aeon archaeology

RAF Valley, Llanfair-yn-Neubell, Anglesey, Gwynedd

April 2016 - July 2017
V 1.0

Archaeological Watching Brief
Project Code: A0080.1
Report no. 0150

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Archaeological Watching Brief

Aeon Archaeology
25, Mold Road
Broughton
Chester
CH4 0PQ

Written by: Josh Dean BA ACIfA

Checked by: Richard Cooke BA MA MCIfA

Project Code: A0080.1
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Client: Northstone Material Division
info@aeonarchaeology.co.uk

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1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by Northstone Material Division to undertake an archaeological watching brief associated with the refurbishment of RAF Valley (centred on **NGR SH 30936 75302**) Runway 13-31 and Airfield Ground Lighting (AGL), on the Isle of Anglesey as part of Defence Infrastructure Organisation project (**Z9F0001Y11)**.

Archaeological observation was to take place during the construction of an airside perimeter road in the northwest of the airfield, groundwork associated with the two new cycle tracks and during groundwork associated with the construction of the Compass Calibration Base (CCB).

During the excavation of the calibration circle, a narrow brick built inspection tank was uncovered and during the eastern excavation of the perimeter road, there were deposits which may be considered as possible evidence of peat storage or at the very least ground consolidation. The watching brief facilitated the opportunity to observe a diverse range of artefacts consisting of sporting equipment (golf balls), metal tools, agricultural implements, and a possible prehistoric whet stone, reflecting that RAF Valley can be considered as an intense area of cultural activity during the recent past, excluding the extension of its chronology into prehistory. Furthermore the presence of the shallow pits towards the south-eastern extent of the site, replete with modern demolition materials demonstrates that the airfield in its entirety has been subject to substantial operations during throughout the 20th and 21st centuries.

2.0 INTRODUCTION

Aeon Archaeology was commissioned by Northstone Material Division to undertake an archaeological watching brief associated with the development of the Preferred Option No. 6 for the refurbishment of RAF Valley (centred on **NGR SH 30936 75302**) Runway 13-31 and Runway and Airfield Ground Lighting (AGL), Isle of Anglesey as part of Defence Infrastructure Organisation project (**Z9F0001Y11)**.

Works included a runway refurbishment, the introduction of new Aeronautical Ground Lighting, adjustment of navigational aids, road construction and the construction of stand-alone extensions adjacent to two B Centres. The project involved the installation of temporary works facilities and compounds.

A baseline archaeological assessment was undertaken by URS in December 2014 (**ref.47071811**) and should be read in conjunction with this report. The assessment report identified three Listed Buildings and two Scheduled Monuments within the 1.0km study area. A total of six Protected Places under the Protection of Military Remains Act 1986 were found to be located within 1.0km of the airfield; all being historic crash sites. Sixteen undesignated archaeological and historical assets were identified in the study area, ranging in date from the prehistoric period to the modern era.

Key undesignated assets located within the development area were found to comprise:

- potential secondary deposits related to the Iron Age Llyn Cerrig Bach hoard (NPRN401097; HER42442);

- the site of a possible prehistoric barrow/parish boundary marker (GAT2521);

- the site of a possible medieval church (GAT2519; NPRN43600); and,

- RAF Valley, which is itself a historic airfield (NPRN308389).

The key recommendation of the assessment report were that an archaeological watching brief be carried out during groundwork on and alongside the airside perimeter road construction area in the northwest of the airfield (north of D2 and D3); during groundwork associated with the two new cycle tracks; during groundwork associated with the construction of the Compass Calibration Base (CCB); and that the possible historic sites between taxiways A2 and A3 be protected from any damage and preserved in-situ.

Relevant UK legislation on heritage includes the Historic Environment Act (Wales) 2016; Planning Policy Wales Technical Advice Note 24 (TAN24); the Ancient Monuments and Archaeological Areas Act 1979; and the Planning (Listed Buildings and Conservation Areas) Act 1990. The work will adhere to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).

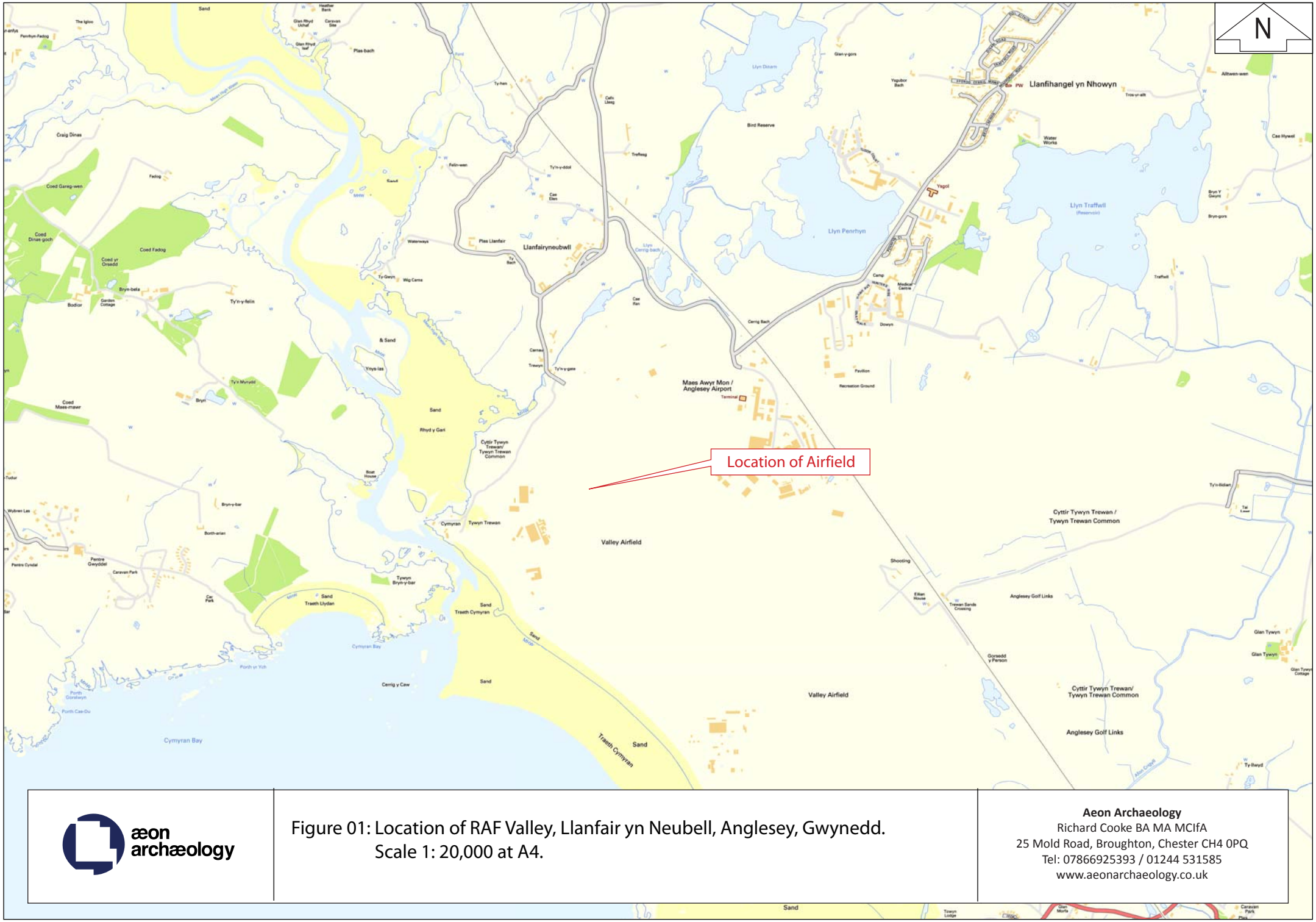


Figure 01: Location of RAF Valley, Llanfair yn Neubell, Anglesey, Gwynedd.
Scale 1: 20,000 at A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

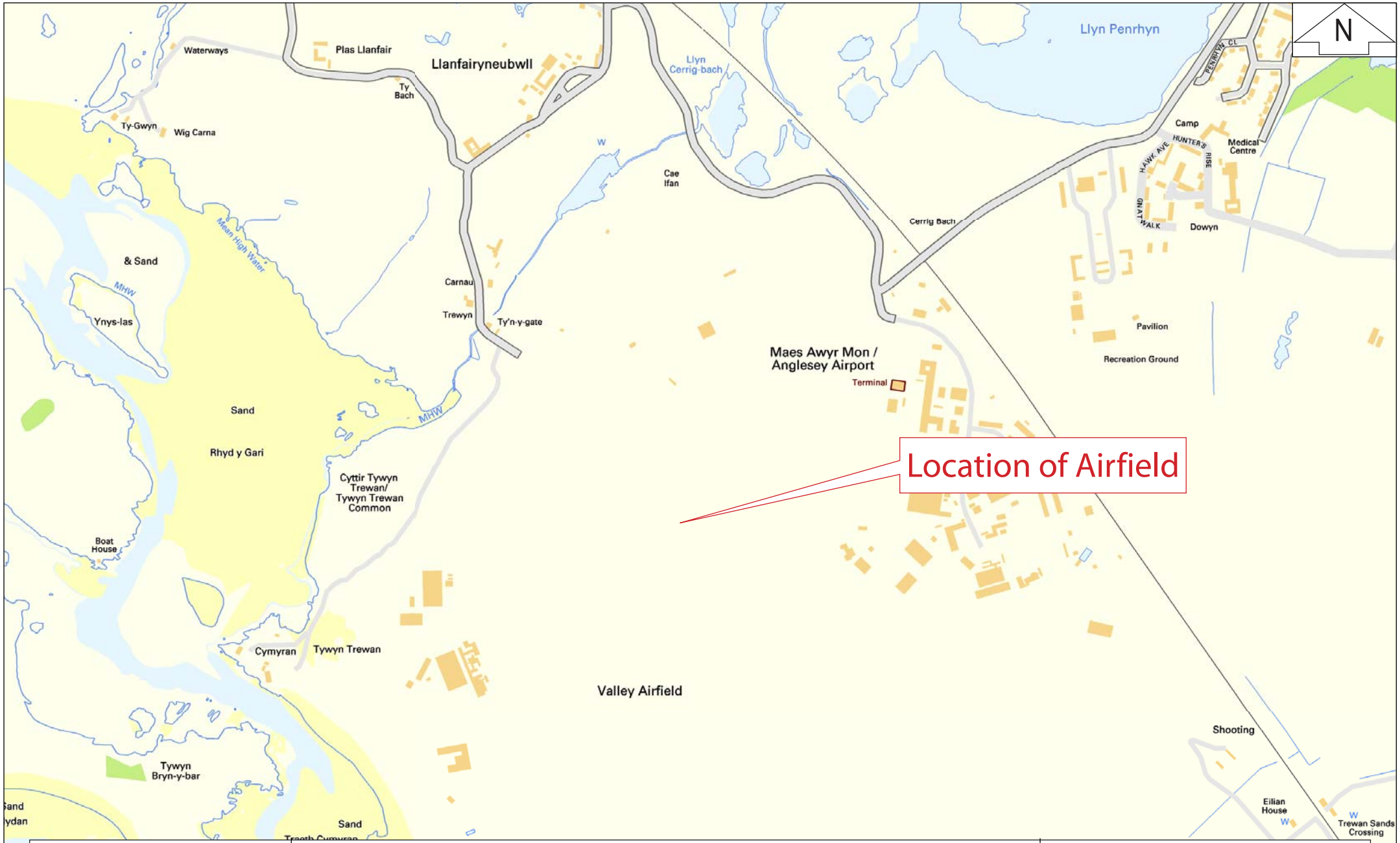
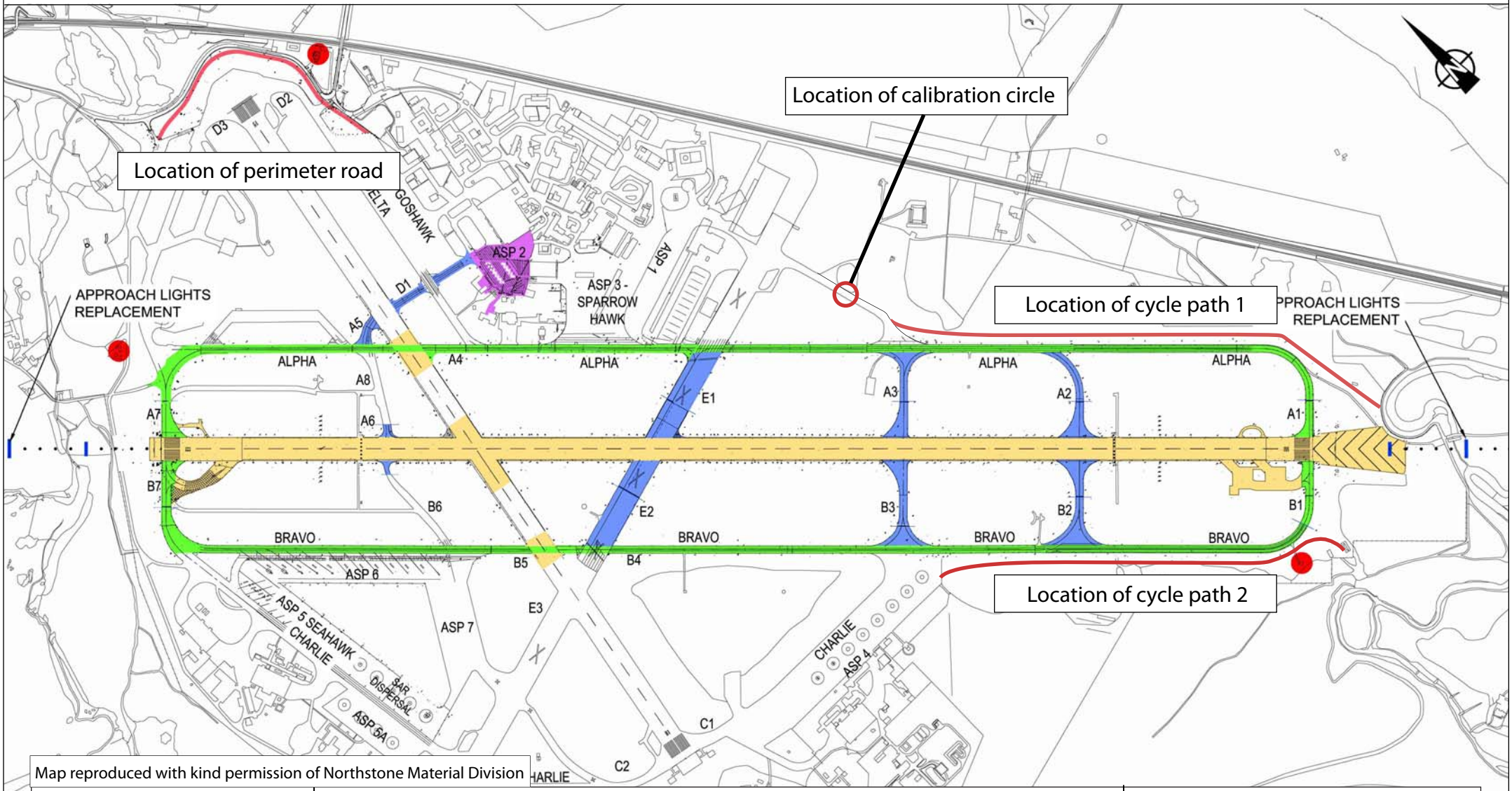


