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B33-2.4 Glascoed WTW to Bodelwyddan Castle, 450mm GRP Main Renewal, Abergele.

November 2020 v2.0

Archaeological Watching Brief
Project Code: A0126.4
Report no. 0274
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REGISTERED CIfA ORGANISATION

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November 2020 v2.0

Report no. 0274

Archaeological Watching Brief

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Project Code: A0126.4
Date: 01/02/2021
Client: DCWW
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Datgelodd y brîff gwylio archeolegol weddillion bach ffos ymarfer WW1 nad oedd yn hysbys o'r blaen - darganfuwyd hyn ym maes B, hefyd darganfuwyd gweddillion odyn galch ym maes C a darganfuwyd cyfanswm o 109 o ddarganfyddiadau trwy'r defnydd. synhwyrydd metel ar hyd llwybr prif adnewyddiad y bibell ddŵr.

Aeon Archaeology was commissioned by Dwr Cymru / Welsh Water to carry out an archaeological watching brief as part of a proposed water main renewal scheme at Glascoed, Abergele, Conwy.

The archaeological watching brief uncovered the vestigial remnants of a WW1 practice trench that was not previously highlighted by aerial survey within field B, the well-preserved remains of sub-rounded lime kiln within field C, and a total 109 finds were uncovered through the use of a metal detector along the route of the water main renewal.

2.0 INTRODUCTION

Aeon Archaeology was commissioned by Dwr Cymru / Welsh Water, hereafter the Client, to carry out an archaeological watching brief as part of the proposed water main renewal (WMR) scheme at Glascoed, Abergele, Conwy (**NGR SH 99860 74245**) (figure 01).

The replacement scheme was located within enclosed grazing fields to the immediate north and south of Cross Foxes, Glascoed Road as detailed in DCWW Drawing No. MUS-0000-B33-D-001-001 (reproduced in figure 02). The WMR scheme included the replacement of the existing water main with a new 450mm diameter high performance polyethelyne (HPPE), using open cutting.

Several site meetings and email correspondence took place between Aeon Archaeology, the Client, the Clwyd-Powys Archaeological Trust (CPAT) Development Management Archaeologist (DMA), and Cadw regarding the proposed route, which was adjusted to best avoid known archaeological earthwork remains in the form of World War I practice trenches associated with the existing Scheduled Ancient Monument polygon of *First World War Practice Trenches at Bodelwyddan Park* (FL186).

The open-cut pipe trench was to run north from the WTW north of Cae Onnen at NGR SH 99667 73695 and then cross Glascoed Road at NGR SH 99820 73910. From then the open-cut trench was to skirt the eastern limit of the Bodelwyddan Park plantation, and then head north c112m west of the main SAM polygon and c30m east of the Observation Post included within the same SAM designation. The pipe trench was then to curve north-eastward past the eastern limit of Bodelwyddan Castle, terminating at NGR SJ 00112 74798.

The recommended assessment and mitigatory response proposed by the CPAT DMA and Cadw was that 4 x evaluation test pits were to be excavated in advance of the main works and target four linear earthworks which were believed to have formed part of the World War I practice trenches. These test pits were to characterise the suspected archaeological resource and in turn help inform the methodology for the main works (this phase of works was covered in a separate report Aeon report number 0273). The remaining mitigatory response took the form of an archaeological watching brief which monitored the pipe trench excavation from Glascoed Road in the south to the scheme termination northeast of Bodelwyddan Castle.

The work adhered to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2020).

The event Primary Reference Number (PRN) assigned by the Clwyd-Powys Historic Environment Record (HER) for this archaeological watching brief is **164309**.

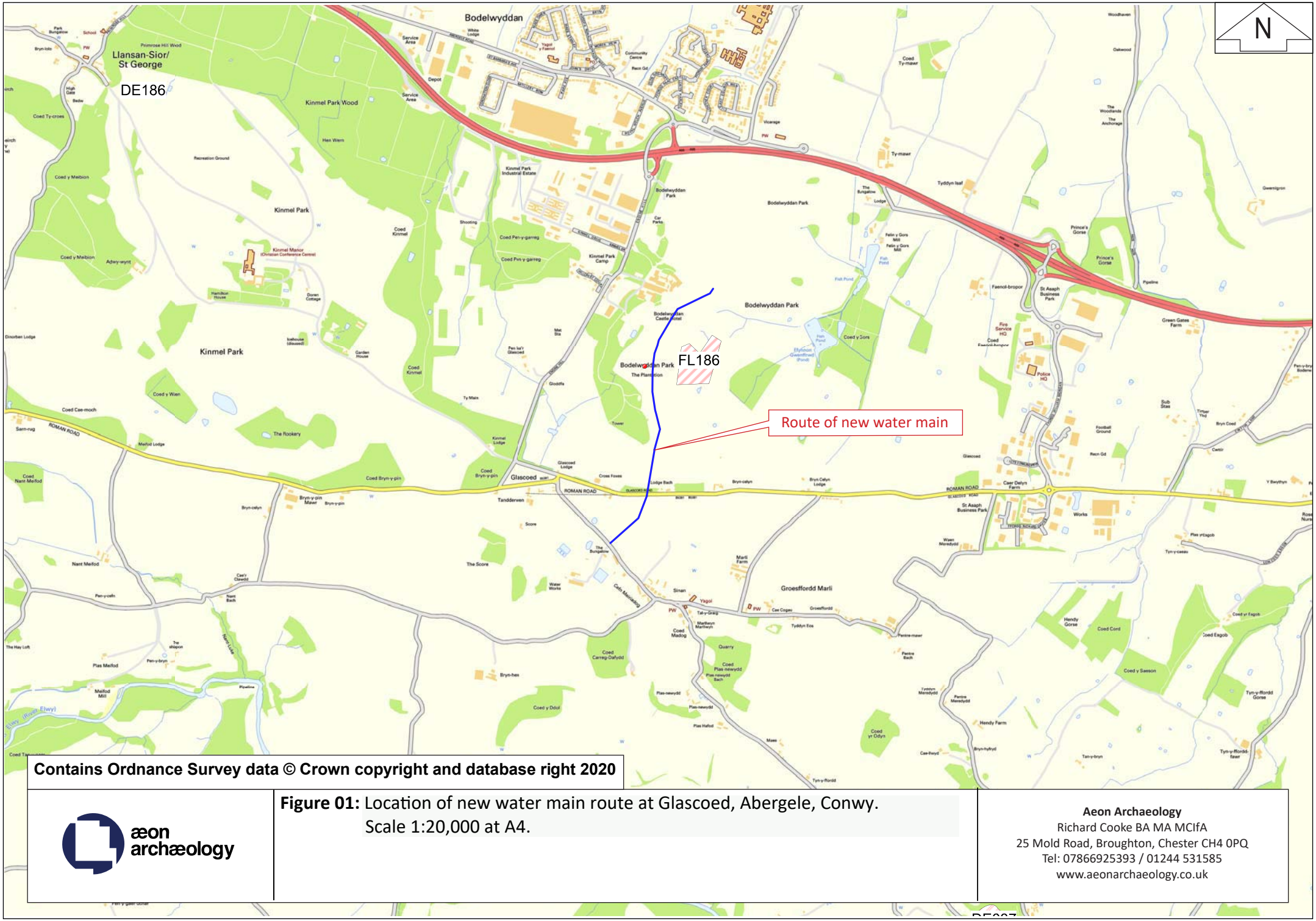

Figure 01: Location of new water main route at Glascoed, Abergele, Conwy.
Scale 1:20,000 at A4.

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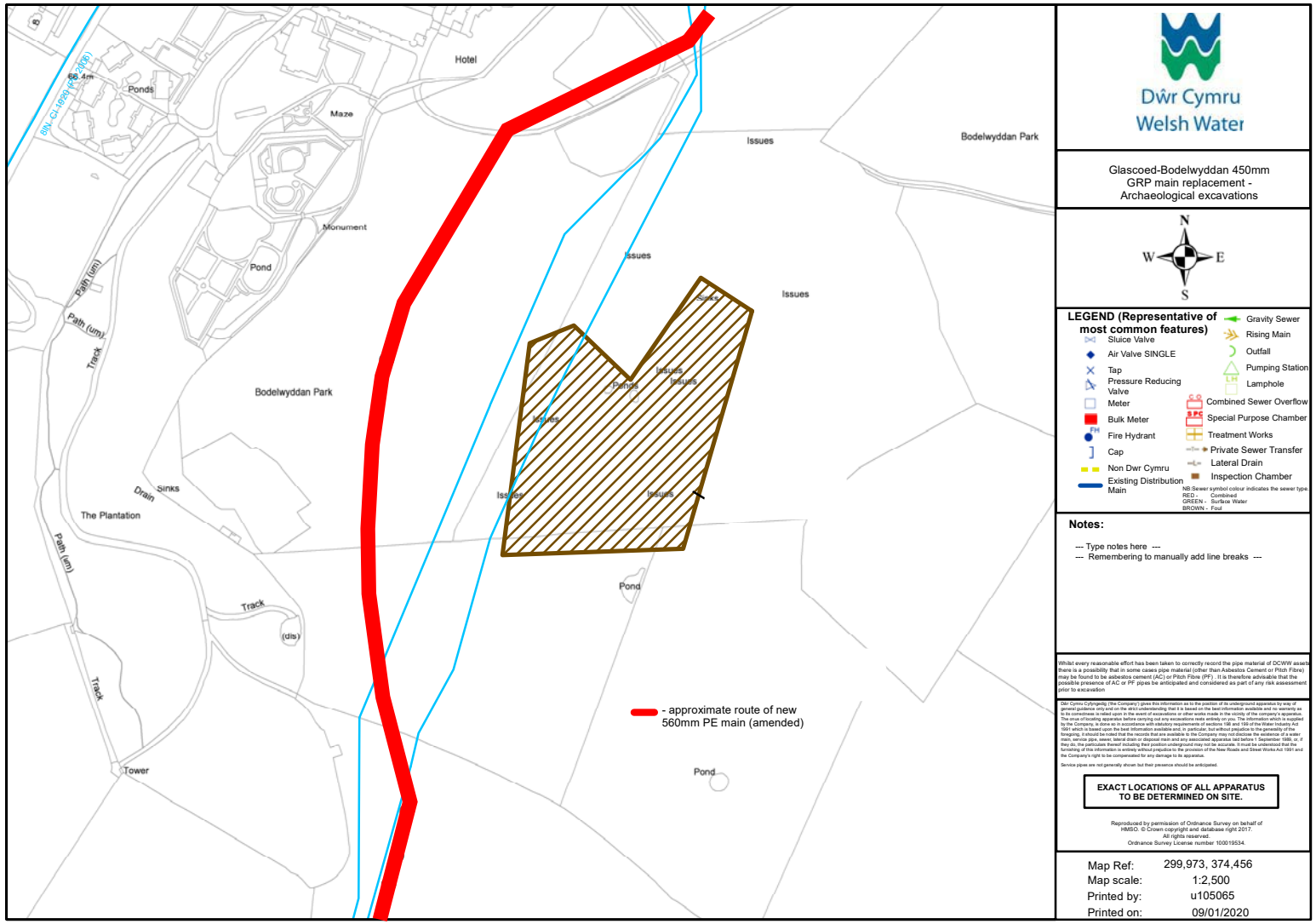

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Figure 02: Location of new water main route, at Glascoed, Abergele, Conwy.
Scale 1:5,000 at A4

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3.0 POLICY CONTEXT

At an international level there are two principal agreements concerning the protection of the cultural heritage and archaeological resource – the UNESCO *Convention Concerning the Protection of World Cultural and Natural Heritage*[1] and the *European Convention on the Protection of the Archaeological Heritage*[2], commonly known as the Valetta Convention. The latter was agreed by the Member States of the Council of Europe in 1992, and also became law in 1992. It has been ratified by the UK, and responsibility for its implementation rests with Department for Culture Media and Sport.

The management and protection of the historic environment in Wales is set out within the following legislation:

- The Planning (Listed Buildings and Conservation Areas) Act 1990 (As amended)
- The Historic Environment (Wales) Act 2016
- The Town and County Planning Act 1990
- The Ancient Monuments and Archaeological Areas Act 1979
- The Town and Country Planning (General Permitted Development Order) 1995 (As amended)

The Historic Environment (Wales) Act is the most recent legislation for the management of the Historic Environment and amends two pieces of UK legislation — the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990. The new Act has three main aims:

- to give more effective protection to listed buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

With respect to the cultural heritage of the built environment the *Planning (Conservation Areas and Listed Buildings) Act*[3] *1990* applies. The Act sets out the legislative framework within which works and development affecting listed buildings and conservation areas must be considered. This states that:-

> *"In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses" (s66(1))*

Other known sites of cultural heritage/archaeological significance can be entered onto county-based Historic Environment Records under the *Town and Country Planning 1995.*

Planning Policy Wales sets out the land use planning policies of the Welsh Government. Chapter 6 covers the historic environment and emphasises that the positive management of change in the

[1] UNESCO, 1972, *Convention Concerning the Protection of the World Cultural and Natural Heritage*
[2] Council of Europe, 1992, *European Convention on the Protection of the Archaeological Heritage*
[3] Great Britain. *Planning (Conservation Areas and Listed Buildings) Act.* Elizabeth II.(1990), London: The Stationery Office

historic environment is based on a full understanding of the nature and significance of historic assets and the recognition of the benefits that they can deliver in a vibrant culture and economy.

Various principles and polices related to cultural heritage and archaeology are set out in the Planning Policy Wales which guide local planning authorities with respect to the wider historic environment.

The following paragraphs from Planning Policy Wales are particularly relevant and are quoted in full:

Paragraph 6.1.5 concerns planning applications:

The planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. The historic environment is a finite, non-renewable and shared resource and a vital and integral part of the historical and cultural identity of Wales. It contributes to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life. The historic environment can only be maintained as a resource for future generations if the individual historic assets are protected and conserved. Cadw's published Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset.

Planning Policy Wales is supplemented by a series of Technical Advice Notes (TAN). Technical Advice Note 24: The Historic Environment contains detailed guidance on how the planning system considers the historic environment during development plan, preparation and decision making on planning and listed building consent applications. TAN 24 replaces the following Welsh Office Circulars:

- 60/96 Planning and the Historic Environment: Archaeology
- 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas
- 1/98 Planning and the Historic Environment: Directions by the Secretary of State for Wales

4.0 PROJECT AIMS

Before the watching brief commenced an agreed programme of excavation timing, siting, duration, surface re-instatement and health and safety protection measures were agreed with the Client, the DMA at CPAT, and Cadw.

The archaeological watching brief was to be maintained:

- During excavation of the WMR pipe trench from Glascoed Road (NGR SH 99820 73910) in the south to the scheme termination northeast of Bodelwyddan Castle (NGR SJ 00112 74798).

The CIfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of CIfA.

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2020). The watching brief will take place within a specified area within the Site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The CIfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established in advance of development or other potentially disruptive works.

It is also important to note that a watching brief provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The aims of the watching brief were:

- To allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of archaeological remains on the Site affected by excavations and groundworks, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.

- To provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

The specific objectives of the watching brief were:

- To conduct a metal detecting survey ahead of the pipe trench excavation in order to recover ferrous or alloy finds associated with the period of World War 1 training trenches at Bodelwyddan.

- To observe and recover any other artefacts of archaeological significance

- To record the location, dimensions and nature of any deposits, features, structures or artefacts of archaeological significance.

- To recover samples of any deposits considered to have potential for analysis for palaeoenvironmental data should the opportunity arise.

- To recover and record any disarticulated human remains prior to reburial on site.

- To clean, record and remove any articulated human remains situated within the works area and to oversee their reburial on site.

- To ensure minimal disturbance to any buried features via the careful re-routing of the foul drainage trench over or around in-situ buried remains where possible. If fallen grave markers are encountered these will be recorded and then carefully lifted to facilitate the works.

5.0 METHODOLOGY – ARCHAEOLOGICAL WATCHING BRIEF

5.1 Watching Brief

All excavations were undertaken using a mechanical excavator fitted with a toothless ditching bucket. A photographic record was maintained throughout, using a digital SLR camera (Canon 6000D) set to maximum resolution and any subsurface remains were to be recorded photographically, with detailed notations and measured drawings being undertaken if required.

In the event of archaeological discovery features were to be excavated by hand and fully recorded using Aeon Archaeology pro-formas, digital photographs, and plan and section drawings taken at a suitable scale (usually 1:20 for plan drawings and 1:10 for section drawings).

A copy of the archive produced is held at Aeon Archaeology under the project code **A0126.4**.

5.2 Data Collection from Site Records

A database of the site photographs was produced to enable active long-term curation of the photographs and easy searching. The site records were checked and cross-referenced and photographs were cross-referenced to contexts. These records were used to write the site narrative and the field drawings and survey data were used to produce an outline plan of the site.

All paper field records were scanned to provide a backup digital copy. The photographs were organised and precisely cross-referenced to the digital photographic record so that the Clwyd-Powys Archaeological Trust (CPAT) HER can curate them in their active digital storage facility.

5.3 Artefact Methodology

All artefacts were to be collected and processed including those found within spoil tips. They would be bagged and labelled as well any preliminary identification taking place on site. After processing, all artefacts would be cleaned and examined in-house at Aeon Archaeology. If required artefacts would be sent to a relevant specialist for conservation and analysis.

The recovery policy for archaeological finds was kept under review throughout the archaeological watching brief. Any changes in recovery priorities would be made under guidance from an appropriate specialist and agreed with the Client, the CPAT DMA, and Cadw. There was a presumption against the disposal of archaeological finds regardless of their apparent age or condition.

5.4 Environmental Samples Methodology

The sampling strategy and requirement for bulk soil samples was related to the perceived character, interpretational importance and chronological significance of the strata under investigation. This ensured that only significant features would be sampled. The aim of the sampling strategy was to recover carbonised macroscopic plant remains, small artefacts particularly knapping debris and evidence for metalworking.

Advice and guidance regarding environmental samples and their suitability for radiocarbon dating, as well as the analysis of macrofossils (charcoal and wood), pollen, animal bones and molluscs would be obtained from Oxford Archaeology if required.

5.5 Report and dissemination

A full archive including plans, photographs, written material and any other material resulting from the project was prepared. All plans, photographs and descriptions were labelled, and cross-referenced, and will be lodged within a suitable repository to be agreed with the archaeological curator within six months of the completion of the project.

A draft copy of the report has been sent to the client and upon written approval from them paper and digital copies of the report will be sent to the regional HER, the DMA at CPAT, and will be logged with the RCAHMW. Copies of all notes, plans, and photographs arising from the watching brief will be stored at Aeon Archaeology under the project code **A0181.1** with the originals being lodged with the RCAHMW.

6.0 ARCHAEOLOGICAL BACKGROUND

WW1 Training Camps

The construction of Kinmel Bay Camp was only a small part of the countrywide response that Britain undertook at the outbreak of World War 1 in the autumn of 1914. Lord Horatio Herbert Kitchener was made Secretary of State for War at the beginning of the conflict and he was responsible for initiating a policy he referred to as the 'New Army'. His solution to the demand of all-out war with Germany was to realise Britain's true power; a massive increase in the size of its standing Army. This was to be achieved via the mass mobilisation of the population through the use of conscription; between August and September 1914 enlistment offices had recruited approximately 480,000 troops, and by the end of the War in 1918 a further 2.5 million had also been recruited (Brown 2017).

However, these newly conscripted troops lacked the basic training of a British soldier and the contemporary military infrastructure present in Britain at the time was deemed insufficient to handle such large numbers of new recruits. To meet the problems created by mass mobilisation decisive action was needed; existing barracks were made larger to accommodate the new troops (Shornecliff and Aldershot), temporary camps which were often seasonal were expanded into semi-permanent installations (Westdown, Larkhill, Salisbury Plain & Cannock Chase) and wealthy landowners leased large areas (Halton House, Belton House & Bodelwyddan Castle) to the War office (Brown 2017, Staffordshire County Council 2009, University of Bristol, 2014). A second challenge that became evident after the beginning of the war was the use of trench warfare, which further dictated that these new camps and installations be able to provide the new specialist training required to fight effectively (Brown 2017). Networks of trenches needed to be constructed to simulate the environment that the soldiers were to encounter in France and Belgium, how to build and maintain trenches was considered of paramount importance as well how to fight effectively within them.

