# Seion Waste Water Treatment Works & Outfall Pipeline

Archaeological Watching Brief





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## **Archaeological Watching Brief**

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Prepared for: Dwr Cymru Welsh Water

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Cover Illustration: Southeast face of clawdd after breach (Archive Ref: G2601\_236)

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#### **CRYNODEB ANHECHNEGOL**

Dirprwyo Ymddiriedolaeth Archeolegol Gwynedd gan Dwr Cymru Welsh Water i ymgymryd briff gwylio archeolegol yn ystod gwaith sylfaenu i waith triniaeth gwastraff dwr a phibell arllwysfa newydd yn Seion, Gwynedd. Wnaeth y briff gwylio arolygu'r stribedi'r ddaear tu fewn terfynau, yn ogystal â chofnodi toriadau derfynau'r cae yn gysylltiedig gyda'r gwaith sylfaenu.

Wnaeth y briff gwylio dadorchuddia tri llwybr a cofnodi tri a ddeg terfyn cae o dyddiad 19eg ganrif yn gysylltiedig gyda stad blaenorol Feinol.

#### **NON-TECHNICAL SUMMARY**

Gwynedd Archaeological Trust was commissioned by Dwr Cymru Welsh Water to undertake an archaeological watching brief during the groundworks for a new waste water treatment works and outfall pipe at Seion, Gwynedd. The watching brief monitored the soil strip within the limits of the easement for the outfall pipe and the contractor's temporary compound and treatment works, as well as recording the field boundary breaches associated with the groundworks.

The watching brief uncovered three paths and recorded thirteen field boundaries of 19<sup>th</sup> century date associated with the former Vaynol Estate.

#### 1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) was commissioned by *Dwr Cymru Welsh Water* (DCWW) to undertake an archaeological watching brief during the groundworks for a new waste water treatment works (WwTW) and outfall pipe at Seion, Gwynedd ((NGR SH54556684; Figure 01). The groundworks were undertaken by *Jones Bros* and commenced from Saturday 22<sup>nd</sup> June and concluded on Wednesday 21<sup>st</sup> August 2019.

The groundworks associated with the outfall pipe commenced to the north west of Tan-yr-Wylfa (SH 54256 67260), at the western terminal of the pipeline route where it will discharge into the Nant y Garth. The excavations for the pipeline continued across nine fields and terminated at the north western boundary of the field in which the new sewage works will be located. This field was also the location of a temporary compound; a pipeline was excavated from the north eastern boundary of this field to the existing sewage works.

The archaeological watching brief was conducted as outlined in the approved GAT Written Scheme of Investigation (Appendix I) and consisted of the following:

- A partial watching brief during any ground disturbance within the pipe easement; and
- A partial watching brief during any ground disturbance within the contractor's compound/new WwTW.

The project was monitored by the Gwynedd Archaeological Planning Service (GAPS). The GAT HER Enquiry Number for this project is GATHER1134 and the Event PRN is 45449.

The archaeological watching brief was completed in accordance with the following guidance:

- Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014);
- 2. Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (Chartered Institute for Archaeologists, 2014);
- 3. Management of Archaeological Projects (English Heritage, 1991);
- 4. Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015);
- 5. Guidelines for digital archives (Royal Commission on Ancient and Historic Monuments of Wales, 2015); and

6. Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) Version 1.1 (The Welsh Archaeological Trusts, 2018).

Gwynedd Archaeological Trust is certified to ISO 9001:2015 and ISO 14001:2015 (Cert. No. 74180/B/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists and a member of the Federation of Archaeological Managers and Employers (FAME).

## 1.1 Fieldwork Aims and Objectives

The key aims and objectives of the archaeological watching brief were:

- to identify and record archaeological activity present on site prior to removal by groundworks; and
- if no archaeological activity was identified, establish why this may have been the case.

### 1.2 Acknowledgements

GAT would like to acknowledge the cooperation and support provided by Dwr Cymru Welsh Water and Jones Bros during the archaeological watching brief. GAT would also like to acknowledge the support and guidance provided by GAPS throughout all stages of the project. In addition, GAT would also like to acknowledge the GAT project team: Anne Marie Oattes and Stuart Reilly.

#### 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

#### 2.1 Introduction

The groundworks associated with the new WwTW works at Seion are set within the Arfon plateau (PRN 15849) an area made up of improved pasture, most of which was formerly Vaynol land. The initial groundworks took place within the grounds of Tan-yr-Wylfa and crossed two field boundaries (Figure 02) that were highlighted in the GAT archaeological assessment of the area (see GAT Report 1435):

- A drystone wall (PRN 71215) that defines the southern boundary of the ground of Tan-yr-Wylfa. It is the remnants of a drystone wall orientated west northwest by east southeast, with a length of 60.0m, width of 0.50m and height of 1.0m. The wall is made up of large rounded and sub-rounded field clearance boulders is depicted on the Vaynol estate map of 1867; and
- A clawdd (PRN 71219) that defines the eastern boundary of a field located to the immediate west of Tan-yr-Wylfa. It is orientated north-south, with a surviving height of 1.30m and width of 1.20m. The boundary comprises of a mix of up cast earth mixed with frequent medium sized sub-rounded and sub-angular stone along with the occasional large sub-angular boulder. Several thorn and ash trees grow out of the clawdd which is visible on the Vaynol estate map of 1867.

In the immediate vicinity of this section of the pipeline route there is a semi-derelict stone and mortar outbuilding (PRN 56143), most likely associated with the nearby Tan-yr-Wylfa farm (Figure 03). It is present on the 1867 Vaynol estate map and the ordnance survey maps thereafter, which would suggest that it originates at least from the mid to late 19<sup>th</sup> century. The outbuilding has a double pitched slate roof, with two entrances at the west face long with a small lean-to structure with a narrow brick and mortar wall and dilapidated wooden half door. The building was not physically affected by the groundworks.

The combined sewer extended south from the existing sewage treatment plant compound (see Figure 01) to the location of the new waste water treatment works. The pipe crossed two features (Figure 02) identified during the GAT archaeological assessment:

The remnants of a wire and slate fencing that appears to define a path (PRN 71209)
aligned east-west along the southern boundary of the field which houses the existing
sewage treatment plant compound. The slates are machine cut, set vertically into the

ground and held in place by thick, rusted iron wire. The path enclosed by the fencing is 1.20m wide, with an average height of 0.70m for the slates. It has an approximate length of 55m, before disappearing into thick undergrowth at the east corner of the field and has been partially truncated by a more recent wire and post fence. The feature is probably depicted on the Vaynol estate map of 1867; and

A clawdd (PRN 71220) that defines the northern boundary of the field in which the
waste water treatment works will reside. The clawdd is stone faced with modern wire
and post fences set on top or within it as well as trees and bushes. On average the
clawdd has a height of 1.0m and width of 2.50m.

To the immediate east of the works, within the village of Seion, there is the Seion Wesleyan Methodist Chapel (NPRN 6951) which was built in 1818 and repeatedly modified throughout the 19<sup>th</sup> century. The chapel is built in the Classical style with a gable entry plan. Documents relating to the life of the chapel are preserved in Gwynedd Archives (XD34/18-19, 599-602).

In addition there is significant archaeological activity within the wider area, indicative of prehistoric and later activity (Figure 04), including the following:

- A burnt mound to the south of Ty Mawr (PRN 15) and adjacent to a small stream. The
  mound is approximately 1.0m in height with a diameter of approximately 18.0m but
  the southern half has been destroyed by a modern ditch;
- There are two settlement enclosures approximately 500m to the east of the site, the settlement enclosure of Ty Mawr (PRN 11) and the nearby Ty Mawr enclosure (PRN 8). The former is an oval enclosure, that measures c.50.0m northwest southeast by 37.0m northeast southwest, defined by a degraded stone filled bank. Within this enclosure there are two hut circles set against the south circuit of the bank. The latter is a sub circular enclosure, approximately 26.0m in diameter and is also defined by a stone filled bank, with a possible hut circle at the centre. These settlements are most likely Iron Age (700 BC to 74 AD) or Romano-British (74 to 410 AD) in date;
- Located between these settlements and the site, to the southeast of Seion, are parch
  marks that may represent remnants of Fachell Roman road (PRN 17566) part of the
  route from Caerhun to Caernarfon. In addition, there is another possible Roman road
  that extends north east between the farms Ty'n-yr-allt and Tan-yr-wylfa that formed
  part of the route between Segontium and Bangor (PRN 17829);

- To the south east of Ty Mawr farm there is a medieval moated site PRN 6, a scheduled monument that consists of a rectangular earthwork set in a marshy valley bottom. It is comprised of two shallow ditches with a low central bank and there are possible traces of a rectangular building within the interior which measures 42m by 34m. There is an apparent entrance on the north west side, with a 4.5m wide stone causeway cutting through the two ditches;
- There are several post-medieval structures and outbuildings indicative of the rural setting of Seion, that are located within approximately 500m of the proposed site (PRN 28866 28868 and 56142) which also include Seion Methodist Chapel (NPRN 6951) which was built in 1818 and repeatedly modified throughout the 19<sup>th</sup> century. The chapel is built in the Classical style with a gable entry plan; and
- There are two quarries (PRN 28864 & 28865) along with a small rectangular structure (PRN 28866) c.500m to the southeast of the site, along the B4366.

#### 2.2 Geology

The underlying bedrock geology in the vicinity of the location of the waste water treatment works primarily consists of Padarn Tuff Formation - Tuff, Felsic. This is Igneous Bedrock formed approximately 541 to 635 million years ago in the Ediacaran Period. In addition, there are veins of an Unnamed Igneous Intrusion, Ordovician – Microgabbro within the Padarn Tuff Formation. This Igneous Bedrock formed approximately 444 to 485 million years ago in the Ordovician Period.

#### 2.3 Previous Work

In the summer of 2018 GAT undertook an archaeological assessment of the location of the waste water treatment works on behalf of DCWW. The assessment comprised a desk-based assessment of the site and its setting in the local landscape, along with a walkover and geophysical survey of location of the new waste water treatment works (GAT Report 1453).

The desk-based assessment and walkover survey confirmed the presence of field boundaries associated with the former Vaynol Estate. These features would be of at least mid to late 19<sup>th</sup> century date and are sites of local importance given their relation to the Vaynol Estate. The geophysical survey of the field for the WwTW did not identify likely archaeological anomalies.

#### 3 METHODOLOGY

#### 3.1 Watching Brief

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CiFA, 2014).

An archaeological watching brief can divided into four categories:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

GAT conducted a **partial** watching brief of ground disturbing works within the pipe easement and the new WwTW between the 22<sup>nd</sup> June and 21<sup>st</sup> August 2019.

#### 3.2 Fieldwork Methodology

- The soil strip was undertaken using a 360° tracked excavator fitted with a toothless bucket;
- During the watching brief, all attendances and identified features were recorded using GAT watching brief pro-formas;
- A photographic record was maintained in RAW format using a digital SLR (Nikon D3100) camera set to maximum resolution (4,608 x 3,072; 14.2 effective megapixels) and were converted to TIFF format for archiving using Adobe Photoshop; the photographic record was digitised in *Microsoft Access* using archive numbering system G2601\_001 to G2601\_277 (<u>Appendix II</u>);
- Archaeological features/deposits/structures encountered were manually cleaned and examined to determine extent, function, date and relationship to adjacent activity. In total 48 context numbers were assigned (Appendix III) during the watching brief;
- In total 11 sections were drawn at 1:10 scale using GAT A4 pro-forma permatrace (Appendix IV);
- In total 2 plans were drawn at 1:20 scale on GAT A4 pro-forma permatrace (<u>Appendix IV</u>);

#### 4 RESULTS

#### 4.1 Introduction

The groundworks for the outfall pipe commenced at the northwestern end of the scheme in Field 01 (Figure 01), and continued through nine fields in a south easterly direction to the field boundary between Fields 08 and 09; Field 09 being the location of the contractor's temporary compound and the new WwTW. Fields 10 and 11 are located to the northeast of the compound. The results of the watching brief are set out on a field by field basis. In each of the fields the topsoil was removed and stored to one side of the easement; the spoil from the excavation of the pipe trench was stored separately within the easement.

A total of three linears ([37], [43] and [45]) were identified and thirteen field boundaries ([05], [16], [17], [18], [19], [20], [47], [49], [50], [51], [52], [53] and [55]) were recorded, as was the remnants of a path defined by parallel slate and wire fencing [54].

#### 4.2 Field 01

The groundworks for the outfall pipe commenced at Nant Y Garth at the northwestern end of Field 01. An easement approximately 10m wide was fenced off on the southern side of the field, the topsoil was removed and then using a toothless bucket measuring 1.8m wide, the pipeline was excavated to natural. The topsoil, a light greyish brown silty clay, was 0.15m deep and the natural comprised yellowy brown clay with orange mottling (Plate 01). There was no subsoil. The pipe trench as then excavated using a 0.6m wide bucket to the required depth. No archaeology was identified.