Figure 02: Location of RAF Valley, Llanfair yn Neubell, Anglesey, Gwynedd.
Scale 1:10,000 at A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk



Map reproduced with kind permission of Northstone Material Division

Figure 03. Plan of RAF Valley Airfield showing location of refurbishment projects, Not to scale.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

3.0 PROJECT AIMS

The aim of the watching brief was to characterise the known, or potential, archaeological remains should they be revealed during the groundworks associated with the construction and refurbishment works at RAF Valley.

The **watching brief** consisted of the following:

- Groundworks on and alongside the airside perimeter road construction area in the northwest of the airfield (north of D2 and D3).

- Groundworks associated with the construction of the two new cycle tracks at the western end of the airfield.

- Groundworks associated with the construction of the Compass Calibration Base (CCB).

An Archaeological Written Scheme of Investigation (WSI) was written by Aeon Archaeology and submitted to Northstone Material Division in April 2016. This formed the basis of a method statement submitted for the work. The archaeological watching brief was executed in accordance with this WSI.

The management of this project has followed the procedures laid out in the standard professional guidance *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006; rev 2015), and in the Chartered Institute for Archaeologists *Archaeological Watching Brief* (Institute for Archaeologists, 2014). Five stages are specified:

Phase 1: project planning
Phase 2: fieldwork
Phase 3: assessment of potential for analysis and revised project design
Phase 4: analysis and report preparation
Phase 5: dissemination

The current document reports on the phase 4 analysis and states the means to be used to disseminate the results. The purpose of this phase is to carry out the analysis identified in phase 3 (the assessment of potential phase), to amalgamate the results of the specialist studies, if required, with the detailed site narrative and provide both specific and overall interpretations. The site is to be set in its landscape context so that its full character and importance can be understood. All the information is to be presented in a report that will be held by the Gwynedd Historic Environment Record (HER) and the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) so that it can be accessible to the public and future researchers. This phase of work also includes archiving the material and documentary records from the project.

4.0 METHODOLOGY – ARCHAEOLOGICAL WATCHING BRIEF

4.1 Watching Brief

4.2 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 Gwynedd Historic Environment Record (HER) can curate them in their active digital storage facility.

4.3 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 and The Defence Infrastructure Organisation (DIO) archaeologist (Guy Salkeld). There was a presumption against the disposal of archaeological finds regardless of their apparent age or condition.

4.4 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.

4.5 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 Defence Infrastructure Organisation (DIO) (x1) the regional HER (x1) (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, LL57 2RT) and the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) (x1). Copies of all notes, plans, and photographs arising from the watching brief will be stored at Aeon Archaeology under the project code **A0080.1** with the originals being lodged in a suitable repository to be agreed with the archaeological curator.

Any artefacts arising from the fieldwork were to be lodged with the Gwynedd Museum and Art Gallery, Bangor, Gwynedd.

5.0 HISTORY OF THE SITE

(Reproduced from; URS Historic Environment Study 2014 Doc No: 47071811)

Palaeolithic (c.500,000 – 9,000 BC)

There is little evidence for the Palaeolithic and Mesolithic periods in Wales. During the lower and middle Palaeolithic period (c.500,000 – 40,000 BC), most of the area was intermittently covered by ice sheets, which disturbed earlier deposits of items such as flint tools and animal bone. As the ice sheets began to retreat c.15,000 BP (before present), Wales began to be occupied by ancient humans. Neanderthal teeth have been recorded from Pontnewydd Cave (Denbighshire; Green & Walker 1991). The effects of the last glaciation have apparently removed much evidence for an earlier human presence in all but a few exceptional sites. The assessment site, located on a coastal site with no sheltering caves, has little potential for buried landscapes or for harbouring Upper Palaeolithic remains (c.40,000 – 9,000 BC).

There are no recorded Palaeolithic remains from the study area or the airfield site.

Mesolithic (c.9,000 – 4,000 BC)

The earliest prehistoric sites encountered in Anglesey belong to the Mesolithic period, when the island was heavily wooded. Mesolithic populations were mobile hunter-gatherers and fishers, occupying seasonal sites which are identified through the presence of flint and chert scatters, of hunter-gatherers' flint tools and tool-making debris, rather than *in situ* material.

Excavations at Trwyn Du, now located on the eastern coast of Anglesey, recorded over 5,000 flint points and scrapers at a seasonal campsite. During the Mesolithic period, land levels were higher and the coastline was several kilometres further out to sea than the current coastline. In recent years, storms have eroded coastal sands, revealing Mesolithic land surfaces and exposing submerged forests and human footprints. These coastal and intertidal contexts preserve forms of artefactual and ecofactual evidence which are very infrequently encountered on dryland sites including faunal assemblages, organic artifacts, plant remains, human and animal footprint tracks.

There are no recorded Mesolithic remains from the study area or the site.

Neolithic (c.4000 – 2200 BC)

During the Neolithic period, farming was introduced, settlements became more permanent, burial monuments and pottery developed. Polished stone axes may reflect tree clearance, as well as long-distance trading contacts. The nearest source of rock for stone axes is Graiglwyd, Penamaenmawr (Conwy), c.45km east of RAF Valley. The Early Neolithic saw the construction of many chambered tombs, particularly dolmens or cromlechs (c. 4000 – 3200 BC). Anglesey contains a rich variety of megalithic tombs, including the scheduled Bryn Celli Ddu (Llanddaniel Fab), a Neolithic chambered tomb built on an earlier henge monument, and Barclodiad y Gawres, c. 3.8km south of the airfield.

The scheduled remains of a possible chambered tomb are located at Castellor, Bryngwran (**GAT1539**), associated with an area of prehistoric settlement nearby at Castellor. Two further possible chambered tombs have been recorded within the 1km study area, one at Llanfaeolog (**GAT3035**), whose location has been lost, and one near Pentre-traeth (**GAT3031**), though this is probably a natural rock outcrop (Lynch 1969). Cymyran submerged forest (**GAT16603**) at Traeth Cymyran is located immediately west of RAF Valley. Fallen trees and tree stumps are known from

around the Welsh coast, and have been preserved due to waterlogged conditions. They are rooted in peat levels lying below the marine sand. These submerged forests do not date to a single flooding event, but are the result of rising sea levels. They have been dated to between about 3500 and 500 BC.

Although possible Neolithic sites are recorded within the study area, there are no known Neolithic sites within the airfield.

Bronze Age (c.2200 – 800 BC)

The Beaker Period (Late Neolithic/Bronze Age transition, c. 2700 – 1700 BC) is characterised by pottery types which may reflect growing social distinctions and the emergence of hierarchies (Kristiansen & Larsson 2005) as well as single inhumation burials in round barrows or cremations in flat cemeteries. Barrows may have origins in earlier Neolithic ritual and funerary monuments; and some were re-used in the early medieval period. Many have beenlevelled by ploughing, but some are still visible in the landscape or have been recorded on aerial photographs. The site of a possible Late Neolithic or Bronze Age round barrow is recorded within the airfield (**GAT2521**). Prior to the construction of the airfield, it was described in the Royal Commission on Ancient and Historic Monuments *Inventory of Ancient Monuments of Anglesey* as '*A possible tumulus, 1.5 miles S of the church at Llanfihangel-yn-Nhowyn, in marshy ground among sand hills. About 80 yards in circumference and 4ft high, composed of sand and much disturbed'* (RCAHMW 1937). Records note that in 1970, following airfield construction, the area around the runway access road appeared to be completely flat, indicating that the mound had been levelled. Beyond the airfield the natural contour of the land is very bumpy with occasional rock outcrops - a sand covered marsh. This seems a very unlikely place for a barrow, much of the blown sand has probably been deposited in medieval or later times and the mound was most probably a natural feature (Smith 2003). In the vicinity of this putative barrow (**GAT2521**) is '*a smaller mound, 5.0-6.0m across, about 12m to the south-east, which marked the boundary between Llanfihangel-yn-nhowyn and Llechylched'* (**NPRN43600**, RCAHM 1937; Plate SV7 & SV8 in this report); it is possible that these sites have been confused. In addition, barrows are frequently located in historical boundary areas (Woodward 2000). In the collections of the National Museum is a quartz crystal, 'said to have been found among the ashes of a burial urn' at Cymynod, Bodedern (**NMGW Accession Code 33.403/4**). This may be from an urned cremation burial; a number of Bronze Age cremation cemeteries have been recorded on Anglesey. The site of a standing stone is recorded at Perth Ior (**GAT3034**), though the stone has now gone and the exact location is not known.