Context of The Great War

The First World War was the first conflict in which propaganda was specifically fashioned by the British Government for the purpose of targeting the hearts and minds of the general public. The edifice of mass media was mobilised in such a way as to instil a 'war fervour' upon the nation, this was achieved by inciting feelings of patriotism and stoking the fires of nationalism. As participants in the war the people were compelled by their government to recognise that they had a responsibility to justify the righteousness of the war (Welch 2000). Probably one of Britain's most enduring images symbolising the need for a 'war effort' is the idiosyncratic recruitment poster that portrays Lord Kitchener - which is adorned with the message '*Your Country Needs YOU'*, this iconic image almost implores the observer to honour their duty as a citizen, whilst simultaneously issuing a command to take up arms in defence of the nation.

Subsequent forms of propaganda began to be produced and these were to draw heavily from stereotypical imagery and invoke aggressive, nationalistic thought processes that became reminiscent of the British Jingoism that prevailed during the latter half of the 19th century. British propaganda posters often employed the religious symbolism of St George slaying the (German) dragon (Welch 2000). British recruitment posters changed in tone, from appealing to an individual's honour to 'mobilisation by shame' (Murphy 2017).

However, once the initial euphoria had subsided, it was imperative to remind people, both at home and in the trenches, of what they were fighting for. The major themes included a call to arms and a request for war loans; as well as efforts to encourage industrial activity, to explain national policies, to channel emotions such as courage or hatred, to urge the population to conserve resources, and to inform the public of food and fuel substitutes (Saunders & Taylor 1982).

One tactic at a state's disposal was the use of iconic figures to strengthen a particular point about national identity in order to promote patriotism. These might be real people presented in a mythologised form as national heroes, or they might come from old myths or popular folklore: Britannia, John Bull and the British bulldog; the German eagle or the French cockerel for instance (Welch 2000).

Kinmel Bay Camp

Kinmel Military Camp was a large facility by the standards of the time; and was the largest army camp in Wales (Vannan & Taylor 2007), and was constructed to the southwest of the village of Bodelwyddan. It was also provided with a railway connection, The Kinmel Camp Railway (NPRN 34761) from Foryd Junction on the North Wales main coast line in 1915. The camp originally occupied an area approximately 1.50km long and 0.75km wide (Malaws 2008); it consisted of twenty sub-camps, each with their own canteens and messes as well as accommodation and rooms for instruction, all in timber huts. There was also a headquarters, stores, a Post Office, bakery, theatre/cinema, Wesleyan, Free Church, Salvation Army and three YMCA buildings (Putkowski 1989). There were stables and training areas for bayonet practice and trench fighting within the camp and it is widely assumed that extensive use was made of detached training areas in parkland in the locality (Spencer 2014).

The camp also had a significant effect on local population distribution and density; as civilian shops and semi-permanent shelters were erected near the camp – this settlement came to be nicknamed 'Tintown'. Some anecdotal evidence also exists of soldiers spending nights out in Rhyl, particularly following a large advance of pay given to the Canadian Young Soldiers battalion, perhaps to celebrate the defeat of the German Army (Putkowski 1989). The camp was not enveloped by a defensive perimeter and it is possible that soldiers and civilians came into contact, although there is no evidence for this (ibid.). The camp's principal function was to train soldiers for active service during the conflict (Vannan & Taylor 2007). Towards the end of the First World War it had been occupied by the Canadian Young Soldiers battallion, battalions of Welsh and English recruits and two Officer Cadet battalions (Grant et al. 2015). Following the First World War, the camp was transferred to the Canadian expeditionary forces who were awaiting demobilisation.

The camp's location is now more accurately described as lying south of the A55, between Engine Hill and Primrose Hill. The site until recently included a camp, small-arms ranges and a dry training ground. As well as accommodating up to 250 troops, it was used as a base for training in nearby Snowdonia National Park (Vannan & Taylor 2007).

The New Weapons of War

The huge networks of trenches and semi-static fronts established in the fields of France and Belgium have come over time to serve as the primary context for World War 1. However, as important as the advent of trench warfare was, it was in large part a response to the technological advancements in

warfare. Technological improvements included the development of grenades, mortars, howitzers and the widescale adoption of machine guns. The use of the grenade as a weapon of war was to become a very important element in the capture and defence of trenches, with specific tactics and training courses for specialist troops including specialised bombing schools (Vannan & Taylor 2007); of which Bodelwyddan may be an example.

Mortars were also beginning to be developed as a weapon although not immediately available to the British by 1914. However, the later introduction of a series of trench-mortars were eventually designed to reduce or destroy enemy trenches through relatively short-range high angle artillery fire. These smaller more mobile weapons would have been supplemented by traditional artillery – field guns and howitzers. These retained their importance and became the masters of the battlefield, allowing for long distance bombardment by high explosive, shrapnel and, as the war progressed, gas, onto enemy trenches or further into the rear where supply depots, ammunition dumps, camps, railheads and airfields were often located.

Machine guns were already in use in the British Army by 1914, predominantly the Vickers-Maxim Gun, but the role of machine guns and machine gun tactics changed. As well as acting as a direct fire weapon, machine guns provided a form of light artillery firing indirectly to specific grid references, rather than at a visible target, in interdiction roles designed to prevent an enemy bringing up reinforcements or supplies to a section of the line, and in infantry support bombarding enemy trenches with suppressing fire during an attack.

Military aviation was in its infancy in 1914, the Army had only started to take a serious interest in aeroplanes in 1910 and the Royal Flying Corps was only founded in 1912 and British preparations lagged behind France and Germany. Nevertheless the role of aircraft cannot be understated; the application of airplanes for observation, reconnaissance, aerial photography and eventually coordinating ground attack changed the accuracy in which intelligence was accrued and developed and only served to exacerbate the challenges the War presented.

Furthermore the advent of armoured warfare is another technological advance which is synonymous with the Great War. Testing, training and the evaluation of the first British tanks initially took place at Lincoln, close to their original factory. In 1916 tank training was moved to a former infantry training camp on Bovington Heath in Dorset, as the technology and tactics around tank warfare began to evolve. Soon after a series of demonstrations which King George V personally attended; tanks began to be demanded by military commanders for operations at the Battle of the Somme (Section reproduced from Brown M., (2017). *First World War Fieldworks in England*, Research report series 61-2017, Historic England. – please read for greater detail).

Bodelwyddan Practice Trenches

The training that was provided at places such at Bodelwyddan was organised as a direct response to the challenges posed by this new weaponry and the realities of the emergent trench warfare. Extending over several hectares to the south and east of the parkland at Bodelwyddan Castle, to the east of the Kinmel Camp there is a complex of training trenches. These were presumably created initially for instruction in how to excavate effective trenches, but were also subsequently used for infantry combat training. Firing (frontline) trenches are identifiable from their crenelated shape (or traverses), with zigzag communication trenches linking back to support and reserve lines parallel to the firing line. There appear also to be dugouts (perhaps for command posts or first aid stations),

passing bays and saps (trenches dug out into 'no-man's land' from the front line). From the study of aerial photographs it seems there were several distinct groups in the parkland, some perhaps dug as opposing systems. Over much of the area circular craters suggest efforts were made to create a realistic landscape for troops to negotiate. Some of the craters have been joined by digging between them, and the fact that none of the craters appear to have damaged the trenches suggests they were created by detonating charges in the ground, rather than by shelling. In addition there is what is thought to be a remote command post on slightly higher ground (at SH 9981 7445) overlooking part of the training area. Interestingly, a similar circular earthwork (129913) appears on an air photograph (CPE/UK/2525 Frame 4029) of 1948 just to the south-east of the entrance to Kinmel Park Camp. Whatever it was, this latter site now lies beneath a housing estate.

Canadian Mutiny

Following the conclusion of the First World War, the Kinmel Camp was transferred to the Canadian expeditionary forces who were awaiting demobilisation (Morton 1980). This was an extremely frustrating time for the camps inhabitants, as they had received their final payment in advance of repatriation, but were now stranded in North Wales awaiting transportation back to Canada without compensatory provision for the extended wait.

As well as the discomfort of this hiatus between overseas military service and repatriation, during the Autumn and Winter of 1918/19 an influenza pandemic had killed 80 soldiers at Kinmel (Mullins 2000). The understandably low morale at the camp was also afflicting an army comprised of mixed types of soldiers, including conscripts, non-combatants, and under-aged soldiers who would not be continuing with a military career, and a general lack of discipline existed within the camp (Morton 1980, Putkowski 1989). The failure of commanding officers to keep the camp inhabitants informed of the progress of their transportation appears to have been largely responsible for allowing a tense situation to escalate into mutiny and riots.

On Tuesday the 4th March 1919, riots broke out in protest at camp conditions, disturbances that focused mainly on raiding camp stores, canteens and messes and the civilian shops of 'Tintown' (Putkowski 1989). The riots continued until the afternoon of the 5th March, with up to 800 men being involved, and clashes between rioters and camp defenders resulted in the injuries of 28 men, five of whom died (Morton 1980). Fifty-one soldiers were court-martialled for mutiny following the riots.

The riots at Kinmel Park were happening at a time of general unrest both at home and abroad, which probably contributed, at least in part, to their instigation. In January and February 1919, there was a wave of strikes by shipbuilding engineering and transport workers, fuelled partly by increases in the cost of living, poor housing and low rates of pay (Putkowski 1989). At the same time, the IRA renewed its campaign to end British occupation in Ireland and other similar struggles around the British Empire began to spring up. A third crisis came with police strikes and more pertinent, strikes in the British Army. Disturbances involving both British and Canadian troops were reported due to the poor British demobilisation procedures.

Between the end of the First World War and 1953 the camp arrangement was modified substantially, including the demolition of the original camp buildings and the reduction of the overall area of the camp to less than half of its original size. (Section reproduced from Vannan A. & Taylor K. (2007). *Former Barracks, Kinmel Park Army Camp, Bodelwyddan, Denbighshire*, Oxford Archaeology North, Issue No: 685/2007-8, OA North Job No. L9834. – please read for greater detail).

The Legacy of War

The eventual conclusion to World War 1 on November the 11th 1918 signalled to most people an end to the destruction and savagery of the War. The legacy of the war is almost inestimable although the cost may be expressed in general terms. Succinct estimates on the number of war dead vary but it is widely accepted that 20 million people lost their lives during the conflict and 20 million more were left maimed or wounded (Stevenson 2004). Countless hectares of farmland were left destroyed by the fighting; a vast area which is still deemed unsuitable to human life called *Zone Rouge* exists in the northern part of France, due to the sheer volume of unexploded ordinance that exists below the surface (Hupy 2006, Brown 2017). Shell shock and PTSD (Post Traumatic Stress Disorder) was a poorly understood phenomenon at the time – but it affected thousands of men returning from the front, the prevalent concept at the time was that the repeated physical impact of exploding shells above men's heads was to blame. However, as time passed another theory became popular - that the cause of the condition was borne from the sustained trauma of war, living for extended periods of time in the trenches concentrated tremendous emotional stress in the minds of soldiers. Individuals lived in such close proximity to death and destruction on a daily basis that the fear of losing their own lives became incapacitating, furthermore, being forced to experience friends and enemies suffering gruesome ends at the hands of terrible modern weaponry would often cause men to have debilitating psychological breakdowns, which often only manifested after the fighting had ended (Downing 2016, Stevenson 2004).

Another product of the war was the rise of European socialism and labour movements; as well as the trade union movement which emerged in response to the plight of the working class. The experiences of the First World War were shocking and it was the working classes which suffered in the largest numbers (Downing 2016, Stevenson 2004). During the war, workers in important industries, in particular skilled workers, crucial for the production of machinery and armaments - were exempt from recruitment into the army and often favourable food and wage conditions in return for renouncing strike action (Sherry 2014). But as the war wore on and continued to destroy lives and resources, living and working conditions for workers declined. The Russian year of revolution in 1917 is seen as a political turning point as socialism became organised, belligerent, and determined with the trade union movement demanding better standards for the working class (Stevenson 204). This was augmented by the decline of the traditional aristocracy in Britain which had suffered greater proportional losses in the fighting than other classes (Clark 2012).

Whether the war can legitimately say to have liberated women is a matter of lengthy debate. However, that it was a huge catalyst for debate cannot be denied. Women became essential to the war effort as they were asked to adopt traditionally masculine roles in arms production and in the fields producing food for the front (Adie 2013). Without a doubt, women achieved important political gains in certain countries (Britain). Certain fashions, such as the flapper look of the 1920's, induced a liberation of women from certain traditional feminine codes. However, in reality once the war was over, many women were expected to return to traditional gender-based roles as dictated by the traditional Patriarchal system. The fight for Women's Suffrage was both long and arduous and required the determination of women over an extended period of time (in France, women only won the right to vote in 1944. In Germany they could vote as of 1919, in Great Britain from the age of 30 in 1918, and from the age of 21, like men, in 1928). Recent work suggest that this post war period was a transitional phase for feminism, rather than a true revolution of Women's rights – however the experiences of the War had set the conversation for Universal Suffrage in motion (Dombrowski 2004, Adie 2013).

As the guns were falling silent across Europe the seeds of future conflict were already beginning to be sown. In Russia, war fatigue among other factors led to the collapse of the ruling Romanov dynasty, the 1917 Russian Revolution, and the establishment of Communist rule. The empire of Austria-Hungary broke into a collection of independent states based on ethnicity, including the former Yugoslavia which experienced terrible Wars largely based on ethnicity between 1991-2001. The harsh terms imposed by the Allies in the Treaty of Versailles ultimately facilitated the rise of National Socialism in Germany, and eventually helped to deliver Adolf Hitler and his Nazi Party to power. Some historians see World War I as the beginning of a continuous struggle for Europe that didn't really end until the reunification of Germany in 1989 (Dombrowski 2004, Stevenson 2004, Clark 2012).

After World War I, the allies stripped Germany of its colonies in Asia and Africa. But instead of being given independence, these long-oppressed lands were absorbed into the victors' colonial empires. Colonized peoples resented being denied the right to national self-determination which had been extended to newly created or liberated European countries like Poland, fuelling independence movements in India and several African nations (Sherry 2014). World War I also redrew the map of the Middle East. The British and the French carved up the remnants of the Ottoman Empire, which had entered the war on Germany's side. Britain took control of what became Iraq and Jordan, as well as the Gulf States. The new borders were arbitrarily drawn, with no regard for long-standing religious and tribal identities (Sherry 2014).

Ultimately the legacy of World War 1 is now rehearsed each year, all over the world under a collection of different monikers namely: Remembrance Day in the United Kingdom. For the victors of the Great War, Armistice Day (11/11/1918) was initially seen as a day of celebration – elation that the war had finally ended and Germany beaten (Stevenson 2004, Clark 2012). However, the festive nature of this event quickly changed; by the 1st and 2nd anniversaries of the armistice (1919 and 1920) a more solemn atmosphere characterised the event and now became a memorial with a focus on mourning the dead rather than celebrating a victory against a vanquished enemy. A Cenotaph was erected at Whitehall, at first a temporary wooden structure but this was replaced in 1920 with a monument made of Portland stone; this new place which became the focus for remembrance events as crowds gathered to lay wreaths. The 11th November 1919 saw the first observance of a minute's silence at 11 o' clock, in which the vast majority of people participated, wherever they were and whatever they were doing. A year later, on the same day that the permanent Cenotaph was unveiled, the Unknown Warrior was buried in Westminster Abbey to honour the countless ordinary service personnel who had died. This immediate post war period was when most of the memorials that commemorate the First World War were erected, as thousands of communities came together to pay tribute to their fallen (Mcnab 2018).

By the 1990s the memorial had come to be known as Remembrance Day in the United Kingdom. It is generally agreed that by this time the service had become less popular; as its observance gradually declined during the latter half of the 20th century (Mcnab 2018). Partly to remedy this, the two-minute silence began to be held on 11th November itself, regardless of whether it was a Sunday or not. Remembrance therefore became a more integral part of daily life on that day once more and its relevance returned. Remembrance Day is now widely observed, with two-minute silences often being held at 11 o'clock on the 11th as well as the following Sunday (Remembrance Sunday) if the 11th falls on a different day. Many people continue to attend Remembrance services at local war memorials in the United Kingdom. The observance of Remembrance Day often starts before 11th November, when many people buy and wear poppies. The tradition of wearing a poppy to symbolise Remembrance

began in 1920 and was inspired by the poem, *'In Flanders Fields,'* written by John McCrae in 1915. The opening lines of the poem refer to poppies growing in Flanders, an area of the Western Front, around the graves of soldiers. The poppy came to symbolise remembering those who had died during the Great War of 1914-1918.

7.0 DIGITAL DATA MANAGEMENT PLAN

7.1 Type of study

Archaeological watching brief as part of a proposed water main renewal (WMR) scheme at Glascoed, Abergele, Conwy (NGR SH 99860 74245).

7.2 Types of data

- Photographs (RAW)
- Context sheets (paper)
- Photographic register (paper)
- Drawings (drafting film)
- Misc registers (paper)
- Compiled report

7.3 Format and scale of the data

Photographs taken in *RAW* format and later converted to *TIF* format for long term archiving and *JPEG* format for use in the digital report, converted using *Adobe Photoshop*. All photographs renamed using *AF5* freeware with the prefix (*project code_frame number*) and a photographic metadata created using Microsoft Excel (*.xlsx*) or Access (*.accdb*).

Compiled report (including figures and plates) as *.PDF* files.

7.4 Methodologies for data collection / generation

Digital data will be collected / generated in line with recommendations made in the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014. Rev 2020). Sections 3.3.1 and 3.3.3 are relevant:

> *3.3.1 Project specifications, research designs or similar documents should include a project specific Selection Strategy and a Data Management Plan.*
>
> *3.3.3 Project designs or schedules of works etc should outline the methodology used in recording all information, in order to demonstrate that all aspects of archive creation will ensure consistency; for instance in terminologies and the application of codes in digital data sets, highlighting relevant data standards where appropriate*

7.5 Data quality and standards

Consistency and quality of data collection / generation shall be controlled and documented through the use of standardised procedure as outlined in the WSI. This will include the use of standardised data capture file formats, digital proformas, data entry validation, peer review, and use of controlled vocabularies.

7.6 Managing, storing and curating data.

All digital data will be organised into Aeon Archaeology proformae project file systems and backed up to the cloud using *Digital River's Crashplan* with additional copies made to external physical hard drive.

7.7 Metadata standards and data documentation

Digital metadata created using Microsoft Excel (*.xlsx*) or Access (*.accdb*) of all photographic plates.

Paper metadata created from Aeon Archaeology proformas for contexts, artefacts, environmental samples, watching brief day sheets, trench sheets, and basic record sheets and then scanned to create digital .PDF copies.

7.8 Data preservation strategy and standards

Long term data storage will be through the submission of digital (.PDF) reports to the regional Historic Environment Record (HER); submission of digital (.PDF) reports and a project completion form to the RCAHMW; submission of the scanned (.PDF) archive, photographic plates (.TIF), and metadata (*.xlsx*) (*.accdb)* to the Archaeology Data Service (ADS); and retention of copies of all digital files at Aeon Archaeology on physical external hard drive and uploaded to the cloud.

7.9 Suitability for sharing

All digital data will be placed within the public realm (through the channels in 6.8) except for where project confidentiality restricts the sharing of data. All data sets will be selected / discriminated by the Senior Archaeologist at Aeon Archaeology and written permission will be sought from all project specific Clients prior to the sharing of data.

