

From Landscape of War to Archaeological Report: Ten Years of Professional World War I Archaeology in Flanders (Belgium)

YANNICK VAN HOLLEBEEKE, BIRGER STICHELBAUT AND JEAN BOURGEOIS

Department of Archaeology, Ghent University, Belgium

With the commemoration of World War I (WWI) under way, a preliminary stocktaking can be made of archaeological research into the physical remains of this war. The question is to what extent the perspective on the study of WWI heritage, and consequently the way in which archaeological research into WWI remains has been conducted, has evolved over the last ten years. Are relics from WWI seen as a legitimate subject of inquiry or does its archaeology as a discipline still strive for recognition? This paper deals with the practices surrounding WWI archaeology in Flanders, Belgium, as well as the (methodological) problems concerning the study of WWI archaeological remains, based on the reports resulting from fieldwork carried out by professional archaeologists.

Keywords: World War I, modern conflict archaeology, aerial photography, battlefield archaeology, archaeological practice, material culture

INTRODUCTION

2014 sees the commemoration of the centennial of the beginning of World War I (WWI). The impact of this conflict on the landscape where the war was waged was immense. A line of sheer destruction ran from the North Sea coast all the way to the Swiss border, turning parts of Belgium and France, the so-called Western Front, into a landscape of war, where armies from all over the world were caught in a stalemate. On the former front line, it is still possible to find numerous relics, monuments, and cemeteries that remind us of the bitterness of the battles. Material evidence of war can also be found beneath the soil, providing an archive that seems to be getting more and more

attention from archaeologists. Initially, this came mainly from amateur archaeologists and WWI enthusiasts. However, since the late twentieth century, buried WWI heritage has also become a research objective of professional archaeologists.

A little more than a decade has passed since the professional archaeology of WWI emerged in Flanders (Belgium). As a result of implementing the guidelines of the Valletta Convention in Flemish legislation and the development of commercial archaeology in Flanders, the number of archaeological operations has grown. Within an evolving legal framework for heritage management, archaeological practice has changed rapidly. The question is to what extent the perspective on the study of WWI heritage, and consequently

the way in which archaeological research into WWI remains has been conducted, has also evolved. Are relics from the war seen as a legitimate subject of inquiry or does WWI archaeology still strive for recognition as a discipline? This article investigates how this buried wartime heritage has been approached in an archaeological way based on the reports from fieldwork carried out by professional archaeologists. In this review, part of the Western Front in the province of West Flanders (Belgium) is taken as a case study, although the issues discussed also relate to other former theatres of war across Europe.

THE AFTERMATH OF THE WAR: TURNING A WAR LANDSCAPE INTO PART OF A MULTI-LAYERED LANDSCAPE

After the First World War, the former inhabitants of devastated regions in Belgium who returned home after four years wanted to ensure their land was habitable again. The land clearance was initially performed by Chinese Labour Corps, German prisoners of war, and the Belgian army. Later, companies were deployed and labourers (both locals and foreigners) were recruited to carry out the clearance. Their work consisted mainly of clearing the land of war debris and levelling the ground. In reality, most of the time it came down to throwing the debris into shell holes and former trenches and covering them with a layer of earth (Debaeke, 2010: 37). However, some of those involved tried to benefit from gathering the valuable metals littering the former battlefields. Others profited from selling abandoned objects as war memorabilia and trench art to tourists (Saunders, 2010: 49).

In the aftermath of the war, providing shelter for everyone was a huge task. The

Belgian government took the initiative to erect some emergency accommodation in response to the needs of the local population. However, it was unable to provide sufficient emergency housing (Meire, 2003: 111). Many returnees erected their own shelter using any materials they could find in the surroundings or from the barracks that were built during the war. Not all of these barracks were systematically demolished. Some, for example, the British Nissen huts, were even reused by returning refugees until better accommodation could be provided (Demeurie & Vandewalle, 2006: 23; Vernimme, 2010: 78).

Thus, the local residents and nature claimed back their places in the post-war landscape and remnants of war disappeared at a significant rate (Meire, 2003: 170). At the same time, a number of memorials, monuments, statues, and cemeteries emerged along the Western Front. According to Saunders (2010: 64), all this formed the 'layer of Remembrance' as part of the palimpsest of layers that make up a war landscape. In particular, after the war, the Commonwealth War Graves Commission engaged in the construction and maintenance of war graves and memorials, thereby contributing to building a landscape of memory (Dendooven, 2003: 11). However, there were differences of opinion concerning the way in which this layer was given shape. Of major concern was the fate of the town of Ieper (Ypres). During the war, the idea had already been proposed to preserve the ruined town as it was. The British saw it as 'holy ground': a land soaked in the blood of many British and Commonwealth casualties. None other than Winston Churchill himself wanted to buy Ieper in order to develop a zone of remembrance (Dendooven, 2003: 20). However, this plan encountered a lot of opposition from the local people. Until the decision was taken to rebuild the town of Ieper as it was before the war, another proposition was the

creation of a 'zone of silence', whereby only part of the town would be preserved as a ruin: namely, the Cloth Hall, St Martin's Cathedral, and the area around the market place. Finally, on 15 April 1921, the British agreed to reconstruction of the town to its pre-war state and construction of an impressive monument: the Menin Gate (Dendooven, 2003: 51). This monument was designed by Reginald Blomfield and bears the names of almost 55,000 soldiers who went missing between 1914 and August 1917. Eventually, Ieper was rebuilt in historicism style. The towns of Nieuwpoort and Diksmuide are also examples of this architecture (Demeurie & Vandewalle, 2006: 17). In fact, examples of this architecture can be found everywhere in the war-affected areas.

