Jan-Mar 1914 x3; Apr-June 1914 x1; Jul-Sept 1914 x2 <b>(x28 fired cases)</b>
Trench related	Uncertain nationality X4 Fe nails X1 Fe bolt (160mm long) X5 Fe 5mm di wire frags
Military Equipment	British X1 Jack knife (blade still out) X1 brass small General Service button French X1 brass large (23mm) tunic button
Domestic items	Uncertain nationality X1 torch bulb X4 animal bone X3 tin can frags X1 frag clinker/coke X2 frags of clear glass from round-sectioned bottles X1 frag of brown glass
Miscellaneous	Uncertain nationality X9 Fe small amorphous lumps

Context	Context 006: West end of Trench B
Large calibre ammunition	Uncertain nationality X10 Fe shell splinters
Small arms ammunition	British .303 unfired complete: illegible x1; (x1 unfired complete)
	.303 fired cases: illegible x3 (x3 fired cases)
	<b>French</b> (NB. Many French cases were dropped into long grass and straw which has been preserved by corrosion of brass. Summer/autumn fighting in open ground?)
	8mm unfired complete: illegible x15; 1907 x3; Apr-June 1907 x2; Oct-Dec 1907 x1; Jul-Sept 1909 x1; 1910 x1; Oct-Dec 1910 x1; 1913 x1; Jan-Mar 1913 x1; Oct-Dec 1913 x1; Jan-Mar 1914 x1 (x28 unfired complete)
	8mm unfired cases: illegible x12; 1903 x1; Apr-June 1907 x1; Jan-Mar 1911 x1 <b>(x15 unfired cases)</b>
	8mm unfired bullets: illegible x1; Jan-Mar 1904 x2; Jan-Mar 1908 x3; Apr- June 1909 x1; Jan-Mar 1910 x1; Oct-Dec 1910 x5; Jul-Sept 1912 x1; Jul- Sept 1913 x1 <b>(x15 unfired bullets)</b>
	8mm fired bullet: Oct-Dec 1906 x1 (x1 fired bullet)
	8mm fired cases: illegible x11; Oct-Dec 1903 x2; 1906 x1; Jul-Sept 1906 x1; Apr-June 1907 x1; Oct-Dec 1907 x1; Jan-Mar 1908 x6; Jul-Sept 1908 x1; Oct-Dec 1908 x1; Jul-Sept 1912 x1; Oct-Dec 1912 x1; Jan-Mar 1913 x1; Apr-June 1913 x2; 1914 x1 <b>(x31 fired cases)</b>
Trench related	Uncertain nationality X1 Fe hook X1 Fe nail
Domestic items	Uncertain nationality X1 animal bone X1 frag coke/clinker
Miscellaneous	Uncertain nationality X3 Fe amorphous lumps/rod frags X1 Fe wire hook X1 Cu al cut sheet with suspension hole

Context	Context 007: Fill of Trench C
Large calibre ammunition	Uncertain nationality X1 Fe shell splinter X1 Cu al fuse frag
Small arms ammunition	British.303 fired cases: illegible x1; 1915 x4 (x5 fired cases)French8mm fired cases: illegible x1; Jul-Sept 1903 x1; Apr-June 1907 x1; Apr-June1908 x1; Apr-June 1910 x1; Oct-Dec 1913 x1 (x6 fired cases)
Trench related	Uncertain nationality Numerous frags of communication wire: Single-strand 0.7mm Cu al wire in 2.3mm di rusty coating/jacket Three-strand 0.2mm Cu al wire in 3mm di rusty coating/jacket X2 frags of wooden trench board X4 Fe 5mm wire frags (reveting) X2 Fe nails
Military Equipment	British X1 charger
Domestic items	<b>Uncertain nationality</b> X3 frags from round-sectioned tin cans (x3 different cans) X1 frag porcelain tea-cup X1 bone handle frag from toothbrush
Miscellaneous	Uncertain nationality X7 amorphous Fe blobs