7.10 Discovery by potential users of the research data

Potential users of the generated digital data (outside of the organisation) will be able to source the data and identify whether it could be suitable for their research purposes through access granted via the ADS and RCAHMW websites. Requests can also be made for data through the regional HER's and directly to Aeon Archaeology (info@aeonarchaeology.co.uk).

7.11 Governance of access

The decision to supply research data to potential new users will be via the associated website request (ADS, RCAHMW, HER) or via the Senior Archaeologist when made directly to Aeon Archaeology.

7.12 The study team's exclusive use of the data

Aeon Archaeology's requirement is for timely data sharing, with the understanding that a limited, defined period of exclusive use of data for primary research is reasonable according to the nature and value of the data, and that this restriction on sharing should be based on simple, clear principles. This time period is expected to be six months from completion of the project however Aeon Archaeology reserves the right to extend this period without notice if primary data research dictates.

7.13 Restrictions or delays to sharing, with planned actions to limit such restrictions

Restriction to data sharing may be due to participant confidentiality or consent agreements. Strategies to limit restrictions will include data being anonymised or aggregated; gaining participant consent for data sharing; and gaining copyright permissions. For prospective studies, consent procedures will include provision for data sharing to maximise the value of the data for wider research use, while providing adequate safeguards for participants.

7.14 Regulation of responsibilities of users

External users of the data will be bound by data sharing agreements provided by the relevant organisation or directly through Aeon Archaeology.

7.15 Responsibilities

Responsibility for study-wide data management, metadata creation, data security and quality assurance of data will be through the Senior Archaeologist (Richard Cooke BA MA MCIfA) at Aeon Archaeology when concerning data generation and early/mid-term storage. Upon deposition with digital depositories the study-wide data management, metadata creation, data security and quality assurance of data will be the responsibility of the specific organisations' themselves.

7.16 Organisational policies on data sharing and data security

The following Aeon Archaeology policies are relevant:

- Aeon Archaeology Archive Deposition Policy 2019
- Aeon Archaeology Quality Assurance Policy 2019
- Aeon Archaeology Conflict of Interest Policy 2019
- Aeon Archaeology Outreach Policy 2019
- Aeon Archaeology Digital Management Plan 2020

8.0 QUANTIFICATION OF RESULTS

8.1 The Documentary Archive

The following documentary records were created during the archaeological watching brief:

Watching brief day sheets	15
Context Sheets	21
Digital photographs	224

8.2 Environmental Samples

No environmental samples were taken as part of the archaeological watching brief.

8.3 Artefacts

The Archaeological Finds from the metal detecting survey conducted during the DCWW water main renewal (WMR) between Glascoed and Bodelwyddan Castle.

Preface

This finds report concerns the archaeological finds that were recovered during the watching brief throughout the course of the Water Main Renewal (WMR) between Glascoed and Bodelwyddan Castle. The artefacts were discovered using a *Garrett ACE 250* Metal detector which was utilised during the course of a metal detecting survey of the WMR route. Therefore, the finds recovered largely comprise of metalwork, namely ferrous and nonferrous metals including copper alloys which principally date to the operational period of the Kinmel Camp during World War 1 (1915 – 1919). A total of one hundred and nine, 109 finds; an amalgamation of 71 individual finds numbers and the group finds number 22 representing 38 Fe objects found within the primary fill (105) of the world war 1 practice trench [103].

It is practical to mention at this point of the finds report that the recovery of the archaeological artefacts from the fields at Bodelwyddan was subordinate in importance to the watching brief that was concurrently being conducted by the UXO (unexploded ordinance specialist) who employed a fluxgate magnetometer *(Schonstedt GA-72 CD/ML)* in order to trace the signals of potential targets (unexploded ordinance). In order for the finds to be recovered in a manner that was safe and risk averse the UXO was primarily engaged with scanning an area and investigating any signal prior to archaeological survey or excavation by the archaeologist. Following an initial scan of consecutive 30/40m sections of the topsoil along the WMR route by the UXO and subsequently the archaeologist, a 13-tonne tracked excavator would reduce the ground level by 0.20m spits before the process of scanning and survey was repeated. This process continued, with the reduction in ground level by a further 0.20m followed by a survey, this process continued until the natural glacial clay soil horizon was reached at which point the archaeological scanning ceased, while the UXO survey continued until the full depth of the trench was achieved. All of the archaeological finds were recovered using this methodology.

The Archaeological Finds

Mills Grenades

The various components of mills grenades including; spring mechanisms, base plugs, handles, safety pins, a filling hole plug and a mill's bomb spanner (see figure 09 and plates 41, 43 and 45), formed the bulk of the finds recovered from the fields at Bodelwyddan and these were predominantly recovered from fields A & B (see Figure 03). A concentration of Fe (Ferrous/Iron) finds (find no. 22) from within the primary fill (105) of the World War 1 practice trench [103] within field B consisted of three (3) Mills Bomb safety pins and a single (1) grenade spanner suggests that this trench (103) was a potential '*lobbing post/pit*'. The finds recovered from the southern, upper slopes of the fields at Bodelwyddan were dominated with Cu (copper) Alloy, Mill's Bomb spring mechanisms, as well as some base plugs and all of the fragments associated with the grenade body suggesting that this was an area where grenade 'lobbing' or throwing was practiced.

Mills Bomb - Spring Mechanism

Finds No.	Description	Material	Weight (g)	L/D* (mm)
2	Mills Bomb -Spring Mechanism	Cu Alloy	23	510
7	Mills Bomb -Spring Mechanism	Cu Alloy	26	510
8	Mills Bomb -Spring Mechanism	Cu Alloy	34	550
14b	Mills Bomb -Spring Mechanism	Cu Alloy	7	620
15	Mills Bomb -Spring Mechanism	Cu Alloy	35	550
17	Mills Bomb -Spring Mechanism	Cu Alloy	115	570
20	Mills Bomb -Spring Mechanism	Cu Alloy	8	530
21	Mills Bomb -Spring Mechanism	Cu Alloy	34	560
23	Mills Bomb -Spring Mechanism	Cu Alloy	34	560
25	Mills Bomb -Spring Mechanism	Cu Alloy	35	550
26	Mills Bomb -Spring Mechanism	Cu Alloy	27	550
28	Mills Bomb -Spring Mechanism	Fe	25	520
30	Mills Bomb -Spring Mechanism	Cu Alloy	27	510
31	Mills Bomb -Spring Mechanism	Cu Alloy	28	550
33	Mills Bomb -Spring Mechanism	Cu Alloy	29	520
42	Mills Bomb -Spring Mechanism	Cu Alloy	30	560
55	Mills Bomb -Spring Mechanism	Cu Alloy	26	490
64	Mills Bomb -Spring Mechanism	Cu Alloy	26	500
79	Mills Bomb -Spring Mechanism	Cu Alloy	30	560

*Table 1 : Catalogue of Cu Alloy, Mill's Bomb – spring mechanisms with finds number, weight and length/diameter (*L/D) measurement (mm).*

William Mills, was an industrial designer from Sunderland and he patented, developed and manufactured the "Mills bomb" at the Mills Munition Factory in Birmingham, England, in 1915. The Mills bomb was inspired by an earlier design by Belgian captain Leon Roland. Roland and Mills were later engaged in a patent lawsuit over who originated the design. The Mills bomb was adopted by the British Army as its standard hand grenade in 1915, and designated with the model number "No. 5".

The Mills bomb underwent numerous modifications. The No. 23 was a variant of the No. 5 with a rodded base plug which allowed it to be fired from a rifle. This concept evolved further with the No. 36, a variant with a detachable base plate to allow use with a rifle discharger cup. The final variation of the Mills Bomb, the No. 36M, was specially designed and waterproofed with shellac for use initially in the hot climate of Mesopotamia in 1917, but remained in production for many years. By 1918 the No. 5 and No. 23 were declared obsolete and the No. 36 (but not the 36M) followed in 1932 (Saunders 1999).

Mills Bomb - Base Plug

Finds No.	Description	Material	Weight (g)	L/ D(mm)
4	Mills Granade Base Plug?	Cu Alloy	6	270
5	Mills Granade Base Plug?	Cu Alloy	5	430
24	Mills Granade Base Plug?	Cu Alloy	15	260
40	Mills Granade Base Plug	Cu Alloy	10	210
43	Mills Granade Base Plug	Cu Alloy	61	350

Table 2 : Catalogue of Cu Alloy, Mill's Bomb – base plugs with finds number, weight and length/diameter (L/D) measurement (mm).

The No. 5 Mk. 1 was the first version of Mill's Bomb. The explosive filler was loaded through a small circular plug on the upper half, the detonator assembly was loaded through the bottom through the baseplug, and the pull-ring striker was screwed in to the fuse well at the top. The lever was protected by metal "ears" flanking the top that could be used to locate it in darkness. It was first issued in May, 1915 but wasn't in general issue until mass production caught up a year later in 1916. The Mk. 2 had a redesigned stronger safety lever (Saunders 1999).

Mills Bomb - Fragments

Finds No.	Description	Material	Weight (g)	L/D (mm)
9	Mills Granade Fragment?	Fe (cast)		470
16	Mills Granade Fragment?	Fe (cast)	35	570
54	Mills Granade Fragment?	Fe (cast)	2	120
82	Mills Granade Fragment?	Cu Alloy	5	400

Table 3 : Catalogue of Fe/Cu Alloy, suspected fragments of Mill's Bomb with finds number, weight and length/diameter (L/D) measurement (mm).

Mills Bomb - Components

Finds No.	Description	Material	Weight (g)	L/D (mm)
3	Mills Grenade Filling hole Plug	Steel	4	120
10	Mills Bomb -Handle	Fe	52	570
18	Mills Bomb -Handle	Fe	36	360
19	Mills Bomb -Handle	Fe	8	520
73	Mills Bomb - Spanner	Fe	53	1100
74	Mills Bomb - Safety pin	Cu Alloy	10	700
75	Mills Bomb - Safety pin	Cu Alloy	14	430
76	Mills Bomb - Safety pin	Cu Alloy	11	360

Table 4 : Catalogue of Fe/Cu Alloy, Mill's Bomb – Handles, Safety Pins, Filling hole plug and spanner. With finds number, weight and length/diameter (L/D) measurement (mm).

Flare Pistol Cartridges

Two separate flare cartridges (finds no. 13 & 71) were recovered during the watching brief and these were roughly commensurate with the 1" (inch) variant which was in use during World War 1 – these were stamped "Eley – London – V". Furthermore, a single 8-gauge ammunition cartridge base (find no. 1) was recovered with the headstamp "Beesley – London - No 12 – London" (see Figure 10, Plate 45). It is unclear whether the 8-gauge ammunition round dates to the same era as the World War 1 flare gun ammunition that was found during the survey - the only Army issue weapon that would employ such ammunition would most likely have been the US Army trench gun which was not issued by the British Army at this time, and only saw limited use during the War by the US.

Cartridges

Finds No.	Description	Material	Weight (g)	L/D (mm)
1	*8 Gauge Round	Cu Alloy	7	210
13	Signal Cartridge Base 1"	Cu Alloy/Paper	54	300
71	Signal Cartridge Base 1"	Cu Alloy/ Paper	8	300

Table 5 : Catalogue of Cu Alloy/Paper cartridges found during the metal detecting survey. With finds number, weight and length/diameter (L/D) measurement (mm).

Flare pistols were used for signalling, illumination at night or as distress flares and could fire a variety of different cartridges to suit these different roles. British and commonwealth flare pistols came in either 1" or 1.5" calibres (Bull 2002).

These cartridges consisted of a heavy card body, with a brass base. There was a coloured band around the body of each cartridge indicating the colour of the flare, a red band is visible on Find 71 – although it is not clear what a red flare would have represented, as the attributed meanings changed on a regular basis, sometime daily, during the War. Other markings can indicate the type of cartridge (Mk V: Find 71), the lot number of the cartridges and at the bottom the manufacturer's name (ELEY: LONDON – Find 71) and dates of manufacture. The flare cartridge in this assemblage indicates that it was manufactured by ELEY, indicating that it was produced by Eley Brothers, a British manufacturer of firearms cartridges at the ELEY Cartridge Factory. The factory was located in Edmonton, London

and was well situated between the River Lee Navigation and the Great Eastern Railway at Angel Road. The company was founded by Charles and William Eley in London in the 1820s. The Eley Brothers purchased the patent rights to the "wire cartridge" in the spring or early summer of 1828.

A leading ballistics expert F. W. Jones was hired in 1907 and a 107 ft shot tower was built at the Edmonton site soon after. However, the factory was ill-adapted to mass production - it produced 209 million .303 cartridges in World War I compared with 2,373 million at Kynochs, Birmingham factory - but its specialised skills made it ideal for innovation, such as the preparations of munitions for aircraft (Harding 2006).

The base of these cartridges has a central percussion cap in the centre and the cartridge would have been wrapped in cardboard which contained layers of chemicals to project the flare material in order to properly to ignite it and make it burn for a set time as required (See Figure 10).

The .303 British Service Cartridge

Five separate .303 service spent rounds (finds no. 14, 56, 61, 62 & 68) were recovered during the watching brief and four of these were quite concentrated suggesting the potential for concentrated fire within a general area.

.303 Rounds

Finds No.	Description	Material	Weight (g)	L/D (mm)
14	.303 Round - Lee Enfield	Cu Alloy	15	300
56	.303 Round - Lee Enfield	Cu Alloy	7	310
61	.303 Round - Lee Enfield	Cu Alloy	11	410
62	.303 Round - Lee Enfield	Cu Alloy	10	410
68	.303 Round - Lee Enfield	Cu Alloy	9	470

Table 6 : Catalogue of Cu Alloy .303 cartridges found during the metal detecting survey. With finds number, weight and length/diameter (L/D) measurement (mm).

The .303 British Service cartridge, commonly known as the .303 or .303 British was adopted by Britain along with the Lee - Enfield Rifle in 1889 and contained 71.9 grains of black powder. Cordite was used as a propellant from 1891; Cordite consisted of 58% Nitro-glycerine, 37% Nitro-cellulose and 5% Mineral Jelly and was normally pressed into cord. Nitro-cellulose was first used as a propellant in the .303 cartridge during 1894 although it was not officially approved for service until 1916 (Temple 1986). This propellant, however, was not considered to be as stable as cordite in the tropics and cordite was, therefore, still retained as a propellant in military cartridges for the remainder of the cartridges service life. Nitro-cellulose propellant however was extensively used during the first and second world wars (Hogg 1982).

In 1910 the 174 grain, pointed, Mark VII bullet was adopted and the muzzle velocity was increased to 2440 feet per second. This mark of bullet remained the standard ball round for the remainder of the .303 cartridges service life. Tracer, armour piercing and incendiary cartridges were adopted by the British Government during 1915, explosive bullets having been approved for service in 1916. These

rounds were extensively developed over the years and saw several Mark numbers (Labbett & Mead 1988).
Since the introduction of the .303 cartridge in 1889 it has been manufactured in at least 20 countries and in nearly 200 military variants as well as in numerous experimental and sporting cartridge configurations. During the First World War more than 7,000 million Mk 7 ball cartridges were produced by British factories alone (Tebbutt 2020).

The Coins

Two separate Cu alloy coins were found (finds no. 69a & 69b) during the watching brief within **Field C** approximately 3.00m apart to the northeast of Bodelwyddan Castle. These were both half pennies but represented the same denominations but from the reigns of different monarchs;

1. Edward the VII (1902) – Obverse description: Bare head of the King facing right; inscription around: *EDWARDVS VII DEI GRA:BRITT:OMN:REX FID:DEF:IND:IMP:*, reverse description: Britannia seated facing right on a rock wearing a helmet and flowing robes; she holds a trident and rests her right hand on a shield which bears the combined crosses of the Union Flag; inscription around, *HALF PENNY*; in exergue, *1902.*

In January 1901, Queen Victoria died and her son Edward succeeded to the throne as Edward VII after having spent nearly 60 years as the official heir, although he was not crowned until August 1902. He began his tenure as monarch with energy and his reign restored splendour to a monarchy that had been characterised by a very public melancholy since his father's death 40 years earlier. Related to most of European royalty (he was known as the 'Uncle of Europe'), he was able to assist in foreign policy negotiations. Following his well-received addresses during a state visit to Paris, he helped pave the way for the Anglo-French Entente Cordiale of 1904. Edward was also the first British monarch to visit Russia. In 1902, he founded the Order of Merit to reward those who distinguished themselves in science, art or literature.

In the last year of his life, Edward was involved in a constitutional crisis brought about by the refusal of the Conservative majority in the Lords to pass the Liberal budget of 1909. He died on 6 May 1910, before the situation could be resolved, and was succeeded by his son who became King George V (Glencross 2015).

2. George V (1910) - Obverse description: Bare head of the King facing left; inscription around: *GEORGIVS V DEI GRA:BRITT:OMN:REX FID:DEF:IND:IMP*, reverse description: Britannia seated facing right on a rock wearing a helmet and flowing robes; she holds a trident and rests her right hand on a shield which bears the combined crosses of the Union Flag with the sea behind; inscription around, *HALF PENNY*; in exergue, *1910.*

George was born on 3 June 1865 in London, the second son of the Prince of Wales. When George was 18, he went into the Royal Navy, but the death of his elder brother in 1892 meant he had to leave a career he enjoyed, as he became heir to the throne. He married his elder brother's fiancée, Princess Mary of Teck, and they had six children. In May 1910, George became king. His reign inherited the constitutional crisis of his father's reign which revolved around the government's attempt to curb the power of the House of Lords. After the Liberal government obtained the king's promise to create sufficient peers to overcome Conservative opposition in the Lords (and won a second election in

1910), the Parliament Bill was passed by the Lords in 1911 without a mass creation of peers. The year 1911 also saw George's visit to India, the only king-emperor to make the journey.
Public respect for the king increased during World War One, when he made many visits to the front line, hospitals, factories and dockyards. In 1917 anti-German feeling led him to adopt the family name of Windsor, replacing the Germanic Saxe-Coburg-Gotha.

After the overthrow of the Russian Tsar in 1917, the post-war world saw the toppling of monarchies all over Europe, many of them related to the British royal family. The king's relationship with parts of the British Empire changed too. The 1916 Easter Rising in Dublin and subsequent civil war resulted in the setting up of the Irish Free State in 1922, which became a dominion, while the six northern counties remained part of the United Kingdom. The Statute of Westminster of 1931 meant dominion parliaments could now pass laws without reference to United Kingdom laws. This paradoxically increased the monarchy's importance, since the dominions (no longer subordinated to one supreme parliament at Westminster) were now linked through common allegiance to the crown. India gained a measure of self-governance in 1935.

In 1924, George readily accepted the first Labour government. In 1931 the international economic slump caused a political crisis in Britain. The king promoted the idea of a 'national coalition' government of Labour, Conservatives and Liberals, which was eventually formed. In 1935, King George V celebrated his Silver Jubilee, an occasion of great public rejoicing. He died on 20 January 1936 and was succeeded by his son Edward (Cannadine 2018).

Other Finds

Of the other finds recovered from the metal detecting survey none were particularly diagnostic in terms of dating, consisting of a variety of objects including an iron hinge (57), a rivet (50), several split pins (47, 49, 77), a filler cap (53), various lead weights (and/or) seals (44, 51, 70) and a corroded penknife (11).

However among these other finds, the most abundant was iron nails and nail heads which may be of the most significance of all the finds as they relate most closely to the primary preoccupation of World War 1 – the construction of trenches. British trenches during the Great War varied from the German trenches in terms of sophistication; as British trenches considered to be of lesser quality and ingenuity. However, as the War dragged on even British designs took on a semi-permanent nature with the construction of dugouts, firing trenches and reserve trenches as the concept of trench warfare developed. These trenches would have been outfitted with walls consisting of timber framework and corrugated iron sheeting which were attached together with iron nails. A series of wooden duckboards (or elevated walkways) would have covered sumps (or drainage trenches) which would help to channel water away from the area of the trench where the troops spent most of their time. The duckboards would also have been nailed to timber runners and laid in sections, which served to keep them in place at the base of the trench.