THE ARCHAEOLOGY OF WORLD WAR ONE

Since the end of the war, the former battlefields have been visited by tourists and battlefield pilgrims. These places are also frequented by people who are interested in military history and looking for the sites where battles took place. Some of them continue to search for remains in the ground, sometimes with the help of a metal detector. The objects found are then sold to other WWI enthusiasts or exhibited at home.

In Flanders in the 1980s, a new practice came to light. A number of WWI enthusiasts organized themselves in semi-official groups or associations and carried out the first excavations whereby WWI features were studied to a certain extent (Saunders, 2010: 12). These amateur archaeologists, with a passion for the First World War, organized excavations on former battlefields in their spare time. They were not merely looking for collectors' items but also wanted to study the context in which

these artefacts were found. In some cases, they were assisted by professional archaeologists and the finds often found their way into museums (e.g. in Flanders Fields Museum in Ieper). Although these amateur archaeologists were usually not trained as archaeologists, they still attempted to use methodologies that are prevalent in everyday archaeological research to recover information about the site. Prior to the appearance of development-led archaeology, they often worked on sites that were under threat of destruction from the construction of infrastructure such as buildings and industrial estates. In the region where almost a hundred years ago part of the Western front was situated, there was broad public support for this research led by amateur archaeologists. Similarly, local governments and property developers, all of whom saw an opportunity to cleanse their lands of troublesome and hazardous material (i.e. unexploded ammunition) in a cheap way, supported these initiatives.

These amateur archaeologists also filled a void in the study of WWI remains. After all, at that time, professional archaeologists often considered the preserved remains of WWI as unimportant or even as interference with older features. Although some of these amateur archaeologists did their utmost to act as responsibly as possible while investigating certain sites, the information they provided was still superficial, fragmentary and not always reliable (Dewilde, 2009: 52). However, it is here that the foundations were laid for the need to examine further the archaeological heritage of war. A number of people, mainly from outside the academic and professional world, saw the need to protect and, in particular, to investigate this heritage. Some of these amateur archaeologists are still active, although greatly reduced in numbers.

The remains of the First World War were never taken into consideration during professional archaeological research conducted by universities or government agencies in the 1980s or 1990s. Sporadically, these features and remnants were registered during archaeological research on sites dating from the prehistoric to medieval period (Dewilde et al., 2007: 38). However, this procedure was *ad hoc* and often done merely to show that older archaeological features had been significantly disturbed by the act of war (Dewilde, 2010).

For the first time, professional archaeologists became involved in sites dating back to the First World War in Flanders when former Minister Van Grembergen—Flemish Minister of Internal Affairs, Public Administration and Foreign Policy between 2001 and 2002 and also responsible for heritage—commissioned the Institute for the Archaeological Heritage (*Instituut voor het Archeologisch Patrimonium* – IAP) on 6 February 2002 to carry out an evaluation along the route of the planned A19 motorway. The motorway runs from the town of Kortrijk and ends abruptly near Ieper. The government wanted to extend this motorway in order to redirect heavy traffic between Kortrijk and the Channel ports. However, the problem was that the motorway would have to cross the former WWI battlefields. The aim of the study was to investigate the possible impact on WWI heritage in this area and to evaluate possible archaeological remains (Dewilde et al., 2007: 38). Finally, the government wanted to assess the possibility of encountering human remains since thousands of fallen soldiers are still missing and could be buried in Flanders fields. A number of sites were chosen for test excavations. Based on desktop analysis, nine sites were selected for trial trenching. Between 2002 and 2005, these archaeological sites were

investigated extensively. However, the research, which was led by the Flemish Heritage Institute (*Vlaams Instituut voor Onroerend Erfgoed*—VIOE), the successor of the IAP, was not limited to the A19 project. Due to expansion of the industrial estate at Boezinge-Ieper, archaeological research was also conducted by the IAP/VIOE in some other small-scale initiatives.

So far, a professional study of WWI heritage has only been carried out by the former IAP or VIOE, with or without local/regional authorities, museums, documentary makers, or amateur archaeologists. A new player entered the field in the mid-2000s: development-led commercial archaeology (De Clercq et al., 2012: 29). In 2005, work was carried out on an administrative framework that ensured thorough and systematic implementation of the terms of the Decree on the Protection of the Archaeological Heritage, a statute dating from 1993 that formed the legal framework within which Flemish archaeology operated. After that, in locations where archaeological heritage was threatened by significant construction work, the land could only be released for exploitation following at least preliminary archaeological research. This, in turn, led to an increase in archaeological research carried out. This could not be borne only by the authorities, such as the VIOE (Wouters, 2012: 28). The void that threatened to emerge would be filled by commercial archaeology, as the Flemish government chose to liberalize archaeology in Flanders. Since 2005, there has been a rise in the number of archaeological contractors (De Clercq et al., 2012: 30). The amount of archaeological fieldwork carried out by the former VIOE (now *Agentschap Onroerend Erfgoed*) was reduced. Many of the aforementioned archaeological contractors, especially those active in the former Western Front regions, came across relics from the First World War.