*The site of a possible Late Neolithic or Bronze Age burial mound has been recorded within the airfield (**GAT2521**).*

Iron Age (c.800 BC – AD 43)

It is thought that in the late Bronze Age to early Iron Age, marine flooding affected coastal, riverine and low-lying areas. There is extensive evidence for Iron Age settlement on Anglesey. The Llyn Cerrig Bach Iron Age hoard (NPRN401097) was discovered in the peats of the dried lake of Llyn Cerrig Bach, at the mouth of the Alaw river, during the construction of the RAF Valley base in 1942 (Fox 1945; *ibid*. 1946; Lynch 1970; Macgregor 1976; Macdonald 2006). Workmen discovered these objects whilst digging peat from the site of a former lake edge. The peat containing the deposit was quarried away and used to consolidate nearby sand dunes so that the runways could be built. It is one of the most important groups of metalwork in British prehistory. Although Fox and others maintained that the hoard was from Llyn Cerrig Bach, the finder's daughter, Eflyn Owen-Jones, holds that it

came from Llyn Carnau, c.150m west of Llyn Cerrig Bach. The circumstances of the discovery, and wartime secrecy, mean that the exact location and full extent of the hoard may never be known.
The hoard comprises the surviving metal components of over a hundred and fifty bronze and iron objects deposited in a wetland lake, which may represent a series of small votive offerings over a long time-period, spanning c.300BC-AD100. Although it has been suggested this is the site of an Iron Age shipwreck, the remains of cargo from a trading vessel lost about 50BC (Roberts 2002), all other studies, dating evidence and recent re-assessments indicate that the hoard was not the result of a single depositional event. The finds are primarily military and included eleven swords, eight spearheads and parts of a parade shield. Equipment from several chariots were also present, both the harness and parts of the structure. Up to 22 chariots can be recognised from the wheels discovered, but this might indicate the offering of wheels alone (which are known to have been sacred to one of the Celtic gods) rather than complete vehicles (Green, M n.d.). Finds also include personal ornaments, fragments of two cauldrons, currency bars, blacksmith's tongs, trumpets, a sickle, equestrian equipment and a slave gang-chain (Aldhouse-Green, M 2004). The finds were recovered from the edge of a bog at the foot of a c.3.5m high rock cliff, a good vantage-point for throwing offerings. Some items were deliberately damaged or 'killed'. The collection of valuable metal objects is interpreted as an offering to the gods or goddesses. Such votive offerings are part of a long tradition in the Bronze and Iron Ages in Wales

Recent metallurgical analyses and comparison with other parallel sites indicate that it is likely that most of the objects in the hoard were made locally, rather than being imported from Ireland and southern England (Macdonald 2006). The finds date to between 500BC and AD100, but little material later than AD60 has been identified, perhaps indicating that the Roman invasion of Anglesey in AD60 ended the flow of offerings (NPRN401097; Lynch 1995). In addition to deposits of metalwork, animal bone from Llyn Cerrig Bach suggests that animal sacrifice was practiced from at least the 4th to 2nd century BC, and possibly later, suggesting a long period of deposition (Manning 1998: Council for British Archaeology Radiocarbon Database, OxA-6390; OxA-6391; OxA-6392).

Work exploring landscape and palaeoenvironmental evolution at Llanfair-yn-neubwll suggests that the low lying wetlands surrounding Llyn Cerrig Bach were once subject to tidal influence and that deposition of the hoard may have occurred in an intertidal environment. Environmental survey, EDM, resistivity and magnetometer surveys, and analysis were undertaken in 2006 (Macdonald & Young 1995; Macdonald 2006; Tetlow, Chapman & Gearey 2006). The recent survey work suggests that the deposition may have taken place from a causeway linking a rock platform to an island in the lake. This recent reappraisal indicates that '… *there is apparently nothing left of the peat in which the objects were deposited and it is impractical to survey the area in which the peat was first dumped to let it drain. It might, however, be possible to identify where the peat was dumped on the airfield, and where the objects were first discovered. Fox himself found one of the currency bars here and it is possible that other objects remain to be discovered. Moreover, a new island has been identified in the middle of Llyn Cerrig Bach, perhaps the focus of ritual activity in the Iron Age. Both of these sites would repay further survey and perhaps excavation*' (Foster 2007). Further investigations southwest of Llyn Cerrig Bach, northwest of the northern Crash Gate and west of 'TACAN Hill', are being planned by Dr Oliver Davis, Cardiff University (pers. comm. Sqn Ldr DM Williams).

The scheduled Iron Age roundhouse enclosed settlement of Castellor (**GAT2520; NPRN308123**; **NPRN308122**; **NPRN302306**) is located c.1.8km northeast of the eastern boundary of the airfield. It consists of roundhouses, enclosures, burials, and a chambered tomb or cromlech, from which finds

including Roman material, querns, mortars, coins, leather money, gold tweezers, and copper cake have been recovered (Pritchard 1871; RCAHM 1937; Cadw 1990, Castellor Hut Group).

There is evidence of Iron Age activity in the study area, including one of the most significant deposits of Iron Age metalwork in Britain. Although analysis of available geotechnical cores suggests that peat contexts of Llyn Cerrig Bach do not extend into the air base area, and recent palaeoenvironmental and geophysical surveys indicate that the primary hoard context was fully extracted, those areas once used for peat dump drainage and areas where peat was used to stabilise sandy ground may yet contain scattered elements of the hoard.

Romano-British (AD 43 – 410)

The Roman historian Tacitus, described Mona (Anglesey) as a centre of Druidical learning at the time of the Roman conquest (about AD60). In 61AD, the island was invaded by Suetonius Paulinus, whose troops massacred the druids and burnt their sacred groves. Tacitus described the battle as follows: "*On the beach stood the adverse array[1], a serried mass of arms and men, with women flitting between the ranks. In the style of Furies, in robes of deathly black and with dishevelled hair, they brandished their torches; while a circle of Druids, lifting their hands to heaven and showering imprecations, struck the troops with such an awe at the extraordinary spectacle that, as though their limbs were paralysed, they exposed their bodies to wounds without an attempt at movement. Then, reassured by their general, and inciting each other never to flinch before a band of females and fanatics, they charged behind the standards, cut down all who met them, and enveloped the enemy in his own flames. The next step was to install a garrison among the conquered population,[2] and to demolish the groves consecrated to their savage cults: for they considered it a pious duty to slake the altars with captive blood and to consult their deities by means of human entrails. - While he was thus occupied, the sudden revolt of the province was announced to Suetonius''* (Tacitus *Annals* XIV.xxix-xxx). Fox suggested that the Llyn Cerrig Bach might have been a focus of druidic rituals (Fox 1946).

In 77 or 78 AD, the Romans founded the auxiliary fortress of *Segontium* (now Caernarfon) to maintain control of the Menai Strait. It was connected by a Roman road to the Roman legionary base at Chester, Deva Victrix. The fort was in use until the late 4th century, defending the north Wales coast against Irish raiders and pirates. A fortlet at Caer Gybi, was established at Holyhead in the 4th century to support Segontium against Irish sea-raiders. The Romans also built a signal station or lighthouse at Mynydd y Twr on the top of Holyhead Mountain.

Anglesey was again invaded in AD78, following Agricola's retribution on the Ordovices in Snowdonia, '' *knowing that he depended on the issue of his first campaign to terrorise the enemy for the future, he determined to reduce the island of Anglesey … His plans had been hastily formed and so, as was natural, he had no ships on the spot; yet the resourcefulness and determination of the general bridged the straits … he then launched them upon the enemy so suddenly that the astonished islanders, who looked for fleets of ships upon the sea, promptly came to the conclusion that nothing was hard and nothing invincible to men who fought in this fashion. Accordingly they petitioned for peace and surrendered the island*." (Tacitus Agricola 18.3-5.)"

Several small settlements dating to the period of Roman rule in Britain have been identified on Anglesey and Holy Island, suggesting that life in roundhouse settlements and farmsteads continued as usual, probably trading grain and wool with the troops. Roman material has been recovered during excavations at the scheduled Castellor roundhouse settlement (**GAT2520**; **NPRN308123**; **NPRN308122**; **NPRN302306**). However, recent excavations at Tai Cochion (Brynsiencyn) have

identified a late 1st century to mid- 4th century Romanised urban civilian settlement near the Menai Strait, opposite *Segontium* fort. This was probably a centre for trade between local people and the Roman garrison.

The only evidence for Roman activity in the study area is the Roman material recovered from the Castellor settlement, c.1.8 km to the northeast of RAF Valley. There is no evidence for Roman activity within the assessment site.

Early medieval (AD 410 to 1066)

By the end of the fourth century AD the Roman legions had been withdrawn from Wales. Around the year 450, Irish settlers were expelled from Anglesey by Cunedda. Cunedda based his court at Aberffraw, and was the first ruler of the Kingdom of Gwynedd. Two main monasteries were founded - St. Cybi's (Holyhead), and St. Seiriol's (Penmon). The Vikings raided these monasteries and the royal court in Aberffraw from 854 onwards. In 903 Vikings came to Anglesey after being driven out of Dublin, but were moved on to Chester; they attacked Anglesey again in 918, and in the later 10th century. Anglesey has a number of Scandinavian place-names, particularly for navigational landmarks. It is possible that Viking beachmarkets were established to trade with locals, and that some Vikings settled, with a sequence of possible Viking halls and burials at Llanbedrgoch.

There is no evidence for early medieval activity in the study area or the within the assessment site.

Medieval (1066 to 1539)

One medieval site is recorded within the airfield, the site of Murddyn Eglwys (Church of Mary) (**GAT2519**; **NPRN43600**). In 1937, the site was described as '*A much disturbed mound composed of sand set in marshy ground amongst the sand hills of Tywyn Trewan, depicted on the 3rd edition OS County series (Anglesey XVII.5 1924), but not before. Traditionally the site of a church or chapel, where walls had stood 100 years before although no services had been held for two centuries or more*' RCAHMW 1937, 85). When the site was visited in 2007, it was described as follows: '*This was a roughly circular mound, about 10m across and 1.3m high. A smaller mound, 5.0-6.0m across, about 12m to the south-east marked the boundary between Llanfihangel-yn-nhowyn and Llechylched. Both have been levelled for Valley Airfield.*' (RCAHMW entry **NPRN43600**). The site visit associated with the present project noted that there is a mound of these dimensions, set out on an east-west axis, at this site (Plates SV8- SV10). To the east, in the vicinity of a putative barrow (see above, **GAT2521**), is '*a smaller mound, 5.0-6.0m across, about 12m to the south-east, which marked the boundary between Llanfihangel-yn-nhowyn and Llechylched'* (RCAHM 1937). There are two other demolished medieval church sites within the study area: Capel Bettws, Llanfaelog (**GAT3036**); Cappel Gyfa in Tyddyn Trewen (**GAT2526**; **NRPN43564**). The two extant medieval church sites in the study area comprise the parish church of St Mary, Llanfair yn Neubwll (Grade II listed; **GAT5363**; **GAT6990**; **NPRN43623**), and the Parish church of St. Michael, Llanfihangel-yn-nhowyn (Grade II listed; **GAT2204**; **GAT7004**). The scheduled medieval tidal mill of Ty'n y Felin, Rhoscolyn (**GAT7159**) is located c.1.4 km west of the assessment site.

A number of place-names in the area reflect saints, personal names and natural features (Morgan 1912; Jones & Roberts 1996). These include:

- Murddyn Eglwys – Church of St Mary (**GAT2519**; **NPRN43600**).
- Llanfihangel-yn-nhowyn – llan (church, enclosure) + mihangel (archangel Michael) + tywyn
- (duneland).

- Llanfair yn Neubwll – llan (church, enclosure) + mair (St Mary) + deu bwll (two pools).
- Llechylched – llech (slab, slate, stone, rock) + personal name Ylched.
- Tywyn Trewan – Tywya (duneland) or tref (home, dwelling place) + personal name Owain.
- Llanfaelog – llan (church, enclosure) + maelog (maelgwn), St Maelog.
- Rhoscolyn – rhos (moorland) + collen (hazel tree). Morgan notes that 'Colyn is perhaps allied with Colofn, a column, a pillar. It is said that the Romans erected a column here to perpetuate the memory of their conquests in Mona. The ancient name of the parish was Llanwenfaen, from respect to Gwenfaen, the daughter of Pawl Hen, who is supposed to have founded a religious institution here.'
- Rhosneigr – rhos (moorland) + niger (black), in allusion to the black hue and peaty nature of the soil.