The most prevalent finds by weight (902g) and number (37) during the watching brief were iron nails. The sheer amount of iron nails that was required to outfit the vast network of British trenches across the battlefields of France and Belgium would have been enormous. This would have also been true for the training trenches at Bodelwyddan and Kinmel Camp which would have been accepting large

amounts of corrugated iron, timber planks and iron nails with which to build the practice trenches. Iron nails would have been a core component of the materiel required by the British sappers of World War 1 and the ubiquitous wire nail was to be mass produced from 1913 in places like Glasgow and the Midlands of England (Sjörgren 2020).

9.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

9.1 Overview

The archaeological watching brief was maintained by Catherine Jones BSc, MSc and Josh Dean BA ACIfA, archaeological contractors at Aeon Archaeology. The site was attended from the 19th - 20th, 23rd - 25th, 29th - 30th & 31st Mar 2020 and the 1st – 9th, 14th – 22nd Apr 2020 and the weather conditions varied between bright sunshine, overcast with persistent rain to heavy rain.

The works consisted of an open-cut pipe trench in order to receive a new water main. The route (in its entirety) of this pipe ran north from the WTW north of Cae Onnen at NGR SH 99667 73695 and across Glascoed Road at NGR SH 99820 73910. Then the open-cut trench skirted the eastern limit of the Bodelwyddan Park plantation, before heading north c112m west of the main SAM polygon and c30m east of the Observation Post included within the same SAM designation. The pipe trench then curved north-eastward past the eastern limit of Bodelwyddan Castle, terminating at NGR SJ 00112 74798. The watching brief was maintained from a location, south of Glascoed Road, approximately 600m northeast of the WTW, roughly commensurate with the southernmost part of the Bodelwyddan Park Plantation. It was then maintained until the pipe trench curved north-eastward past the eastern limit of Bodelwyddan Castle.

The initial phase of Aeon Archaeology's responsibility at Bodelwyddan during the works was in order to act as a Clerk of Works during the initial formation of the site; which included monitoring the site on a daily basis and decision making to avoid any potential damage to underlying archaeological deposits by ground disturbance. This measure was taken as a direct response to advice provided by CADW in order to preserve the WW1 era archaeological features at Bodelwyddan highlighted by CPAT's aerial photography. There is also a principle of preservation that extended to the trench systems on the hillside at Bodelwyddan that alluded to by their National significance, which is to be recognised by the anticipated expansion of the SAM polygon by CADW in the near future.

Prior to the commencement of the works an easement 6.00m wide was established using a wire fence with timber posts which ran the length of the route, both to isolate the area from livestock and also to restrict movement of the contractors on site to that area, therefore restricting any potential damage to the WW1 trenches.

Following the erection of the easement the route of the pipe trench was marked out using wooden stakes and the topsoil was subsequently surveyed by a UXO (unexploded ordnance) specialist using a *Schonstedt GA-72 CD/ML* fluxgate magnetometer prior to archaeological investigation. Following the safety inspection by the UXO specialist the archaeologist would then survey the topsoil with a *Garrett ACE 250* Metal detector in order to recover ferrous and non-ferrous archaeological finds. Where finds were uncovered, they were recorded by the archaeologist and assigned a 12-digit NGR. Following this phase of survey a 13-tonne tracked excavator was used to reduce the ground level by 0.20m before the process of scanning and survey, initially by the UXO specialist and subsequently the archaeologist was repeated. This process continued, with the reduction in ground level by 0.20m followed by a survey, until the natural glacial clay soil horizon was achieved, at which point the archaeological scanning subsided while the UXO survey continued until the full depth of the trench was achieved.

9.2 Field A.

(Top of the northern facing slope) (SH 99871 74154 – SH 99890 74240) (plates 3-6)

The northern part of Field A (*See Figure 02*) initially forms part of the break of slope of a long curving plateau on the southern hillside east of the tree plantation before gradually sloping northward towards the fence line with field B. The initial works involved the excavation of a pipe trench which was excavated to a width of 0.60m by 2.00m (maximum depth) and was located within the centre of the fenced easement. It cut through 0.42m deep soft, dark grey-brown clay-silt topsoil with frequent sub-rounded pebble inclusions with very occasional fragments of post-medieval white ware and blackware ceramic of 19th century date. This lay above 0.63m of firm, mid red-brown (with yellow and grey), natural clay substrata with very occasional large sub-rounded glacial boulders. At the southern extent of the trench this clay lay above >0.95m of limestone bedrock. There were no archaeological features exposed during the excavation of the pipe trench within this field. A collection of finds were recovered from the line of the pipe trench including a 1" Flare Cartridge, three Cu Alloy Spring Mechanisms from Mills Bombs, multiple Fe (Ferrous) objects, a horseshoe and a wooden handled penknife. (Finds nos. 1-10; 63-67)

9.3 Field B.

(smaller enclosed field on northern facing slope) and the World War 1 training trench [103] (SH 99890 74240 – SJ 00015 74401) (plates 7-15)

The boundary between Fields A and B consisted of a barbed wire fence which had been situated at a second less pronounced break of slope on the hillside falling gently away towards Bodelwyddan Castle in the north before sweeping to the northeast into what becomes Field C. The pipe trench once more cut through 0.40m deep soft, dark grey-brown clay-silt topsoil with frequent sub-rounded pebble inclusions with very occasional fragments of post-medieval 19th ceramic. Which lay above >1.55m of firm, mid red-brown (with yellow and grey), natural clay substrata with very occasional large sub-rounded glacial boulders. A collection of finds were recovered from the line of the pipe trench including a 1" Flare Cartridge, 13 Cu Alloy Spring Mechanisms from Mills Bombs, 2 Cu Alloy Safety levers from Mills Bombs, 2 Mills bomb iron body fragments and multiple Fe objects of uncertain providence. (Finds nos. 12-39)

At the **NGR SH 99855 74302** lying beneath 0.32m of dark grey-brown clay-silt topsoil (102) was the vestigial remnants of a WW1 practice trench that was not highlighted by the survey of aerial photography undertaken by CPAT in 2015. The trench cut [103] was linear and aligned northeast to southwest. It measured >2.02m in length by 1.41m in width and was 0.32m deep at its maximum depth. Its northern break of slope was almost imperceptible whilst its southern break of slope was more pronounced but was not sharp. The base of the trench was generally concave although it had an undulating quality to it. The trench had a single fill (105) which was >1.41m in length by 1.00m in width and 0.32m deep. This fill was a reasonably soft, dark grey-brown, clay-silt which produced 35 individual finds (Group Finds No. 22) which included three Mills Bomb safety pins, a single Cu Alloy Mills Bomb spring mechanism, a Cu alloy Mills Bomb safety lever, A Mills Bomb spanner, a fragment of Fe sheeting and 25 Fe nails of various sizes. This primary fill of the trench was most likely an alluvial deposit which washed into the base of the trench from the sides above.

TBM	*84.02*	**1**	*82.93*	**5**	*82.84*	**9**	*83.14*
BS	*1.22*	**2**	*82.98*	**6**	*82.83*	**10**	*83.36*
IH	*85.24*	**3**	*82.96*	**7**	*82.97*	**11**	*83.44*
		4	*82.88*	**8**	*82.91*	**12**	*n/a*

Table 7: Levels OD(m) for the World War 1 Trench [103] See ***Figure 04.***

Positioned directly above the fill (105) were the remnants of four timber duckboards (104) which consisted of a very brittle wood which only covered a limited area to the northwest of the trench; >1.00m long by 0.40m wide. The boards had been subject to the pressure of weight of the soil above and as such were very ephemeral, surviving largely as impressions upon the fill (105) located directly below. A concentration of Fe Nails formed a northwest – southeast aligned linear formation, directly to the northwest of where the duckboards (104) were absent - their location corresponded with the alignment of the duckboards suggesting these were fixings for more duckboards that were previously continuing along what would have been the north eastern edge of the trench. Three wooden timbers that formed the majority of the duckboards were laid in the alignment of northeast-southwest and appeared to be spanning the gap at the base of the trench (the sump), with a single timber located perpendicular to these other boards along slightly beyond their northern margin. The morphology of these timbers corresponds with the photographic evidence of trenches from World War 1 as well as work conducted around Ypres in Belgium (Stichelbaut 2017, Verdegem 2007).

9.4 Field C.

(large, linear enclosed field to east of Bodelwyddan Castle and Grounds) The Anchor stone and the Lime Kiln (214) (SJ 00015 74401 – SJ 00097 74808) (plates 7-15)

The boundary between Fields B and C once again consisted of a barbed wire fence located approximately 120m northeast of the previous fence. The large sweeping field (Field C) located to the east of Bodelweyddan Castle is the foreground for a typical late 18th century estate landscape characterised by large open vistas, punctuated by belts of woodland. At its south western corner there is a reconstructed World War 1 trench system with associated dugouts, officers' quarters and an infirmary (see Plates i-iii). Towards the northern end of the field there is an access trackway (1) which permits access to the Castle grounds eastern gate, this track crosses the field from west to east (crossing the pipeline easement) before gently curving away to the northeast. Approximately 140m northeast of where the trackway (1) crossed the easement the track branches away to the northwest forming a second trackway (2) and this crossed the easement once more before running along the northern boundary of the Bodelwyddan castle grounds.

The pipe trench cut through a 0.48m deep soft, dark grey-brown clay-silt topsoil with frequent sub-rounded pebble inclusions and very occasional fragments of post-medieval 19th ceramic (similarly to the other fields). Which lay above >1.52m of firm, mid red-brown (with yellow and grey), natural clay substrata with very occasional large sub-rounded glacial boulders. A collection of finds were recovered from the line of the pipe trench including a Primer cap for a round of ammunition, 5 spent .303 Mark VII ammunition rounds, 3 Cu Alloy Spring Mechanisms from Mills Bombs, a Cu Alloy locking pin, a lead (Pb) plum-bob weight, an Edward VII Half Penny dated 1902 and a George V -

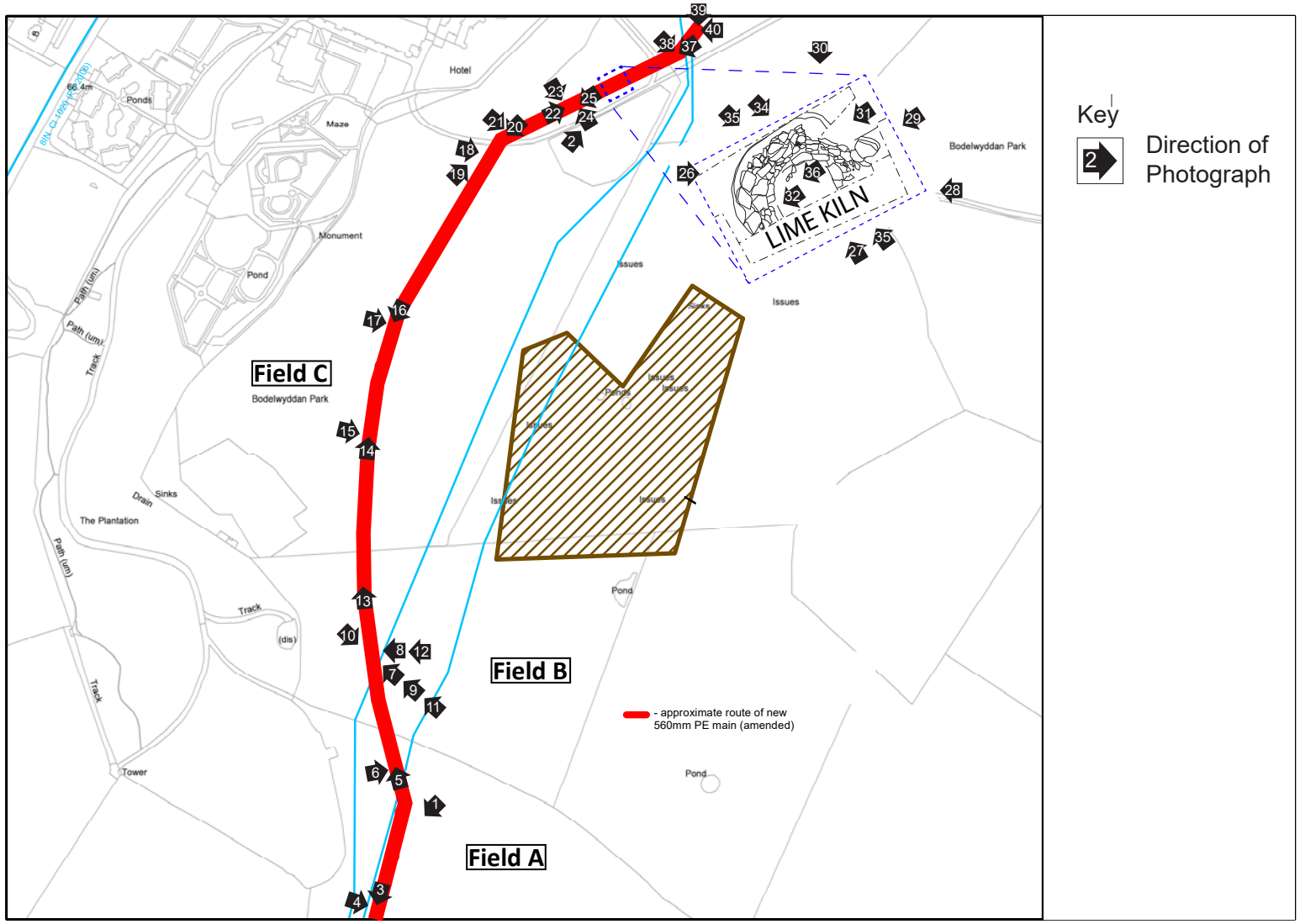

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Figure 03: Location of archaeological photographs (Plates 1-40), at Glascoed, Abergele, Conwy. Scale 1:5,000 at A4

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Plate 01: General pre-excavation conditions shot at top of slope within the pipe trench easement, Glascoed to Bodelwyddan DCWW - from the north-northeast - no scale

Plate 02: General pre-excavation conditions shot at base of slope within the pipe trench easement, Glascoed to Bodelwyddan DCWW - from the southwest - no scale

Plate 03: Trench shot at top of slope, Glascoed to Bodelwyddan DCWW - from the north-northeast - no scale

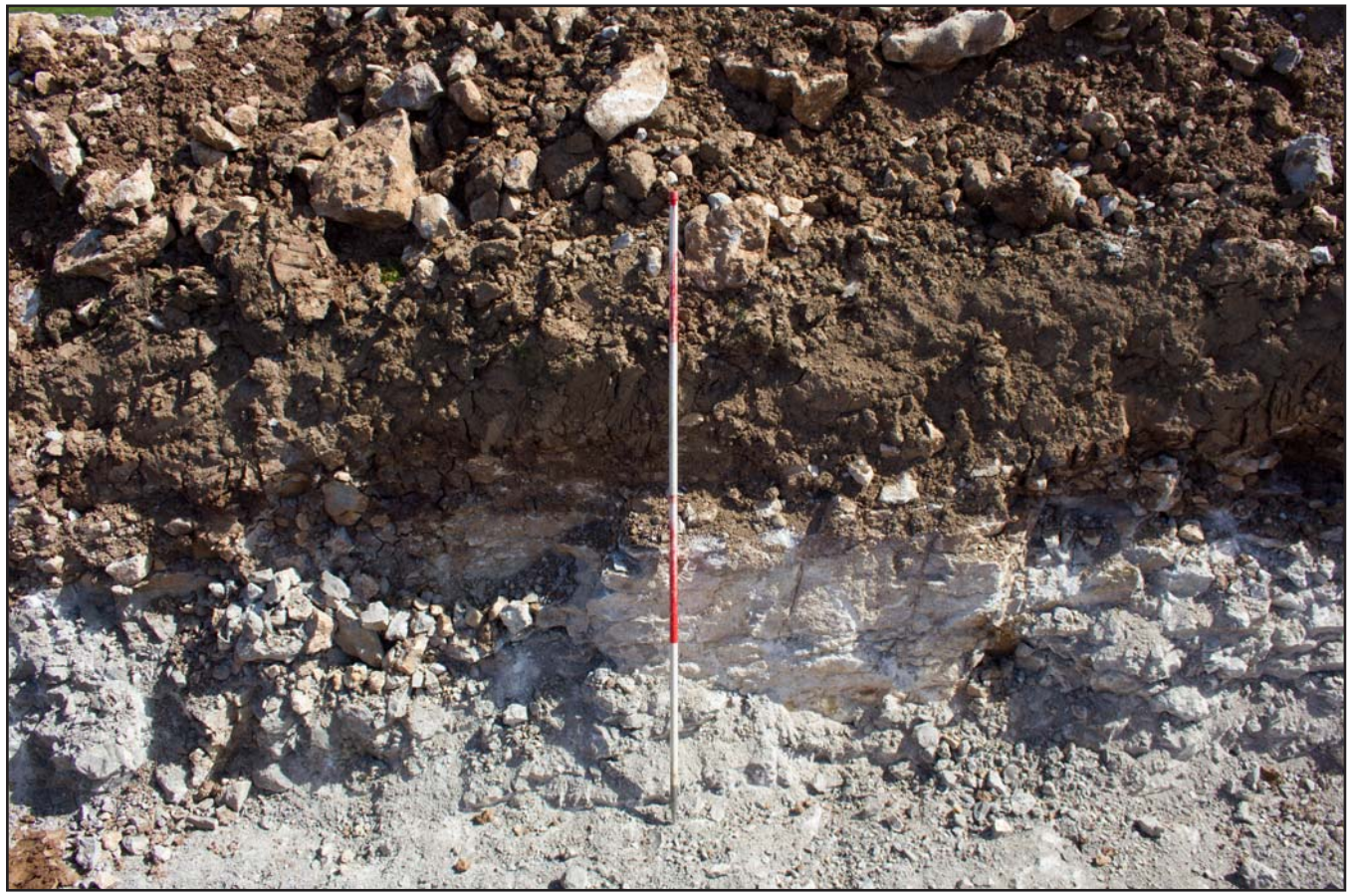

Plate 04: Section shot of Trench (shown Plate 03) Glascoed to Bodelwyddan DCWW - from the northwest - 2.00m scale

Plate 05: Trench shot of northwest facing slope, Glascoed to Bodelwyddan DCWW - from the southeast - 1.00m scale

Plate 06: Section shot of Trench (shown Plate 05) Glascoed to Bodelwyddan DCWW - from the southwest - 1.00m scale

Plate 07: Pre excavation shot of World War 1 Trench [103], Glascoed to Bodelwyddan DCWW - from the southeast - 1.00m scale

Plate 08: Pre excavation shot of World War 1 Trench [103], Glascoed to Bodelwyddan DCWW - from the east - 1.00m scale

Plate 09: Post excavation shot of World War 1 Trench [103], Glascoed to Bodelwyddan DCWW - from the southeast - 1.00m scale