Academic research into WWI archaeology is limited to the work of the Archaeology Department at Ghent University and more specifically to the use of historical aerial photographs for studying and overseeing WWI heritage (Stichelbaut, 2009a, 2009b, 2011; Stichelbaut et al., 2010). In 2013, this department launched a project in which WWI heritage in the municipality of Comines-Warneton—the only place in the Walloon region where the Western Front was situated—was examined using non-invasive methods (Bourgeois et al., 2013). These methods comprised a desktop analysis of historical remote-sensing data, geophysical prospection and a field survey. In Wallonia, the French-speaking part of Belgium, professional archaeological research into WWI heritage is limited. Apart from this project, another large archaeological research was undertaken in 2007 and 2008 (Brown & Osgood, 2009). The aim of the so-called ‘Plugstreet Project’, carried out by the No Man’s Land Archaeology Group, was to examine two pieces of terrain in the surroundings of two large mine craters, Ultimo Crater and Factory Farm Crater. An archaeological excavation was combined with a thorough analysis of documentary sources, aerial photographs and trench maps, and the use of non-invasive techniques, such as geophysical prospection.

In France, where a larger part of the Western Front is located, material remains of WWI have been studied since the late 1980s, starting more than a decade earlier than in Belgium. Archaeological research took place in 1988–1989 on the planned route of the Train à Grande Vitesse (TGV) railway line in northern France, as it crossed WWI battlefields (Desfossés et al., 2008: 25). Many archaeological remains from WWI came to light during trial trenching and it

was possible to evaluate conservation of the relics. From then on, any evidence of battles was studied mainly during archaeological rescue operations. However, from the end of the 1990s, there was a change in attitude towards WWI heritage. The study of war archaeology was integrated into preventive archaeological research. This happened first during excavation of the land around the Actiparc site at Arras, initiated from well-defined research questions (Desfossés et al., 2008: 35). Since then, the study of archaeological remains from more recent conflicts, such as WWI, took a foothold in northern France, first in the Nord-Pas de Calais region and later in Lorraine, Champagne-Ardenne and Alsace (Landolt et al., 2012: 307). In France, associations from the UK occasionally conducted archaeological excavations in former WWI battlefields. Even today, *La Commission Interrégionale de la Recherche Archéologique* receives requests from British associations to launch archaeological projects. Examples include the Durand Group and the aforementioned No Man’s Land Archaeology Group. In Flanders, there have been fewer interventions by British archaeologists. The study into the ‘Vampire dugout’ is by far the best-known example of archaeological research conducted by an international team, namely the Association for Battlefield Archaeology and Conservation (Jacobs & Pollard, 2008).

There is a lot of interest from British people in the WWI battlefields. The theatres of war in northern France and Flanders witnessed the highest number of casualties of all time, in a way making this ground ‘holy’. The landscape from Flanders to the Somme is also characterized by many Commonwealth monuments and cemeteries. The fact that many soldiers died on these battlefields coupled with the decision not to repatriate the dead means that the

soldiers' descendants have strong ties with these locations (Meire, 2003: 149).

For more than ten years already, a tradition has been set on the archaeological study of recent conflicts in the United Kingdom. It started out more as a battlefield-centred endeavour. The archaeology of conflict as a scientific discipline began from so-called 'battlefield archaeology'. This sub-discipline within archaeology deals with battlefields from different time periods, and by extension those of the First World War, providing scientific information that cannot be obtained merely from documentary sources (Freeman & Pollard, 2001; Sutherland, 2005). However, according to Saunders (2013), this perspective on the archaeology of recent conflicts, such as the First World War, is actually too narrow and doomed to disappear. Thus, modern conflict archaeology has emerged, which strives to build up knowledge on all aspects of recent conflicts, and addressing other academic disciplines, too. It no longer relies solely on the things that are found on the former battlefields, but on a lot more. The conflict is approached as a multifaceted phenomenon that leaves a large diversity of relics. These remnants may have different meanings, according to the different individuals or communities who have come in contact with them and which can change over time (Saunders, 2010). In short, in recent years, battlefield archaeology has evolved from a narrow field of research to an interdisciplinary and multifaceted archaeological study of the material culture and landscape of war.

PROFESSIONAL WORLD WAR I ARCHAEOLOGY IN FLANDERS: DATA ACQUISITION AND METHODOLOGY

It cannot be disputed—certainly when based on the steadily growing number of

published monographs, scientific articles in periodicals, and edited books—that interest in WWI material and features have grown in recent years. For over ten years, professional archeologists in Belgium have studied the material remains of the First World War. The question may be asked in what way research into archaeological remains from WWI has been conducted by professional organizations? The A19 project was an important moment for the professional archaeology of the First World War in Flanders. For the first time, an archaeological project in Belgium posed purely scientific research questions concerning the archaeological heritage of WWI. Thus, the question arises as to whether or not this was also the turning point for WWI conflict archaeology, where it became accepted as a new scientific research field, and what this implies for heritage policy and management in Flanders. It is one thing to see WWI heritage as archaeological heritage but another when it comes to the daily handling of these material remains in the field. Therefore, we have sought to find out how the features are regarded and/or investigated when they are found. Are they recognized as archaeology, are they seen as modern disturbances of older features, or are they recorded as an integral part of the archaeological archive?

To provide answers to the questions above, we have examined reports of archaeological research that has taken place over the past decade in the province of West Flanders, the so-called 'grey literature'. Only research into excavations and trial trenching was included. Our research area comprised the former front line, including the hinterland on both sides of the front. In this way, we were able to get an overview of the front line, the area just behind it where, for example, the artillery was set up, and part of the hinterland.