Post-medieval (1540 to 1901)

The study area contains a series of post-medieval mills, including the scheduled Felin Carnau Tide Mill (**NPRN275607**) and the scheduled Felin Wen Tide Mill, Llanfair-yn-neubwll (**GAT7234**; **NPRN402431**), and corn mills: Melin Carnau, Llanfair-yn-neubwll (**NPRN407821**) and Melin y Traeth, Rhosneigr (**GAT36099**; **NPRN407831**). A post-medieval boundary stone is located at Eilian House, immediately east of the airfield (**GAT16630**). The study area contains a number of historic buildings, including the grade II listed Llanfaelog parish church (built 1878; **GAT6980**), and nonconformist chapels such as Bethania (**GAT8138**), Siloam Independent Chapel, Llanfair-yn-Neubwll (erected 1843; **NPRN8756**) and Siloh Baptist Chapel (1848), and Plas Cymyran House, Llanfair-yn-neubwll (**NPRN15809**). Between 1860 and 1897 there was a running dispute over the claims to Towyn Trewan common; in 1871 it was resolved, with parts in the parish of Llanfihangel-yn-Nhowyn being possessed by the crown, and parts in the parishes of Llechylched and Llanfaelog being possessed by the Bishop of Bangor and then sold to private individuals (National Library of Wales B/DL/731; B/EP/301; ECE/MD/B13; ECE/B24,055i; ECE/WB/B123; ECE/WB/B124; ECE/WB/B125). In 1897-1911, the Manor of Cantref sold off its foreshore rights (ECE/B24,055ii).

Cymyran Bay, west of Valley Airfield, contains a number of post-medieval and modern shipwreck sites noted in the RCAHMW inventories. These have not been inventoried or illustrated as the project will not impact them. Post-medieval find spots in the area include a gib hank and a metal fitting dredged from Llyn Cerrig Bach, and material recovered during metal detecting at Silver Bay and Rhosneigr: a copper alloy buckle (**GAT19618**) and copper alloy jewellery (**GAT19639**; **GAT19640**).

Modern (1901 to present)

RAF Valley airfield (**NPRN308389**) was constructed in 1940 on a requisitioned portion of Tywyn Trewan Common. Extensive information regarding the construction, history and development of the airfield are held by the Air Historical Branch, RAF Northolt; National Archives at Kew (operations record books of station and squadrons); the RAF Museum, Hendon (archive aircraft records and photographs), and the Imperial War Museum, Duxford (photographic archive). The base itself holds limited and uncatalogued historical material and photographs.

The Station opened on 13 February 1941, in No 9 Group, Fighter Command, and for the first few weeks was called Royal Air Force Rhosneigr after one of the nearby villages, but was renamed Royal Air Force Valley on 5 April 1941. By late 1941, the station's three runways were being extended to cater for fighter planes and transatlantic landings. The airfield had a long-standing problem with wind-blown sand until May 1942 when it was decided to use dredged silt from a small lake nearby to

spread over the airfield to encourage stabilisation of the sand dunes. This dredging activity led to the discovery of the Llyn Cerrig Bach Iron Age hoard (see **NPRN401097**).

Enemy air activity over the western part of the United Kingdom and the Irish Sea declined and by 1943, the base became a landing and transfer point for American and Canadian bombers and diverted British aircraft. Following the departure of the United States Army Air Force Transit Unit in September 1945, the station continued its search and rescue operations and converted to pilot training. It was transferred to the control of Flying Training Command in 1946. RAF Valley became a permanent RAF station in 1948, the first jet aircraft arrived in 1949, and since 1951 it has been one of Flying Training Command's principal stations and a Master Diversion Airfield. Further improvements were made into the 1950s, including new brick buildings, the renovation of hangars (**GAT33382**), the replacement of the Blister hangars and the resurfacing of the taxi-ways. This function continues today in addition to air-sea rescue and guided weapons development. The site of a Royal Observer Corps (ROC) underground monitoring post, located at Rhosneigr, has been demolished to make way for housing (**GAT58998**).

The airfield and the surrounding area contain a number of air crash sites. The RCAHMW holds extensive documentation on the airfield, including digitised USAAF Aircraft Accident Reports 1942-1945 and Military Air Accident Collections. The Aircraft Accident Reports, produced by the U.S. War Department during World War II, note the crashes of a number of aircraft including P-38F Lightnings (C545793, 28/07/1942; C545795, 4/09/1942), a B-24H Liberator (C545806, 15/04/1944), a B-17F Flying Fortress (C545808, 27/04/1944), B-17G Flying Fortresses (C545815, 26/09/1944; C545811, 19/06/1945; C545818, 8/07/1945; C545819, 9/07/1945), a C-53 Skytrooper (C545813, 2/09/1944), a C-109 Liberator (C545817, 5/12/1944) and an A-26B Invader which crashed one mile from RAF Valley (C545820; 6/08/1945). Archaeological remains associated with the remains of any of these aircraft are not confirmed, but may be present in the vicinity.

The following sites are Protected Places under the Protection of Military Remains Act 1986: the 1941 crash of a Bristol Beaufighter (**NPRN240134**), a 1943 De Havilland Mosquito crash (**NPRN240143**), a 1944 Avro Anson bellylanding (**NPRN515802**), and a 1945 North American Mustang P51 sea crash (**NPRN240172**). Post-Second World War crashes include a De Havilland Vampire, 1952 (**NPRN515681**), a Folland Gnat, 1963 (**NPRN515326**), Hawker Siddeley Gnats which crashed in 1966 (**NPRN515862**), 1967 (**NPRN515865**) and 1973 (**NPRN515863**), a hawker Hunter which crashed into Cwm Penmachno in 1971 (**NPRN515860**) and another which was abandoned in 1976 (**NPRN515849**), and a BAC Lightning which was abandoned in 1979 after the undercarriage jammed (**NPRN515868**). Modern find spots in the area comprise a lead alloy weight recovered during metal detecting at Rhosneigr (**GAT19636**)..

6.0 QUANTIFICATION OF RESULTS

6.1 The Documentary Archive

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

Watching brief day sheets **13**

Digital photographs **178**

6.2 Environmental Samples

No environmental samples were taken as part of the watching brief as no suitable archaeological deposits were encountered.

6.3 Artefacts

During the watching brief there were a **13** artefacts recovered ranging from the prehistoric period to the modern era. The majority of these finds were from the modern era. The finds are listed below in ascending order into the archaeological era in to which they have been assigned. The finds below are presented below with their relative weights, dimensions, location, finds number (Δ1.) and a brief description.

Δ5. Whetstone or saddlestone (Prehistoric-Medieval?)
0.52m x 0.33m long
5.24kg
NGR: SH 231826 374839
Large sub rounded cobble with heavily polished upper surface; possibly a whetstone for knife sharpening or a polishing stone used for leatherwork.

Δ12. Iron gib hank (Post medieval-19th century?)
Plate 41
0.23m
1.34kg
NGR: SH 30924 76320
Iron gib hank or iron fitting (perhaps maritime) with circular 'eye' and four protrusions set at different angles; two extending from below the 'eye' and two set above. The object is heavily corroded and therefore identification is difficult.

Δ1. Bent iron rod (Industrial era/2nd World War era)
Plate 42
0.52m long
1.15kg
NGR: SH 31808 74856
Iron bar with single pointed end; towards the other end tt exhibits a steady curve to a flat end. The rod appears square in cross section and where the corrosion has broken away it appears slick with fouled grease. The item may have once been a time from a drag harrow.

Δ6. Iron horseshoe (Industrial era/2nd World War era)
Plate 43
0.12m x 0.11m long
37 grams
NGR: SH 30928 76299
Iron horseshoe (referred to as *Pelod* on the island of Anglesey) which has been slightly bent under torsion force. There is an appearance of corrosion all over the object but especially in the cntre close to the torsion bend. The horseshoe appears small perhaps for a pony or smaller breed.

Δ9. Iron/Alloy Object (Industrial era/2nd World War era)
Plate 44
0.31m long
67 grams
NGR: SH 30932 76645
Two pieces of interlocking iron work formed into three separate loops; two loops are found on one piece of iron work with a single loop on the other. These pieces of iron may be part of a chain link fence or form park of the body of a chain harrow.

Δ7. Iron/Alloy Object (Modern)
0.13m long
12 grams
NGR: SH 30932 76645
Iron/alloy bolt or nail; heavily corroded.

Δ8. Iron/Alloy Object (Modern)
0.19m long
22 grams
NGR: SH 30932 76645
Iron/alloy long bolt or nail; also heavily corroded.

Δ2. Shovel head (Modern)
Plate 45
0.47m long
1.53kg
NGR: SH 231812 374852
Sheet steel, square shovel head (0.28m x 0.22m) with seam on handle fitting. Subject to very heavy corrosion and missing portion out of its right hand shovelling face; either due to corroded metal or having been cut out.

Δ3. Chisel (Modern)
0.35m long
61 grams
NGR: SH 231855 374809
Steel masonry chisel with flared chisel head (1.52cm wide), heavily corroded.
Δ4. Iron peg or stake (Modern)
0.62m long
92 grams

NGR: SH 231826 374839
Iron or alloy alloy rod with point at one end. Appears circular in cross section (80mm diameter), also subject to heavy corrosion.

Δ10. Copper alloy object (Modern)
Plate 46
0.13m long
30 grams
NGR: SH 30934 376372
Extremely bent and corroded piece of copper alloy with both ends tapering to points, most likely a piece of shorn armoured cable sheathing.

Δ11. Rake head (Modern)
Plate 47
0.19m long
1.24kg
NGR: SH 30934 376372
Iron or steel alloy rake head with four visible tines and a further possible three obscured by rust/corrosion. The design is robust reminiscent of a rake used to level concrete, although no concrete residue was visible on the rake head.

Δ13. Iron shackle or ring (Modern)
Plate 48
0.12m x 0.14m long
42 grams
NGR: SH 30916 76312
Sub rounded, iron or steel alloy ring or shackle, heavily corroded.

7.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

The watching brief took place over three separate visits between April 2016 and July 2017 and incorporated four separate phases of renewal works at RAF Valley; the construction of a new cycle path on the northern side of the runway (early-mid April 2016), the construction of a new cycle path on the southern side of the runway (mid-late April 2016), the construction of a compass calibration base (CCB) to the immediate northwest of the northern cycle path (mid April 2016) and the construction of a perimeter road at the northernmost point of Runway 19 (April – May 2017, July 2017, July 2017).

These works included the reduction of the ground to formation level, the lowering of any services or communication cables encountered and the excavation of a drainage channel (relevant to the cycle path only).

7.1 Excavation of northern cycle path route (plates 1-7)

4th – 29th April 2016

The first phase of the archaeological watching brief was concerned with the excavation of the cycle path. It was maintained while a tracked excavator with toothless ditching bucket excavated a 1.80m wide strip running northwest to southeast (**NGR SH 31468 75235 – SH 32030 74522**). The cycle path route begins at southern approach road to taxiway alpha before running parallel with the runway (along its north eastern extent) before curving southwards to connect with the pathway leading towards Rhosneigr to the South. All distances given here are from west to east; from 0m to the excavation's terminus at 1050m (Figures 04-05).

The strip was excavated to no more than a maximum depth of 0.55m along its entire length. Within the first 200m the machine cut through 0.15m deep deposit of loose, dark black-brown sandy-silt topsoil with occasional sub rounded pebble inclusions. Beneath this layer at the north western end was a 0.10m of tarmac which overlay >0.15/0.20m deposit of very loose, light yellow-brown sand with rare angular/sub angular small cobble inclusions. This area showed heavy traces of root action suggesting that it may have once been quite vegetated.