Context	Context 008: Fill of Trench A (West end, Section 3)
Large calibre ammunition	Uncertain nationality X3 Fe shell splinters
Grenades and Mortars	British X1 complete No. 5 Mills grenade (live/pin still in). Brass base-plug dated August 1916
Small arms ammunition	British .303 unfired complete: illegible x40 (37 in x9 Fe chargers); 1915 x7; 1916 x1 (x48 unfired complete)
	.303 unfired cases: illegible x1; 1915 x3 (x4 unfired cases)
	.303 unfired bullets: x4 (x4 unfired bullets)
	.303 fired cases: illegible x53; 1914 x2; 1915 x69; 1916 x16 <b>(x140 fired cases)</b>
	French 8mm unfired bullets: Jan-Mar 1908 x1 (x1 unfired bullet)
	8mm fired cases: illegible x1; Oct-Dec 1912 x1 (x2 fired cases
Trench related	Uncertain nationality X2 frags of 5mm di Fe wire (reveting) X1 Fe nail X5 frags of Cu al single-strand 0.8mm di wire in 4.1mm di protective cover/jacket still with x1 Fe 'U' staple attached. Communication wire
Military Equipment	British         X19 Fe chargers (early type)         X1 brass 3" belt guide from 08 webbing         X1 brass strap-end from 1" strap. 08 webbing         X1 brass strap-end from 1" strap. 08 webbing         X1 brass rectangular buckle (34 x 28mm). ?1914 webbing         X1 brass 11mm diam. press-stud from bandolier         X1 large brass General Service button (FIRMIN & SONS Ltd LONDON')         X1 four-hole 17mm diam. dome-backed shirt button (Impressed 'BUTTONS         Ltd B'HAM')         Uncertain nationality         X2 brass 17mm di studs         X1 brass 16mm di eye-let
Domestic items	Uncertain nationality X1 animal bone frag X1 coke/clinker frag
Miscellaneous	Uncertain nationality X4 frags from crushed Fe tin

Context	Context 009: Fill of shell damaged area, South side of Trench A
Large calibre ammunition	German X1 Fe shell splinter (77mm shrapnel)
	<b>Uncertain nationality</b> X27 Fe shell splinters (H.E. and shrapnel)
Small arms ammunition	British .303 unfired case: 1916 x1 (x1 unfired case)
Trench related	<b>Uncertain nationality</b> Numerous frags of: Three-strand Cu al communication wire (1.1mm di combined thickness)

Context	Context 010: Shelf/Crater area West of Trench D
Small arms ammunition	British .303 unfired complete: illegible x13 (x12 in x3 Fe chargers) (x13 unfired complete)
	.303 unfired cases: illegible x1 (from charger); 1915 x1 (x2 unfired cases)
	.303 unfired bullets: x4 (x4 unfired bullets)
	.303 fired cases: illegible x1; 1915 x1 (x2 fired cases)
	French 8mm unfired complete: illegible x2; Jul-Sept 1904 x1; 1907 x1; 1908 x1; Jan- Mar 1908 x1; Jul-Sept 1908 x1; Oct-Dec 1910 x2; Oct-Dec 1914 x1 (x10 unfired complete)
	8mm unfired cases: illegible x7; Jul-Sept 1904 x1; Oct-Dec 1907 x1; Oct-Dec 1912 x1; Jul-Sept 1914 x1 (x11 unfired cases)
	8mm unfired bullets: illegible x2; Jul-Sept 1907 x1; Jan-Mar 1908 x3; Apr- June 1908 x1; Jul-Sept 1910 x1; Jul-Sept 1912 x1; Apr-June 1913 x1; Jan- Mar 1914 x1; Jul-Sept 1914 x1 <b>(x12 unfired bullets)</b>
	8mm fired cases: illegible x20; 1901 x1; Jan-Mar 1903 x2;Jul-Sept 1903 x1; Oct-Dec 1903 x3; Jul-Sept 1904 x2; 1905 x1; Oct-Dec 1905 x1; Apr-June 1906 x1; Apr-June 1907 x2; Jul-Sept 1907 x2; Oct-Dec 1907 x1; 1908 x1; Jan-Mar 1908 x3; Jul-Sept 1908 x1; Oct-Dec 1908 x1; 1909 x1; Apr-June 1910 x2; Jul-Sept 1910 x1; Jan-Mar 1911 x1; Jan-Mar 1912 x1; Oct-Dec 1912 x1; Oct-Dec 1913 x1; Jan-Mar 1914 x1; Jul-Sept 1914 x1 (x53 fired cases)
Trench related	Uncertain nationality X4 frags from 10mm di Fe rods X1 bent 7mm di Fe rod to form suspension hook X6 Fe nails
Military Equipment	<ul> <li>British</li> <li>X1 Fe charger</li> <li>X1 brass large General Service button</li> <li>X1 brass SMLE oiler bottle still with oil in (NB. Grass adhering to sides)</li> <li>X1 clear glass phial for suture in alcohol (medical equipment)</li> <li>French</li> <li>X1 white metal 15mm di shirt button</li> </ul>
	Uncertain nationality X1 large (33mm di) white metal eye-let (from French groundsheet?)
Domestic items	French X1 5 centimes coin of Napoleon III. V. worn. Date illegible
	Uncertain nationality X1 thin sheet (Cu al) match case with one match still inside (matted grass adhering) X1 animal bone frag (rib) X1 frag of coal X1 frag of coke/clinker