#### 4.3 Tan-yr-Wylfa access

A narrow trench measuring 0.6m wide was excavated across the track which provides access to Tan-yr-Wylfa and along the southwestern side of the driveway leading to Field 02. The access track and driveway consisted of stone gravel to form hard standing, which gave way to bedrock. The pipe trench measured 1.2m wide and 1.7m at the deepest point. It was excavated through the bedrock and was aligned northwest-southeast. The excavations continued in a south easterly direction towards Field 02. No archaeology was identified within the pipe trench.

#### 4.4 Field 02

The topsoil and the subsoil were removed within the easement which measured 4.7m wide, and then the line of the pipe was excavated to natural using the 1.8m wide toothless bucket. The outfall pipe trench was aligned northwest-southeast. A narrow trench for a blue plastic water pipe carrying water to the farm sheds was observed at the northwestern end of the field. A second trench containing a brown ceramic pipe was identified towards the southeastern end of the field.

The topsoil was light grey brown silty clay and was 0.06m deep and covered light grey brown clay subsoil with orange mottling at the north western end of the field. At the southeastern end of the field the topsoil increased in depth to 0.15m and overlaid a light grey brown slightly silty clay subsoil that was 0.2m deep. The underlying natural was yellowy orange sandy clay (Plate 02).

The field boundary [05] between Field 02 and Field 03 comprised a dry stone wall approximately 0.6m high, with a hedge and a post and wire fence on the southeastern side of the wall. The large boulders [15] of the stone wall appeared to act as a revetment against the steeply sloping ground at the top of Field 02 and the bottom of Field 03. The hedge was overgrown and the stones of the wall appeared to have been partially dislodged by the roots. The boundary breakthrough measured 4.7m wide (Plates 03 and 04).

#### 4.5 Field 03

The outfall pipe trench was aligned northeast-southwest in Field 03. The topsoil, mid brown silty sand and the subsoil orangey brown silty sand, were removed across the width of the easement and then the pipe trench was stripped to natural light orange sandy clay (Plate 05) using a 1.8m wide toothless bucket. At the southwestern end of the field the outfall pipe trench was aligned northwest-southeast.

The field boundary between Field 03 and Field 04 comprised a slate and wire fence [16] and a low (0.75m high), 1.2m wide dry stone wall [17] with a combined width of 1.8m wide. The drystone wall was quite dilapidated and some of the large boulders appear to have been dislodged by the tree roots in Field 04. The slate fence comprised slate uprights measuring between 0.15m and 0.3m wide, with a thickness of 0.05m set vertically approximately 0.4m deep into the ground with 0.9m above ground level (Plates 06 and 07). The slate uprights and the dry stone wall were removed; the breakthrough measured 6m wide (Plate 08).

#### 4.6 Field 04

Field 04 was a narrow strip of fairly steep ground given over to woodland in a very wet area; the trees within the easement had been felled prior to the groundworks. The topsoil was dark blackish grey clayey silt with a depth of 0.12m; the subsoil was medium orange brown silty sand. The natural was orange brown clay with frequent sub-angular cobbles and was only seen in the pipe trench (Plate 09). No archaeology was identified during the soil strip.

The field boundary between Field 04 and Field 05 was aligned northeast-southwest and comprised a dry stone wall [19] 1.4m wide with a slate and wire fence [18] on the northwestern side. The slate panels were between 1.6m and 1.3m long and set vertically 0.4m deep in the ground (Plate 10). The breakthrough of the boundary measured 6m wide.

#### 4.7 Field 05

At the northwestern end of the field, the ground conditions were the same as that encountered in Field 04; this changed towards the southeast of the field which became drier. The topsoil was stripped across the width of the easement and the subsoil was removed along the pipeline trench with a 1.8m wide toothless bucket. The topsoil was mid grey brown silty sand with an orange hue (Plate 11) 0.15m deep; the subsoil was grey brown slightly clayey silty sand 0.1m deep and the natural was orange brown sandy clay.

A shallow linear [37] was identified aligned northwest-southeast that extended across the easement. It was uncovered when the ground was reduced within the pipeline trench (Plate 12). The linear had an exposed length of 10m, with a width of 0.8m and a depth of 0.09m (Plate 13). The cut had an imperceptible break of slope at the top with slightly concave sides and imperceptible break of slope at the base which was flat (Figure 05). It was backfilled by (38) a friable mid brown silty sand mixed with occasional inclusions of grit and gravel. Based on the examination of the 1<sup>st</sup> and 2<sup>nd</sup> Edition Ordnance Survey maps, the linear appears to be the remnants of a footpath (Figure 06). Linear [37] was located 20m southeast of the manhole at E254327.78 and N367085.50.

The field boundary between Field 05 and the lower farm track that provides access to Ty'n-yr-allt comprised large boulders and cobbles and an overgrown hedge [49] (Plate 14); the ground sloped steeply up to the track and the boulders appeared to act as a revetment for the track (Plate 15); the break through measured 9m wide. The field boundary was aligned north-south.

The field boundary [50] between the lower farm track and Field 06 comprised a slate and wire fence which formed the northwestern boundary of a narrow strip of step wooded hillside (Plate 16); the slate uprights were between 0.1m and 0.4m wide, 0.05m thick and were set approximately 0.4m deep into the ground. The slate uprights were carefully removed and the break through measured 6m wide. The fence was aligned northwest-southeast.

#### 4.8 Field 06

Field 06 was a narrow strip of woodland between the lower track and the main access track to Tyn-yr-Allt (Plate 17). The trees within the easement had been felled prior to the commencement of the groundworks. The tree stumps were removed and a narrow trench was then excavated through the underlying natural bedrock. No archaeology was identified.

The field boundary between Field 06 and the main access track to Tyn-yr-Allt comprised a slate and wire fence [55]. The slate uprights were between 0.1m and 0.4m wide, 0.05m thick (Plate 18) and were set on end approximately 0.4m deep into the ground. The slate uprights were carefully removed; the break through measured 7m wide. The fence was aligned northwest-southeast.

The boundary between Fields 06 and 07 was a clawdd [20] with a post and wire fence overgrown with brambles and occasional small trees (Plate 19). It was aligned northwest-southeast between the main access track to Tyn-Yr-Allt and Field 07; the break through measured 9m. The clawdd was comprised of four fills (22-25). The primary fill (24) was a friable dark brownish black clayey silty sand mixed with sub-angular pebbles and small cobbles, that formed the earth bank of the clawdd. It had a width of 2.45m and height of 0.72m in section. The bank was overlaid by (25) along the northwest edge of [20]. Layer (25) was a friable mid brown silty sand mixed with occasional sub-angular pebbles, with a width of 0.9m and depth of 0.26m. Set within layer (25) was the lens (22) which consisted of a friable light orangey brown silty clay, with a width of 0.16m and depth of 0.14m. The layers (4) and (25) were capped by (23) a thin (0.3m) but wide (1.8m) that covered most of the breadth of the clawdd. The layer consisted of a friable light greyish brown silty sand mixed with pebbles, grit and gravel.

#### 4.9 Field 07

Field 07 was a flat field given over to pasture. The topsoil was removed across the narrow easement along the southwest side of the field and the subsoil was then stripped from the pipeline route, which was aligned northwest-southeast, with a 1.8m wide toothless bucket. The topsoil was mid brown silty sand with a depth of 0.15m; the subsoil was light greyish

brown silty sand with a depth of 0.2m (Plate 20). The natural was orange brown clay with frequent sub-angular pebbles and cobbles. No archaeology was identified.

The field boundary between Field 07 and 08 was a clawdd [51] with a hedge and occasional small trees growing on top (Plate 21). It was aligned northeast-southwest. The clawdd was comprised of five fills (26-29 & 35), with the basal fills (27) and (28) both consisting of firm dark brownish black clayey silt that may be preserved turf upon which the bank was erected. These fills were overlaid and consumed by the main fill of the clawdd (26) which had a maximum width of 1.87m and height of 0.7m. The fill consisted of friable orangey brown silty sand mixed with sub-angular cobbles and pebbles. This was in turn enclosed by (29) that had a width of 1.1m and maximum height of 0.4m. It was a friable mid greyish brown silty sand mixed with sub-angular cobbles and stones (Plate 22). The outer edge of the clawdd, in particular the southeastern face, was overlaid by a layer of large sub-angular and angular blocks of stone (35).

#### 4.10 Field 08

Field 08 was an unimproved wet field. The topsoil was stripped across the width of the easement and the pipeline route was stripped to natural with a 1.8m wide toothless bucket. The topsoil comprised mid grey brown silty clay and was 0.1m deep; there was little or no subsoil and there were outcrops of bedrock along most of the easement which was aligned northwest-southeast (Plate 23).

The field boundary between Field 08 and Field 09 was a clawdd [52] aligned northeast-southwest with small trees and a hedge growing on the bank. The clawdd was comprised of five fills (31-34 & 36). The clawdd was set on top of the underlying light greyish white clay (30), with the basal fill being (31) a compact dark brown clayey silty sand that measured 0.38m wide and 0.13m high in section. It was overlaid by (36) a thin (0.1m) layer with a width of 1.18m which consisted of a firm dark brownish black clayey silty sand mixed with moderate sub-angular cobbles. This was in turn covered by (32) a friable light greyish brown sand with moderate inclusions of sub-angular cobbles and infrequent boulders. It had a width of 1.18m and maximum depth of 0.5m. All of the fills were sealed by (33) a friable mid brown clayey sand mixed with (34) the frequent sub-angular stones that formed the outer face of the clawdd (Plate 24).

#### 4.11 Field 09

This field was the location of the site compound and the WwTW; the topsoil was removed and stored in a bund on the southwest side of the field. The topsoil comprised mid brown slightly clayey sandy silt with a depth of 0.15m; the subsoil comprised dark greyish brown slightly clayey sandy silt and was 0.15m deep. Across most of the field the topsoil gave way to bedrock, except for the northwest corner where the topsoil and subsoil gave way to orange clay natural (Plates 25 & 26). No archaeological deposits were identified during the soil strip.

The field boundary that separated Fields 09 and 10 was a clawdd [53] orientated northwest-southeast with a hedge and occasional small trees growing on top; the clawdd was documented in the assessment and assigned PRN 71220. The clawdd consisted of three fills (40-42). The centre of the boundary consisted of (40) mid brownish orange silty sand mixed with occasional sub-rounded cobble, that had a width 0f 1.15m and height of 0.95m in section. It was partially overlaid by (41) a layer of friable light greyish brown silty sand mixed with frequent pebbles that was concentrated at the top, northeast corner of [53]; layer (41) had an exposed height of 0.43m and width of 0.32m. Both (40) and (41) were covered by (42) the outer layer of [53] a friable light greyish brown silty sand mixed with frequent sub-angular and sub-rounded stones (Plate 27). Two breaches were made through [53] into Field 10.

#### 4.12 Field 10

Field 10 was a large, roughly square in plan field of pasture located to the north of Field 9 and the compound/WwTW. The easement was 10m wide and the area was roughly stripped to the surface of the underlying natural bedrock. The topsoil was dark brown silty clay with a depth of 0.1m and the subsoil was also shallow (0.05m) being a light greyish brown silty clay with frequent grit and cobbles (Plate 28). The underlying natural was only evident once the route of the pipe trench was excavated, consisting of orange silty sand mixed with frequent boulders and outcrops of bedrock (Plate 29). No archaeological features were uncovered during the soil strip.

The field boundary between Field 10 and Field 11 was defined by the possible remnants of a clawdd [47] with a mature and overgrown hedgerow that has partially disrupted the remains of [54] the remnants of a wire and slate fencing that defined an east-west aligned path (PRN 71209) (Plate 30). The fencing was comprised of slate uprights that varied in height from 0.5m to 0.7m and were held in place with wire. The slate uprights (56) were placed within a trench [45] which had a width of 0.5m and depth of 0.22m. The cut was linear, with a sharp

break of slope at the top, vertical sides and abrupt break of slope at the base which was quite irregular (Figure 05). The trench was backfilled by (46) a firm mid brown slightly clayey silty sand mixed with moderate cobbles, which were packed against the slate to secure it in place (Plate 31).

To the immediate north and partially of place of the northern edge of the slate lined path, there was [47] the degraded remnants of a clawdd that had an exposed width of 1.2m and height of 0.8m. It was composed of (48) a friable mid greyish brown clayey silty sand mixed with frequent sub-rounded and sub-angular cobbles, concentrated along the outer edge of the bank. The clawdd was flanked by a mature, overgrown hedgerow with frequent trees growing out of the top (Plate 32).