Currently, there are four players active in the field: universities; government agencies (IAP-VIOE); Inter-municipal Archaeological Services (*Intergemeentelijke Archeologische Dienst*—IAD); and archaeological companies. The time frame of the research covers a ten-year period between the start of professional WWI archaeology with the A19 project (2002) and 2011. All the reports are available up to 2011. This has resulted in a dataset of 213 archaeological excavations at 198 locations between 2002 and 2011 (see Figure 1). All relevant information was placed in a database for analysis.

WORLD WAR I IN THE ‘GREY LITERATURE’

In the province of West Flanders, in the area where an important part of the Western Front was located, there were 213 archaeological campaigns between 2002 and 2011. Based on the archaeological reports, seventy-eight campaigns included features dating from the First World War. Recorded features include shell holes, waste pits, trenches, shelters, barracks, narrow gauge lines, and debris layers.

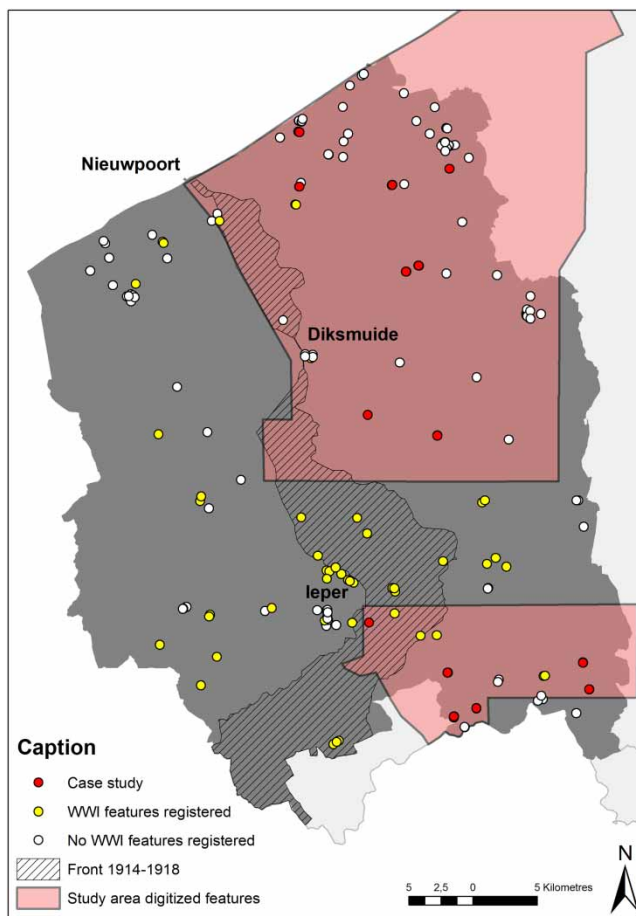


Figure 1. Overview map of the research area.

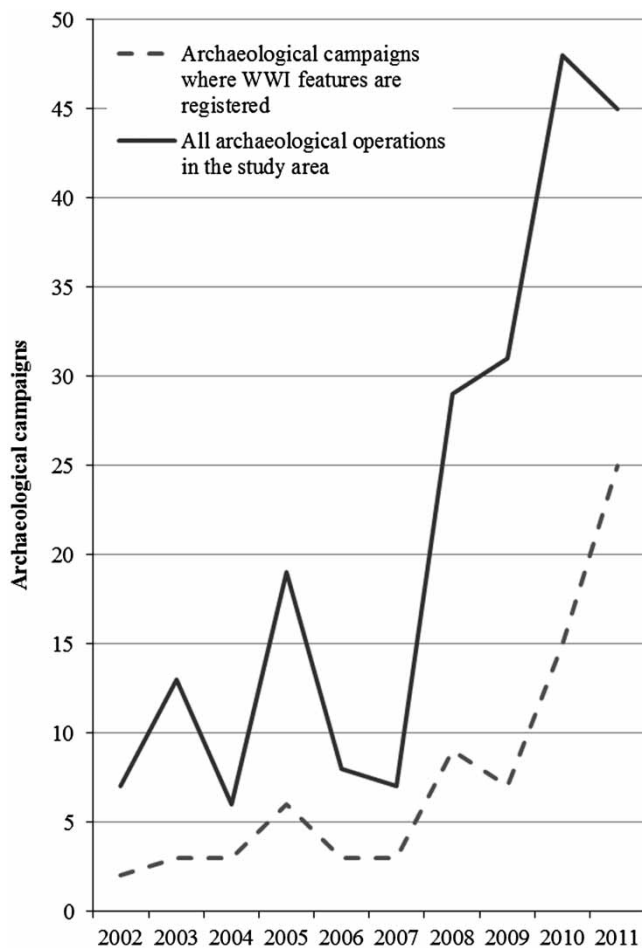


Figure 2. Increase in the number of archaeological operations in the study area.

In general, there has been an increase in the total number of archaeological campaigns in the study area (see Figure 2). This is in line with the increase in the number of investigations throughout the whole of Flanders. Based on the data comprising the number of excavation permits issued by the government agency *Agentschap Onroerend Erfgoed*, there has been a steady increase from 2004 onwards (seventy excavation campaigns) and significant growth from 188 campaigns in 2007 to 471 campaigns in 2011 (source: *Agentschap Onroerend Erfgoed*). This large increase in archaeological research is the

result of more intense activities by the former agency *Ruimte en Erfgoed* and better integration of archaeology within spatial planning, resulting in an increase in development-led archaeology (De Clercq et al., 2012: 33).