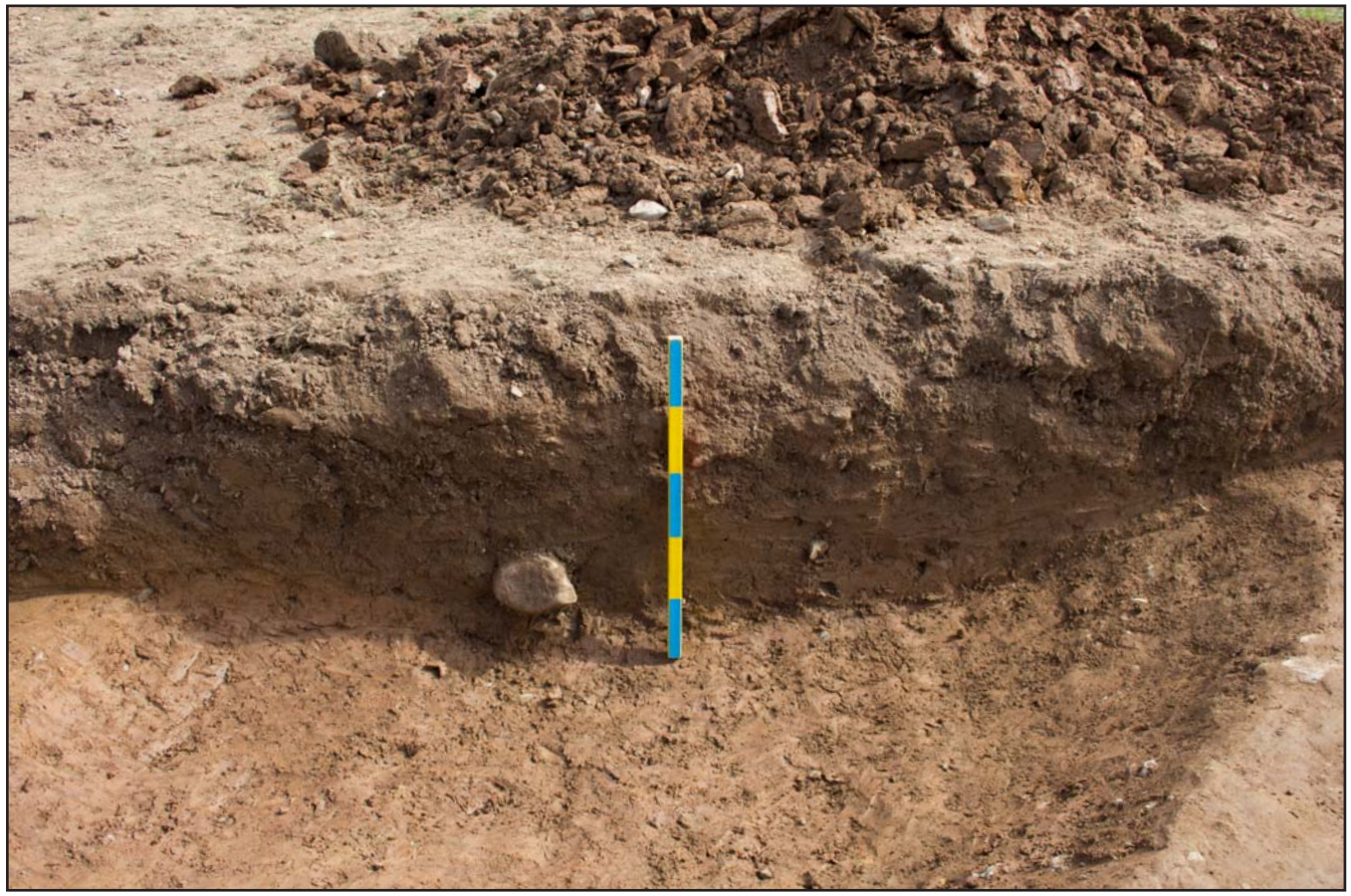

Plate 10: Northwest facing section of World War 1 Trench [103], Glascoed to Bodelwyddan DCWW - from the northwest - 0.50m scale

Plate 11: Southeast facing section of World War 1 Trench [103], Glascoed to Bodelwyddan DCWW - from the southeast - 0.50m scale

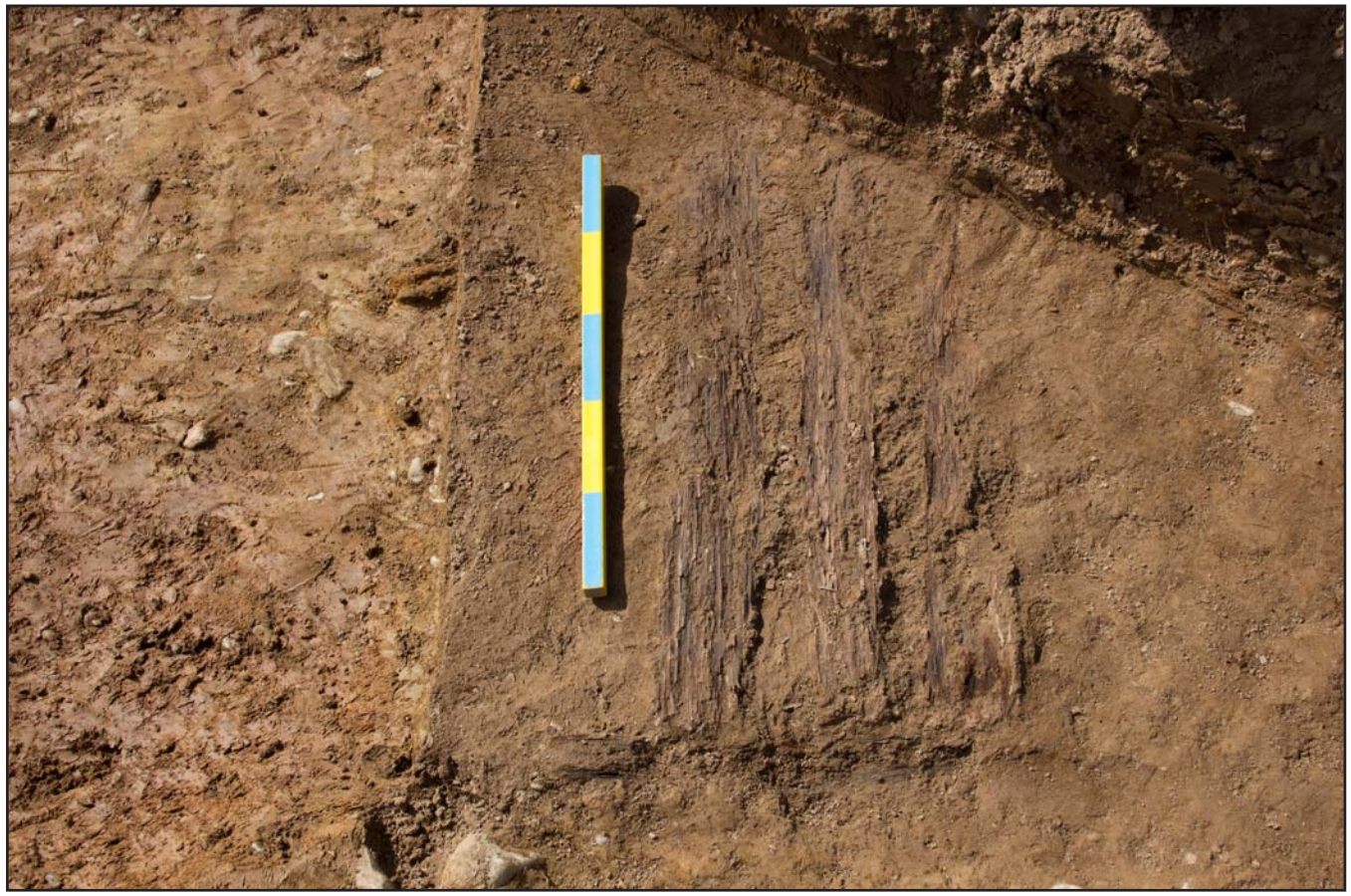

Plate 12: Focus shot of Duckboards (104) witin the World War 1 (WW1) Trench [103], Glascoed to Bodelwyddan DCWW - from the east - 0.50m scale

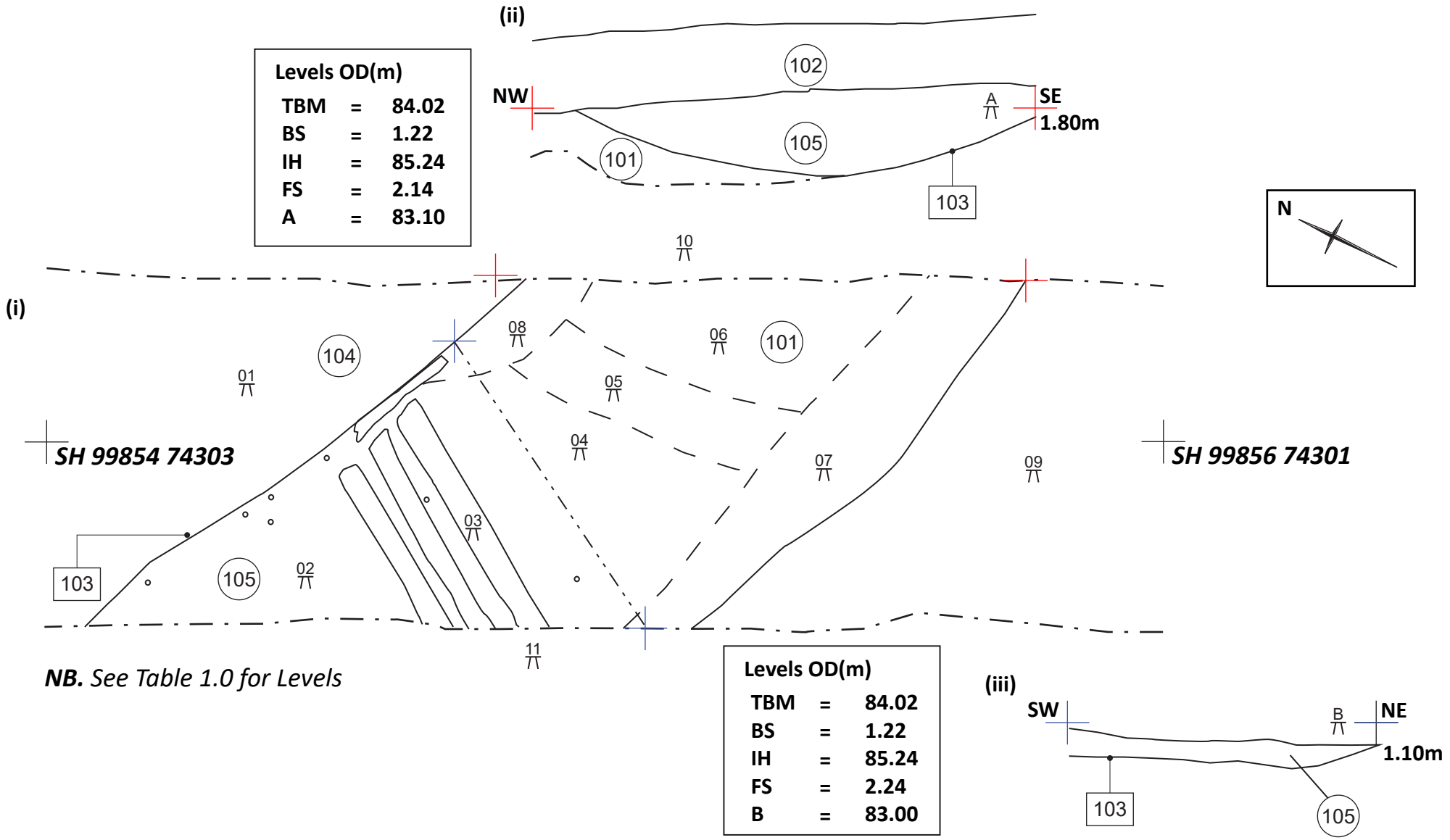

Figure 04: (i) Archaeological Plan of the World War 1 Trench [103], (ii) The northwest facing section of [103], and (iii) The southeast facing section of [103]. uncovered at Glascoed, Abergele, Conwy. Scale 1:20 at A4.

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Half Penny dated 1916, an 8 bore gun cartridge and multiple Fe objects of uncertain providence. (Finds nos. 39b -71).

Located to the immediate southwest of trackway (1), approximately 0.12m beneath the topsoil was a limestone anchor point with a cast iron eye loop which had been fixed into the stone with a lead flux. This stone was adjacent to the trackway; 2.60m to the southwest of the track and 61.50m to the southeast of the east gate of the castle grounds **(NGR SJ 99959 74709)**.

Approximately 82.00m to the northeast (**NGR SH 00018 74764**) (see Figure 05) of the anchor stone was a buried sub-rounded lime kiln (214) 4.75m long by >2.43m wide by >2.30m in depth. This structure was built using dressed stone slabs which were positioned within a 45° angle cut [212] into the surrounding very hard, dark orange-brown clay natural (200). The clay which was in direct contact with the facing stones (211) was stained a mid-grey-black colour (209) and was friable; this clay had been heavily heat effected or almost burnt by during the firing process of the lime kiln. Adjacent to the grey/black heat effected clay (209) was another discoloured light red-orange clay (210) which appeared to be a secondary band of heat affected natural which could suggest reflected that the kiln went through a process of heating and cooling resulting in this bright halo of heat effected clay natural.

TBM	*50.12*	**1**	*51.43*	**5**	*50.15*	**9**	*49.10*	**13**	*50.81*
BS	*2.79*	**2**	*50.95*	**6**	*50.19*	**10**	*49.34*	**14**	*50.45*
IH	*52.91*	**3**	*50.70*	**7**	*50.52*	**11**	*50.37*	**15**	*51.02*
		4	*50.70*	**8**	*49.24*	**12**	*50.77*	**16**	*n/a*

*Table 8: Levels OD(m) for the Lime Kiln (214) See **Figure 07.***

The dressed stones formed the kiln wall (211) and consisted of medium sized angular boulders and were un-mortared. The primary fill of the kiln consisted of a soft, white, lime-ash (215) which was partially amalgamated with the kiln wall suggesting it was an in-situ deposit. The depth of this deposit was >0.20m as the full depth was not understood. A 0.50m wide archaeological sondage was excavated against the kiln wall into this material in an attempt to ascertain its depth, however the working conditions became hazardous due to the depth restrictions and the corrosive nature of the lime ash. On the lower parts of the south western and southern walls of the kiln there were isolated areas of burning (207) these were friable, black, silt charcoal deposits which mostly survived as black staining on the walls of the kiln – perhaps where individual fires had been previously lit.

The secondary fill was a 0.96m deep layer of soft, mid white-grey, silt-lime ash (206) with distinct areas of orange-brown (burnt lime) within its matrix. This material consisted of small regular sized limestone fragments as well as the pulverised lime ash. It is probable that this secondary silt-lime ash (206) represents the initial layer of backfill within the kiln when it was closed down after its final firing – the elements of burnt limestone representing refuse that had become mixed in with the ash after removal from the kiln. Furthermore the section through the fills appears to show a possible tip line from the southwest. Above this layer was a tertiary 0.66m backfilled deposit of rubble infill (213) consisting of dressed angular and sub angular, large cobbles and small boulders, limestone blocks. This deposit was observed upon excavation of the kiln and is not shown in **Figure 06.** It is possible

that these limestone blocks (213) represent a larger superstructure that was collapsed into the void of the kiln.

Situated above the tertiary stone rubble infill (213) was a 0.84m layer of friable, mid grey-brown, silt clay (205), with abundant small sub-angular cobble inclusions. This deposit appeared to be a sealing layer which capped off the silt-lime ash (206) and stone infill backfill (213). At the south western and north eastern sides of the kiln wall, beneath this stony silt-clay (205), were two small deposits of quite hard, mid red-brown (with white speckle) clay-ash with frequent large sub-angular pebble inclusions. These discreet areas were likely caused by water ingress around the margins of the stony-clay silt (205) sealing layer which resulted in localised slumping and leaching of the clay deposit (205) into the ash deposit (206). Lying in a long, narrow lens/band (3.70m wide) above (205) was a 0.15m deep deposit of very soft, black, silt-charcoal (204). This charcoal lens (204) subdivided (205) from another clay layer (203) above; this deposit was a 0.83m deep, plastic, mid-red brown, redeposited clay with occasional sub-rounded cobble inclusions. This may represent a secondary sealing deposit for the kiln. Above this lay a very hard, 0.08m deep, light grey-brown, silt-sand (202) with abundant small sub-angular pebbles – which appeared to be a generic levelling layer across the whole area of the kiln and its immediate surroundings. The whole area was then covered by a 0.15m deep deposit of soft, dark grey-brown, silt-clay turf and topsoil (201).

Plate 13: Trench shot of north of World War 1 Trench [103], Glascoed to Bodelwyddan DCWW - from the southwest - 1.00m scale

Plate 14: Soil strip to natural clay on easement bend, Glascoed to Bodelwyddan DCWW - from the southwest - 1.00m scale

Plate 15: Section shot soil strip to natural clay on easement bend, Glascoed to Bodelwyddan DCWW - from the southwest - 1.00m scale

Plate 16: Trench shot at base of northwest facing slope, Glascoed to Bodelwyddan DCWW - from the northeast - 1.00m scale

Plate 17: Section shot of Trench (shown Plate 16) Glascoed to Bodelwyddan DCWW - from the northwest - 2.00m scale

Plate 18: Plan shot of Stone/Lead loop Anchor near trackway 1, Glascoed to Bodelwyddan DCWW - from the northwest - 0.50m scale

Plate 19: Context shot for Anchor and trackway 1, Glascoed to Bodelwyddan DCWW - from the southwest - 0.50m scale

Plate 20: Trench shot through trackway 1, Glascoed to Bodelwyddan DCWW - from the northeast - 1.00m scale

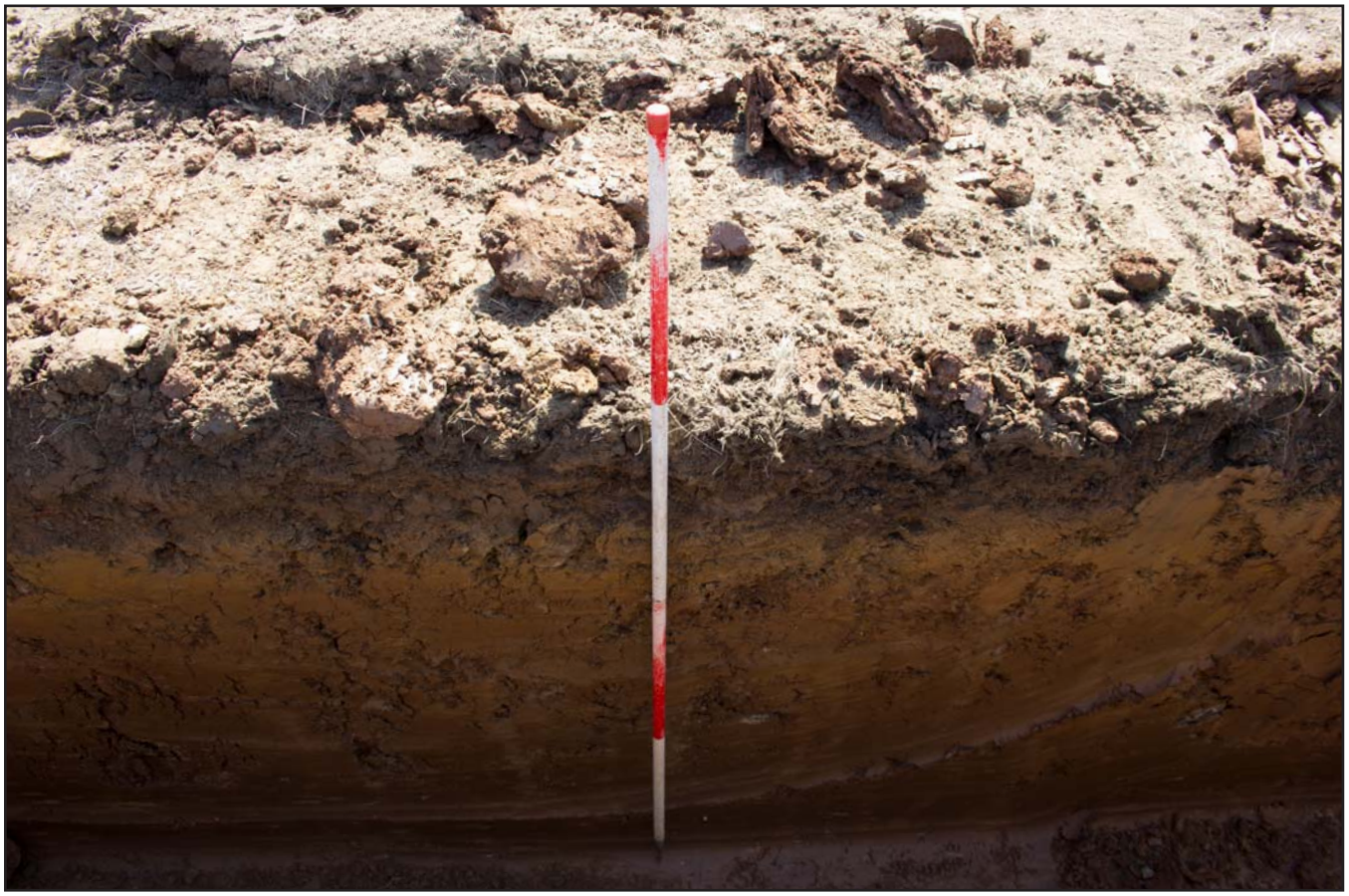

Plate 21: Section shot of Trench (shown Plate 20) Glascoed to Bodelwyddan DCWW - from the northwest - 2.00m scale