Miscellaneous	Uncertain nationality X1 Fe tube (28mm di) formed from sheeting X1 Fe split pin (possible from ammunition box) X4 Fe sheet frags X1 gun flint (pre WW1)

Context	Context 011: Fill of Trench A, Sections 1 and 2
Small arms ammunition	British .303 unfired complete: illegible x39 (in x7 chargers in bandolier); 1915 x4 (traces of chargers) (x43 unfired complete)
	.303 unfired cases: illegible x2 (in charger) (x2 unfired cases)
	French 8mm unfired complete: Jan-Mar 1908 x1 (x1 unfired complete)
	8mm fired cases: Jan-Mar 1903 x2; Oct-Dec 1903 x3; Jul-Sept 1904 x2; Apr-June 1907 x1; Oct-Dec 1907 x2; Jan-Mar 1908 x3; Apr-June 1910 x1; Apr-June 1911 x1; Oct-Dec 1912 x2; Jan-Mar 1914 x2; Jan-Mar 1915 x1 <b>(x20 fired cases)</b>
Trench related	Uncertain nationality
	X1 complete Fe trench staple
	X1 Fe wire hook from cable support
Military	British
Equipment	X1 blue enamelled steel canteen
	X2 brass 2" tongue-less buckles from 08 webbing
	X1 brass 15mm di press-stud from 08 webbing
	French
	X1 brass large (23mm) tunic button
	X1 tin drinking cup
Miscellaneous	Uncertain nationality
	X1 Fe sheet frag

Context	Context 012: fill of Trench B, East end.
Large calibre ammunition	British X1 brass fuse protector cap for ?18pdr
	<b>Uncertain nationality</b> X27 Fe shell splinters (H.E. and shrapnel) X3 Cu al driving band frags X2 Cu al fuse frags
Grenades and Mortars	British X1 complete No. 23 Mills rifle grenade (live/lever still in). No visible marks on white metal baseplug
Small arms ammunition	British .303 unfired complete: illegible x78 (in x16 Fe chargers. NB. X2 of these rounds dated to 1916 and 1917); 1914 x1; 1915 x2; 1916 x1; 1917 x2 (x84 unfired complete)
	.303 unfired cases: illegible x2; 1915 x1; 1916 x1 (x4 unfired cases)
	.303 unfired bullets: x9 (x9 unfired bullets)
	.303 fired cases: illegible x2; 1915 x4 (x6 fired cases)
	French 8mm unfired complete: Jul-Sept 1903 x1; Jul-Sept 1904 x1; 1908 x1; Oct- Dec 1908 x1; Oct-Dec 1912 x1 (x5 unfired complete)
	8mm unfired cases: illegible x6; Apr-June 1913 x1 (x7 unfired cases)
	8mm unfired bullets: Jan-Mar 1908 x1; Jan-Mar 1913 x1; Apr-June 1913 x1; Jul-Sept 1913 x2 (x5 unfired bullets)
	8mm fired cases: illegible x5; Apr-June 1901 x1; Jan-Mar 1903 x1; Jul-Sept 1903 x1; Jan-Mar 1904 x1; Jul-Sept 1904 x1; Apr-June 1907 x4; 1908 x1; Jan-Mar 1908 x1; Apr-June 1908 x1; Jan-Mar 1909 x1; Apr-June 1910 x1; 1912 x1; Apr-June 1912 x1; Oct-Dec 1912 x1; Apr-June 1913 x8; Jul-Sept 1914 x2 <b>(x32 fired cases)</b>
Trench related	Uncertain nationality X3 pieces of wood X3 Fe nails X2 frags of 8mm diam. Fe rods X5 frags of 20mm diam. Fe rods (riveting) X1 frag of 2mm diam. Cu al wire (twisted to make loop) – bracing wire X4 frags of single-strand 0.6mm diam Cu al wire in yellow-painted 3.3mm diam. protective case (communication wire)