There is also a noticeable increase in the number of archaeological campaigns in which WWI relics have been found. In fact, in 2011, the number of campaigns in which WWI features were discovered made up 36 per cent of all archaeological excavations.

The database analysis also shows that, between 2002 and 2005, the government

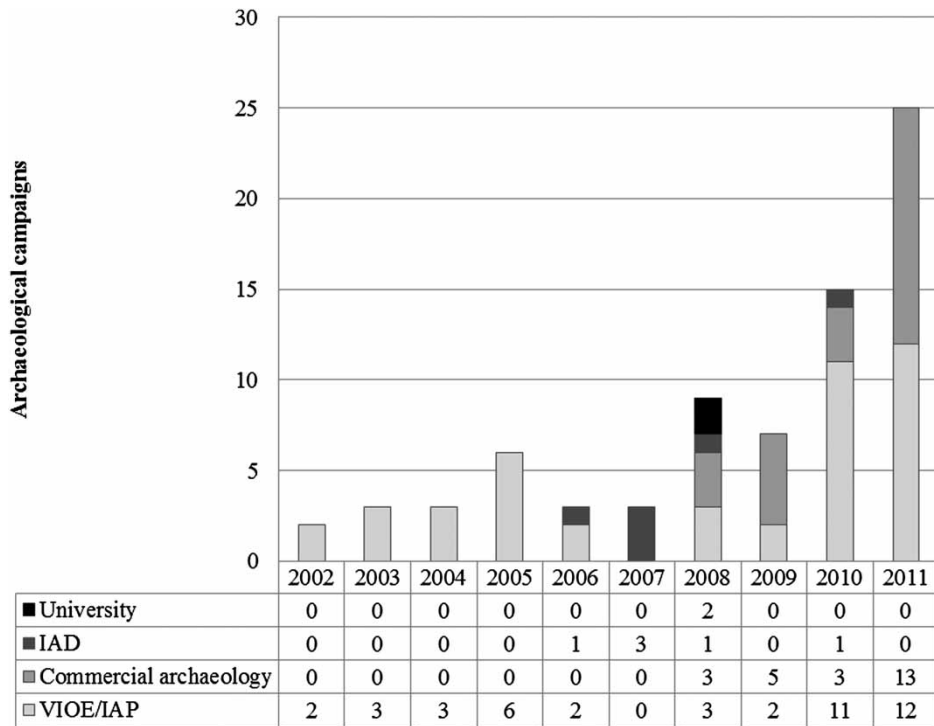


Figure 3. Graph showing the number of archaeological campaigns, led by different archaeological organizations, in which WWI remains have been found.

agency IAP/VIOE was mainly responsible for investigations into WWI relics during the archaeological operations (see Figure 3). Since 2005, the IAD and commercial archaeology has gradually taken over. During 2010 and 2011, the IAP/VIOE was still responsible for a significant part of the research. However, the research it conducted in 2010 and 2011 took place within the scope of the WWI heritage research project, when archaeological research was carried out in twenty-two locations. This one-off study comprised two parts: namely, an archaeological part, where preservation of the archaeological remains and features was investigated, and a part in which the landscape was studied to examine to what extent the landscape of war had been preserved. This research led to the selection of twenty-eight important historic sites

located in the front line and highlighting a particular feature of the fighting that took place in that area. The researchers wanted to preserve these zones as much as possible from further exploitation of the land by having them included in the regional spatial implementation plans (*Gewestelijke Ruimtelijke Uitvoeringsplan*) as anchor points or in the spatial implementation plans (*Ruimtelijke Uitvoeringsplannen*) of the respective municipalities.

Archaeological research versus data from historical aerial photographs

Our database, which contains information from the archaeological reports, comprises all the data registered during the archaeological operations. However, an archaeological report is not always a

complete reflection of the archaeological record of a particular project area, since part of the archaeological record can be overlooked by the archaeologist, especially when it concerns a material culture with which they are not familiar. To tackle this issue, an inventory of WWI features was used which comprises features mapped from historical aerial photographs (Stichelbaut, 2009a: 124). Throughout WWI, millions of aerial photographs were taken, providing a unique dataset showing the progress of trench warfare along the Western Front. During one aerial photography project, more than 17,200 photographs were geo-rectified, interpreted and mapped in a Geographic Information System (GIS). Basically, this dataset shows where WWI features were built during the war and where material remains can still be anticipated.

The dataset covered a large part of our research area (see Figure 1) and could be used for ninety-three locations within it. Often, the archaeological research reports

came with AutoCAD files (.dwg). If they had geospatial data attached, these files could easily be integrated into a GIS environment (see Figure 4). This was possible for seventeen sites within the areas where mapped features are available. By so doing, features digitized from historical aerial photographs could be matched with the structures registered during several excavations. In this way, it could be established whether or not WWI features were recognized as such, ignored or thoroughly investigated.

There has been an increase in research into WWI relics in the province of West Flanders. However, if we compare the relics that archaeologists have found during archaeological research with the digitized features from aerial photographs, we reach a different and more nuanced picture of how the study of WWI relics is being conducted.