Plate 22: Trench shot northeast of trackway 1, Glascoed to Bodelwyddan DCWW - from the west-southwest - 1.00m scale

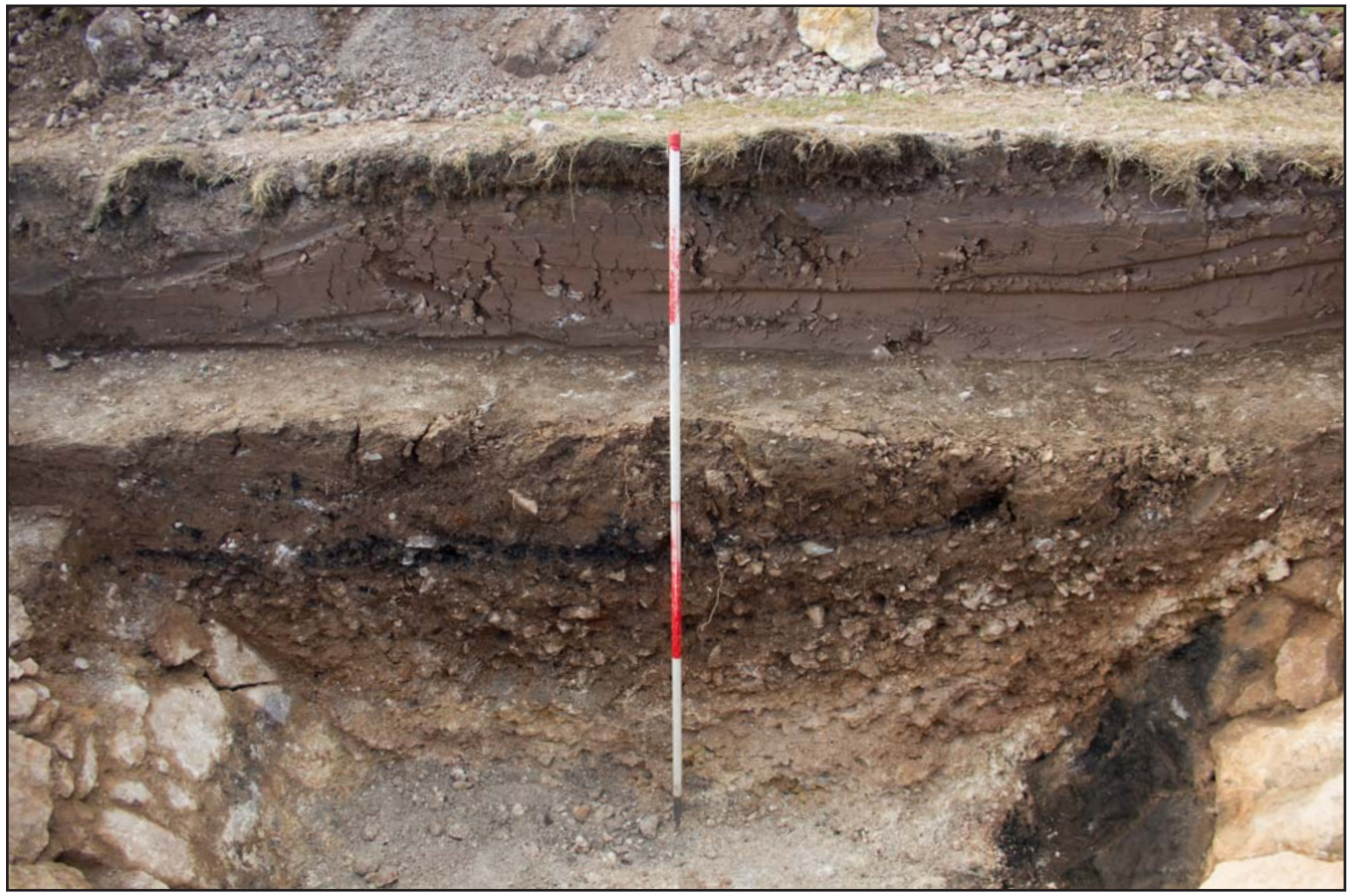

Plate 23: Section shot of Trench (shown Plate 22) Glascoed to Bodelwyddan DCWW - from the north-northwest - 2.00m scale

Plate 24: Cast iron drainage pipe running northwest - southeast toward former pond, Glascoed to Bodelwyddan DCWW - from the south-southeast - 1.00m scale

Plate 25: Cast iron drainage pipe running northwest - southeast toward former pond, Glascoed to Bodelwyddan DCWW - from the south-southeast - 1.00m scale

Plate 26: Oblique shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the west - 2.00m scale

Plate 27: Shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the south-southeast - 2.00m scale

Plate 28: Oblique shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the east - 2.00m scale

Plate 29: Shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the east-northeast - 2.00m scale

Plate 30: Shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the north - 2.00m scale

Plate 31: Shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the east-northeast - 2.00m scale

Plate 32: Focus on Lime Kiln wall (211) showing burning (207), Glascoed to Bodelwyddan DCWW - from the northeast - 2.00m scale

Plate 33: Plan shot of Lime Kiln (211), Glascoed to Bodelwyddan DCWW - from the northwest - 1.00m scale

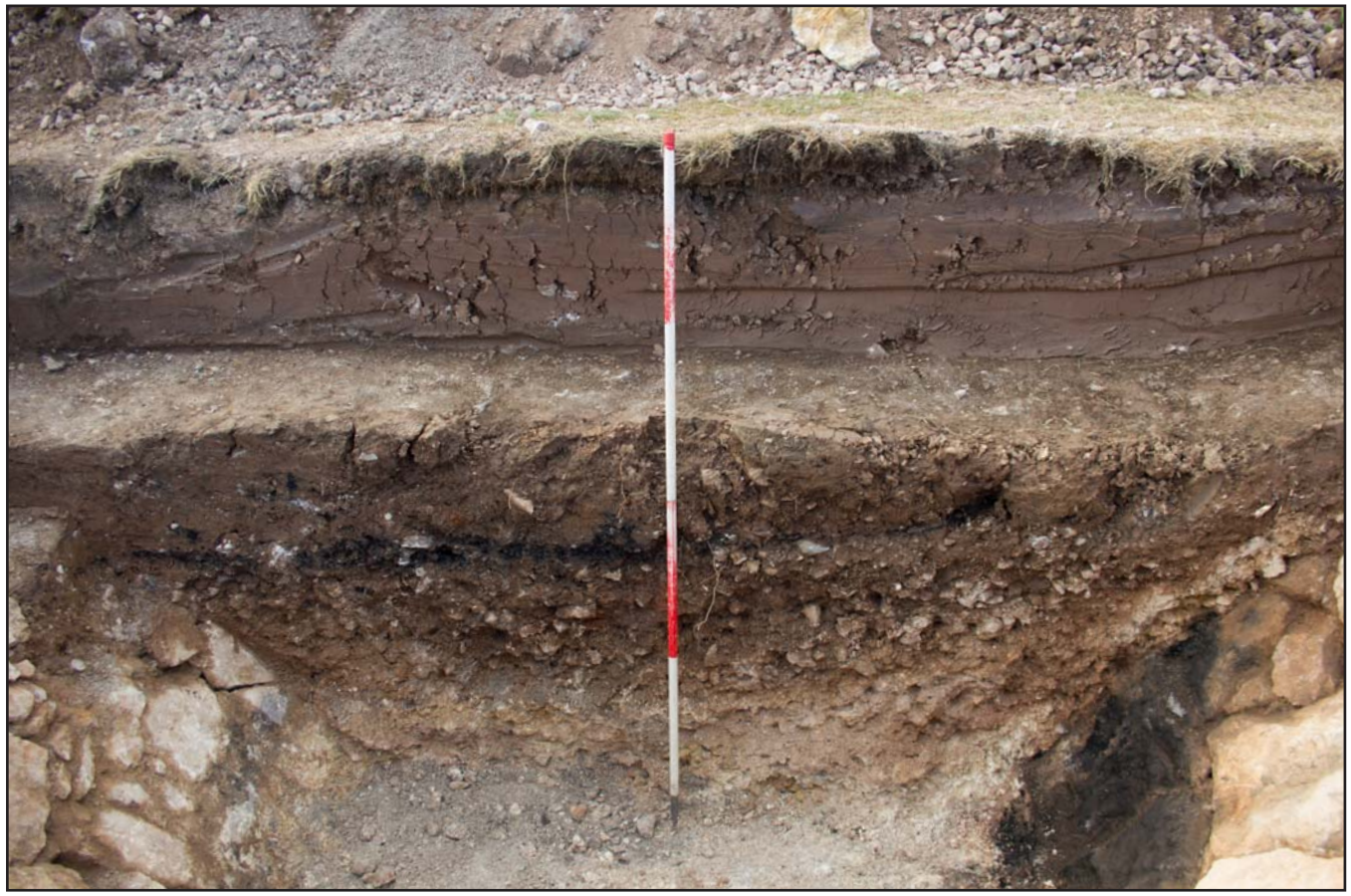

Plate 34: Section shot of Lime Kiln (211) stratigraphic fills, Glascoed to Bodelwyddan DCWW - from the northwest - 2.00m scale

Plate 35: Sondage within Primary lime-ash fill (215), Glascoed to Bodelwyddan DCWW - from the southeast - 0.50m scale

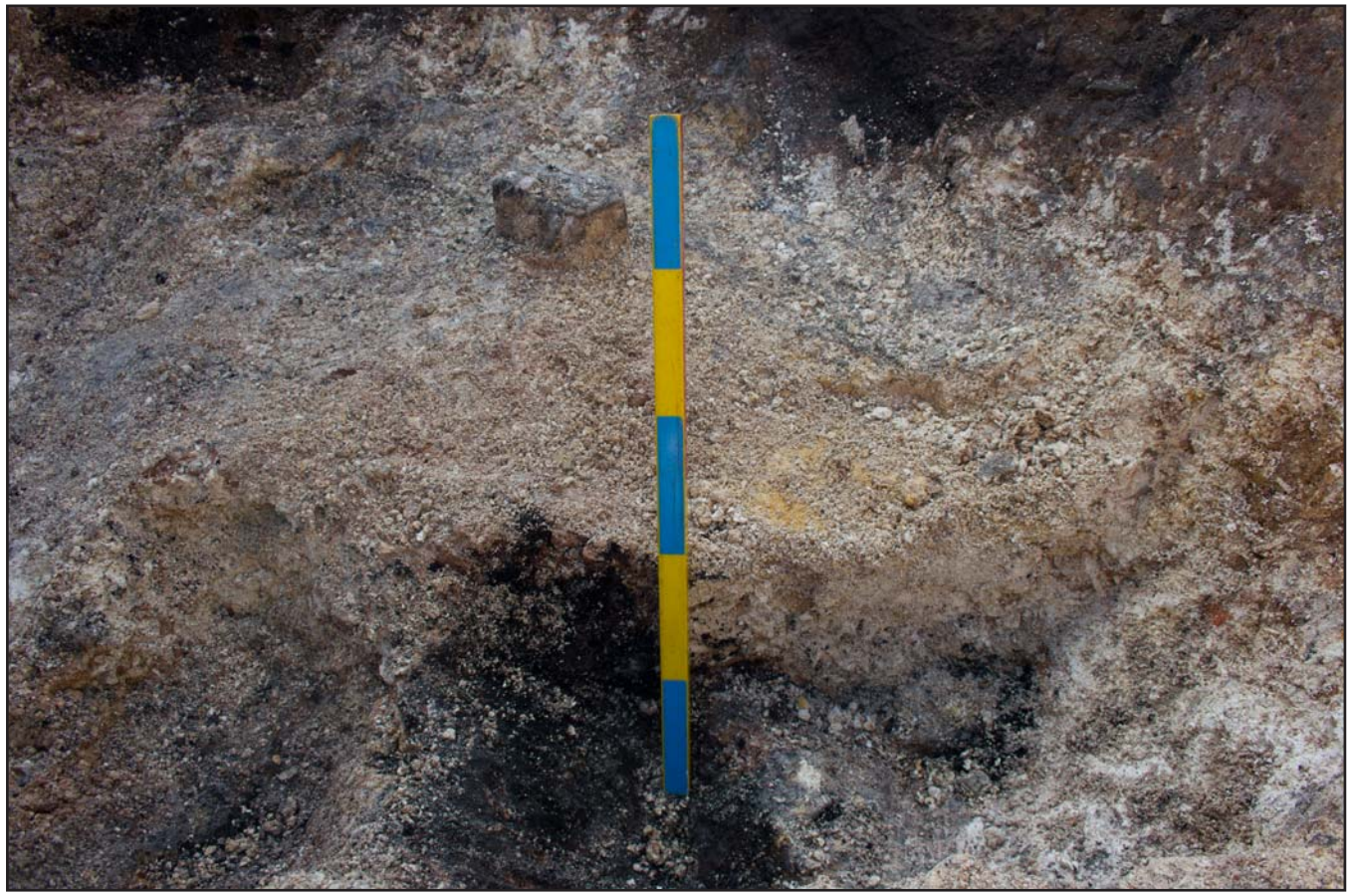

Plate 36: Section of sondage within Primary lime-ash fill (215), Glascoed to Bodelwyddan DCWW - from the northwest - 0.50m scale

Plate 37: Trench shot through trackway 2, Glascoed to Bodelwyddan DCWW - from the east-northeast - 1.00m scale

Plate 38: Section shot of Trench (shown Plate 37), Glascoed to Bodelwyddan DCWW - from the north-northwest - 2.00m scale

Plate 39: Trench shot south of trackway 2, Glascoed to Bodelwyddan DCWW - from the north-northwest - 1.00m scale

Plate 40: Section shot of Trench (shown Plate 39), Glascoed to Bodelwyddan DCWW - from the east-southeast - 1.00m scale

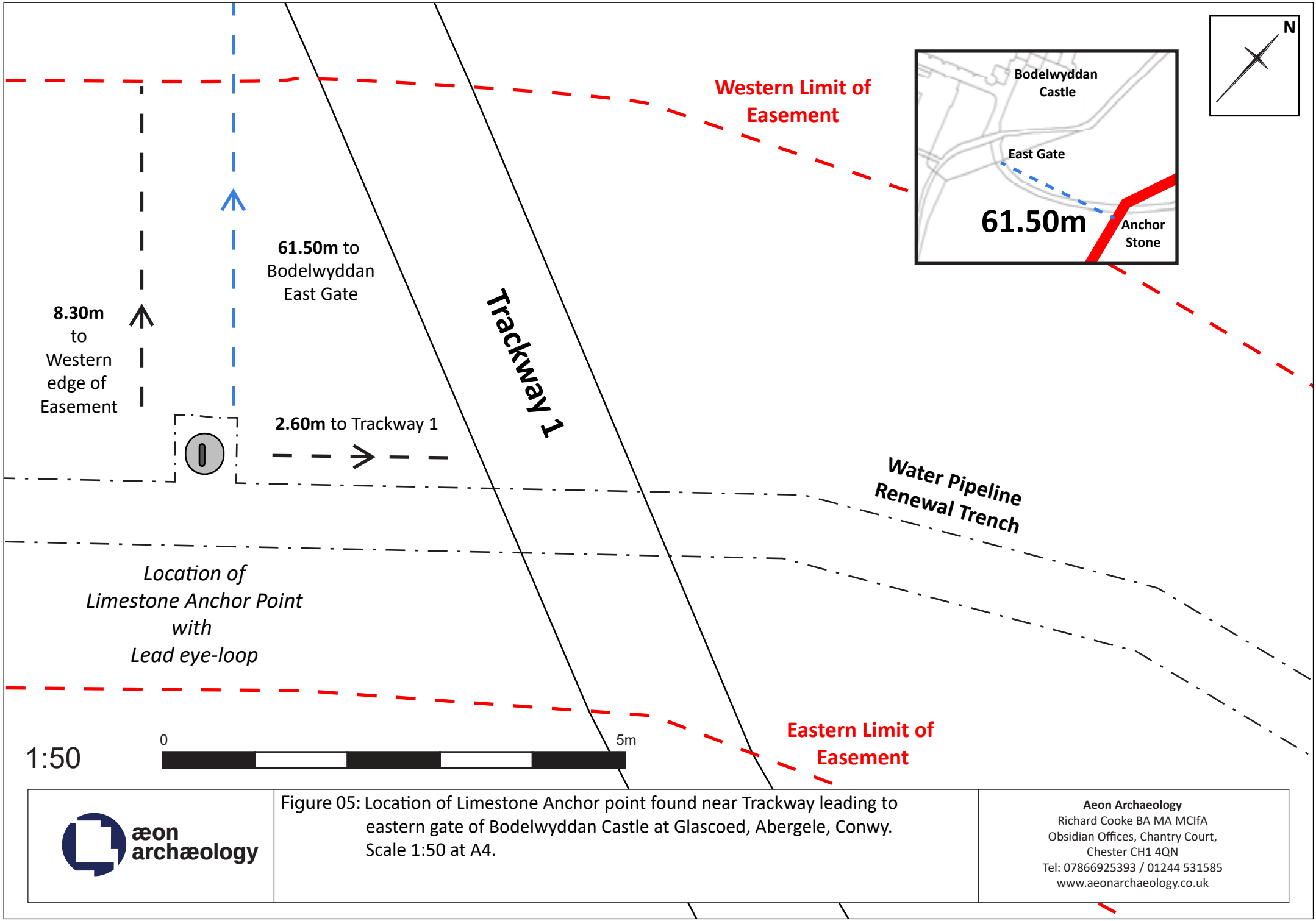

Figure 05: Location of Limestone Anchor point found near Trackway leading to eastern gate of Bodelwyddan Castle at Glascoed, Abergele, Conwy. Scale 1:50 at A4.