#### 4.13 Field 11

The existing sewage works were located in the northeastern corner of Field 11. The turf was removed by machine with most of the topsoil left in place; the underlying natural orange silty sand was exposed in the 1.8m wide pipe trench (Plate 33). The ground reduction uncovered a linear [43] that was orientated northwest-southeast and which was located to the immediate north of [47]. It was only visible within the pipe trench, so had an exposed length of 1.8m, with a width of 2.35m and depth of 0.19m. The cut had a slight break of slope at the top with gently sloping sides and an imperceptible break of slope at the base, which was flat (Figure 05). It was backfilled by (44) a firm mid greyish brown clayey sand mixed with the occasional pebble (Plate 34) which produced the occasional sherd of 20<sup>th</sup> century pottery. The sherds were examined and discarded.

#### 5 CONCLUSIONS

Gwynedd Archaeological Trust was commissioned by Dwr Cymru Welsh Water to undertake an archaeological watching brief during the groundworks for a new waste water treatment works (WwTW) and outfall pipe at Seion, Gwynedd. The watching brief monitored the soil strip within the limits of the easement for the outfall pipe and the contractor's temporary compound and WwTW, as well as recording the field boundary breaches associated with the groundworks.

The watching brief uncovered three linears ([37], [43] and [45]), of which [37] and [45] correspond with the location of former paths of 19<sup>th</sup> century date, as they were first depicted on the Vaynol Estate map of 1867, then subsequently on the 1<sup>st</sup> (1889) and 2<sup>nd</sup> (1900) Edition Ordnance Survey Maps. The path [37] though is no longer depicted by the time of the publication of the 3<sup>rd</sup> Edition Ordnance Survey Map in 1920, while the path [45]/PRN 71209 is still depicted. While the linear [43] may well date from the 20<sup>th</sup> century based on the pottery sherds uncovered during excavation.

The thirteen field boundaries ([05], [16], [17], [18], [19], [20], [47], [49], [50], [51], [52], [53] and [55]) recorded during the watching brief all correspond with boundaries depicted on the Vaynol Estate map of 1867. As such, like most of the linears, these would date from at least the mid-19<sup>th</sup> century and are associated with the former Vaynol Estate. The broad uniformity of these boundaries, typically slate and wire fences or cloddiau, also implies that they are broadly contemporary features, constructed under the aegis of a wealthy landowner.

The watching brief alongside the proceeding archaeological assessment (GAT Report 1435) has provided insight into the setting of the Arfon plateau and part of the former Vaynol Estate. The features identified are of local importance given their relation to the Vaynol Estate.

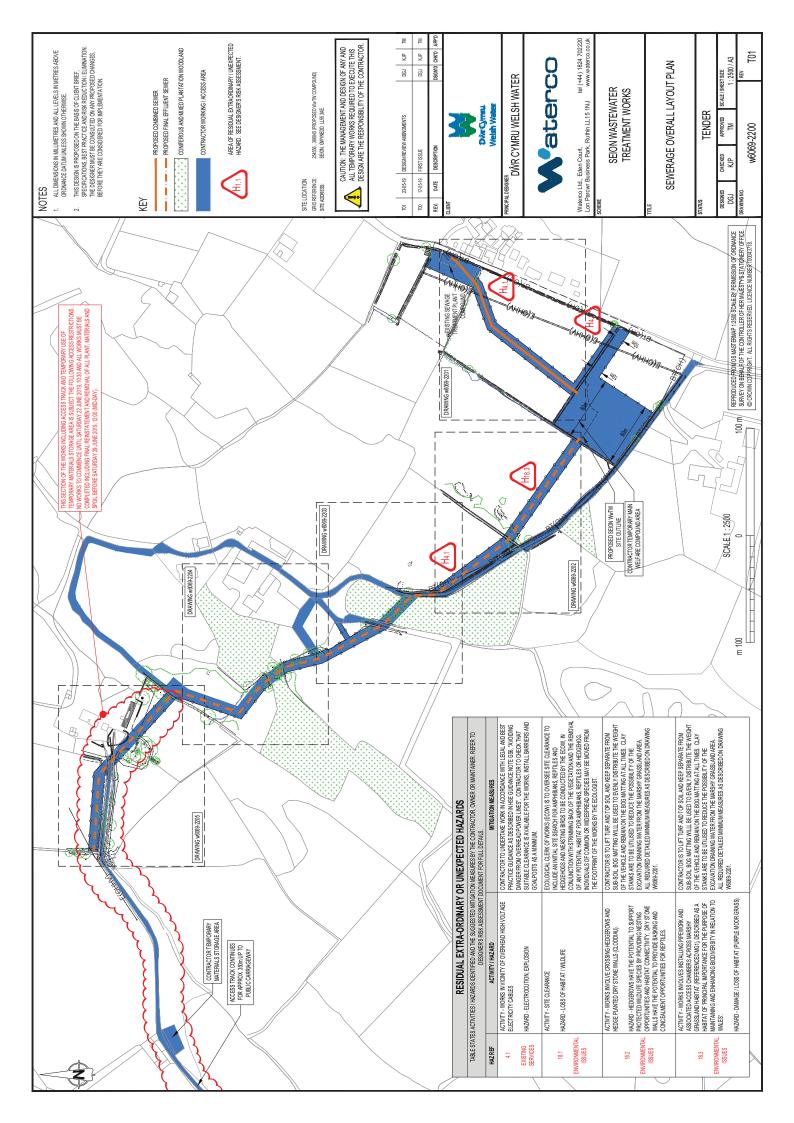
The archaeological watching brief uncovered limited evidence of archaeological activity, in part as given the nature of the scheme, comparatively small areas of land were opened for the easement of the outfall pipe and the treatment works.

#### **6 SOURCES CONSULTED**

- Caernarvonshire County Series 25 inch map Sheet XI.7 First (1889) Edition Ordnance Survey;
- 2. Caernarvonshire County Series 25 inch map Sheet XI.1 Second (1901) Edition Ordnance Survey;
- 3. Caernarvonshire County Series 25 inch map Sheet XI.1 Third (1920) Edition Ordnance Survey;
- 4. Chartered Institute for Archaeologists, 2014, Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives;
- 5. Chartered Institute for Archaeologists, 2014, Standard and Guidance for An Archaeological Watching Brief;
- 6. English Heritage, 1991, Management of Archaeological Projects (MAP2);
- 7. English Heritage, 2011, Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation;
- 8. Evans R., N. McGuinness, S. Reilly & J. Roberts 2018. Seion Waste Water Treatment Works Archaeological Assessment Gwynedd Archaeological Trust Report 1435;
- 9. Gwynedd Archaeological Trust, 2014, *Historic Environment Record (HER) Guidelines for Archaeological Contractors* (Version 1.3; draft);
- 10. Historic England, 2015, Management of Research Projects in the Historic Environment (MoRPHE);
- 11. Royal Commission on Ancient and Historic Monuments of Wales, 2015, *Guidelines for digital archives;*
- 12. X/Vaynol/4138-9 1867 Plan of Farms in the north of the Parish of Llanddeiniolen, part of the "Surveys of the Vaynol Estate made for the purposes of Valuation, begun by the late Robert Lloyd Ellis and completed by Frederick Jackson.

Figure 01

Reproduction of DCWW drawing w6069-220



## Figure 02

Location of archaeological features that will be affected by or that are adjacent to the outfall pipe of Seion WwTW. Scale 1:4,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE.

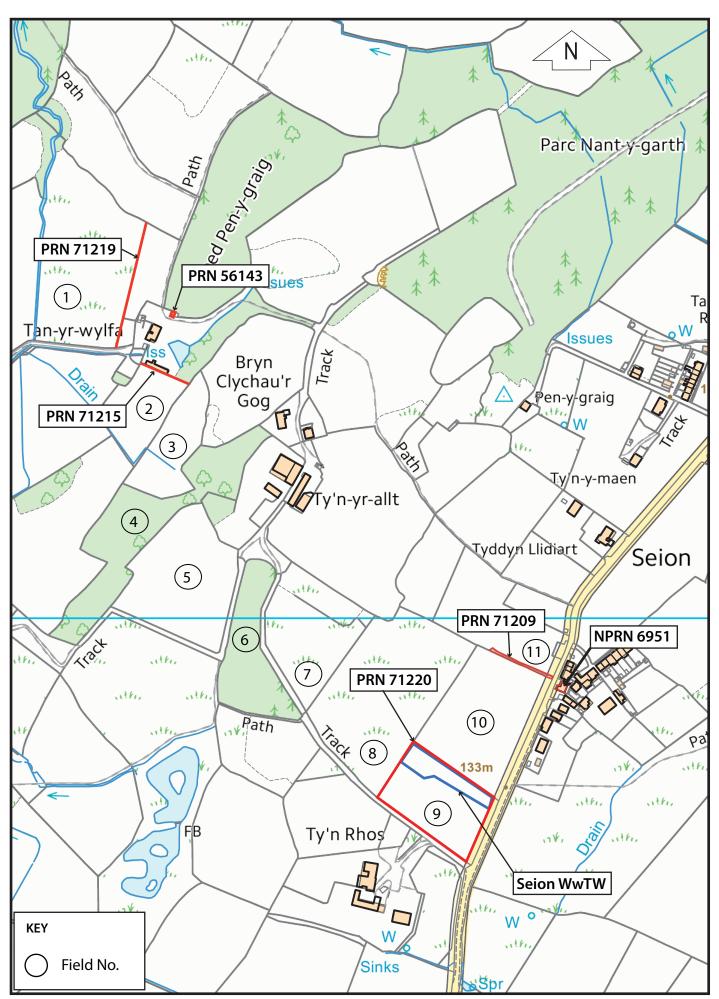


Figure 02: Location of archaeological features that will be affected by or that are adjacent to the outfall pipe of Seion WwTW. Scale 1:4,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE. © Crown copyright. All rights reserved. License number AL100020895

## Figure 03

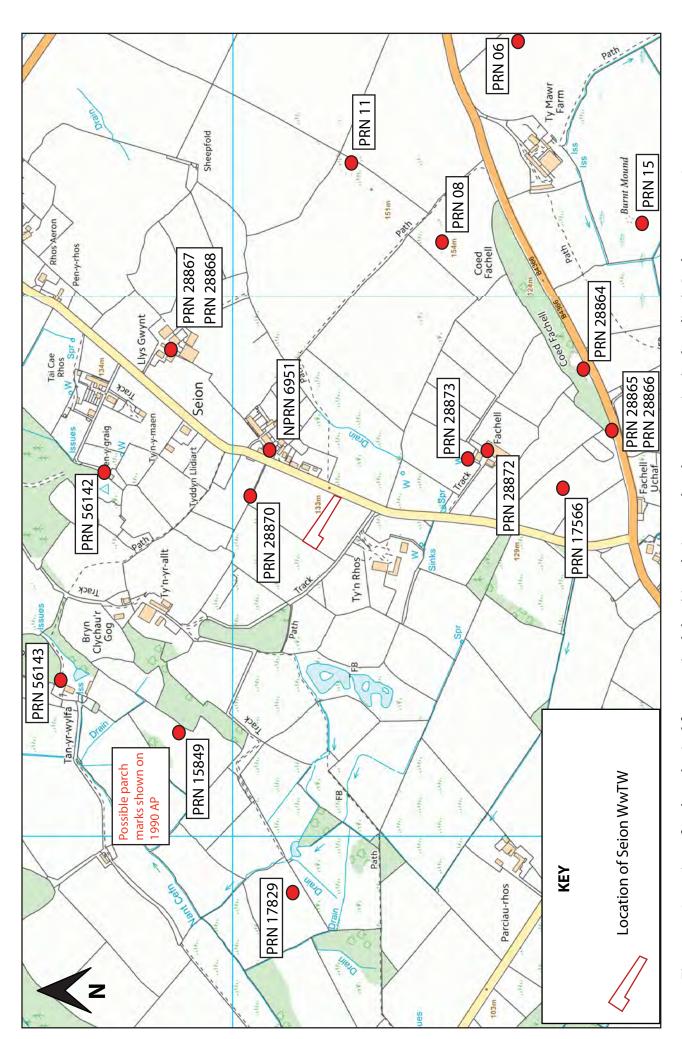
Plan of Farms in the north of the Parish of Llanddeiniolen, part of the "Surveys of the Vaynol Estate made for the purposes of Valuation", begun by the late Robert Lloyd Ellis and completed by Frederick Jackson (1867), with the WWTW overlain (Gwynedd Archives, X/Vaynol/4138-9). Scale 1:6000 @A4



begun by the late Robert Lloyd Ellis and completed by Frederick Jackson (1867), with the WWTW overlain (Gwynedd Archives, X/Vaynol/4138-9). Figure 03: Plan of Farms in the north of the Parish of Llanddeiniolen, part of the "Surveys of the Vaynol Estate made for the purposes of Valuation", Scale 1:6000 @A4