Of the seventeen sites where digitized features could be correlated with the excavation plans, there are fourteen in which



Figure 4. Map showing the methodology for comparing digitized features derived from aerial photographs with the features recorded from an excavation.

Table 1. Interpretation and preservation of digitized features

	Not preserved	Not recognized	Next to trial trench	Studied
Barracks	0	3	0	0
Barbed wire	4	0	0	0
Cable	0	1	0	0
Concrete supply shelter	22	0	0	0
Gun emplacement	0	0	4	0
Narrow gauge line	3	0	0	2
Parapet	1	0	0	0
Pillbox	3	0	0	0
Trenches	2	2	2	0
Total	35	6	6	2

military infrastructure was built during the First World War, according to historical aerial photographs. On these fourteen sites, forty-nine digitized features were mapped from the aerial photos (see Table 1).

Vanished structures

The majority of features—73 per cent—have not been preserved, for several reasons. First, some categories of features often leave almost no traces in the soil—for example, mainly barbed wire, narrow gauge lines, and barracks. On one archaeological site, the barbed wire did come to light in an indirect way, namely in waste pits. Railway lines were built on a bed of sand or gravel. Narrow gauge railways had shallow foundations that probably disappeared shortly after the war. Barracks were usually made of perishable materials that had little impact on the soil archive. They were not built to withstand time because as soon as the frontline was breached during an offensive, these barracks became obsolete. After the war, nearly all of them were knocked down and the materials were reused by the local population.

Similarly, the more robust structures, such as bunkers and trenches, did not always survive the ravages of time. Bunkers were cleared to make way for agriculture or

for constructing infrastructure and buildings. Trenches do not always survive either.—Particularly in low-lying areas, in the former front zone, there are no signs of the trenches having been there. During two archaeological campaigns, two trenches, which were clearly visible on the wartime aerial photographs, were not recorded during fieldwork. One trench location is no more than four metres above sea level. Trenches that were dug deeply in these places could flood easily so they were often dug into a raised berm or consist of a parapet and/or parados made of sandbags. The other trench was located further inland and comprised a fire trench that could be linked with a nearby artillery battery. It is possible that this trench was not dug as deep since the structure was temporary. The location of the trench had also been cultivated—deep ploughing had disturbed the soil to a depth of more than one metre below the ground surface and has destroyed all the existing features within this layer.

Preserved features

Of the forty-nine structures recorded from the aerial photographs, only ten were preserved in the soil. However, only two of these were investigated during fieldwork. They consisted of two segments of a one-metre wide narrow-gauge railway

comprising a bed of crushed stone and slag grit, flanked by drainage ditches. The *Kleinbahn* was part of a junction of railway lines which came from Jabbeke—one went to the town of Oudenburg and the other to Gistel.

Not all preserved features are recognized as such. Fire trenches, communication trenches, buried cables, and barracks were not acknowledged during four archaeological campaigns. Close to a narrow-gauge railway at Westkerke, the Germans built a military rest camp of barracks. One of the sites where the barracks stood was excavated. The ditches around one of the barracks were identified as recent features. In addition, trenches on two sites were not recognized as such and were also recorded as recent disturbance.

The use of documentary sources

In three of the four campaigns in which WWI features were not recognized, archaeologists did not use any historical sources dating back to the First World War. During one campaign, they used a trench map, but this served more as an illustration. Indeed, had historical sources been consulted, the features would probably have been interpreted as dating to WWI.

During two campaigns, six structures fell next to the trial trenches and thus could not be detected. Therefore, the question remains whether these structures have been preserved. During one campaign, no historical sources were used. On the other archaeological site, they had to orientate the trial trenches so that they followed the route of the road they were planning to build. Trial trenches are often used in archaeological research, particularly in preliminary studies. Typically, trial trenches run parallel to an adjacent street or the boundaries of land parcels. Yet this method is not so effective when dealing

with features from the First World War. Such features are often linear and clearly distinguishable. When trial trenches run parallel to linear structures, such as trenches or narrow-gauge railways, there is a real chance that these structures will be missed. Therefore, the use of historical sources can be extremely important in determining the orientation of trial trenches or when taking an adjustment of the orientation of the trial trenches into consideration. In this way, it is possible to change the angles of trial trenches so that the linear features cannot be missed.

Historical sources can be of great importance when studying relics from the First World War. Although they are available in abundance, their use is still too limited. Despite the fact that the archaeological sites in our study area are close to the former front, only 27 per cent of the 213 archaeological campaigns in that area used at least one historical source, either when preparing the archaeological research or afterwards for interpreting the data. The main sources employed are trench maps and aerial photographs, followed by regimental diaries and archival sources.

From 2011 onwards, the trend has been towards outsourcing the preliminary historical research. The companies used are specialized in the study of cartographic and historical sources from the First World War. Sometimes, they also have expertise in demining, bomb disposal, and the disposal of other hazardous ammunition, which allows archaeologists to carry out their work safely. In 2011, archaeologists made use of such services during five campaigns.