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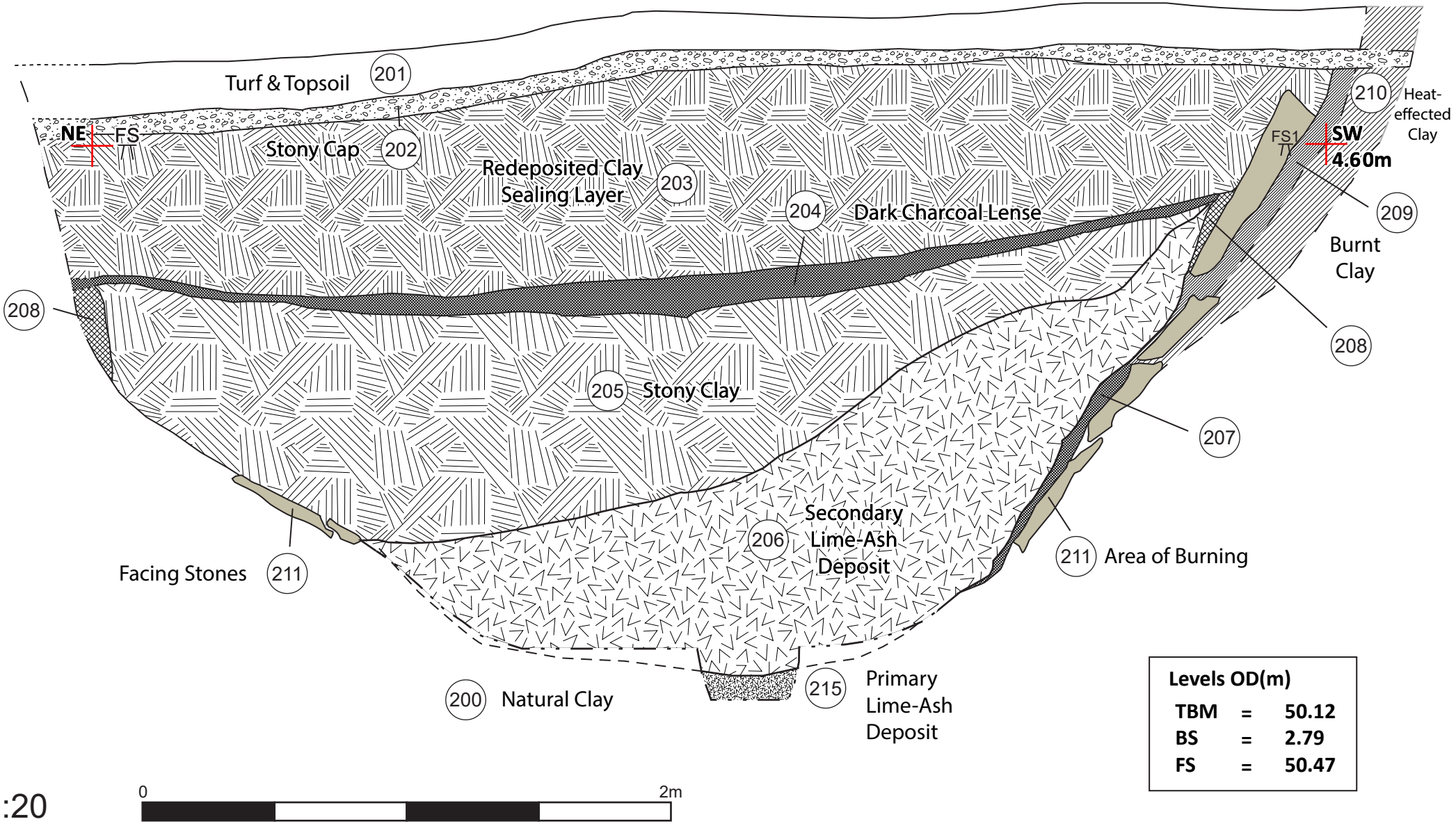

Figure 06 : Archaeological Section of the Lime Kiln (214) uncovered at Glascoed, Abergele, Conwy. Scale 1:20 at A4.

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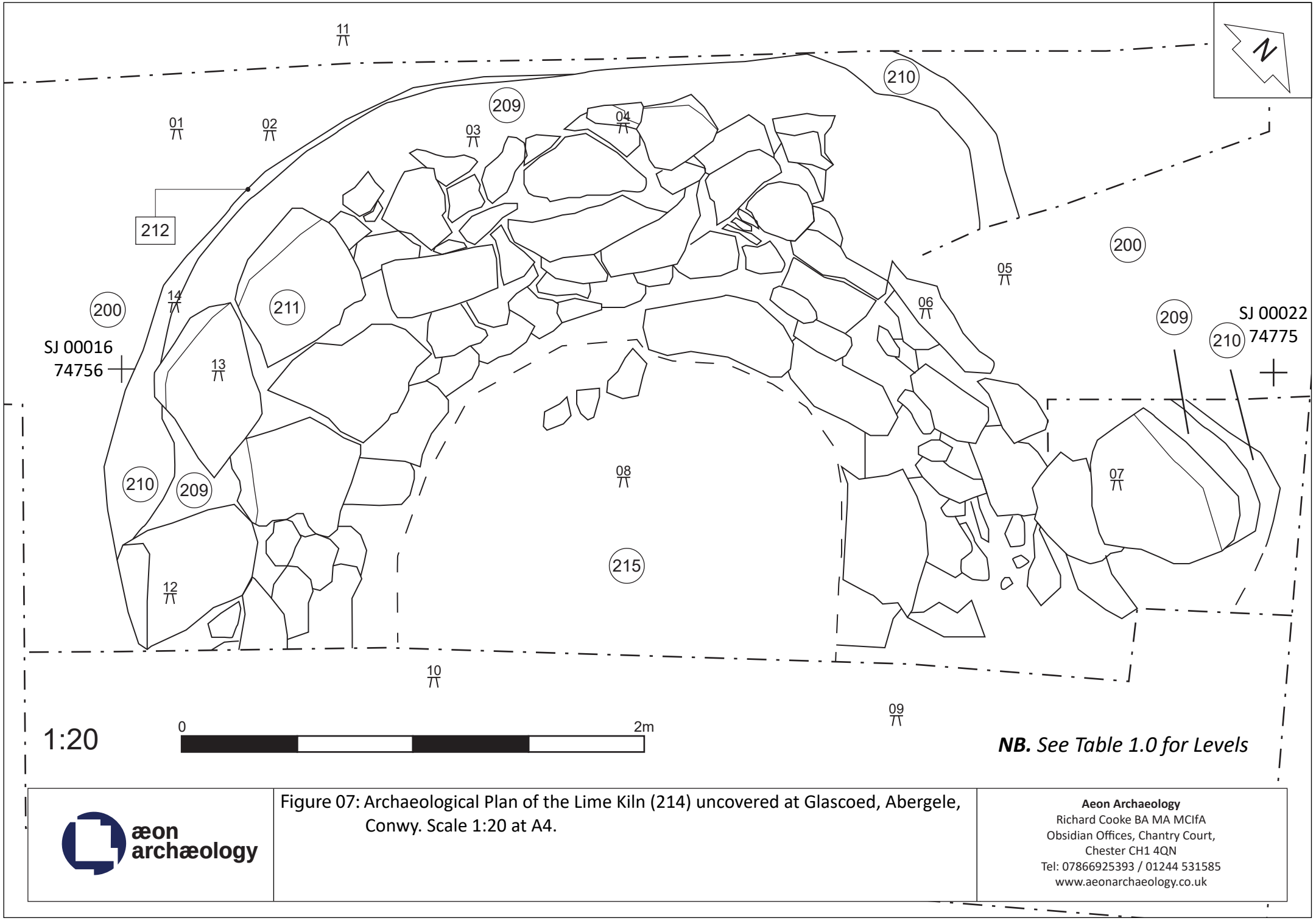

NB. *See Table 1.0 for Levels*

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Figure 07: Archaeological Plan of the Lime Kiln (214) uncovered at Glascoed, Abergele, Conwy. Scale 1:20 at A4.

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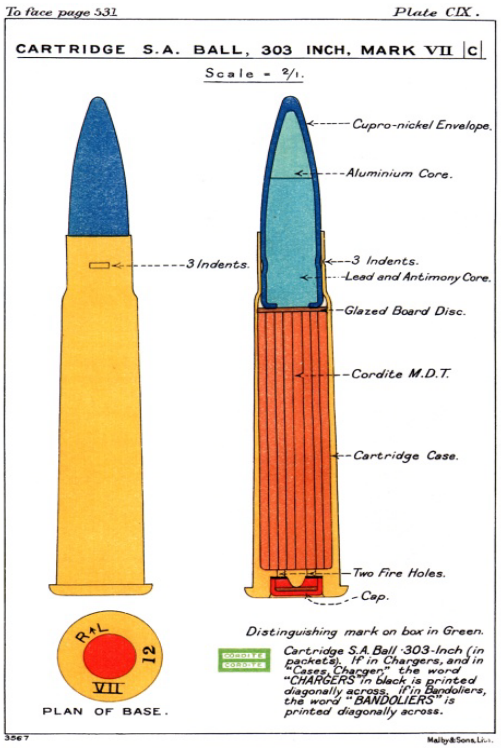
Example of a WW1 Lee Enfield rifle



Longitudinal section of Mk VII ammunition circa 1915, showing the "tail heavy" design

(War Office, UK - Plate CIX in "Treatise on Ammunition" 10th Edition 1915. Facsimile reprint by Imperial War Museum and Naval & Military Press 2003)

Figure 08: The .303-inch (7.7 mm) calibre rimmed rifle cartridges (small find no. 68, 62, 61, 56, 41).

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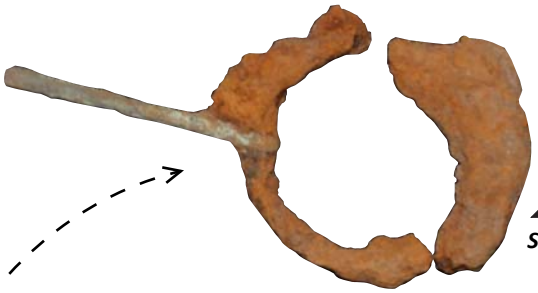
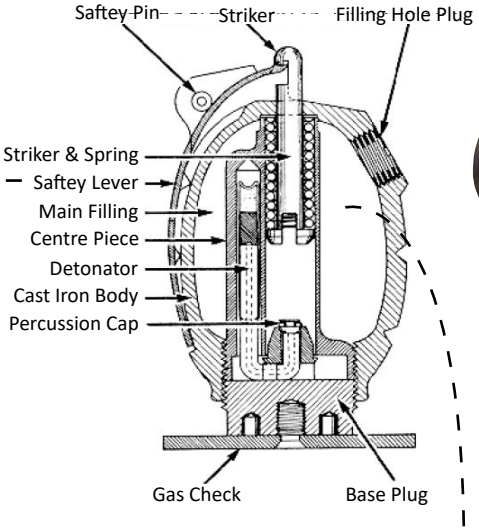


22
Saftey Pin

0 3cm

3
Filling Hole Plug

18
Saftey Lever



Example of a Mills bomb

16
Cast Iron Body Fragment

21
Spring Mechanism

22

Mills Bomb Spanner found within WW1 Trench [103] in association with three Saftey Pins

A bombing officer "lobbing" a Mills grenade

(Greece, Salonika National Archives, Public Domain 2.24.09 158-2200)

Figure 09: Components from a Mills bomb grenade found at Bodelwyddan (small find no. 3, 16, 18, 21, 22).

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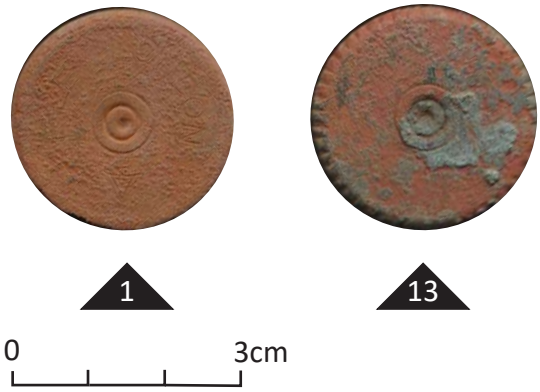


2x 1" (inch) Signal Flares found at Bodlewyddan, Headstamp (left): ELEY LONDON V

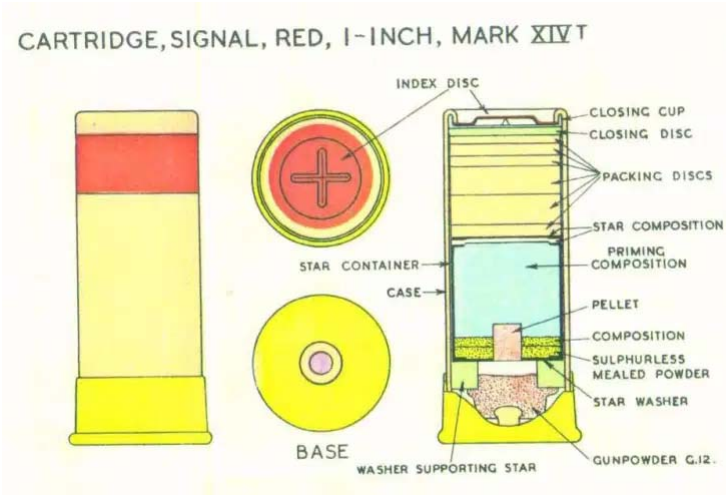
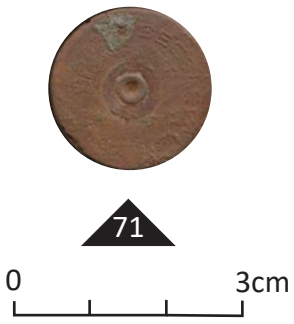


Diagram of 1 inch Signal Cartridge, Mk XIV

(War Office, UK - Plate CIX in "Treatise on Ammunition" 10th Edition 1915. Facsimile reprint by Imperial War Museum and Naval & Military Press 2003)

Example of a WEBLEY & SCOTT Flare Pistol (left) & 1 inch Signal Flare (right)



8 Gauge Ammunition (0.835-inch 21.21mm), Headstamp: BEESLEY LONDON No 12 ELEY

Figure 10: 1 inch Signal Flare Cartridges and an 8 bore Cartridge (small find no. - 1, 13, 71). Found at Bodelwyddan.

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69

Edward VII - Half Penny : 1902

69

George V - Half Penny : 1916

0 3cm

Figure 11: Edward VII - Half Penny 1902 and George V - Half Penny 1916 (small find no. - 69). Found together at Bodelwyddan.

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Plate 41: Spring Mechanisms from Mills Bomb Grenades Found at Glascoed to Bodelwyddan (Finds Nos. 2, 7, 8, 14, 15, 17, 20, 21, 23, 25, 26, 28, 30, 31, 33, 42, 55, 64) - Scale 10cm.

Plate 42: Mk VII .303 Rounds fired by Lee Enfield SMLE Rifle with roundhead possible bullet projectile (centre) - 10cm Scale (Finds Nos. 41, 45, 46, 56, 61, 62, 68).

Plate 43: Mills Bomb Grenade components and Fragments
(Finds Nos. 4, 5, 10, 16, 18, 19, 24, 43, 49, 54) - 10cm Scale.

Plate 44: Mills Bomb Safety Pins and Grenade spanner found within fill (105) within WW1 Trench [105] - 10cm Scale (Group Finds No. 22).

Plate 45: 1" inch Signal Flare Cartridge (Left & Right) with 8 Gauge Ammunition (0.835-inch 21.21mm), Headstamp: "BEESLEY LONDON No 12 ELEY" (Finds Nos. 1, 71, 13) - Scale 10cm.

Plate 46: Mills Grenade base plug
(Finds Nos. 1, 71, 13) - Scale 10cm.

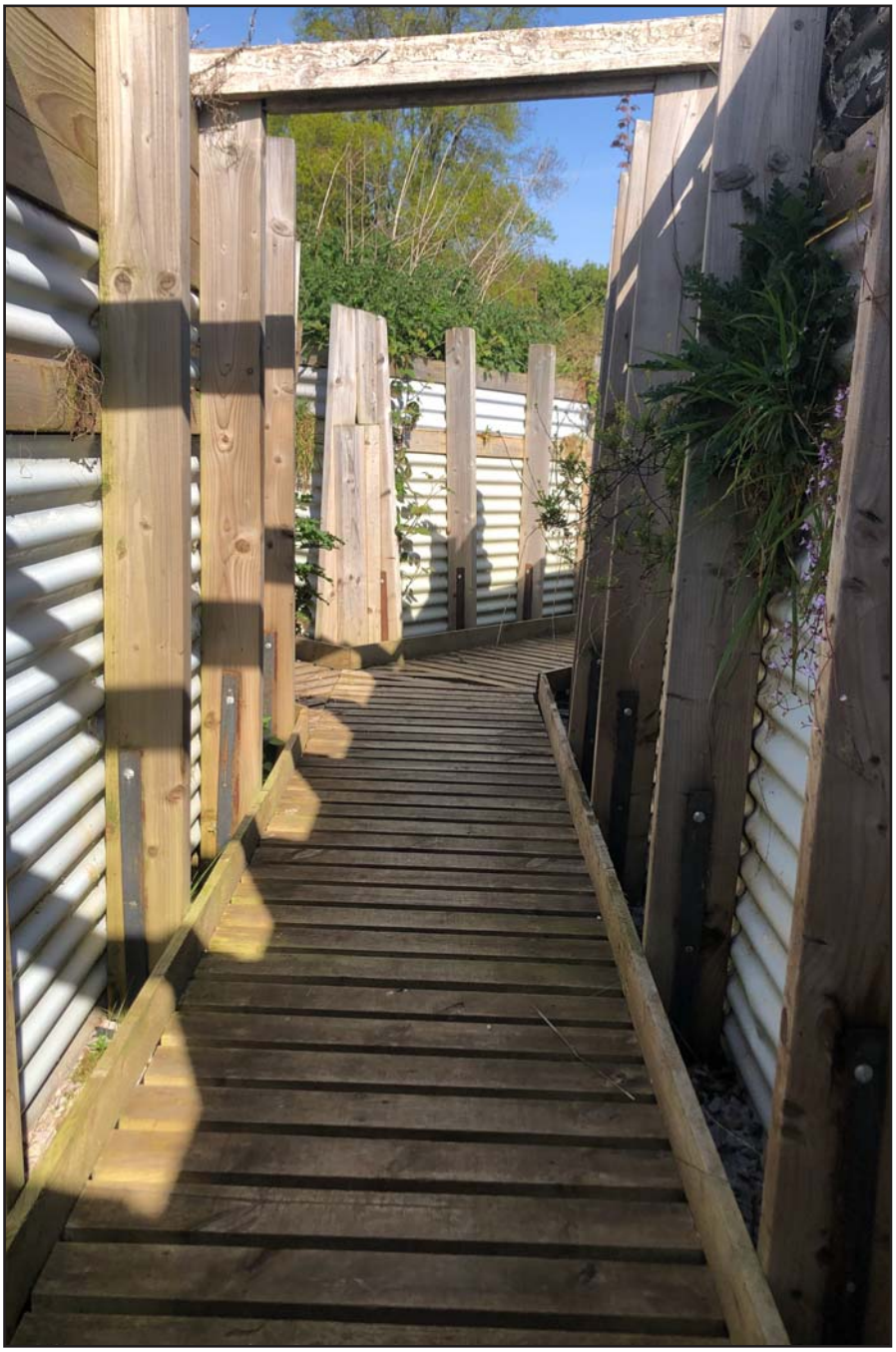

Plate i: Example of reconstructed trench at Bodelwyddan Castle

Plate ii: Example of reconstructed trench at Bodelwyddan Castle

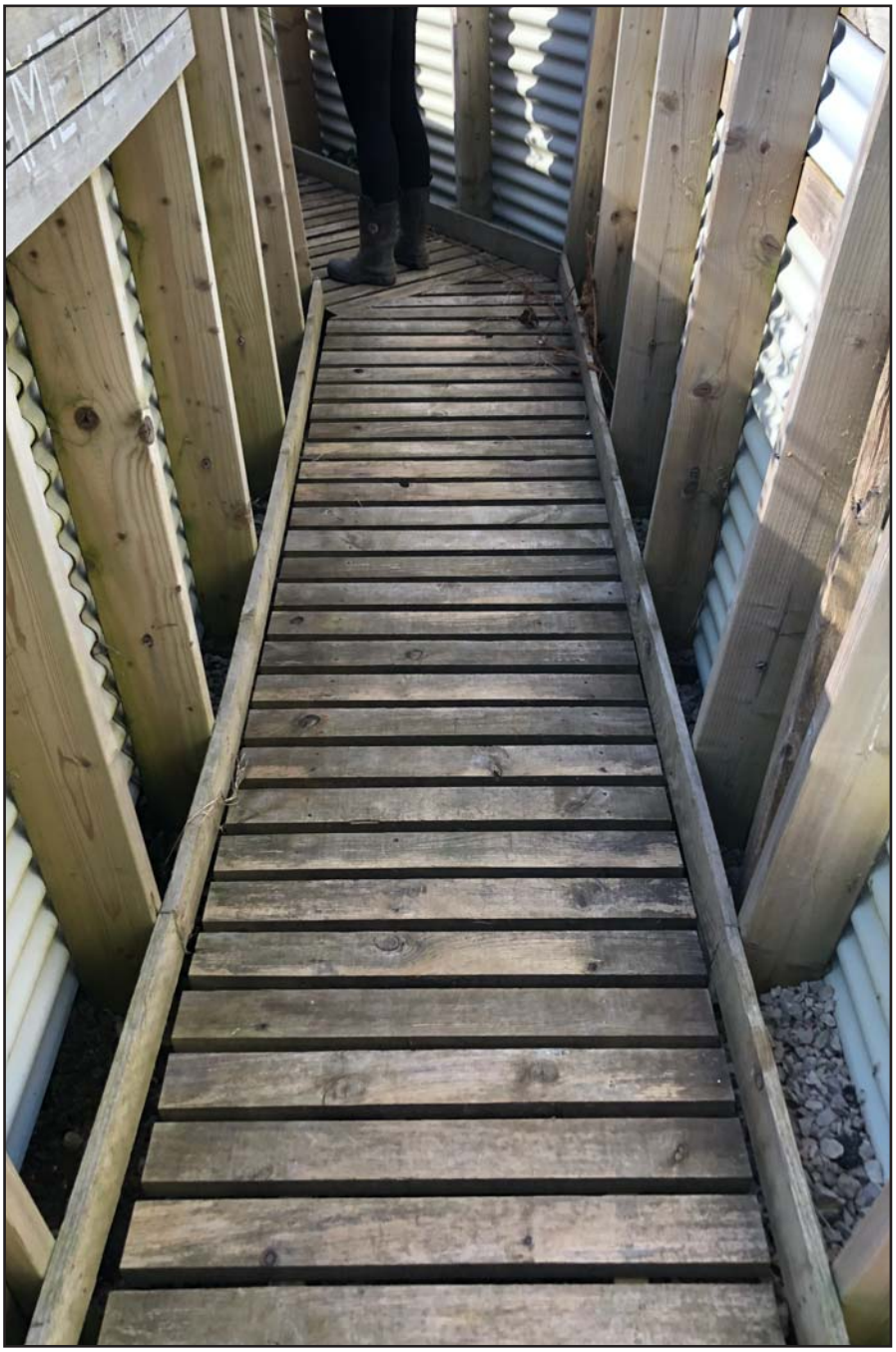

Plate iii: Example of reconstructed duckboards within trenches at Bodelwyddan Castle

Plate iv: Example of Officer's bunker within trench system at Bodelwyddan Castle

10.0 CONCLUSION

The archaeological watching brief maintained during the water main replacement scheme by DCWW at Glascoed, Abergele, Conwy uncovered the remains of a previously unknown World War 1 (WW1) era practice trench, a sub-rounded, subterranean lime kiln and 109 individual finds found during a metal detecting survey of the pipe route.