## Figure 04

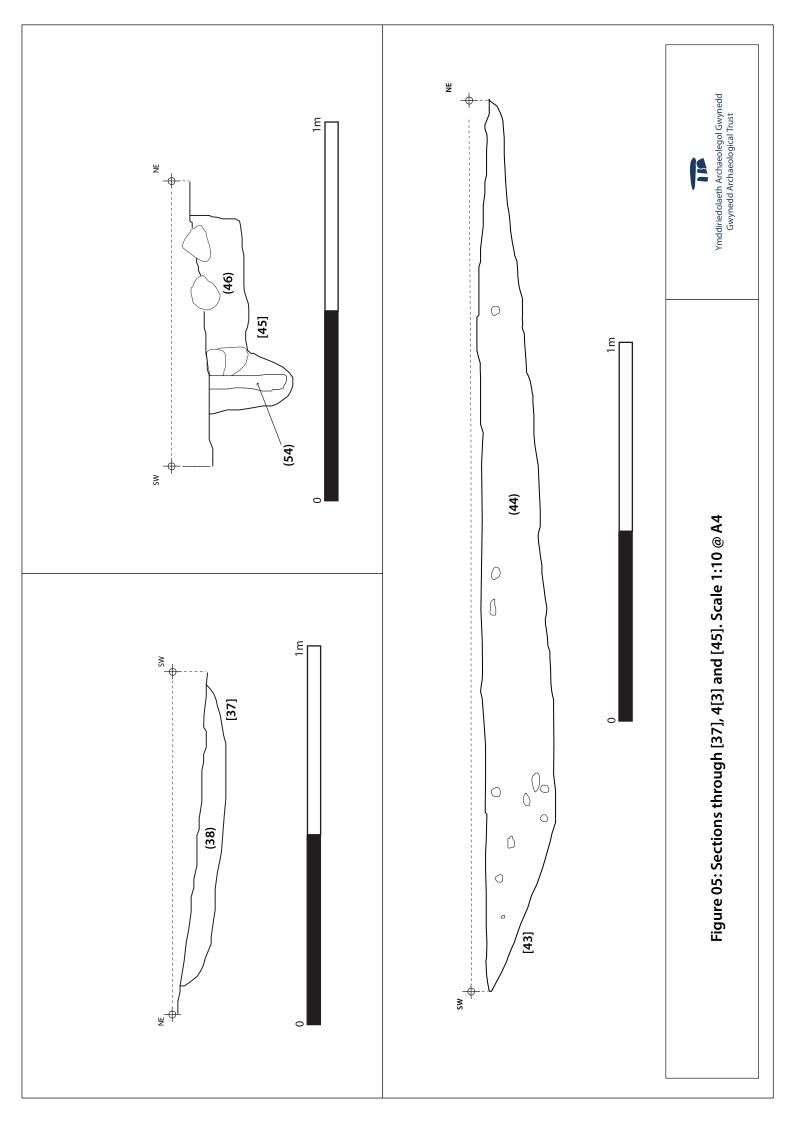
Location of archaeological features (red dots) in relation to development site (red outline). Scale 1:7,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE.



Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE. © Crown copyright. All rights reserved. License number AL100020895 Figure 04: Location of archaeological features (red dots) in relation to development site (red outline). Scale 1:7,000 @ A4.

Figure 05

Sections through [37], [43] and [45]. Scale 1:10 @ A4



# Figure 06

Path [37] in relation to outfall pipeline route (shown in red) on Caernarvonshire County Series 25 inch map Sheet XI.7 First (1889) Edition Ordnance Survey

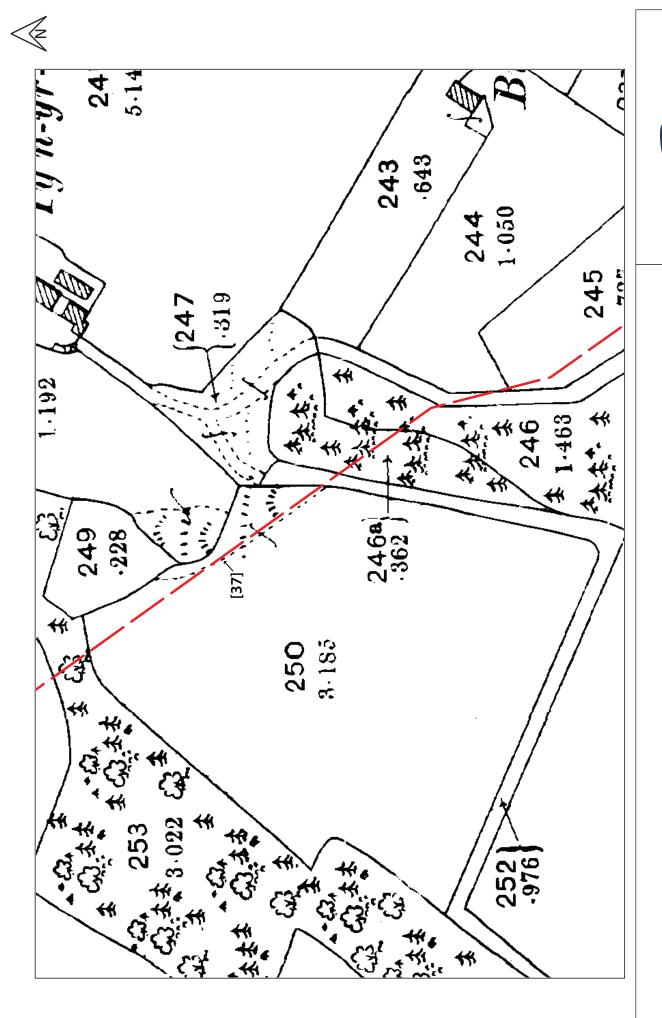




Figure 06: Path [37] in relation to outfall pipeline route (shown in red) on Caernarvonshire County Series 25 inch map Sheet XI.7 First (1889) Edition Ordnance Survey.



Plate 01: Pipe trench from manhole; scale not used; view from E (archive reference: G2601\_013).



Plate 02: SW facing section showing topsoil depth; scale 1x1m; view from SW (archive reference: G2601\_027).



Plate 03: Field boundary at SE end of Field 2; scale 1x1m; view from NW (archive reference: G2601\_036).



Plate 04: NE facing section of boundary breakthrough F2/F3; scale 1x1m; view from NE (archive reference: G2601\_060).



Plate 05: Topsoiled area at NE end of F3; scale 1x1m; view from NW (archive reference: G2601\_054).



Plate 06: Closer view of slate fence; scale 1x1m; view from NW (archive reference: G2601\_087).



Plate 07: Fallen stone wall on NW side of slate fence; scale 1x1m; view from NW (archive reference: G2601\_090).



Plate 08: NE facing section of wall and slate fence FB F4/F5; scale 1x1m; view from NE (archive reference: G2601\_110).



Plate 09: Pipe trench stripped to natural; scale not used; view from N (archive reference: G2601\_117).



Plate 10: Location shot view to E; scale not used; view from W (archive reference: G2601\_112).



Plate 11: F5 topsoil strip; scale 1x1m; view from SE (archive reference: G2601\_137).



Plate 12: Linear 1 in pipe trench; scale 1x1m; view from NW (archive reference: G2601\_140).



Plate 13: NW facing section of Linear 1; scale 1x1m; view from NW (archive reference: G2601\_145).



Plate 14: View of field boundary before breakthrough; scale 1x1m; view from E (archive reference: G2601\_124).



Plate 15: View to F4 location shot; scale not used; view from SE (archive reference: G2601\_123).



Plate 16: View of field boundary before breakthrough; scale 1x1m; view from SE (archive reference: G2601\_126).



Plate 17: View to NW (field 6 and woods); scale not used; view from SE (archive reference: G2601\_153).



Plate 18: View to N along slate fence; scale 1x1m; view from SW (archive reference: G2601\_150).



Plate 19: Field boundary viewed from top track pre-ex; scale 1x1m; view from NW (archive reference: G2601\_156).



Plate 20: Topsoil removed; scale 1x1m; view from SE (archive reference: G2601\_168).



Plate 21: Clawdd boundary before breakthrough; scale not used; view from NW (archive reference: G2601\_172).



Plate 22: SW facing section FB F7/F8; scale 1x1m; view from SW (archive reference: G2601\_187).



Plate 23: Pipe trench stripped to natural; scale not used; view from NW (archive reference: G2601\_205).



Plate 24: NW facing section boundary breakthrough; scale 1x1m; view from NW (archive reference: G2601\_200).



Plate 25: Topsoil strip; scale not used; view from SE (archive reference: G2601\_143).



Plate 26: Area topsoil stripped; scale not used; view from E (archive reference: G2601\_276).



Plate 27: Southeast face of clawdd after breach; scale 1x1m; view from SE (archive reference: G2601\_236).



Plate 28: Topsoil strip of Field 10; scale 1x1m; view from SW (archive reference: G2601\_237).



Plate 29: Pipe trench through bedrock; scale not used; view from SE (archive reference: G2601\_243).



Plate 30: Clawdd and slate/wire fence; scale 1x1m; view from E (archive reference: G2601\_254).



Plate 31: Slot through [45]; scale 1x1m; view from N (archive reference: G2601\_265).



Plate 32: Breached clawdd and slate/wire fence; scale 1x1m; view from NW (archive reference: G2601\_260).



Plate 33: Pipe trench reduced to natural; scale 1x1m; view from NE (archive reference: G2601\_261).



Plate 34: Section through [43]; scale 1x1m; view from SE (archive reference: G2601\_238).

# Appendix I

Gwynedd Archaeological Trust GAT Written Scheme of Investigation

SEION WASTE WATER TREATMENT WORKS, SEION GWYNEDD (G2601)

Historic Environment Record Event Primary Reference

Number: 45449

PROJECT DESIGN FOR ARCHAEOLOGICAL WATCHING BRIEF OF THE OUTFALL PIPE

Prepared for

**DWR CYMRU** 

June 2019

Ymddiriedolaeth Archaeolegol Gwynedd Gwynedd Archaeological Trust

Approvals Table	•			
	Role	Printed Name	Signature	Date
Originated by	Document Author	STUART	Sturt Ceilly	14/06/19
Reviewed by	Document Reviewer	JOHN ROBGETS	ALLE TO THE PARTY OF THE PARTY	14/06/19
Approved by	Principal Archaeologist	JOHN ROBBETS	ARM	14/06/19

Revision History				
Rev No.	Summary of Changes	Ref Section	Purpose of Issue	
		10		

All GAT staff should sign their copy to confirm the project specification is read and understood and retain a copy of the specification for the duration of their involvement with the project. On completion, the specification should be retained with the project archive:

Name Signature Date

# SEION WASTE WATER TREATMENT WORKS, SEION GWYNEDD (G2601) PROJECT DESIGN FOR ARCHAEOLOGICAL WATCHING BRIEF

Prepared for *Dwr Cymru*, June 2019

Historic Environment Record Primary Reference Number: 45449

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Location of archaeological features that will be affected by or that are adjacent to the outfal
pipe of Seion WwTW. Scale 1:4,000 @ A4. Base map taken from Ordnance Survey 1
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FIGURE 03
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Vaynol Estate made for the purposes of Valuation", begun by the late Robert Lloyd Ellis
and completed by Frederick Jackson (1867), with the WWTW overlain (Gwynedd Archives
X/Vaynol/4138-9). Scale 1:6000 @A429
FIGURE 0430
Location of archaeological features (red dots) in relation to development site (red outline)
Scale 1:7,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56
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#### 1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) has been commissioned by *Dwr Cymru Welsh Water* to prepare a written scheme of investigation (WSI) for an archaeological watching brief of groundworks for a new outfall pipe that will be connected to a new waste water treatment works (WwTW) at Seion, Gwynedd (Figure 01).

The initial groundworks associated with the outfall pipe will be focused around Tan-yr-Wylfa (SH 54256 67260), close to the western terminal of the pipeline route where it will discharge into the Nant y Garth. These groundworks will be undertaken by *Jones Bros* and will commence on Saturday 22<sup>nd</sup> June and conclude on Saturday 29<sup>th</sup> June 2019. <u>The accompanying GAT watching brief is anticpated to last from the 22<sup>nd</sup> to 25<sup>th</sup> June 2019.</u>

At present the indicative programme for the remainder of the outfall pipe will be undertaken between Wednesday 26<sup>th</sup> June and Friday 9<sup>th</sup> August 2019 but this may be subject to change.