ARCHAEOLOGICAL PRACTICE

In archaeological practice, the study of structures such as trenches and dugouts is becoming increasingly acceptable to

archaeologists. However, this may pose a problem with respect to certain other categories of features such as shell holes. On the one hand, shell holes are simply the result of an exploded shell, causing nothing more than disturbance to all the existing structures in that particular place. Their only purpose was to destroy humans and material. However, shell holes sometimes served a secondary function in a war landscape. Shell holes could be used as foxholes for protection or to bury the dead (Desfossés et al., 2008: 70; de Meyer, 2009: 212). After the war, shell holes were also filled with debris and thus might contain many artefacts or even live ammunition. If every shell hole is left out of archaeological research, important information (e.g. use of makeshift shelters by soldiers on the battlefield) could easily be overlooked. The fact is that a large area in the war-affected areas were literally transformed into a lunar landscape, with one shell hole next to another. The question then is how can archaeologists deal with these features? In what way can 'ordinary' shell holes be distinguished from interesting ones able to provide new scientific data? These questions can apply equally to other features. Along the Western Front, a huge number of relics remain buried. But, which relics hold relevant information?

In short, some areas in the front line still hold a huge number of relics from the battles, not to mention the multitude of objects across the old battlefields. If the physical remains dating from the First World War are considered to be archaeological heritage, must all the features be excavated and recorded during (preventive) archaeological research? These issues are not merely associated with Belgium—they are also the subject of discussion in France. According to Desfossés et al. (2008), not all excavated WWI features have to be recorded. They argue that the

excavation must be programmed according to a scientific question. Thus, a choice must be made between what needs to be excavated and to what extent that excavation provides adds value; choices that must be clearly defined (Desfossés et al., 2008: 100). However, they remain vague about how to make those choices and what methods to use, pointing instead to the trained eye of the specialist archaeologist. However, this is not enough since not all archaeologists have the same background or knowledge of the material remains of the First World War. Therefore, a methodology must be established to investigate various features and material culture in an appropriate and empirical way. The use of the large repertory of historical sources therein is an absolute necessity. These sources can thus help to formulate the research questions in the context of archaeological research and are key to making such choices.

Archaeological excavation is not the only way to study WWI heritage and must be combined with other methods from other scientific disciplines. There should be further investment in an interdisciplinary build-up of knowledge concerning WWI heritage, combining methodologies and techniques from disciplines such as engineering sciences, geography, and history (Saunders, 2010: 21).

There is also potential for geophysical research. This non-destructive form of prospecting can ensure that researchers work meticulously or can provide answers to a number of scientific questions without breaking the surface of the soil. However, this technique is developing constantly, resulting each time in more powerful devices and software to be introduced on the market. Numerous experiments have been conducted using these techniques to gather information about how to apply these instruments in specific contexts, such as former battlefields (Saey et al., 2013).

THE LEGITIMACY OF WORLD WAR I ARCHAEOLOGY

Archaeology of the recent past, such as the study of the material remains of WWI, is a relatively new phenomenon. Several questions have arisen with the integration of the study of WWI relics in professional archaeology and, by extension, to archaeological practice. These questions relate to the vision for the archaeology of the First World War. Where are we going with this discipline? How can we deal with the details of the material culture and what can they still teach us? What additional information can we gather by studying the archaeology of recent conflicts that we do not already know from written records? These are the most important issues that have been discussed over the last ten years. They were also the first questions to be asked in a number of important articles and books concerning the archaeology of modern conflict. It would appear that the *raison d'être* of this discipline had to be justified before any progression could be made in this field of study (Schofield, 2005: 28; Klausmeier et al., 2006: 5; Saunders, 2010: 3; Scott & McFeaters, 2011: 105).

In fact, two decades of archaeological research into the remains of recent conflicts has proved that the aforementioned questions have been met with compelling answers. To understand the particularities of life in an army at war during WWI, documentary sources are important. However, not everything was written down. When it comes to life in the trenches, in particular, the number of written testimonies is limited. Information about the everyday life of an ordinary soldier in the trenches and behind the front line can be gathered by studying the contexts and objects concealed within it. For example, French archaeologists studied glass objects sourced from numerous contexts with the aim of getting an

insight into the living environment of German soldiers and, in particular, their dietary habits (Landolt et al., 2012: 308). Similarly, the way in which pillboxes, shelters, trenches, etc. were built is not always well documented. As regards shell-proof shelters, the field manuals state: 'In the front line [...] these structures must be simple but shell-proof. [...] their construction can be simplified by the free use of corrugated iron and by laying concrete against layers of sandbags or earth' (War Office, 1917: 16), leaving plenty of freedom for the units who built them, and sometimes resulting in large typological differences between the shelters, which can only be documented through thorough archaeological research.

A conflict of this magnitude is of interest to many people. The sheer destruction and enormous loss of life ensures that many scars still remain even after one hundred years. Moreover, many tourists would like to see these relics as a way of grasping the realities of war. Robertshaw and Kenyon (2008: 16) suggest that Great War archaeology has 'as its goal an effort to reach past the simple memorialization of the war and try to present the experience of it'. The aim is to let people share in the inherent perception of the life the soldiers endured during the war. In this respect, the archaeology of WWI provides a scientific basis for the protection, management, and unlocking of WWI heritage.

Special attention should also be paid to the human remains that are still found regularly. According to Desfossés et al. (2008: 41), finding a fallen soldier from the First World War is difficult to compare with finding human remains dating from earlier periods. The difference lies in the fact that these bodies can be identified; they may still be known to people who are alive today. Therefore, this makes finding the remains of a fallen soldier a delicate matter. Desfossés et al. (2008: 41) see it as an

expression of the *devoir de mémoire* or moral obligation to find these bodies, treat them with the necessary care and attention, and rebury them in a proper manner. This exceeds, so to speak, the purely archaeological concerns.