Military Equipment	British (Commonwealth)         X1 brass large tunic button 'NEW ZEALAND FORCES' surrounded by 4 stars (24mm di)         X1 brass stud from bandolier         French         X1 brass large (23mm) tunic button         X1 brass small (17mm) tunic button         X1 Cu al 60 x 27mm buckle         X1 Cu al suspension hook from webbing
Domestic items	British         X1 Cu al spoon/fork handle         Uncertain nationality         X1 Fe fork/spoon handle frag         X1 animal bone frag (with cut marks)         X3 frags of coke/clinker         X3 frags of green bottle glass (wine)         X1 frag clear glass bottle
Miscellaneous	Uncertain nationality X13 pieces of Fe sheet/wire 'blobs' X1 Cu al slitted sheet frag (30mm wide) X1 Fe corner binding from a wooden crate X1 Cu al sheet frag (curved)

Context	Context 016: Fill of Trench A
Large calibre ammunition	German X1 white metal fuse frag
	Uncertain nationality X12 Fe shell splinters
Small arms	British
ammunition	.303 unfired complete: 1915 x1 (x1 unfired complete)
	.303 unfired cases: illegible x1 (x1 unfired case)
	.303 unfired bullets: x2 (x2 unfired bullets)
	.303 fired cases: illegible x13; 1915 x2; 1916 x2 (x17 fired cases)
	French 8mm unfired complete: Jan-Mar 1908 x2; Apr-June 1910 x1 (x3 unfired complete)
	8mm unfired cases: illegible x2; Jul-Sept 1914 x1 (x3 unfired cases)
	8mm unfired bullets: Jan-Mar 1904 x1; Jul-Sept 1907 x1 <b>(x2 unfired bullets)</b>
	8mm fired complete (DUD): Oct-Dec 1903 x1 (x1 fired DUD)
	8mm fired cases: illegible x14; 1903 x3; Oct-Dec 1903 x3; Oct-Dec 1903 x4; 1905 x1; Oct-Dec 1905 x2; Jul-Sept 1907 x1; 1908 x3; Jan-Mar 1908 x9; Oct-Dec 1908 x3; Apr-June 1910 x1; Jul-Sept 1912 x1; Jan-Mar 1913 x1 (x46 fired cases)
Trench related	Uncertain nationality
in chief i related	X1 Fe complete trench staple
	Numerous frags of single-strand 0.6mm di cu al wire in 4mm Fe-stained
	casing (communication wire)
	X2 frags of three-strand cu al communication wire (total di 1mm)
Military	British
Equipment	X1 Fe charger
Domestic items	Uncertain nationality
	X4 frags of green bottle glass
	X1 burnished clay pipe bowl
	X2 frags from rectangular-sectioned tin can
Miscellaneous	Uncertain nationality
	X1 Fe rod frag/'blob' X2 Fe sheet frags