The accompanying archaeological watching brief will be completed in accordance with the following guidance:

- Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014);
- Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (Chartered Institute for Archaeologists, 2014);
- 3. Updated Guidelines to the Standards for Recording Human Remains (Chartered Institute for Archaeologists, 2017);
- 4. Management of Archaeological Projects (English Heritage, 1991);
- 5. Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015); and
- Guidelines for digital archives (Royal Commission on Ancient and Historic Monuments of Wales, 2015).

Gwynedd Archaeological Trust is certified to ISO 9001:2015 and ISO 14001:2015 (Cert. No. 74180/B/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists and a member of the Federation of Archaeological Managers and Employers (FAME).

The project will be monitored by the Gwynedd Archaeological Planning Service on behalf of the Local Planning Authority.

## 1.1 Fieldwork Aims and Objectives

The key aims and objectives of the archaeological watching brief are to:

- identify and record archaeological activity present on site prior to removal by groundworks. The pipe outfall will pass through the grounds of the former Vaynol estate with evidence of archaeological activity in the immediate area that ranges in date from the prehistoric through to the post-medieval period. If archaeological activity is uncovered during the groundworks the objective would be to establish the date and nature of said remains as well as to assess their implications for understanding the historical development of the area, in conjunction with the known archaeological record; and
- if no archaeological activity is identified, establish why this may be the case.

1.2 Monitoring Arrangements

The archaeological mitigation will be monitored by the Gwynedd Archaeological Planning

Service (GAPS). The content of this WSI and all subsequent reporting by GAT must be

approved by GAPS prior to final issue.

The contact details are: 01248 370926

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### 1.3 Historic Environment Record

In line with the Gwynedd Historic Environment Record (HER) requirements, the HER will be contacted at the onset of the project to ensure that any data arising is formatted in a manner suitable for accession to the HER and follows the guidance set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018). The HER will be informed of the project start date, location including grid reference, estimated timescale for the work, and further relevant information associated with the project.

The GAT HER Enquiry Number for this project is GATHER1134 and the Event PRN is 45449. The GAT HER will also be responsible for sourcing the Primary Reference Numbers (PRN) for any new identified and recorded assets.

#### 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The planned outfall pipe route will cross the Arfon plateau (PRN 15849) an area made up of improved pasture, most of which was formerly Vaynol land. The initial groundworks will take place within the grounds of Tan-yr-Wylfa and will cross two field boundaries (Figure 02) that were highlighted in the GAT archaeological assessment of the area (see GAT Report 1435):

- A drystone wall (PRN 71215) that defines the southern boundary of the ground of Tan-yr-Wylfa. It is the remnants of a drystone wall orientated west northwest by east southeast, with a length of 60.0m, width of 0.50m and height of 1.0m. The wall is made up of large rounded and sub-rounded field clearance boulders is depicted on the Vaynol estate map of 1867; and
- A clawdd (PRN 71219) that defines the eastern boundary of a field located to the immediate west of Tan-yr-Wylfa. It is orientated north-south, with a surviving height of 1.30m and width of 1.20m. The boundary comprises of a mix of up cast earth mixed with frequent medium sized sub-rounded and sub-angular stone along with the occasional large sub-angular boulder. Several thorn and ash trees grow out of the clawdd which is visible on the Vaynol estate map of 1867.

In the immediate vicinity of this section of the pipeline route there is a semi-derelict stone and mortar outbuilding (PRN 56143), most likely associated with the nearby Tan-yr-Wylfa farm (Figure 02). It is present on the 1867 Vaynol estate map and the ordnance survey maps thereafter, which would suggest that it originates at least from the mid to late 19<sup>th</sup> century. The outbuilding has a double pitched slate roof, with two entrances at the west face long with a small lean-to structure with a narrow brick and mortar wall and dilapidated wooden half door. The building will not be physically affected by the groundworks.

The proposed combined sewer will extend south from the existing sewage treatment plant compound (see Figure 01) to the location of the new waste water treatment works. The pipe will cross two features (Figure 02) identified during the GAT archaeological assessment:

• The remnants of a wire and slate fencing that appears to define a path (PRN 71209) aligned east-west along the southern boundary of the field which houses the existing sewage treatment plant compound. The slates are machine cut, set vertically into the ground and held in place by thick, rusted iron wire. The path enclosed by the fencing is 1.20m wide, with an average height of 0.70m for the slates. It has an approximate length of 55m, before disappearing into thick undergrowth at the east corner of the

field and has been partially truncated by a more recent wire and post fence. The feature is probably depicted on the Vaynol estate map of 1867; and

A clawdd (PRN 71220) that defines the northern boundary of the field in which the
waste water treatment works will reside. The clawdd is stone faced with modern wire
and post fences set on top or within it as well as trees and bushes. On average the
clawdd has a height of 1.0m and width of 2.50m.

To the immediate east of the works, within the village of Seion, there is the Seion Wesleyan Methodist Chapel (NPRN 6951) which was built in 1818 and repeatedly modified throughout the 19<sup>th</sup> century. The chapel is built in the Classical style with a gable entry plan. Documents relating to the life of the chapel are preserved in Gwynedd Archives (XD34/18-19, 599-602).

In addition there is significant archaeological activity within the wider area, indicative of prehistoric and later activity (Figure 04), including the following:

- A burnt mound to the south of Ty Mawr (PRN 15) and adjacent to a small stream. The
  mound is approximately 1.0m in height with a diameter of approximately 18.0m but
  the southern half has been destroyed by a modern ditch;
- There are two settlement enclosures approximately 500m to the east of the site, the settlement enclosure of Ty Mawr (PRN 11) and the nearby Ty Mawr enclosure (PRN 8). The former is an oval enclosure, that measures c.50.0m northwest southeast by 37.0m northeast southwest, defined by a degraded stone filled bank. Within this enclosure there are two hut circles set against the south circuit of the bank. The latter is a sub circular enclosure, approximately 26.0m in diameter and is also defined by a stone filled bank, with a possible hut circle at the centre. These settlements are most likely Iron Age (700 BC to 74 AD) or Romano-British (74 to 410 AD) in date;
- Located between these settlements and the site, to the southeast of Seion, are parch
  marks that may represent remnants of Fachell Roman road (PRN 17566) part of the
  route from Caerhun to Caernarfon. In addition, there is another possible Roman road
  that extends north east between the farms Ty'n-yr-allt and Tan-yr-wylfa that formed
  part of the route between Segontium and Bangor (PRN 17829);
- To the south east of Ty Mawr farm there is a medieval moated site PRN 6, a scheduled monument that consists of a rectangular earthwork set in a marshy valley bottom. It is comprised of two shallow ditches with a low central bank and there are possible traces of a rectangular building within the interior which measures 42m by

34m. There is an apparent entrance on the north west side, with a 4.5m wide stone causeway cutting through the two ditches;

- There are several post-medieval structures and outbuildings indicative of the rural setting of Seion, that are located within approximately 500m of the proposed site (PRN 28866 28868 and 56142) which also include Seion Methodist Chapel (NPRN 6951) which was built in 1818 and repeatedly modified throughout the 19<sup>th</sup> century. The chapel is built in the Classical style with a gable entry plan; and
- There are two quarries (PRN 28864 & 28865) along with a small rectangular structure (PRN 28866) c.500m to the southeast of the site, along the B4366.

#### 2.1 Geology

The underlying bedrock geology in the vicinity of the location of the waste water treatment works primarily consists of Padarn Tuff Formation - Tuff, Felsic. This is Igneous Bedrock formed approximately 541 to 635 million years ago in the Ediacaran Period. In addition, there are veins of an Unnamed Igneous Intrusion, Ordovician – Microgabbro within the Padarn Tuff Formation. This Igneous Bedrock formed approximately 444 to 485 million years ago in the Ordovician Period.

#### 2.2 Previous Work

In the summer of 2018 GAT undertook an archaeological assessment of the location of the waste water treatment works on behalf of DCWW. The assessment comprised a desk-based assessment of the site and its setting in the local landscape, along with a walkover and geophysical survey of the field in which the waste water treatment works will be located (GAT Report 1453).

The desk-based assessment and walkover survey confirmed the presence of field boundaries associated with the former Vaynol Estate. These features would be of at least mid to late 19<sup>th</sup> century date and are sites of local importance given their relation to the Vaynol Estate. The geophysical survey of the field for the WwTW did not identify likely archaeological anomalies.

#### 3 METHODOLOGY

## 3.1 Watching Brief

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CiFA, 2014).

An archaeological watching brief can divided into four categories:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

GAT will conduct a partial watching brief of any ground disturbing works within the pipe easement. The initial groundworks, concentrated in the ground of Tan-yr-Wylfa are anticpated to last from the **22**<sup>nd</sup> **to 25**<sup>th</sup> **June 2019**. At present the indicative programme for the remainder of the outfall pipe will be undertaken between Wednesday 26<sup>th</sup> June and Friday 9<sup>th</sup> August 2019 but this may be subject to change.

# 3.2 Fieldwork Methodology

- The soil strip and ground reduction (with the exception of the removal of glacial til and areas of concrete, hardcore, tarmac) will be conducted by a 360° excavator fitted with a toothless bucket. GAT staff will attend all intrusive groundworks in the hitherto undisturbed areas, as far as the archaeological horizon, glacial horizon or construction limit of excavation (whichever is encountered first). If archaeological activity is identified, then any groundworks in that location will stop to allow for investigation and recording;
- The Project Archaeologist will be present for the breach of any field boundaries, in particular PRN 71215, PRN 71219, PRN 71209 and PRN 71220. The sections of the field boundaries will be recorded through GAT watching brief pro-formas, photographs and if practical a scaled drawing;
- During the watching brief, all attendances and identified features will be recorded using GAT watching brief pro-formas (Appendix I);
- Photographic images will be taken using a digital SLR (Nikon D40) camera set to maximum resolution (3008 × 2000 6.1 effective megapixels) in RAW format and will be converted to TIFF and JPEG format for archiving using Adobe Photoshop; a photographic record will maintained on site using GAT pro-formas (Appendix II) and digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images will be archived in TIFF format; the archive numbering system will start from G2601\_001. When possible, a photographic ID board will be used during the watching brief to record site code, image orientation and any relevant context numbers. An appropriate scale will be used in photographs;
- Any subsurface remains will be recorded photographically, with detailed notations and a measured survey. The survey will be completed using a *Trimble* R8 GPS unit;
- Any archaeological features/deposits/structures encountered will be manually cleaned and examined to determine extent, function, date and relationship to adjacent activity. For linear features, terminal ends and intersection points with other features will be prioritised; if these aren't present then representative slots will be completed. Features such as burnt mounds, which comprise a spread of material rather than a cut feature, will be completed in quadrants (if fully extant within mitigation area) and followed by additional excavation if earlier activity is encountered

beneath the spread. The following minimum strategy will also apply: 50% sample of each discrete feature (followed by complete excavation once section records are completed), 10% sample of each linear feature. In the event of the identification of extensive/complex remains (for example burials, structures or preserved wooden or organic artefacts), additional time, resourcing and costs may be required for GAT to complete an appropriate programme of works;

- Any required sections to be drawn at a minimum 1:10 scale using GAT A4 or A2 proforma permatrace;
- Any required plans to be at a minimum 1:20 scale. Plans will be drawn on GAT A4 or A2 pro-forma permatrace;
- Should dateable artefacts, human remains and/or ecofacts be recovered, an interim report will be submitted summarising the results of the watching brief, along with an assessment of potential for analysis post-excavation project design (in line with the MAP2 process). Additional time, resourcing and costs will be required to undertake any post-excavation programme of works.

#### 3.3 Human Remains

If any human remains identified are to be excavated, and cannot be preserved in situ this will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a Ministry of Justice licence is required under Section 25 of the Burials Act 1857 for the removal of any body or remains of any body from any place of burial. In accordance with the Ministry of Justice licence, recovered remains will be reburied once the investigation and/or assessment/analysis are complete.

Non-fragmented skeletal remains will be excavated using wooden tools and collected and stored in polyethylene bags (with appropriate references for context, grave number, et al) and placed in a lidded cardboard archive box (note: separate boxes for each grave) and stored in a suitable manner within GAT premises. If significant quantities of human remains are encountered, a human osteologist should be contacted and appointed to advise the team during the fieldwork. The osteologist will be an external appointment: Dr. Genevieve Tellier | Tel: 01286 238827 | email: northwalesosteology@outlook.com who will assist in devising the excavation, recording and sampling strategy for features containing human remains. The osteologist should also help to ensure that adequate post-excavation processing of human remains is carried out so that the material is in a fit state for assessment during the post-excavation stage. For inhumations, this will involve washing, drying, marking and packing.

If human remains are recovered that are deemed suitable for further assessment/analysis, this will be completed in accordance with the osteologist's requirements and with *Human Bones from Archaeological Sites Guidelines for producing assessment documents and analytical reports* (Chartered Institute for Archaeologists, 2017).