CONCLUSIONS

After ten years of professional archaeology of conflict in Flanders, a preliminary stock-taking can be made. Research has shown that, in addition to a general increase in the number of archaeological excavation campaigns in Flanders, there is also growth in the number of campaigns in which WWI features are being investigated by professional archaeologists. However, this image must be nuanced. The relics of the Great War that are currently registered are just the tip of the iceberg. On some sites, the features dating back to the First World War are not recognized. It is striking that historical sources from WWI are not commonly used either to make an assessment of the study area or to identify the remains that are found during the excavation. These historical sources can be important for understanding the history of the archaeological site, but can also be useful for other purposes. For example, based on trench maps or historical aerial photographs, the orientation of the trial trenches—a methodology widely used in preliminary archaeological research—can be positioned to ensure that WWI features are not missed. The archaeology of conflict appeals to other sources and techniques from other fields in understanding a site. However, it seems that there is still a lack of effort to do so. There are still many questions to be resolved, very fundamental questions which must be answered in order to turn the archaeology of the First World War and, by extension, the

archaeology of contemporary conflict, into a fully accepted field of study.

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BIOGRAPHICAL NOTE

Yannick Van Hollebeeke works as a research assistant at the Archaeology Department of Ghent University. He has carried out several prospection assignments in Antwerp and Comines-Warneton (Belgium) with the objective of inventorying and studying the preserved WWI heritage. Currently he works on historical aerial photography coverage of the Région Nord—Pas de Calais (France). His main interest is in the archaeology of modern conflict with a focus on heritage perception and management.

Address: Department of Archaeology, Ghent University, Sint-Pietersnieuwstraat 35, 9000 Gent, Belgium [email: Yannick.vanhollebeeke@ugent.be]

Birger Stichelbaut's general research interests are archaeological prospection, aerial photography for archaeology and conflict archaeology. He currently works as a post-doctoral researcher at the Centre for Archaeological and Historical Aerial Photography, carrying out a large-scale landscape analysis of WWI sites in West-Flanders using historical aerial

photographs (1915–1918). This is a collaboration between the In Flanders Fields Museum, the Province of West-Flanders and the University of Ghent Department of Archaeology.

Address: Department of Archaeology, Ghent University, Sint-Pietersnieuwstraat 35, 9000 Gent, Belgium [email: Birger.stichelbaut@ugent.be]

Jean Bourgeois is full professor at Ghent University and Head of the Department of Archaeology. He is a member of the Royal Flemish Academy of Belgium for Science and the Arts, corresponding member of the German Archaeological Institute and president of the International Union of Prehistoric and Protohistoric Sciences (2011–2017). His research concentrates on the Bronze Age and Iron Age in Western Europe as well as in the Altay Mountains and on aerial archaeology in Flanders.

Address: Department of Archaeology, Ghent University, Sint-Pietersnieuwstraat 35, 9000 Gent, Belgium [email: Jean.Bourgeois@ugent.be]

Paysage de guerre et compte rendu archéologique: dix années d'archéologie professionnelle de la Grande Guerre en Flandre (Belgique)

À l'occasion des commémorations de la Première Guerre mondiale, le temps est venu d'effectuer un inventaire préalable de la recherche archéologique sur les vestiges physiques de cette guerre. La question est de savoir dans quelle mesure la perspective sur les études de l'héritage de la Grande Guerre—et par conséquent la façon par laquelle les recherches archéologiques de ses vestiges ont été menées—a évolué durant les dix dernières années. Les reliques de la Première Guerre mondiale sont-elles considérées comme un légitime sujet d'enquête, ou faut-il que cette archéologie lutte toujours pour sa reconnaissance? Nous analysons ici les pratiques de l'archéologie de la Première Guerre mondiale en Flandre (Belgique) ainsi que les problèmes (méthodologiques) soulevés lors de l'étude des restes archéologiques de cette guerre, en nous basant sur les comptes rendus provenant du travail sur le terrain mené par des archéologues professionnels.

Mots-clés: Première Guerre mondiale, archéologie des conflits modernes, photographie aérienne, archéologie des champs de bataille, pratique archéologique, culture matérielle

Von der Kriegslandschaft zum archäologischen Bericht: Zehn Jahre professioneller archäologischer Forschung zum Ersten Weltkrieg in Flandern (Belgien)

Im Zuge der aktuellen Erinnerung an den Ersten Weltkrieg kann eine vorläufige Bestandsaufnahme der archäologischen Erforschung der physischen Hinterlassenschaften dieses Krieges vorgenommen werden. Es stellt sich die Frage, in welchem Maße sich die Perspektive der Untersuchung des historischen Erbes des Ersten Weltkrieges—und dementsprechend auch die archäologische Erforschung seiner Hinterlassenschaften—im Laufe der letzten zehn Jahre entwickelt hat. Werden Überreste des Ersten Weltkriegs mittlerweile als seriöses Untersuchungsfeld angesehen oder kämpfen ihre Archäologie noch immer als Anerkennung als Disziplin? Auf der Basis von Forschungsberichten professioneller Archäologen diskutiert dieser Beitrag die Praktiken der Archäologie des Ersten Weltkrieges in Flandern (Belgien) sowie auch ihre methodologischen Probleme. Translation by Heiner Schwarzberg.

Stichworte: Erster Weltkrieg, Archäologie moderner Konflikte, Luftbildfotografie, Schlachtfeldarchäologie, archäologische Praxis, materielle Kultur