Context	Context 017: Upper fill of Trench D
Large calibre ammunition	British X6 Pb shrapnel balls
	German X1 Cu al 77mm driving band frag
	<b>Uncertain nationality</b> X55 Fe shell splinters (H.E and shrapnel) X5 Cu al driving band frags
Small arms ammunition	British .303 unfired complete: 1915 x1 (x1 unfired complete)
	.303 unfired cases: illegible x1 (x1 unfired case)
	.303 fired cases: illegible x1; 1915 x5 (x6 fired cases)
	French 8mm unfired complete: illegible x1; Jul-Sept 1903 x1; Apr-June 1910 x1; 1911 x1; 1914 x1 (x4 unfired complete)
	8mm unfired cases: illegible x1; Jan-Mar 1906 x1; Oct-Dec 1911 x1 (x3 unfired cases)
	8mm unfired bullets: 1908 x1; Apr-June 1908 x1; Oct-Dec 1908 x1; Oct-Dec 1913 x1; Jan-Mar 1914 x1; Jul-Sept 1914 x1 ( <b>x6 unfired bullets)</b>
	8mm fired cases: illegible x3; Jan-Mar 1903 x1; Jul-Sept 1903 x1; Oct-Dec 1903 x2; Jul-Sept 1904 x2; 1906 x1; Jan-Mar 1907 x2; Apr-June 1907 x2; Oct-Dec 1907 x1; 1908 x3; Jan-Mar 1908 x2; Apr-June 1908 x1; Oct-Dec 1908 x2; 1909 x1; Jan-Mar 1909 x1; Apr-June 1910 x3; 1911 x1; Apr-Jul 1911 x1; 1912 x1; Jan-Mar 1912 x1; Oct-Dec 1912 x2; Oct-Dec 1913 x1; 1914 x1; Jan-Mar 1914 x1; Apr-Jul 1914 x1; Jul-Sept 1914 x1 (x39 fired cases)
	<b>Uncertain nationality</b> 7.8mm diam. 37.3mm long copper jacketed fired tracer/incendiary? bullet x1
Trench related	Uncertain nationality X2 frags of 10mm di Fe rods (riveting) X13 Fe nails (some with wood adhering) X6 frags of 0.7mm di cu al single-strand coated communication wire X1 frag of 7-strand cu al wire in 1.6mm di 'rusty' coating (communication wire) X5 frags of 1-strand cu al wire (0.7mm di) in 2.6mm di grey coating (communication wire)
Military Equipment	British X1 brass rectangular buckle (29 x 35mm) with roller and Fe pin. Prob. 1914 webbing
	French Part of sole and uppers from hob-nailed boot

Domestic items	Uncertain nationality X2 animal bone splinters (inc. x1 cow rib) X2 frags of coke/clinker X2 frags from 12-sided clear glass jar X1 frag from a green cylindrical wine bottle X1 sherd of stoneware (C17-18 <sup>th</sup> ) X4 frags from round-sectioned tin cans
Miscellaneous	Uncertain nationality X3 Fe sheet frags

Context	Context 018 Fill of Trench B, East End
Large calibre ammunition	Uncertain nationality X1 Fe shell splinter
Small arms ammunition	British0.22 fired case: undated x1 (x1 fired case).303 fired cases: 1915 x2 (x2 fired cases)French8mm fired cases: Apr-June 1905 x1; Oct-Dec 1907 x1; Jan-Mar 1908 x1;
Military Equipment	Apr-June 1913 x2; Jan-Mar 1914 x1 <b>(x6 fired cases)</b> <b>French</b> X1 large brass (23mm) tunic button
	<b>Uncertain nationality</b> X1 brass press-stud/popper (di 12mm)
Domestic items	Uncertain nationality X1 frag coke/clinker X2 frags of tin cans
Miscellaneous	Uncertain nationality X4 Fe amorphous lumps/blobs X1 brass frag

Context	Context 019: Lower fill of Trench B, (above trench boards)
Large calibre	German
ammunition	X1 cu al 77mm driving band frag
	Uncertain nationality X2 Cu al fuse frags
Small arms	British
ammunition	.303 unfired case 1915 x1 (x1 unfired case)
	French
	8mm unfired complete: 1913 x1; Oct-Dec 1913 x1 (x2 unfired complete) 8mm unfired cases: 1912 x1 (x1 unfired case)
	8mm unfired bullets: Oct-Dec 1907 x1; Oct-Dec 1911 x1 (x2 unfired bullets)
	8mm fired cases: illegible x1; 1904 x1; Oct-Dec 1905 x1; Apr-June 1907 x1; Jul-Sept 1908 x1; Oct-Dec 1908 x1; Apr-June 1909 x1; 1912 x1; Oct-Dec 1912 x1; Apr-June 1913 x2; Jan-Mar 1914 x1; Jul-Sept 1914 x1 (x13 fired cases)
Trench related	Uncertain nationality
	X1 complete Fe trench staple X2 frags of 1.7mm di Fe wire
	X1 frag of cu al single-strand o.6mm di cu al communication wire in 2.5mm
	di casing
Military	Uncertain nationality
Equipment	X1 brass 11mm di stud
Domestic items	Uncertain nationality
	X1 frag coke/clinker
	X1 round-sectioned tin can (90mm tall) X1 oval tin can lid
	X5 frags of tin can