### 3.4 Ecofacts

Should any deposits deemed suitable for dating be identified, they will be taken from sealed contexts, with not less than 40 litres for bulk samples (or 100% if the feature is smaller). The sampling strategy will be undertaken in accordance with the principles set out in *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage, 2011). Recourse will be made to relevant specialists for palaeoenvironmental analysis and dating. Any required specialists will be consulted during the watching brief to advise GAT on a sampling strategy. For any ecofact samples taken from human burials, this will be completed in accordance with an appointed osteologist's guidance.

#### 3.5 Artefacts

Diagnostic artefacts will be retained for further examination and identification. Pottery sherds of 19<sup>th</sup> and 20<sup>th</sup> century date will be examined on site and the context from which they were retrieved noted but the sherds will not be retained. The artefacts will be treated according to guidelines issued by the UK Institute of Conservation (Watkinson and Neal 2001) in particular the advice provided within *First Aid for Finds* (Rescue 1999) and Historic England.

All finds are the property of the landowner; however, it is Trust policy to recommend that all finds are donated to an appropriate museum, in this case Storiel Museum and Art Gallery where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff.

All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown, on whose behalf the National Museums and Galleries of Wales acts as advisor on technical matters, and may be the recipient body for the objects.

The National Museums and Galleries of Wales will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled.

GAT will contact the landowner for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Storiel Museum and Art Gallery, Ffordd Gwynedd, Bangor LL57 1DT). A GAT produced pro-forma will be issued to the landowner where they are given the option to donate the finds or to record that they want them returning to them once analysis and assessment has been completed. Artefacts will be transferred to the Storiel Museum and Art Gallery will in accordance with *Guidelines for the Preparation and deposition of Archaeological Archives: An agreement between and Gwynedd Museums Service* (Gwynedd Council, 2009).

# 3.6 Fieldwork Archiving

Following the completion of the fieldwork, a programme of field work archiving will be completed based on following task list;

- 1. Pro-formas: all cross referenced and complete;
- 2. Photographic Metadata: completed in *Microsoft Access* and cross-referenced with all pro-formas;
- 3. Sections: all cross referenced and complete;
- 4. Survey data: downloaded using a Computer Aided Design package;
- 5. Plans: all cross referenced and complete;
- 6. Artefacts (if relevant): quantified and identified; register completed;
- 7. Ecofacts (if relevant): quantified and register completed;
- 8. Context register (if relevant): quantified and register completed;

All data will be processed, final illustrations will be compiled and a report will be produced which will detail and synthesise the results.

# 4 PROCESSING DATA, ILLUSTRATION, REPORT AND ARCHIVING

Following completion of the stages outlined above, a report will be produced within one month incorporating the following:

- 1. Non-technical summary
- 2. Introduction
- 3. Aims and objectives
- 4. Background
- 5. Methodology
- 6. Results
- 7. Conclusions and further recommendations
- 8. List of sources consulted.
- 9. Appendix I approved GAT project design
- 10. Appendix II photographic metadata
- 11. Appendix III context register
- 12. Appendix IV ecofact register
- 13. Appendix V artefact register

Should dateable artefacts and ecofacts be recovered, an **interim report** will be submitted summarising the results, along with an assessment of potential for analysis written scheme of investigation (in line with the MAP2 process).

Illustrations will include plans of the location, site plans and sections. Historical maps, when appropriate and if copyright permissions allow, will be included. A draft copy of the report will be sent to GAPS and to the client prior to production of the final report.

Dependant on the outcome of the archaeological watching brief the *Research Framework for* the *Archaeology of Wales* will be consulted to help to provide context and to help inform the archaeology identified within the site boundary.

### 5 DISSEMINATION AND ARCHIVING

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. The archaeological mitigation outlined in this written scheme of investigation will commence in June 2019. A draft report will be submitted within one month of fieldwork completion (end date tbc); a final report will be submitted to the Historic Environment within six months of submitting the draft report (submission date tbc).

The following dissemination will apply:

- A paper report(s) plus digital report(s) will be provided to the client/consultant and GAPS (draft report then final report);
- A paper report plus a digital report will be provided to the regional Historic Environment Record, Gwynedd Archaeological Trust; this will be submitted within six months of project completion (final report only);
- If appropriate, digital information such as the project database, GIS table(s) and photographs, will be submitted to the regional Historic Environment Record at Gwynedd Archaeological Trust within six months of project completion. All digital datasets submitted will conform to the required standards set out in Gwynedd Archaeological Trust's Historic Environment Record (HER) Guidelines for Archaeological Contractors (Version 1.3; draft);
- A digital report and archive (including photographic and drawn) data will be provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only);
- Submission of digital information to the Royal Commission on the Ancient and Historical Monuments of Wales shall be undertaken in accordance with the RCAHMW Guidelines for Digital Archives Version 1. Digital information will include the photographic archive and associated metadata;
- Dependent on the results of the watching brief, a summary note or a specific article
  will be included in the Council for British Archaeology Wales publication Archaeology
  in Wales. This shall be agreed with GAPS, and client in advance of publication along
  with all publication content. GAPS involvement in the project will be acknowledged
  therein.

# 6 PERSONNEL

The project will be managed by John Roberts, Principal Archaeologist GAT Contracts Section with attendances on-site undertaken by a GAT Project Archaeologist. The Project Archaeologist will be responsible for the archaeological mitigation on site, including all field management duties, e.g., GAPS/client/consultant liaison, osteologist or palaeoenvironmentalist liaison (if relevant). The Project Archaeologist will be responsible for completing all on site pro-formas and the fieldwork archive itemised in Sec. 3.2. The Project Archaeologist will also be responsible for submitting a draft final report (or interim report) for project manager review and approval. The report will then be submitted as per the arrangements defined in Sec. 5.

# 7 HEALTH AND SAFETY

The GAT Project Archaeologist(s) will be CSCS certified. Copies of the site specific risk assessment will be supplied to the client and sub-contractor prior to the start of fieldwork. Any risks and hazards will be indicated prior to the start of work via a submitted risk assessment. All GAT staff will be issued with required personal safety equipment, including high visibility jacket, steel toe-capped boots and hard hat. All GAT fieldwork is undertaken in accordance with the Trust's Health and Safety Manual, Policy and Handbook which were prepared by Ellis Whittam.

# **8 SOCIAL MEDIA**

One of the key aims in the GAT mission statement is to improve the understanding, conservation and promotion of the historic environment in our area and inform and educate the wider public. To help achieve this, GAT maintains an active social media presence and seeks all opportunities to promote our projects and results. With permission, GAT would like the opportunity to promote our work on this scheme through our social media platforms. This could include social media postings during our attendance on site as well as any postings to highlight results. In all instances, approval will be sought from client prior to any postings.

### 9 INSURANCE

The watching brief will be undertaken when the current insurance policies expire. The client will be sent the relevant details once these insurances have been renewed.

# **Public/Products Liability**

Limit of Indemnity-£5,000,000 any one event in respect of Public Liability

**INSURER Aviva Insurance Limited** 

POLICY TYPE Public Liability

POLICY NUMBER 24765101CHC/UN/000375

**EXPIRY DATE 21/06/2019** 

# **Employers Liability**

Limit of Indemnity- £10,000,000 any one occurrence.

The cover has been issued on the insurers standard policy form and is subject to their usual terms and conditions. A copy of the policy wording is available on request.

**INSURER Aviva Insurance Limited** 

POLICY TYPE Employers Liability

POLICY NUMBER 24765101 CHC / UN/000375

**EXPIRY DATE 21/06/2019** 

# **Professional Indemnity**

Limit of Indemnity-£5,000,000 in respect of each and every claim

**INSURER Hiscox Insurance Company Limited** 

POLICY TYPE Professional Indemnity

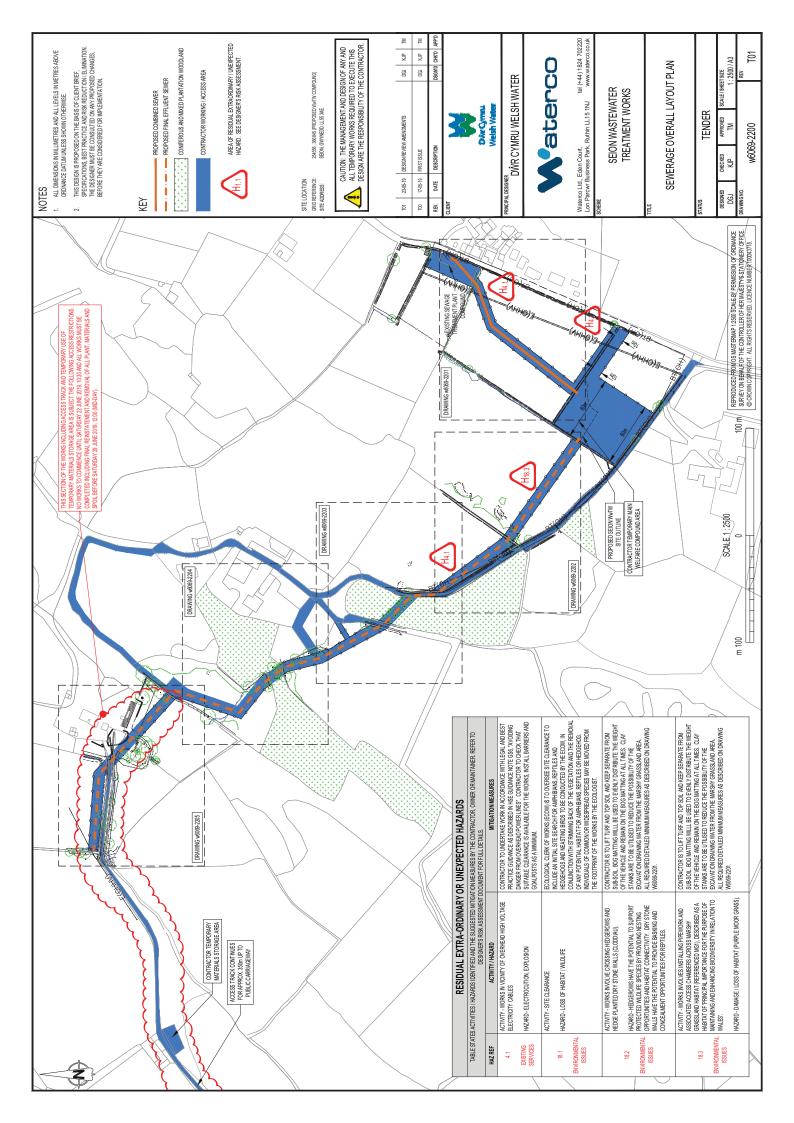
POLICY NUMBER 9446015

**EXPIRY DATE 22/07/2019** 

# **10 SOURCES CONSULTED**

- 1. Chartered Institute for Archaeologists, 2014, Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives;
- 2. Chartered Institute for Archaeologists, 2014, Standard and Guidance for An Archaeological Watching Brief;
- 3. English Heritage, 1991, Management of Archaeological Projects (MAP2);
- 4. English Heritage, 2011, Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation;
- 5. Evans R., N. McGuinness, S. Reilly & J. Roberts 2018. Seion Waste Water Treatment Works Archaeological Assessment Gwynedd Archaeological Trust Report 1453;
- 6. Gwynedd Archaeological Trust, 2014, *Historic Environment Record (HER) Guidelines for Archaeological Contractors* (Version 1.3; draft);
- 7. Historic England, 2015, Management of Research Projects in the Historic Environment (MoRPHE);
- 8. Royal Commission on Ancient and Historic Monuments of Wales, 2015, *Guidelines for digital archives;*
- 9. X/Vaynol/4138-9 1867 Plan of Farms in the north of the Parish of Llanddeiniolen, part of the "Surveys of the Vaynol Estate made for the purposes of Valuation, begun by the late Robert Lloyd Ellis and completed by Frederick Jackson.

Reproduction of DCWW drawing w6069-220



Location of archaeological features that will be affected by or that are adjacent to the outfall pipe of Seion WwTW. Scale 1:4,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE.