Between 200m and 340m the machine cut through 0.15m of loose, dark black-brown sandy-silt topsoil with occasional sub rounded pebble inclusions. Beneath this lay >0.15/0.20m deposit of very loose, mottled light orange-brown sand subsoil this can be characterised as having frequent horizontal bands of dark black-brown silt sand – possibly evidence of turf or peat storage in this area. Furthermore the area between 150m and 475m yielded 37 golf balls which undoubtedly originated from the golf course to the northeast.

Between 650m and 850m the machine cut through 0.15m of loose, dark black-brown sandy-silt topsoil with occasional sub rounded pebble inclusions, before cutting through a 0.25m deposit of light red-brown clay with frequent sub rounded pebble and cobble inclusions. This clay deposit overlay >0.05m of the light yellow-brown sand subsoil. The area of clay seemed to be restricted to a 10.0/15.0m area of outcropping bedrock.

The area between 850m and 900m can be characterised as a series of shallow pits; the machine cut through 0.15m of loose, dark black-brown sandy-silt topsoil onto 0.30m deep deposit of a fairly loose,

mid black-brown clay-sand-silt (distinct black and white stained areas), with very frequent ceramic building material (CBM), re-enforced glass, iron and broken brick inclusions within its matrix. This deposit overlay a >0.10m deep deposit of the light yellow-brown sand subsoil.

The final section connecting to the cycle route to the Rhosneigr pathway, between 900m and 1050m demonstrated a rising bedrock once more; the machine cut through 0.15m of loose, dark black-brown sandy-silt topsoil with occasional sub rounded pebble inclusions, before cutting through a 0.10m deposit of light red-brown clay with frequent sub rounded pebble and cobble inclusions. This clay deposit overlay >0.10m of the light yellow-brown sand subsoil.

The only archaeological deposits encountered during this phase of the watching brief were the shallow modern refuse pits at 850m - 900m which contained large amounts of demolished materials. Several iron objects were encountered during the watching brief, however due to the morphology and preservation levels of these objects the provenance of the finds were securely placed within the modern era or recent past. Of the artefacts recovered during this phase of the watching brief none shared characteristics with the finds assemblage associated with Llyn Cerrig Back or with finds associated with the wider Iron Age era in general.

Plate 01: Commencement of Cycle path North (towards taxiway Alpha) - from the northeast - no scale

Plate 02: Area of previous dense vegetation 50.0m-70.0m - from the northwest - no scale

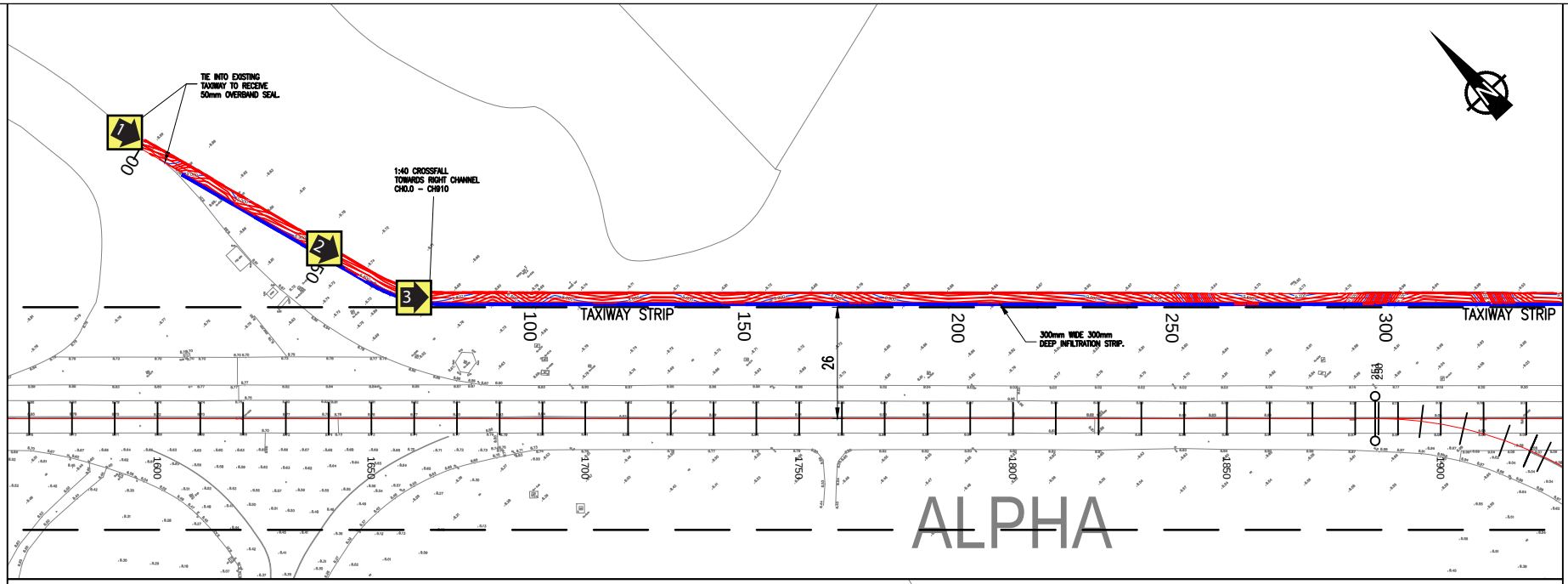
Plate 03: Area (continued) of previous dense vegetation 70.0m-100.0m - from the northwest - no scale

Plate 04: Area with abundant golf balls 250.0m-350.0m - from the south - no scale

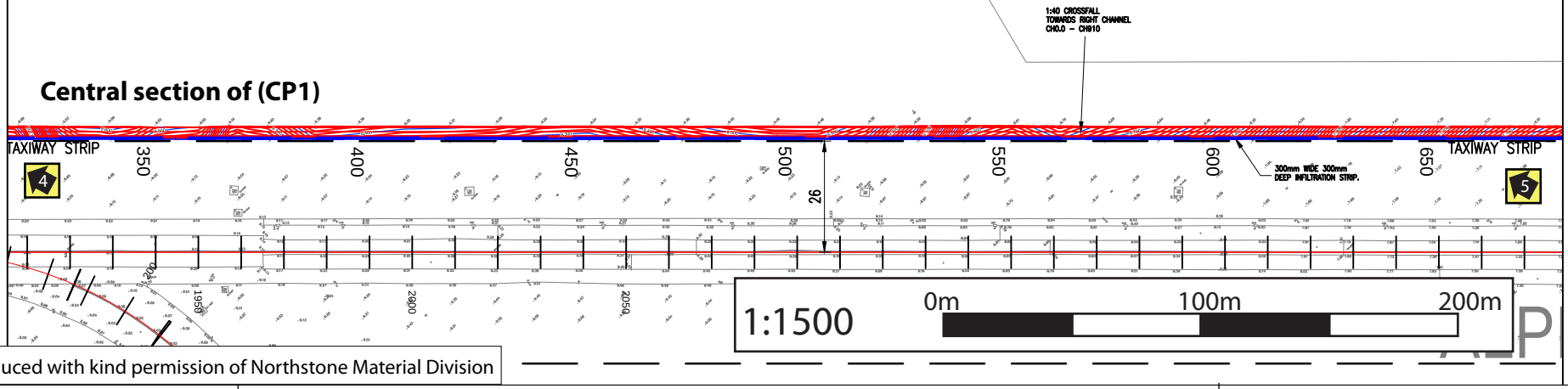
Plate 05: Area with outcropping of bedrock 700.0m-800.0m - from the south - no scale

Plate 06: Area with modern pits 850.0m-900.0m - from the northwest - no scale

Plate 07: End of northern Cycle path (900.0m-1050.0m) connecting with Rhosneigr footpath - from the south - 1m scale



North western section of (CP1)



Central section of (CP1)

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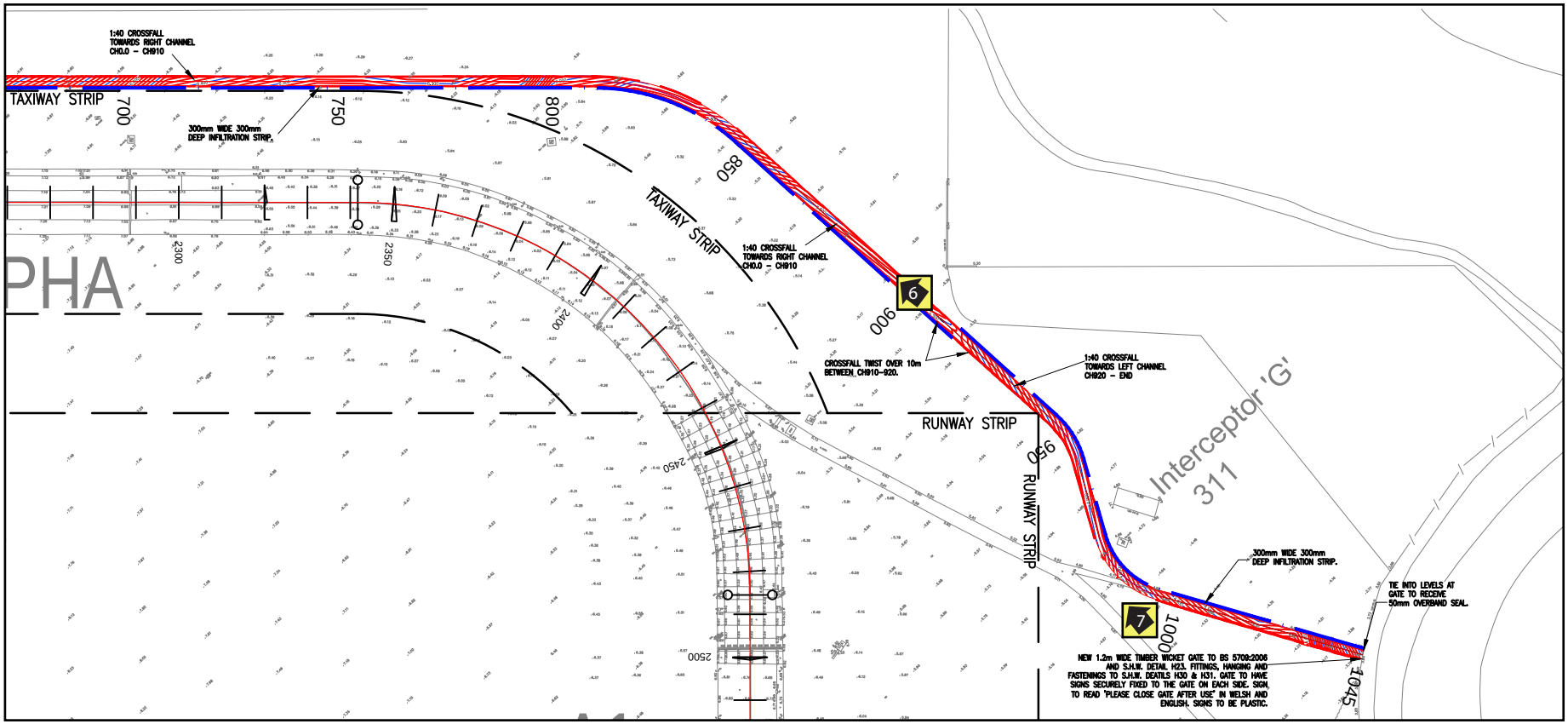
Figure 04. Plan of northern cycle path (1) showing the northwestern and central sections of the path, locations and direction of photographs are shown. 1:1500 @ A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

South eastern end of CP1



1:1500

0m 100m 200m

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Figure 05. Plan of northern cycle path (1) showing the south eastern end of the path, locations and direction of photographs are shown. 1:1500 @ A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

7.2 Excavation of southern cycle path route (plates 8-15)

The second phase of the archaeological watching brief involved the excavation of a second cycle path. It was maintained while the tracked excavator excavated a 1.80m wide strip running northwest to southeast (**NGR SH 32093 74218– SH 31196 74774**). The cycle path route begins at the pathway (nearest Afon Crigyll) leading towards Rhosneigr and the eastern most extent of the search and rescue training unit (SARTU). All following distances given here are from east to west; from 0m to SARTU at 830m.