Context	Context 020: Fill of Shelf area to South of Trench B
Large calibre ammunition	Uncertain nationality X1 Fe shell splinter
Small arms ammunition	French 8mm fired cases: 1912 x1 (x1 fired case)
Domestic items	Uncertain nationality X1 rectangular sectioned tin can lid

Context	Context 023 Fill of Trench D below trench boards
Large calibre ammunition	British         X4 Pb shrapnel balls         German         X1 Fe base plate (82mm di). Bigger than 77mm         Uncertain nationality         X1 Fe fuse frag
Small arms ammunition	<ul> <li>British .303 unfired complete: illegible x4 (x3 in a charger); 1915 x2 (x6 unfired complete)</li> <li>.303 fired cases: illegible x1; 1914 x1; 1915 x8 (x10 fired cases)</li> <li>French 8mm unfired cases: illegible x1; Jul-Sept 1908 x1 (x2 unfired complete)</li> <li>8mm unfired bullets: Jul-Sept 1914 x1 (x1 unfired bullet)</li> <li>8mm fired cases: illegible x1; Jul-Sept 1904 x1; Oct-Dec 1908 x1; Jul-Sept 1914 x1 (x4 fired cases)</li> </ul>
Trench related	Uncertain nationality X1 frag of Fe 'l' bar (reinforcing for dug-out roofs etc) X8 Fe nails X2 small 'U' staples X1 frag Fe 3mm di wire X2 frags of Fe 7mm di wire British
Equipment	X2 Fe chargers (slitted/early type)
Domestic items	Uncertain nationality X4 frags tin can X1 Fe key from corned beef tin X1 frag from green cylindrical wine bottle
Miscellaneous	Uncertain nationality X1 Fe 40mm wide strip

Context	Context 027: Area 3, Fill of mortar pit/ latrine
Large calibre ammunition	German X1 cu al 77mm driving band frag Uncertain nationality X2 Fe shell splinters (inc H.E.) X1 Cu al driving band frag
Small arms ammunition	<ul> <li>British .303 unfired complete: illegible x93 (x91 in x17 Fe chargers - 16 chargers were in a bandolier); 1915 x3 (x94 unfired complete) .303 unfired cases: illegible x5; 1915 x1; 1916 x1 (x7 unfired cases) .303 unfired bullets: x5 (x5 unfired bullets) .303 fired cases: illegible x76; 1911 x1; 1914 x1; 1915 x24; 1916 x58 (x160 fired cases) .455 unfired complete: undated x2 (x2 unfired complete) French 8mm unfired cases: Oct-Dec 1912 x1 (x1 unfired case) 8mm fired cases: Jul-Sept 1903 x1; Jul-Sept 1906 x1; Oct-Dec 1911 x1; Apr-June 1913 x1; Jan-Mar 1914 x1; Apr-June 1914 x1 (x6 fired cases)</li> </ul>
Trench related	Uncertain nationality X1 Fe straight fencing picket
Military Equipment	British X1 Fe charger (slitted/early type) X1 Fe General Service shovel head X1 brass 17mm di 4-hole domed-back shirt button
Domestic items	Uncertain nationality X1 brass 51mm diam. ring from fob watch X1 top/neck from octagonal clear glass bottle X1 top of square-sectioned clear glass bottle X1 frag from cylindrical clear glass bottle X2 frags of tin can
Miscellaneous	Uncertain nationality X1 square-sectioned bolt X2 brass ?lips from bottle