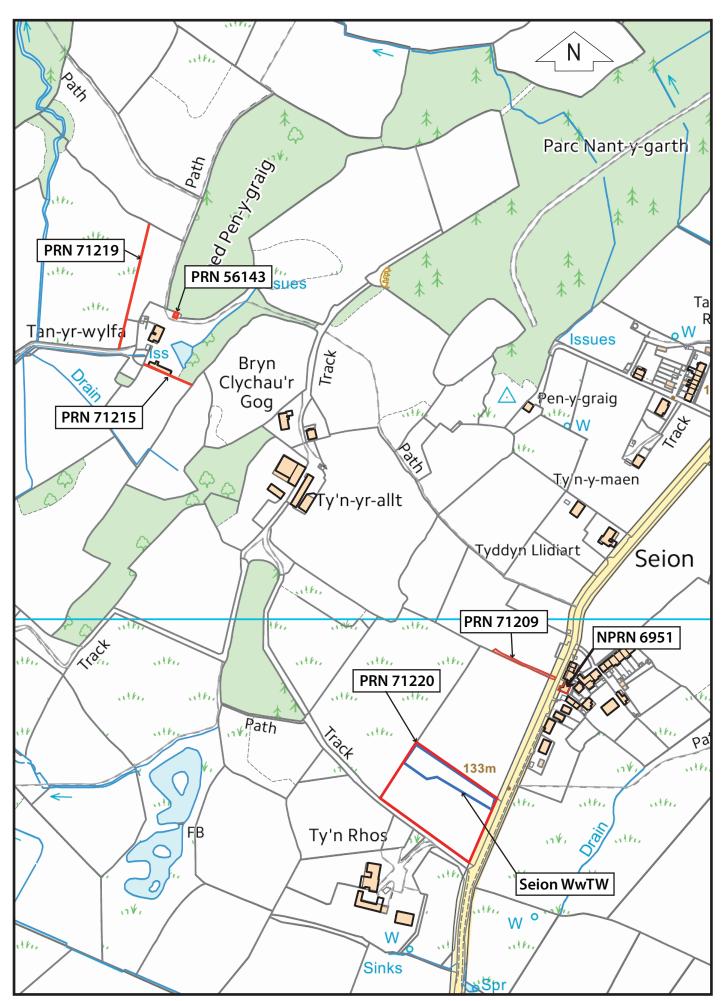
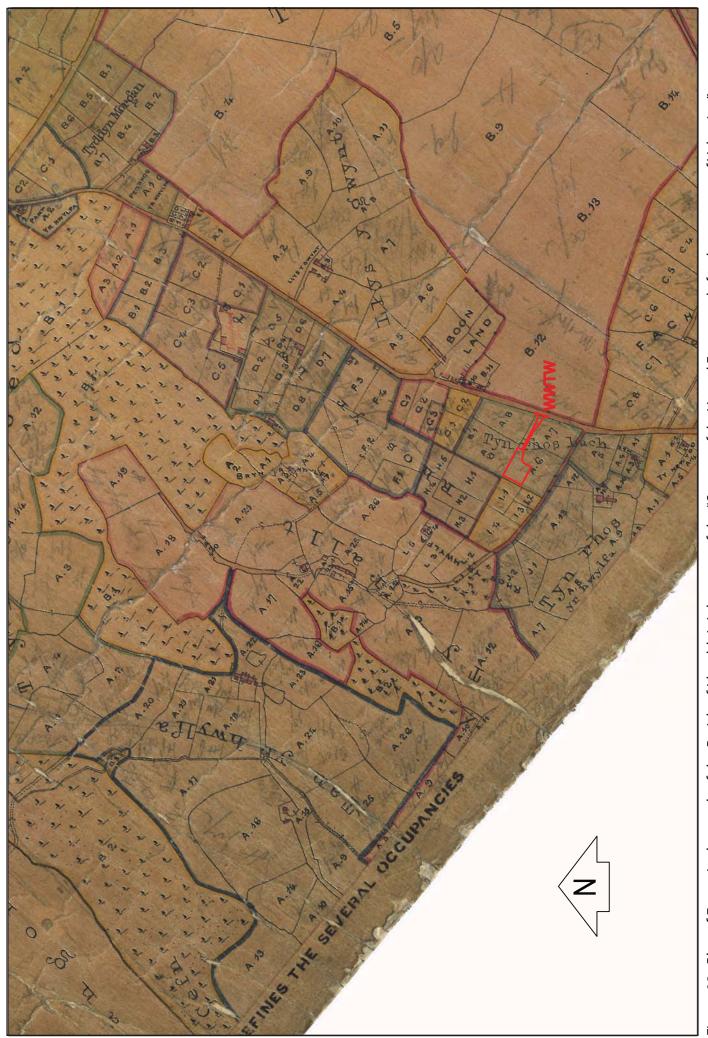


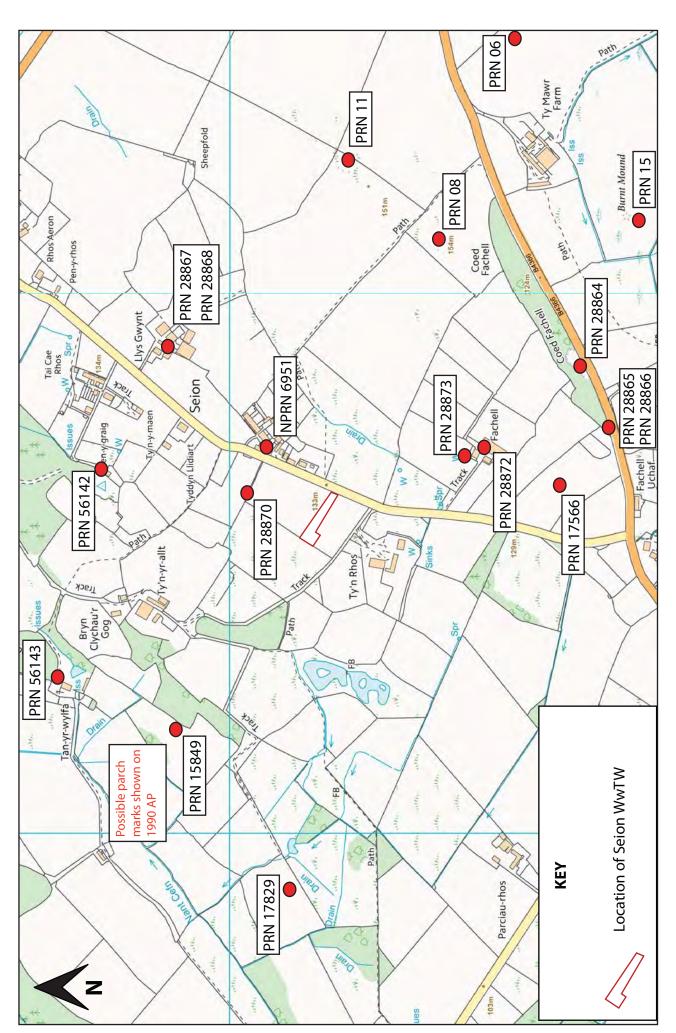
Figure 02: Location of archaeological features that will be affected by or that are adjacent to the outfall pipe of Seion WwTW. Scale 1:4,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE. © Crown copyright. All rights reserved. License number AL100020895

10.1 Plan of Farms in the north of the Parish of Llanddeiniolen, part of the "Surveys of the Vaynol Estate made for the purposes of Valuation", begun by the late Robert Lloyd Ellis and completed by Frederick Jackson (1867), with the WWTW overlain (Gwynedd Archives, X/Vaynol/4138-9). Scale 1:6000 @A4



begun by the late Robert Lloyd Ellis and completed by Frederick Jackson (1867), with the WWTW overlain (Gwynedd Archives, X/Vaynol/4138-9). Figure 03: Plan of Farms in the north of the Parish of Llanddeiniolen, part of the "Surveys of the Vaynol Estate made for the purposes of Valuation", Scale 1:6000 @A4

Location of archaeological features (red dots) in relation to development site (red outline). Scale 1:7,000 @ A4. Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE.



Base map taken from Ordnance Survey 1: 10,000 Series Sheet SH56 NW and NE. © Crown copyright. All rights reserved. License number AL100020895 Figure 04: Location of archaeological features (red dots) in relation to development site (red outline). Scale 1:7,000 @ A4.

# APPENDIX I

Gwynedd Archaeological Trust photographic metadata pro-forma

# Ymddiriedolaeth Archaeolegol Gwynedd Gwynedd Archaeological Trust

# Digital Photographic Record Project code and name:

Include main context numbers for each shot, drawing numbers for sections and any other relevant numbers for cross referencing.

Delete any unwanted photos immediately from the camera.

Regularly upload photographs to computer.

Projec	Project Name:		Project Number:		-		
Photo No.	Trench	Description	Contexts	Scales	View From	Initials	Date

# **APPENDIX II**

**Gwynedd Archaeological Trust watching brief pro-forma** 

YMDDIRIEDOLAETH ARCHAEOLEGOL GW	YNEDD ARCHAEOLOGICAL	TRUST
DAY RECORD		Date
Project name	Project number	Compiler
Location	•	
Description		
Times of travalling and an aite		
Times of travelling and on-site		
Drawn record details		
Photographic record details		

# Appendix II

Gwynedd Archaeological Trust photographic metadata pro-forma

Appendix II – Reproduction of Photographic Metadata

<b>PHOTO*</b> Marie 22/06/2019	/arie	Anne Marie		Anne Marie	E not used Anne Marie		
Marie	Anne Marie Oattes			not used	not used	-	
"	Oattes			-		E not used	not used
	)	Oattes	Oattes	Oattes	Oattes	stream and Oattes	
						headwall	headwall
Marie 22/06/2019	Anne Marie	Anne Marie		Anne Marie	not used Anne Marie	not used Anne Marie	W not used Anne Marie
	Oattes	Oattes	Oattes	Oattes	Oattes	east end of field Oattes	
				4	4		
22/06/2019   22/06/2019	Anne Marie 24	Anne Marie	Anne Marie	not used   Anne Marie	not used   Anne Marie	NW not used Anne Marie	Pre-ex snot NW not used Anne Marie
	Oattes	Oattes	Oattes	Oattes	Oattes	Oattes	Oattes
Marie 22/06/2019	Anne Marie 2	Anne Marie		Anne Marie	not used Anne Marie	not used Anne Marie	SE not used Anne Marie
	Oattes	Oattes	Oattes	Oattes	Oattes	Pre-ex shot Oattes	
Marie 22/06/2019	Anne Marie 22/06/2	Anne Marie		Anne Marie	not used Anne Marie	not used Anne Marie	W not used Anne Marie
	Oattes	Oattes	Oattes	Oattes	Oattes		
				-	-		
		Anne Marie	Anne Marie	not used Anne Marie	not used Anne Marie	W not used Anne Marie	Trench with W not used Anne Marie
Marie 22/06/2019	Anne Marie 22,	Anne Marie		Anne Marie	not used Anne Marie	not used Anne Marie	W not used Anne Marie
		Anne Marie	Anne Marie	not used Anne Marie	not used Anne Marie	W not used Anne Marie	Trench with W not used Anne Marie
		Anne Marie Oattes	Anne Marie Oattes	not used Anne Marie	not used Anne Marie	W not used Anne Marie	Trench with W not used Anne Marie
		Anne Marie Oattes	Anne Marie	not used Anne Marie	not used Anne Marie	W not used Anne Marie	Trench with W not used Anne Marie
Marie Marie	Anne Marie Oattes Anne Marie			not used not used	not used not used	w not used  W not used	Trench with W not used topsoil removed Trench with W not used
	Anne Oatte Oatte Oatte Oatte Oatte Oatte Oatte Oatte			Not used not used not used not used not used	not used not used not used not used	ield  NW not used  NSE not used  W not used  W not used	Pre ex shot to

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_009	G2601_Seion_WwTW	N facing section of trench		z	1x1m	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	
G2601_010	G2601_Seion_WwTW	Length of pipe trench		ш	not used	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	
G2601_011	G2601_Seion_WwTW	S facing section of trench at East end of field 1		S	1x1m	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	
G2601_012	G2601_Seion_WwTW	S facing section of trench at East end of field 1 showing topsoil depth		S	not used	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	
G2601_013	G2601_Seion_WwTW	Pipe trench from manhole		ш	not used	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	01
G2601_014	G2601_Seion_WwTW	Pre -x of Tan Yr Wylfa track and cattle grid		N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/	not used	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	
G2601_015	G2601_Seion_WwTW	Pre -x of Tan Yr Wylfa track		SE	not used	Anne Marie Oattes	22/06/2019	Gwynedd Archaeological Trust	

PHOTO RECORD NUMBER*	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER (S)	VIEW	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	COPYRIGHT*	PLATES
G2601_023	G2601_Seion_WwTW	View of NE facing section showing redeposited material		SE	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_024	G2601_Seion_WwTW	Working shot NE facing section of trench		z	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_025	G2601_Seion_WwTW	View of NW end of trench in yard		SE	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_026	G2601_Seion_WwTW	Topsoiled area		NN NN	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_027	G2601_Seion_WwTW	SW facing section showing topsoil depth		SW	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	02
G2601_028	G2601_Seion_WwTW	Possible field drain		SW	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	