The strip was excavated to a maximum depth of no more than 0.42m along its entire length. The initial 0m to 150m of the southern cycle path, starting nearest to Afon Crigyll at its easternmost extent, cut through 0.06m off a loose, dark black brown sandy topsoil with occasional sub rounded pebble inclusions. Beneath this layer was a 0.19m deposit of very loose, mid orange-brown silt-sand with rare, large sub rounded cobbles, occasional brick fragments and infrequent CBM inclusions. This overlay a >0.10m deposit of firm, bright yellow sand. Occasional services were encountered in this area comprising of cable networks for approach.

Between 150m and 250m there was a series of discreet areas of burning intermingled within the stratigraphy; the trench cut through the 0.17m of loose, mid black-brown sand-silt topsoil onto a >0.11m deposit of firm, bright yellow sand. This area was within 200m a fire test area and flare release site. Between 250m and 300m the area became affected by heavy bioturbation at the edge of a marshy area with a 0.14m deep deposit of quite firm, dark black-brown sand-silt peat situated between the topsoil and the sand. Located between 315m and 325m was a discreet area of tarmac immediately below the topsoil.

The trench in the area between 350m and 400m of the excavation cut through the 0.15m of loose, mid black-brown sand-silt topsoil onto a 0.15m spread of quite loose, dark grey-black silt-sand (with orange mottling) with many small heavily degraded iron inclusions. Below this was a >0.10m deposit of firm, bright yellow sand. This area appeared to have been a refuse pit for machine parts or subject to concentrated iron panning. The trench in the area between 400 and 430m then cut through 0.15m of loose, mid black-brown sand-silt topsoil onto a 0.11m layer of tarmac which over lay a 0.14m layer of firm light white-grey clay-silt with very frequent angular and sub angular pebble inclusions. Below this tarmac and hardcore was a >0.12m firm, bright yellow sand. This area was characterised by very frequent service and land drain cuts and relict tarmac surfaces.

Between 450m and 550m the trench 0.06m off a loose, dark black brown sandy topsoil with occasional sub rounded pebble inclusions. Beneath this layer was a 0.16m deposit of loose, mid orange-brown (with dark brown mottling) silt-sand with rare, large sub rounded cobbles and very frequent fragments of CBM. This overlay a >0.10m deposit of firm, bright yellow sand. This area can be characterised as having been subject to heavy land improvement via the use of land drains; which had since been heavily disturbed and broken in many places.

In the area between 600 and 650m the stratigraphy briefly to shallow upper deposits consisting of; 0.06m of loose, dark black brown sandy topsoil above a layer was a 0.20m deposit of very loose, mid orange-brown silt-sand which in turn overlaid a >0.10m deposit of firm, bright yellow sand. From 650m onward to 750m the topsoil deposit was saturated with shotgun shell casings and fragments of clay pigeons both upon and within it. Near this area sits a mound of sand and stony deposits on which is situated a building that acts as a shooting range. At 750m to 830m the mid orange-brown silt-sand

layer gives way to 0.25m of a light grey-brown (mottled dark brown) sand-silt near an area of rough ground to the south – this area appears to be seasonally marshy. Subsequently following the topsoil strip of the cycle path area there was a drainage channel excavated on the northern side of the path to a maximum depth of 0.42m (Figures 06-07).

Plate 08: Commencement of Cycle path South (from Rhosneigr cycle path) - from the southeast - no scale

Plate 09: Cycle path South (100.0m - 150.0m) - from the northwest - no scale

Plate 10: Cycle path South (150.0m - 250.0m) - from the northwest - no scale

Plate 11: Cycle path South (250.0m -350.0m) - from the northwest - no scale

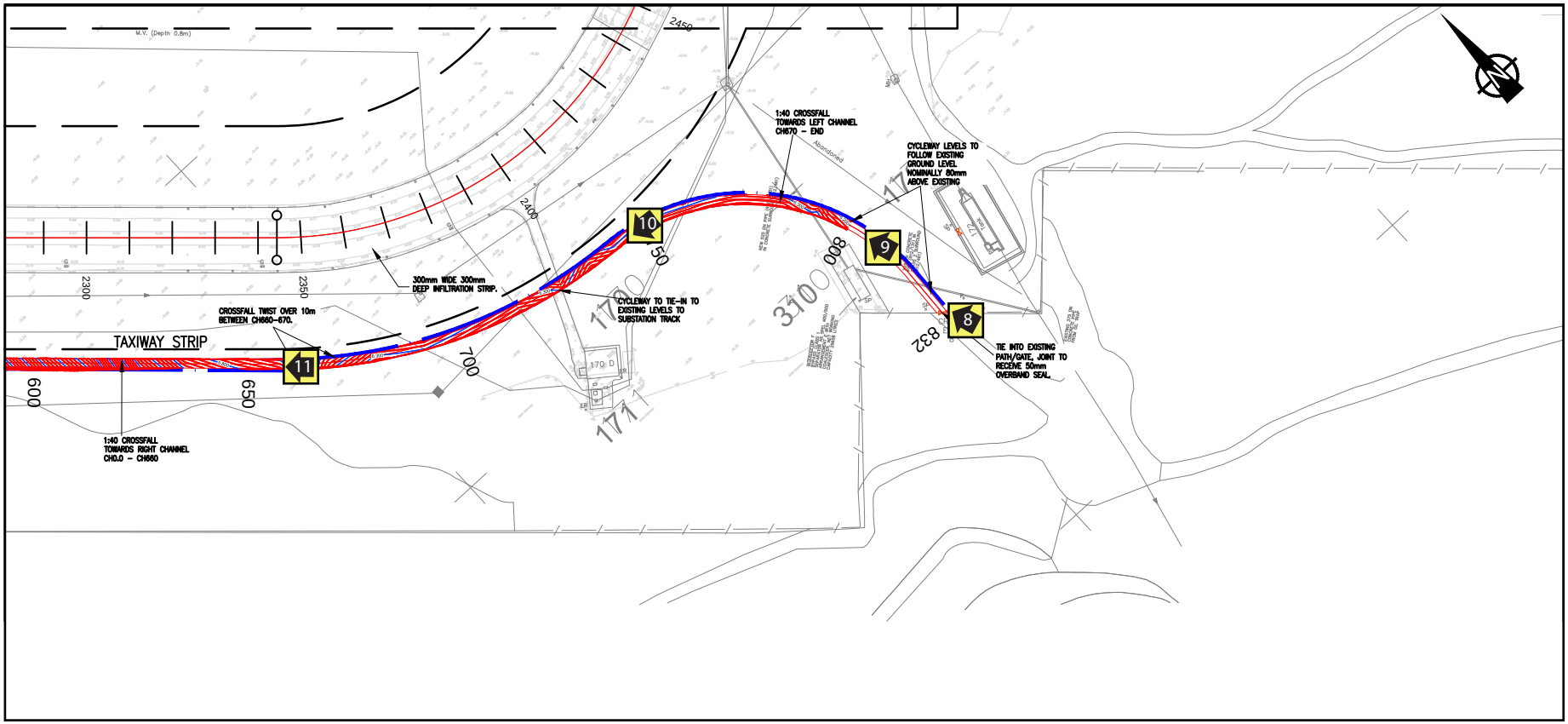
Plate 12: Area of Tarmac exposed (350.0m -550.0m) - from the northwest - no scale

Plate 13: Cycle path south (550.0m -750.0m) - from the northwest - no scale

Plate 14: Cycle path south (750.0m -800.0m) - from the west - no scale

Plate 15: Cycle path south (775.0m -830.0m) - from the south - no scale

South eastern end of CP2



1:1500

0m 100m 200m

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Figure 06. Plan of southern cycle path (2) showing the south eastern end of the path, locations and direction of photographs are shown. 1:1500 @ A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

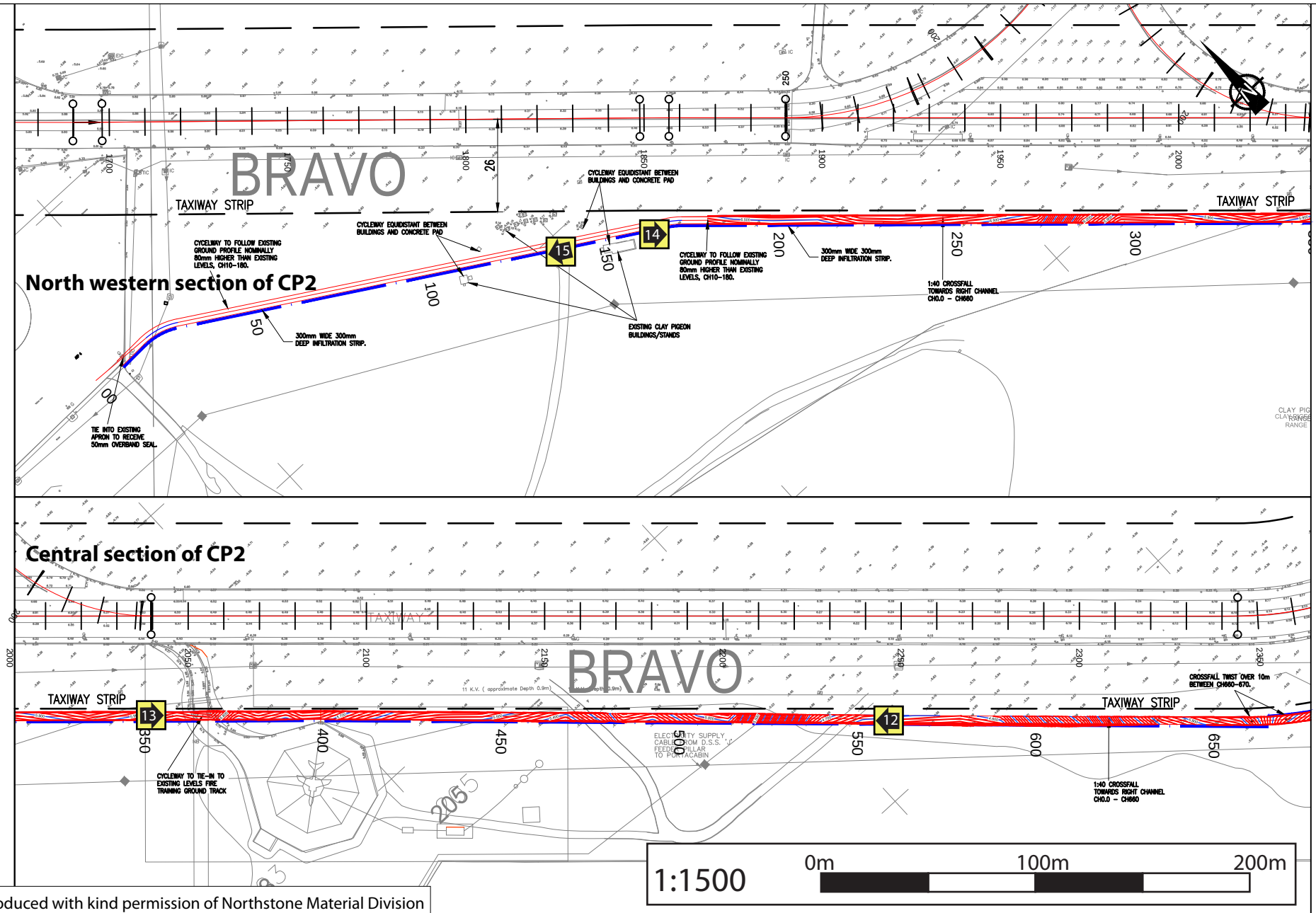

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Figure 07. Plan of southern cycle path (2) showing the northwestern and central sections of the path, locations and direction of photographs are shown. 1:1500 @ A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

7.3 Excavation of compass calibration base (CCB) (plates 16-23)
11th – 13th March 2016

The second phase of the watching brief took place concurrently with the initial phase excavating the strip for the cycle path. This second phase was concerned with the construction of a CCB that was located at the 'old brake test area' to the immediate northwest of the cycle path (**SH 31443 75307**). The excavation involved the levelling of a former golf tee in order to accommodate the CCB and a strip 2.0m wide was excavated in a perfect circle in the areas between three tarmacked surfaces within the brake test area (Figure 08)

The strip was excavated to a maximum depth of 0.20m across the entire circumference of the CCB. The machine cut through 0.08m deep deposit of loose, dark black-brown sandy-silt topsoil with occasional sub rounded pebble and red brick fragment inclusions. Beneath this layer was a >0.12m deposit of very loose, light yellow-brown sand with rare angular/sub angular small cobble inclusions. Within the northern portion of the circle a brick built chamber was uncovered orientated northwest to southeast; the north western extent of the chamber was visible before it ran into section to the southwest. The chamber measured >1.85m in length by 1.05m in width and was 0.70m deep however the base was obscured by a demolition layer. The wall of the chamber was constructed from frogged red brick bonded by mortar, these bricks measured 0.22m long by 0.12m wide and 0.07m in depth. The wall was dual course and appeared to have a core of white/grey brittle mortar 0.14m wide. It is possible that this was some sort of brick lined storage tank or purpose built service inspection pit.