The WW1 practice trench was not previously highlighted by the CPAT survey of the area using the aerial photograph of 1946 and as such was discovered through watching brief. The previous works (Aeon Report 273) at Bodelwyddan consisted of an evaluation which sought to implement the data provided by the aerial photography to inform a targeted approach to the excavation of three identified WW1 trenches. Conversely, the discovery of the vestigial remains of a fourth trench via the formal programme of observation established by the archaeological watching brief is testament to the value that such an approach can provide. Given the level of historical value that this archaeological resource represents to the understanding of overall context of the landscape at Bodelwyddan, the watching brief has proved to be invaluable in identifying an archaeological feature that would have surely been removed or destroyed had the watching brief not been conducted.

The WW1 practice trench was almost imperceptible in a topographical sense, probably as a result of ploughing action or by a large-scale decommissioning event conducted by the Army following the war. The in-situ wooden duckboards are, given the results of the previous evaluation, a very rare find and provide some pivotal information on how the trenches were constructed. Furthermore, the nature of the iron and copper alloy finds present within the primary fill of the trench are suggestive of an association of that trench with a specific activity; the presence of three safety pins and a Mill's Bomb spanner found within the trench suggests that it was probably being used to train the troops in the use of grenades.

The lime kiln was also discovered during the watching brief with no topographical or aerial evidence ever alluding to its presence prior to excavation. The kiln appeared to have been constructed mostly underground with the possibility of a chimney once protruding above ground in a similar fashion to a bottle kiln. The remains of the lime kiln were well preserved although it did appear as if the upper part of the structure had been purposefully collapsed into the subterranean portion which had been formed from limestone slabs set against a sloped cut in the ground which tapered to form a conical base. Only the western half of the kiln was revealed during the watching brief and as no unloading entrance was found it is assumed that this was probably located on the eastern side of the kiln; with the possibility of a ramp once having led down to a subterranean level entrance. The kiln was full of lime ash in two separate deposits possibly representing the final uses before it was closed down – it had then subsequently been collapsed and sealed off with layers of clay and remained hidden until the watching brief.

The contextual information that has been provided by the ferrous and nonferrous metal finds recovered during the metal detecting survey serves to augment the argument for the previously unknown WW1 trench (outlined above). The majority of the copper alloy finds relate to the various components of Mill's Bombs – spring mechanisms, levers and body fragments. The southern portion of the site subject to watching brief had the highest concentration of these finds suggesting that these slopes were employed as a training ground for the 'lobbing' of grenades. Moreover, the soil conditions were not of any distinct difference at this particular location to suggest that archaeological remains would have an increased chance of preservation compared to the rest of the scheme. Other

finds such as the 1” (inch) signal flare cartridges, the spent .303 service rounds and an abundance of iron nails allude to a landscape that was given over to the training of conscripted men for the war that was raging in Europe.

The hillside leading south and east from Bodelwyddan towards Glascoed represents an evocative landscape not only in terms of its aesthetic qualities but also with regards to how it was manipulated to prepare young men for a savage war. The archaeological finds and features that were recovered from Bodelwyddan during this watching brief illustrate the direct link between the landscape of Bodelwyddan Castle and the Great War of 1914-18.

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APPENDIX I – DETAILS OF ARCHAEOLOGICAL CONTEXTS

Context	Description
101	Natural Clay
102	Topsoil
103	Cut of World War 1 Trench
104	Duckboards
105	Alluvial Fill Below (104)
201	Turf & Topsoil
202	Stony Capping below (201)
203	Capping Clay
204	Dark Charcoal Lense
205	Stony Clay
206	Secondary Lime Ash Deposit
207	Isolated area of burning
208	Slumping/Tipline
209	Black Halo
210	Orange Halo
211	Facing Stones
212	Cut of Feature
213	Rubble Infill
214	Structure No. for Kiln
215	Primary Lime Ash Deposit

APPENDIX II – CATALOGUE OF ARCHAEOLOGICAL FINDS

Finds No.	Description	Material	Weight (g)	L/D* mm
1	*8 Gauge Round	Cu Alloy	7	210
2	Mills Bomb -Spring Mechanism	Cu Alloy	23	510
3	Mills Grenade Filling Hole Plug	Steel	4	120
4	Mills Granade Base Plug?	Cu Alloy	6	270
5	Mills Granade Base Plug?	Cu Alloy	5	430
6	Horseshoe	Fe	315	1480, long - 1220, wide
7	Mills Bomb -Spring Mechanism	Cu Alloy	26	510
8	Mills Bomb -Spring Mechanism	Cu Alloy	34	550
9	Mills Granade Fragment?	Fe (cast)		470
10	Mills Bomb -Handle	Fe	52	570
11	Penknife	Wood/Steel	21	910
12	Fe Object	Fe	64	650
13	Signal Cartridge Base 1"	Cu Alloy/Paper	54	300
14	.303 Round - Lee Enfield	Cu Alloy	15	300
15	Mills Bomb -Spring Mechanism	Cu Alloy	35	550
16	Mills Granade Fragment?	Fe (cast)	35	570
17	Mills Bomb -Spring Mechanism	Cu Alloy	115	570
18	Mills Bomb -Handle	Fe	36	360
19	Mills Bomb -Handle	Fe	8	520
20	Mills Bomb -Spring Mechanism	Cu Alloy	8	530
21	Mills Bomb -Spring Mechanism	Cu Alloy	34	560
22	Group Number	Fe/Cu Alloy	249.5	n/a
23	Mills Bomb -Spring Mechanism	Cu Alloy	34	560
24	Mills Granade Base Plug?	Cu Alloy	15	260
25	Mills Bomb -Spring Mechanism	Cu Alloy	35	550
26	Mills Bomb -Spring Mechanism	Cu Alloy	27	550
27	Fitting?	Cu Alloy	11	250, long - 200 (dia)
28	Mills Bomb -Spring Mechanism	Fe	25	520
29	Fe Object	Cu Alloy	71	1100
30	Mills Bomb -Spring Mechanism	Cu Alloy	27	510
31	Mills Bomb -Spring Mechanism	Cu Alloy	28	550
32	Fe Nail	Fe	37	680
33	Mills Bomb -Spring Mechanism	Cu Alloy	29	520
34	Fe Object	Fe	37	640
35	Fe Object	Fe	101	660
36	Slag?	n/a	16	370
37	Fe Object	Fe	179	1110
38	Fe Object	Fe	82	1480
39	Fe Object	Fe	113	1460
40	Mills Granade Base Plug	Cu Alloy	10	210

41				
42	Mills Bomb -Spring Mechanism	Cu Alloy	30	560
43	Mills Granade Base Plug	Cu Alloy	61	350
44	Lead object	Lead Pb	73	390
45	Lead Bullet (projectile Round)?	Lead Pb	8	95 (dia)
46	Locking Pin?	Fe	14	125 (dia)
47	Split pin	Fe	24	1100
48	Tent Peg	Fe	360	3280
49	Split pin	Fe	3	380
50	Rivet	Fe	8	350
51	Lead Weight (Plumbob)	Lead Pb	155	850
52	Ponyshoe	Fe	59	730, long - 720 wide
53	Filler Cap	Cu Alloy	88	430 (dia)
54	Mills Granade Fragment?	Fe (cast)	2	120
55	Mills Bomb -Spring Mechanism	Cu Alloy	26	490
56	.303 Round - Lee Enfield	Cu Alloy	7	310
57	Hinge	Fe	172	880
58	Plate	Fe	147	890
59	Fe Object	Fe	10	260 (dia)
60	Wingnut Frag	Cu Alloy	5	260
61	.303 Round - Lee Enfield	Cu Alloy	11	410
62	.303 Round - Lee Enfield	Cu Alloy	10	410
63	Tag "…uides - …454336"	Cu Alloy	4	400
64	Mills Bomb -Spring Mechanism	Cu Alloy	26	500
65	Fe Object	Fe	39	570
66	Fe Object	Fe	37	685
67	Fe Object	Fe	60	n/a
68	.303 Round - Lee Enfield	Cu Alloy	9	470
70	Lead object	Lead Pb	4	260
71	Signal Cartridge Base 1"	Cu Alloy/ Paper	8	300
72				
73	Mills Bomb - Spanner	Fe	53	1100
74	Mills Bomb - Safety pin	Cu Alloy	10	700
75	Mills Bomb - Safety pin	Cu Alloy	14	430
76	Mills Bomb - Safety pin	Cu Alloy	11	360
77	Split Pin	Cu Alloy	0.5	480
78	Fe Nail	Fe	26	1060
79	Mills Bomb -Spring Mechanism	Cu Alloy	30	560
80	Fe Nail	Fe	8	610
81	Fe Nail	Fe	1	120
82	Mills Granade Fragment?	Cu Alloy	5	400
83	Fe Nail	Fe	8	640
84	Fe Nail	Fe	7	510
85	Nail Heads (x12)	Fe	54	n/a

86	Fe Objects (x20)	Fe	22	n/a
14b	Mills Bomb -Spring Mechanism	Cu Alloy	7	620
69a	Half Penny GEORGE V: 1910	Cu Alloy	5	250
69b	Half Penny EDWARD VII: 1902	Cu Alloy	5	250

***L/D mm** = length and diameter measurements*

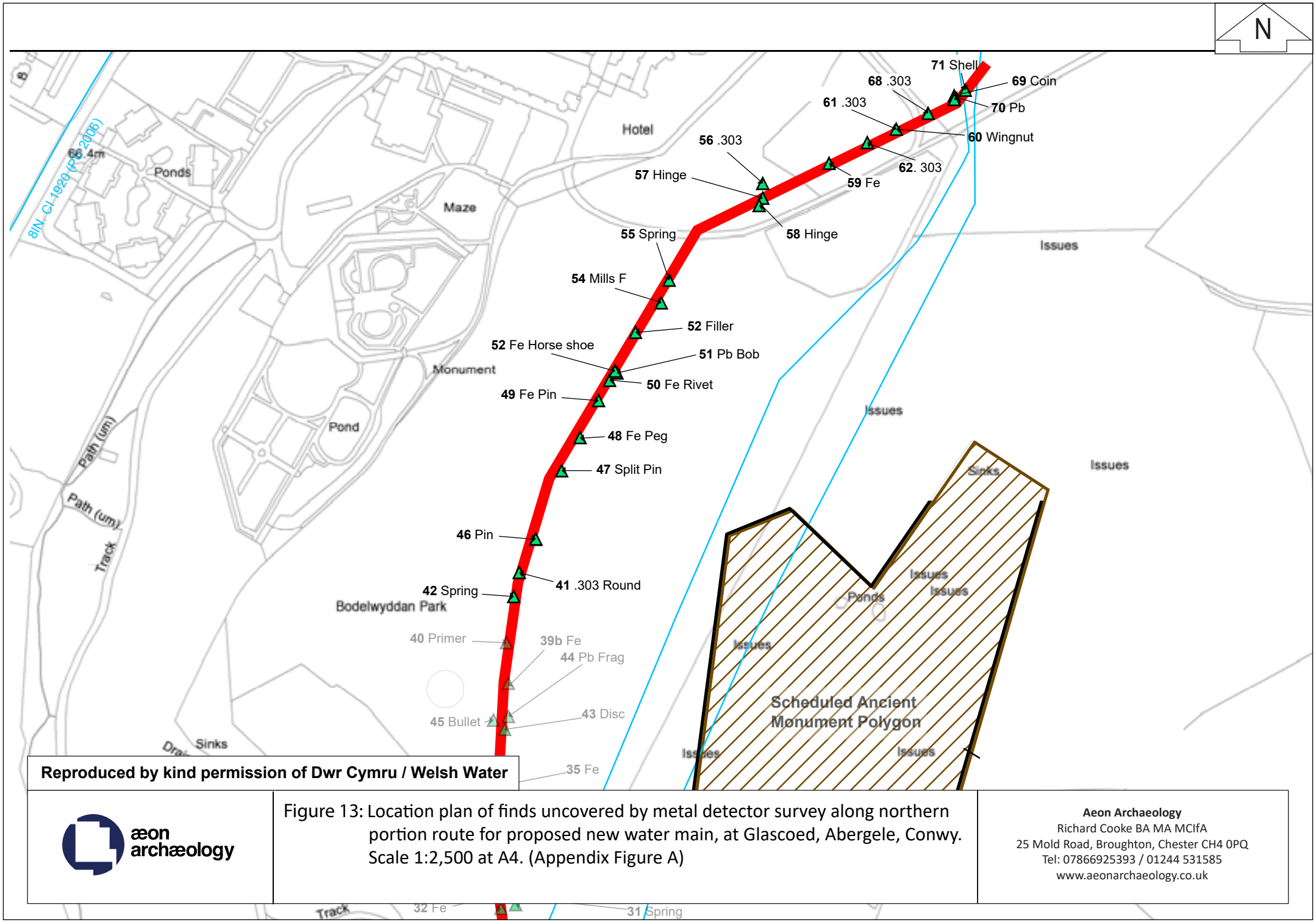

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Figure 13: Location plan of finds uncovered by metal detector survey along northern portion route for proposed new water main, at Glascoed, Abergele, Conwy. Scale 1:2,500 at A4. (Appendix Figure A)

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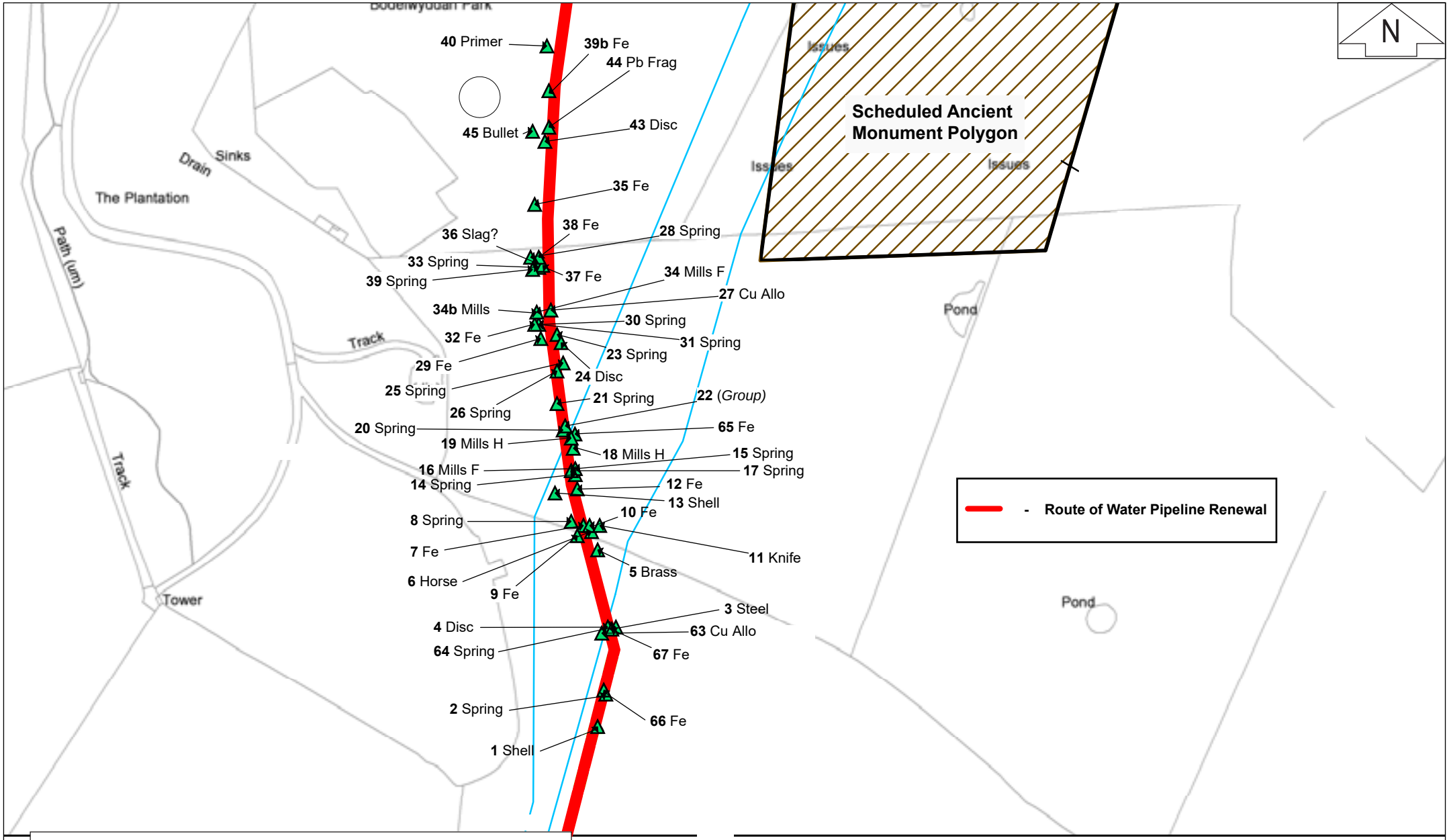

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Figure 12: Location plan of finds uncovered by metal detector survey along southern portion route for proposed new water main, at Glascoed, Abergele, Conwy. Scale 1:2,500 at A4. (Appendix Figure A)

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