Context	Context 028: Fill of possible early trench [037] cut by Trench D
Large calibre ammunition	Uncertain nationality X1 Cu al fuse frag
Small arms ammunition	British .303 fired cases: illegible x2; 1915 x1 (x3 fired cases) French 8mm unfired complete: 1905 x1; Jan-Mar 1908 x2; Oct-Dec 1908 x1; Apr-
	June 1910 x1; Oct-Dec 1913 x9 (x14 unfired complete) 8mm unfired bullets: illegible x7; Apr-June 1903 x1; Jul-Sept 1913 x1 (x9 unfired bullets)
	8mm fired cases: illegible x9; Jan-Mar 1903 x2; Jul-Sept 1903 x1; Oct-Dec 1903 x1; Jul-Sept 1904 x1; Apr-June 1907 x1; 1908 x1; Oct-Dec 1908 x2; Oct-Dec 1913 x1; Jan-Mar 1914 x3; Apr-June 1914 x1; Jul-Sept 1914 x1 (x24 fired cases)
Trench related	<b>Uncertain nationality</b> X1 Fe hook (?to support communication wires)
Military Equipment	Uncertain nationality X1 11.2mm diam. brass eye-let

Context	Context 031: Fill of possible continuation of Trench C to North [036]
Large calibre ammunition	British X1 Pb shrapnel ball
Small arms ammunition	British         .303 fired cases: illegible x2; 1914 x1; 1915 x4 (x7 fired cases)         French         8mm unfired complete: Jul-Sept 1906 x1 (x1 unfired complete)
	8mm fired cases: illegible x2; Oct-Dec 1903 x3; Jul-Sept 1904 x3; Jan-Mar 1906 x1; Apr-June 1907 x1; Oct-Dec 1907 x1; Jan-Mar 1908 x1; Jul-Sept 1910 x1; Oct-Dec 1913 x1; Jan-Mar 1914 x2; Jul-Sept 1914 x1 (x17 fired cases)
Trench related	Uncertain nationality X1 frag cu al 3mm diam. wire
Military Equipment	British X2 brass 4-hole 17.5mm diam. domed-back shirt buttons (unmarked)

Context	Context 038: Lower fill of mortar pit/latrine (floor level)
Small arms ammunition	British .303 unfired complete: illegible x59 (x50 in x14 Fe chargers); 1914 x2; 1915 x7 (x68 unfired complete)
	.303 unfired case: illegible x7; 1915 x1 (x8 unfired cases)
	.303 unfired bullets: x9 (x9 unfired bullets)
	.303 fired cases: illegible x19; 1915 x15 (x34 fired cases)
	.455 unfired bullet: x1 (x1 unfired bullet)
	30mm di fired flare: undated x1 (x1 fired flare)
	French 8mm unfired cases: illegible x1 (x1 unfired case)
	8mm unfired bullets: Jan-Mar 1904 x1 (x1 unfired bullet)
	8mm fired cases: illegible x1; Jul-Sept 1907 x1; Apr-June 1913 x1; Jul-Sept 1914 x1 <b>(x4 fired cases)</b>
Trench related	Uncertain nationality X1 frag of 3mm di Fe wire
Military Equipment	British         X2 SMLE brass oiler bottles (x1 with top broken off)         X1 Fe entrenching tool head. Dated 1915         X2 brass screw caps from petrol cans         X1 brass pull from ammunition box         Uncertain nationality         X1 brass disc badge 'AIDE DE CAMP' 'ADC' with no. around lower edge.         ?From torch
Domestic items	Uncertain nationality
	X1 large (290mm di) Fe bucket X1 large oval (480-375mm) Fe bucket with swing handle and side grip handle

Context	Context 041:
Small arms ammunition	British         .303 unfired bullet: x1 (x1 unfired bullet)         .303 fired cases: illegible x4; 1915 x1 (x5 fired cases)         30mm di fired flare: undated x1 (x1 fired flare)
Trench related	Uncertain nationality X2 frags of Fe rods (riveting)
Military Equipment	British X1 brass 4-hole 17mm di domed-back shirt button X2 complete clear glass iodine ampoules (47.2-49.4mm long) still with iodine (medical) X1 frag from glass thermometer (medical)
Domestic items	Uncertain nationality X1 frag melted candle wax X1 Fe dinner/table knife with solid Fe handle
Miscellaneous	Uncertain nationality X1 frag ?slate

Context	Area 2: unstratified
Grenades and	British
Mortars	X1 Fe base from small Livens projector