Apart from the brick inspection pit there were no other archaeological remains or deposits encountered during the watching brief.

Plate 16: Brake Test Area - reduced dig on 'golf-tee' and south eastern quadrant of compass calibration base (CCB) - from the west - no scale

Plate 17: CCB strip excavation (south western quadrant) - from the east - 1m scale

Plate 18: CCB strip excavation (south western quadrant) - from the south - 1m scale

Plate 19: CCB strip excavation (north western quadrant) - from the northeast - 1m scale

Plate 20: CCB strip excavation (north eastern quadrant) - from the northwest - no scale

Plate 21: CCB strip excavation (north eastern quadrant) - from the southwest - 1m scale

Plate 22: Inspection pit uncovered during CCB excavation - from the southwest - 1m scale

Plate 23: Inspection pit uncovered during CCB excavation - from the north - 1m scale

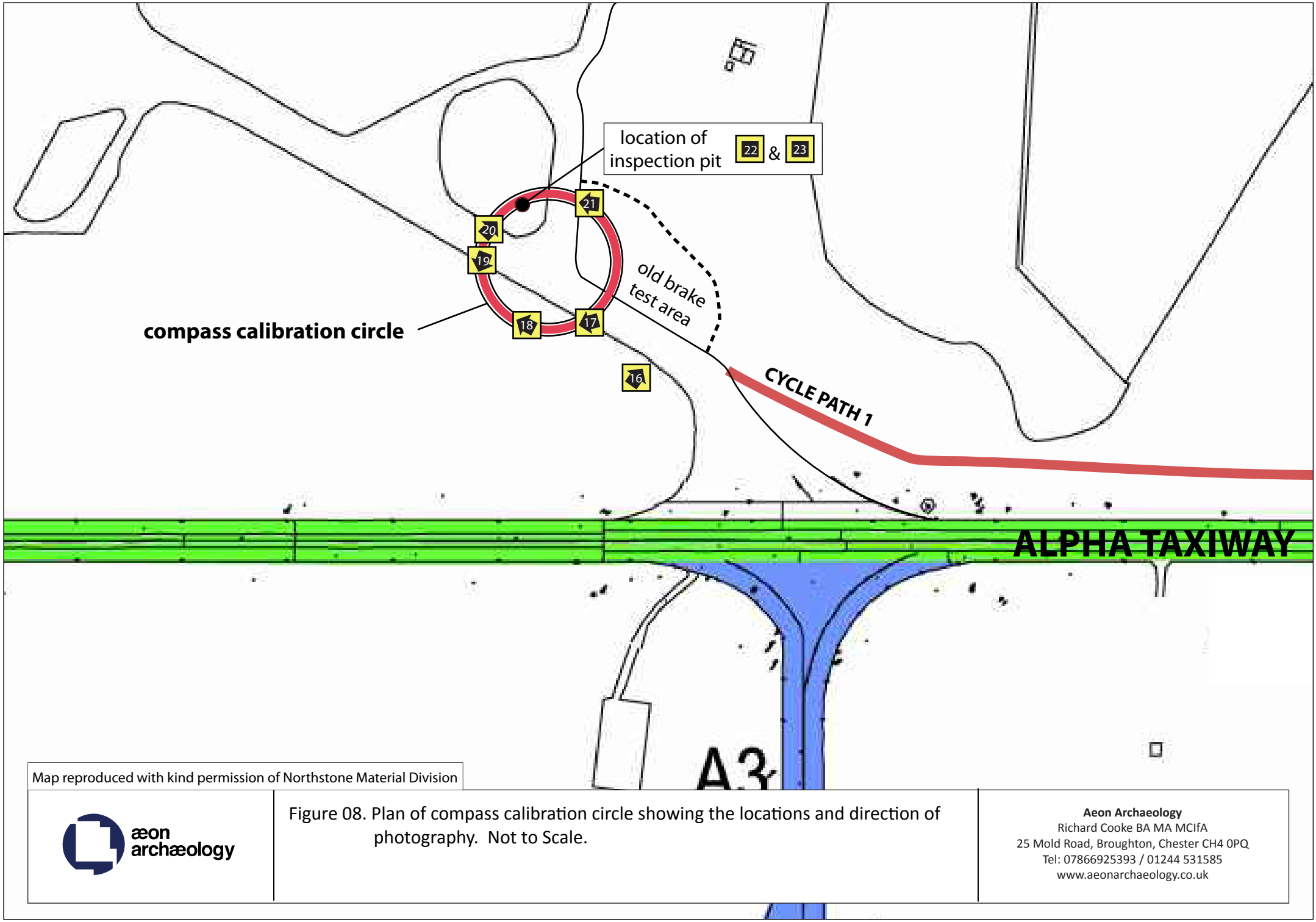

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Figure 08. Plan of compass calibration circle showing the locations and direction of photography. Not to Scale.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

7.4 Excavation of perimeter road (plates 24-39)
27th March – 1st April (western excavation); 25th – 29th July 2017 (eastern excavation);

The third phase of the watching brief comprised of the construction of a perimeter road around the terminus of the north-south runway (Runway 19) which was closed during March and April. The area strip took place initially from east to west - starting close to Crash Gate 1 **(SH 30636 76459)** during March - April, before restarting in July from west to east close to Crash gate 2 **(SH 30907 76224)**. Once more the excavation was conducted with a tracked excavator with toothless ditching bucket and to a maximum width of 6.78m in order to accommodate the roadway; new service ducts and drainage. All distances given here are from west to east; from 0m to the excavation's terminus at 650m (Figures 09).

The initial 130.0m of the perimeter road, starting nearest to Crash gate 1 at its westernmost extent, had already been excavated and stoned up before the archaeologist arrived on site. The strip was excavated to a maximum depth of 1.05m along its entire length. Between 100 and 200m the machine cut through (plate 34) 0.15m deep deposit of loose, dark black-brown sandy-silt topsoil with occasional sub rounded pebble inclusions. Beneath this layer was >0.25m deposit of very loose, light yellow-brown sand with rare, large sub rounded cobbles, occasional brick fragments and infrequent CBM inclusions. Very frequent services were encountered in this area comprising of cable networks for approach lights and communications cables – the excavation was methodical due to the frequent occurrence of these services and the subsequent lowering of those surfaces below the road level.

Between 170m and 210m there was a series of concrete station bases encountered and close to 185m there was a temporary change in stratigraphy with machine cutting through the 0.15m of loose, dark black-brown sandy-silt topsoil onto a >0.30m deposit of very loose dark blue-grey sand with frequent areas of iron panning. This area was very close to the water table and below 0.30m the sands began to run with ground water. The change at 185m may be explained as part of the initial cutting for the Minfordd Road to the north or perhaps be due to the specific hydrology of that area

Between 210m and 255m the machine cut through (plate 35) 0.09m of the loose, dark black-brown sandy-silt topsoil, before cutting through a 0.18m deposit of the light yellow-brown sand subsoil. Below this layer was a >0.76m loose, very light grey-yellow sand with evidence of heavy bioturbation. This lighter layer beneath the subsoil may be a relict ground surface that survives beneath the made ground of the airfield.

The area between 255m and 350m was not observed under the condition of archaeological watching brief. This was due to a reopening of Runway 19 in early April 2017; works were suspended for three months before recommencing in July 2017. Following the 29th of July the archaeologist was informed that attendance on site would not be required for a number of weeks – at this time the area between 300m and 450m remained unexcavated. With the project now completed in October 2017 the area has since been excavated without archaeological attendance.

The area between 350 and 450m demonstrated the best possibly evidence of turf or peat storage whereas, between 450 – 550m the area appeared to be very heavily disturbed. The machine cut through (plate 36) 0.09m of the loose, dark black-brown sandy-silt topsoil, before cutting through a 0.18m deposit of a firm black peat onto a 0.18m deep mid yellow-brown re-deposited sand deposit with frequent brick and CBM inclusions also this layer was subject to frequent of concave service cuts backfilled with a dark-brown silt-sand. Below this layer was a >0.17m loose, very light grey-yellow

sand with evidence of heavy bioturbation and more concave service cuts filled with yellow-brown silt-sand. Further to the south the interventions into the *mid-yellow brown re deposited sand* and the *lighter grey-yellow sand* layers were more frequent (plate 37) and this surely represents phases of service installation/renewal at the airfield; the light grey yellow appears to be a relict ground surface with services cut into it and the mid yellow brown sand is re deposited material subsequently cut into it at a at a later date. The final 100.0m (550m – 650m) between the northern most area between Crash gate 2 and the *ASP1 – Goshawk Delta* area had already been excavated and stoned up before the archaeologist arrived on site.

The initial western excavation (0m – 250m) in March/April 2017 was the closest in proximity to Llyn Cerrig Bach and therefore the area closest to postulated location for historic peat extraction in the 1940's. However it was during the eastern excavation in July 2017 that the evidence for the possible extraction storage of peat is strongest; the area between 350m and 550m demonstrated a 0.18m deep deposit of peat visible in section, in contrast this distinctive band is absent further to the west. This may be because the peat was employed as a consolidating material in this area or it may allude to the storage of peat at this location. Furthermore the great majority of finds were located in this eastern area, perhaps alluding to historic anthropogenic activity in the modern period. However it is important to state that due to the heavily disturbed nature of the stratigraphy in this area by modern services; the prevalence of finds may be related to later phases of works; the installation of modern services for instance. The airfield has been the beneficiary of technological advances since the 1940's and continual upgrades would have resulted in constant ground disturbance.

Once more several iron objects were encountered during the watching brief however once more these objects can be securely placed within the modern era or recent past. The proximity of this excavation to Llyn Cerrig Bach elicited particular scrutiny on the part of the archaeologist; however of the artefacts recovered during this phase of the watching brief none shared characteristics with the finds assemblage associated with Llyn Cerrig Back or with finds associated with the wider Iron Age era in general.

Concurrent with the excavation of the perimeter road was the excavation of a series of test pits (plate 38) around the northern perimeter of the airfield. These test pits were excavated in order to facilitate the installation of diesel powered water pumps as the ground was heavily water logged. The pits were excavated to a maximum depth 0.55m and were approximately 0.60m². These pits cut through 0.15m of loose, dark black-brown sand-silt topsoil onto a 0.06m deposit of light grey-brown silt-sand (mottled dark brown) which lay above >0.34m very loose, light yellow-brown sand (plate 39). It was at this depth that the cut was inundated with ground water.

Plate 24: Perimeter road topsoil strip to north of Runway 19 (130.0m to 0m) - from the east - 1m scale

Plate 25: Perimeter road topsoil strip to north of Runway 19 (130.0m to 200.0m) - from the west - 1m scale

Plate 26: Perimeter road topsoil strip to north of Runway 19 (200.0m to 250.0m) - from the west - 1m scale

Plate 27: Perimeter road topsoil strip to north of Runway 19 (Oblique shot -250.0m to 200.0m) - from the east - 1m scale

Plate 28: Batter ahead of temporary shut down ahead of reopening of Runway 19 (lowered services also shown) - from the west - no scale

Plate 29: Perimeter road topsoil strip to north of Runway 19 (350.0m to 450.0m) - from the northwest - 1m scale

Plate 30: Perimeter road topsoil strip to north of Runway 19 (500.0m to 450.0m) - from the south - 1m scale

Plate 31: Perimeter road topsoil strip to north of Runway 19 (500.0m to 550.0m) - from the north - 1m scale

Plate 32: Perimeter road topsoil strip to north of Runway 19 (550.0m to 600.0m) - from the north - 1m scale

Plate 33: Perimeter road stoned up and concreted (600.0m to 650.0m) - from the north - no scale

Plate 34: Section of perimeter road (at 100.0m) - from the south - 0.50m scale

Plate 35: Section of perimeter road (at 250.0m) - from the north - 1m scale

Plate 36: Section of perimeter road (at 450.0m) - from the northeast - 1m scale

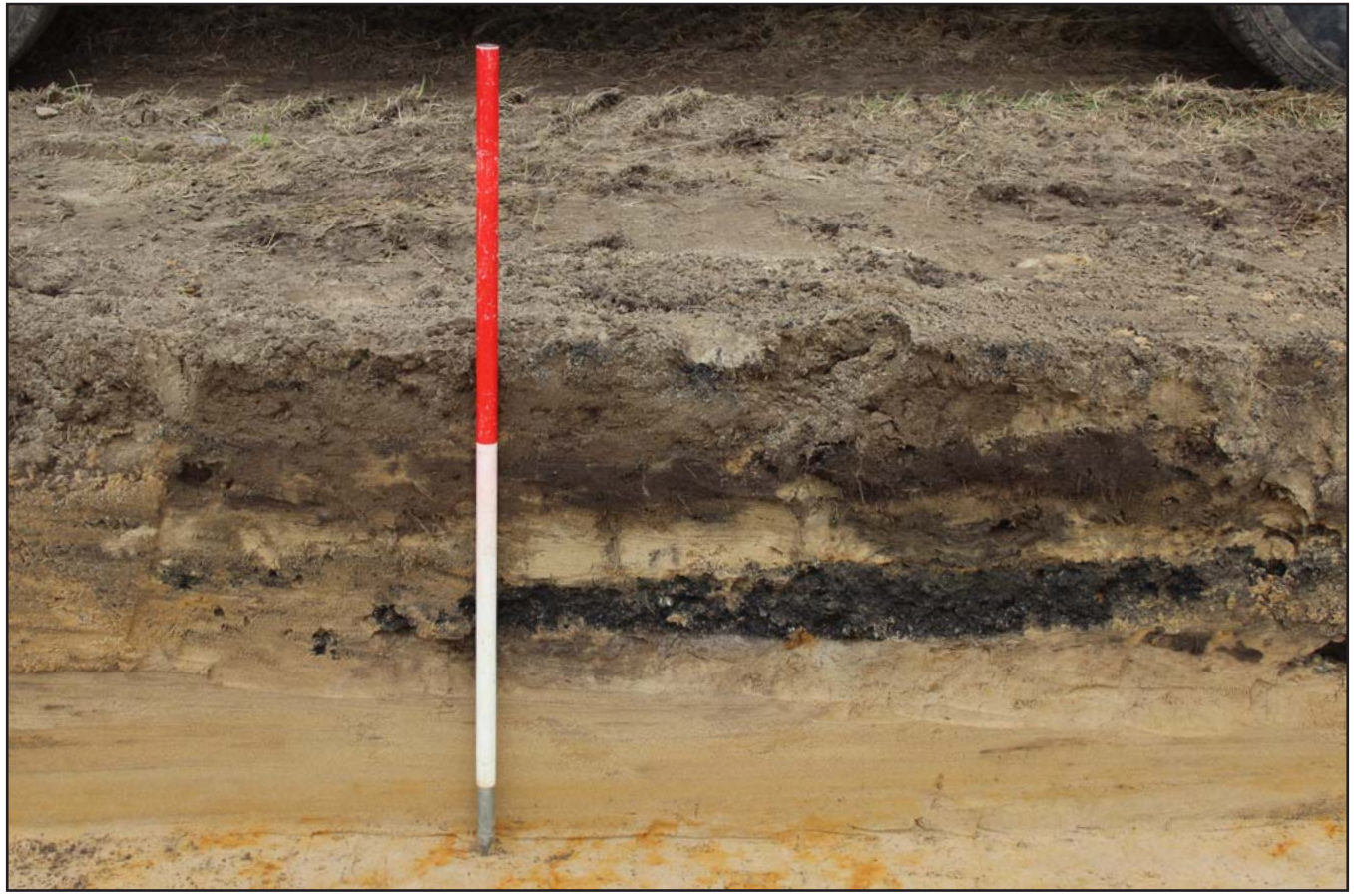

Plate 37: Section of perimeter road (at 550.0m) - from the northeast - 1m scale

Plate 38: Test pits along northern edge of perimeter road - from the west- 1m scale

Plate 39: Example Test pit located along northern edge of perimeter road - from the south - 1m scale

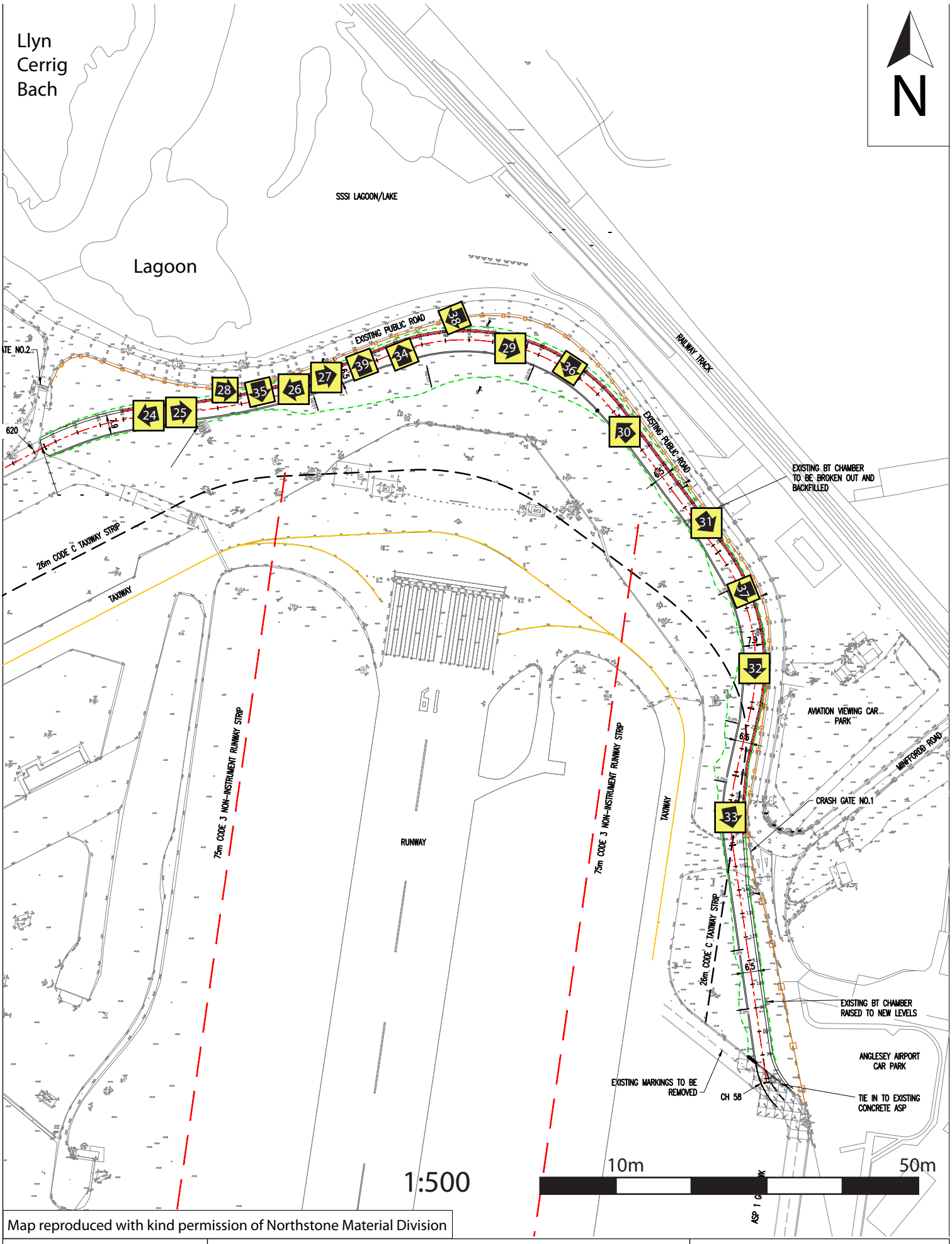

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Figure 09. Plan of northern perimeter road showing the locations and direction of photography Scale 1:500 @ A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

Plate 40: Iron Wall tie - 1m scale

Plate 41: Iron gib hank (0.23m long) - 0.50m scale

Plate 42: Iron tine from drag harrow (0.52m long) - 0.50m scale

Plate 43: Iron horseshoe (0.12m long) - 0.50m scale

Plate 44: Chain harrow link (0.31m long) - 0.50m scale

Plate 45: Steel alloy shovel (0.47m long) - 0.50m scale

Plate 46: Copper alloy object (0.13m long) - 0.50m scale

Plate 47: Iron rake head (0.19m long) - 0.50m scale

Plate 48: Iron ring or shackle (0.12m long) - 0.50m scale

8.0 CONCLUSION AND RECOMMENDATIONS

The archaeological watching brief during renewal works at RAF Valley, Llanfair yn Neubell did reveal some buried archaeological remains and deposits. During the excavation of the calibration circle, a narrow brick built inspection tank was uncovered and during the eastern excavation of the perimeter road, there were deposits which may be considered as possible evidence of peat storage or at the very least ground consolidation. The watching brief facilitated the opportunity to observe a diverse range of artefacts consisting of sporting equipment (golf balls), metal tools, agricultural implements, and a possible prehistoric whetstone - reflecting that RAF Valley can be considered as an intense area of cultural activity during the recent past, excluding the extension of its chronology into prehistory. Furthermore the presence of the shallow pits towards the south-eastern extent of the site, replete with modern demolition materials demonstrates that the airfield in its entirety has been subject to substantial operations during throughout the 20th and 21st centuries.

The watching brief provided the chance to observe and record a distinct anthropogenic process which may be considered crucial to understanding part of the historic narrative at RAF Valley; the consolidation of the sandy ground before the extension of runway 19 at Valley in 1942 was of paramount importance to the functional state of the airfield during the Second World War and subsequently facilitating transatlantic air travel. Additionally the process of spreading peat over the unstable sands led to the discovery of the influential Iron Age artefacts at RAF Valley which have since become known as the Llyn Cerrig Bach horde. In specific reference to this archaeological period, the observations during the watching brief at the airfield produced no finds or artefacts pertaining to the horde – in this sense the results can be viewed as disappointing. However the results of the archaeological watching brief can be said to have achieved the aims and objectives set by the WSI and more widely by the Historic Baseline Study. Although no primary material associated with the Iron Age horde from Llyn Cerrig Bach was found, there has been a general improvement in knowledge associated with the narrative of development at RAF Valley and to some extent, the understanding of particular cultural processes during the modern period at the airfield have been archeologically recorded. In conclusion the landscape at RAF Valley may be considered as a true palimpsest spanning the prehistoric period up to the recent past, reflecting its status as a place of social, cultural and political significance both in the past and as it continues to operate in the present day.

9.0 SOURCES

OS Maps

OS 1:10 000 Series sheet SH 27NE, SH 27SE, SH 27SW, SH 27NW, SH 37NE, SH 37SE, SH 37SW, and SH 37NW.

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