PHOTO RECORD NUMBER*	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER (S)	VIEW	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	COPYRIGHT*	PLATES
G2601_029	G2601_Seion_WwTW	NE facing section showing topsoil depth at SE end of field		N N	1×1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_030	G2601_Seion_WwTW	NE facing section showing topsoil depth at SE end of field		NE	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_031	G2601_Seion_WwTW	SE end of field topsoil removed		NN	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_032	G2601_Seion_WwTW	SW facing section of baulk showing water pipe trench		SW	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_033	G2601_Seion_WwTW	Field boundary with Field 3 at SE end of easement		NZ.	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_034	G2601_Seion_WwTW	Location shot View to Ne		SW	not used	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_035	G2601_Seion_WwTW	Location shot View to NW		SE	not used	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_036	G2601_Seion_WwTW	Field boundary at SE end of Field 2		NN N	1x1m	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	03
G2601_037	G2601_Seion_WwTW	View of trench to SE of bedrock		NN.	not used	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_038	G2601_Seion_WwTW	Length of trench		SE	not used	Anne Marie Oattes	24/06/2019	Gwynedd Archaeological Trust	
G2601_039	G2601_Seion_WwTW	Length of trench		SE	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_040	G2601_Seion_WwTW	View of cattle grid and track pre-x		z	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_041	G2601_Seion_WwTW	Working shot trench to SE of track and cattle grid		MN.	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_042	G2601_Seion_WwTW	Trench at SE end of Field 1		SE	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_043	G2601_Seion_WwTW	NE facing section of trench across yard track		NE	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_044	G2601_Seion_WwTW	Length of trench across yard track		MN.	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601 <u>045</u>	G2601_Seion_WwTW	Length of trench across yard track		SE	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_046	G2601_Seion_WwTW	Location shot view to N before boundary breakthrough		MN	1x1m	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_047	G2601_Seion_WwTW	Location shot view to N before boundary breakthrough		NN.	1x1m	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_048	G2601_Seion_WwTW	Compound boundary pre-x		NE NE	1x1m	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
G2601_049	G2601_Seion_WwTW	Compound boundary pre-x		NE	1x1m	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	

	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
0	G2601_Seion_WwTW	Trench working shot		NN N	not used	Anne Marie Oattes	25/06/2019	Gwynedd Archaeological Trust	
O	G2601_Seion_WwTW	NE facing section of boundary breakthrough F2/F3		ш	2x1m	Anne Marie Oattes	26/06/2019	Gwynedd Archaeological Trust	
	G2601_Seion_WwTW	NE facing section of boundary breakthrough F2/F3		Ш И	2x1m	Anne Marie Oattes	26/06/2019	Gwynedd Archaeological Trust	
	G2601_Seion_WwTW	NE facing section of boundary breakthrough F2/F3		ш Z	1x1m	Anne Marie Oattes	26/06/2019	Gwynedd Archaeological Trust	04
	G2601_Seion_WwTW	NE facing section F2/F3 boundary breakthrough	(07) (08) (09) (10) (11)(12)	N N	1x1m	Anne Marie Oattes	26/06/2019	Gwynedd Archaeological Trust	
	G2601_Seion_WwTW	Access road and compound area before topsoil strip		SE	1x1m	Anne Marie Oattes	26/06/2019	Gwynedd Archaeological Trust	

PLATES								
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DATE OF CREATION OF DIGITAL PHOTO*	26/06/2019	26/06/2019	26/06/2019	26/06/2019	26/06/2019	26/06/2019	26/06/2019	26/06/2019
CREATOR OF DIGITAL PHOTO*	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes
SCALE(S)	1x1m	1x1m	not used	1x1m	1x1m	not used	not used	1x1m
VIEW	SE	Ш Ш	SE	SE	ш	SE	SE	NE
CONTEXT NUMBER (S)								(00) (00) (00) (80)
DESCRIPTION*	Access road and compound area before topsoil strip	View to SW	View to W	Pre-x shot	Pre-x shot	Pre-x shot	Topsoiled area at highway	NE facing section of clawdd wall
PROJECT NAME	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW
PHOTO RECORD NUMBER*	G2601_063	G2601_064	G2601_065	G2601_066	G2601_067	G2601_068	G2601_069	G2601_070

PHOTO	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL		
							РНОТО*		
G2601_071	G2601_Seion_WwTW	NE facing section		NE	1x1m	Anne Marie	26/06/2019	Gwynedd	
		of clawdd wall				Oattes		Archaeological	
								Trust	
G2601_072	G2601_Seion_WwTW	NE facing section		NE	1x1m	Anne Marie	26/06/2019	Gwynedd	
		of clawdd wall				Oattes		Archaeological Trust	
G2601_073	G2601_Seion_WwTW	NE facing section		NE	1x1m	Anne Marie	26/06/2019	Gwynedd	
		of clawdd wall				Oattes		Archaeological Trust	
G2601_074	G2601_Seion_WwTW	Topsoiled area		SE	not used	Anne Marie	26/06/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_075	G2601_Seion_WwTW	Topsoiled area		NE	not used	Anne Marie	27/06/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_076	G2601_Seion_WwTW	Topsoiled area		NE	not used	Anne Marie	27/06/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_077	G2601_Seion_WwTW	Working shot		SE	not used	Anne Marie	27/06/2019	Gwynedd	
						Oattes		Archaeological Trust	
G2601_078	G2601_Seion_WwTW	Working shot		SE	not used	Anne Marie	27/06/2019	Gwynedd	
	l					Oattes		Archaeological	
								Trust	
G2601_079	G2601_Seion_WwTW	Working shot		SE	not used	Anne Marie	27/06/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	

PLATES								90
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DATE OF CREATION OF DIGITAL PHOTO*	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	28/06/2019	28/06/2019	28/06/2019
CREATOR OF DIGITAL PHOTO*	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes					
SCALE(S)	not used	1x1m	1x1m	1x1m				
VIEW	NE	SE	NE	SW	SE	z	NE	N N
CONTEXT NUMBER (S)								
DESCRIPTION*	Topsoiled area	Pre-ex shot of slate and wire fence boundary F3/F4	View along slate fence to SW	Closer view of slate fence				
PROJECT NAME	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW
PHOTO RECORD NUMBER*	G2601_080	G2601_081	G2601_082	G2601_083	G2601_084	G2601_085	62601_086	G2601_087

PROJECT NAME	√E	<b>DESCRIPTION*</b>	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
on	G2601_Seion_WwTW	View to NE		SW	1x1m	Anne Marie	28/06/2019	Gwynedd	
						Oattes		Archaeological Trust	
ion	G2601_Seion_WwTW	View to field		NN	1x1m	Anne Marie	28/06/2019	Gwynedd	
		boundary F4/F5				Oattes		Archaeological Trust	
eion	G2601_Seion_WwTW	Fallen stone wall		MN	1x1m	Anne Marie	28/06/2019	Gwynedd	07
		on NW side of slate fence				Oattes		Archaeological Trust	
seion	G2601_Seion_WwTW	View to Field		SE	not used	Anne Marie	28/06/2019	Gwynedd	
		boundary F3/F4				Oattes		Archaeological Trust	
Seion	G2601_Seion_WwTW	Dry stone wall to		Е	1x1m	Anne Marie	28/06/2019	Gwynedd	
		NW of slate fence				Oattes		Archaeological Trust	
Seion	G2601_Seion_WwTW	Slate fence and		Ш	1x1m	Anne Marie	28/06/2019	Gwynedd	
		stone wall field boundary F4/F5				Oattes		Archaeological Trust	
Seion	G2601_Seion_WwTW	Slate fence and stone wall field boundary F4/F5		NE.	1x1m	Anne Marie Oattes	28/06/2019	Gwynedd Archaeological Trust	

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DATE OF CREATION OF DIGITAL PHOTO*	28/06/2019	28/06/2019	28/06/2019	28/06/2019	28/06/2019	28/06/2019	28/06/2019
CREATOR OF DIGITAL PHOTO*	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes
SCALE(S)	1x1m	1x1m	not used	not used	not used	not used	not used
VIEW	SW	SE	E Z	E C	E C	E Z	z
CONTEXT NUMBER (S)							
DESCRIPTION*	View along slate fence and stone wall F3/F4	Width of stone wall to SE of slate fence F3/F4	View of F4 from slate fence boundary with F3	Pre-ex shot of S end of field 3	Topsoil removed at S end of F3	Field 3 excavation for manhole at S end of field	Topsoil removed at S end of F3
PROJECT NAME	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW
PHOTO RECORD NUMBER*	G2601_095	G2601_096	G2601_097	G2601_098	G2601_099	G2601_100	G2601_101

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_102	G2601_Seion_WwTW	Pipe trench stripped to natural		Z	1x1m	Anne Marie Oattes	28/06/2019	Gwynedd Archaeological Trust	
G2601_103	G2601_Seion_WwTW	Pipe trench stripped to natural		z	not used	Anne Marie Oattes	28/06/2019	Gwynedd Archaeological Trust	
G2601_104	G2601_Seion_WwTW	Pipe trench stripped to natural		z	not used	Anne Marie Oattes	28/06/2019	Gwynedd Archaeological Trust	
G2601_105	G2601_Seion_WwTW	S end of F3 topsoil removed		z	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	
G2601_106	G2601_Seion_WwTW	E facing section of pipe trench		ш	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	
G2601_107	G2601_Seion_WwTW	NE facing section of wall and slate fence FB F3/F4		ZE	1x1m	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	
G2601_108	G2601_Seion_WwTW	View to FB F4/F5		NN NN	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	
G2601_109	G2601_Seion_WwTW	Location shot view to F3		S	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_110	G2601_Seion_WwTW	NE facing section of wall and slate fence FB F4/F5		E E	1x1m	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	80
G2601_111	G2601_Seion_WwTW	View through woods to FB F3/F4		S	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	
G2601_112	G2601_Seion_WwTW	Location shot view to E		>	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	10
G2601_113	G2601_Seion_WwTW	SE facing section of pipe trench		S	not used	Anne Marie Oattes	29/06/2019	Gwynedd Archaeological Trust	
G2601_114	G2601_Seion_WwTW	Length of pipe trench		>	not used	Anne Marie Oattes	30/06/2019	Gwynedd Archaeological Trust	
G2601_115	G2601_Seion_WwTW	Length of pipe trench		NN.	not used	Anne Marie Oattes	30/06/2019	Gwynedd Archaeological Trust	
G2601_116	G2601_Seion_WwTW	Pipe trench stripped to natural		z	not used	Anne Marie Oattes	30/06/2019	Gwynedd Archaeological Trust	
G2601_117	G2601_Seion_WwTW	Pipe trench stripped to natural		z	not used	Anne Marie Oattes	30/06/2019	Gwynedd Archaeological Trust	60

PHOTO	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
NUMBER*			NUMBER (S)	Ž Ž		PHOTO*	CKEATION OF DIGITAL PHOTO*		
G2601_118	G2601_Seion_WwTW	Pipe trench stripped to natural		z	not used	Anne Marie Oattes	30/06/2019	Gwynedd Archaeological Trust	
G2601_119	G2601_Seion_WwTW	Pre-ex shot (no board)		NN.	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_120	G2601_Seion_WwTW	Pre-ex shot		NN N	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_121	G2601_Seion_WwTW	Location shot view to F4		SE	not used	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_122	G2601_Seion_WwTW	Pre-ex shot F5		NN N	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_123	G2601_Seion_WwTW	View to F4 location shot		SE	not used	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	15
G2601_124	G2601_Seion_WwTW	View of field boundary before breakthrough		ш	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	14
G2601_125	G2601_Seion_WwTW	Location shot view along track		NN.	not used	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	

PHOTO	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_126	G2601_Seion_WwTW	View of field boundary before breakthrough		SE	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	16
G2601_127	G2601_Seion_WwTW	View of field boundary before breakthrough		S	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_128	G2601_Seion_WwTW	Compound topsoil strip		NN.	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601 <u>129</u>	G2601_Seion_WwTW	NW end of F5 topsoil strip		N/N	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_130	G2601_Seion_WwTW	FB F5/lower track hedge removed		N/N	1x1m	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_131	G2601_Seion_WwTW	Hedgerow and wire and post fence removed		NNE	not used	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_132	G2601_Seion_WwTW	Topsoil removed F5		SE	not used	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	
G2601_133	G2601_Seion_WwTW	Working shot topsoil strip		WN	not used	Anne Marie Oattes	01/07/2019	Gwynedd Archaeological Trust	

PHOTO	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL		
							PHOTO*		
G2601_134	G2601_Seion_WwTW	F5 topsoil strip		SE	1x1m	Anne Marie	01/07/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_135	G2601_Seion_WwTW	F5 topsoil strip		SE	1x1m	Anne Marie	01/07/2019	Gwynedd	
						Oattes		Archaeological	
76760	(M.H. : 344 : - 0 2000)			L	7		0,000,000	II dat	
G2601_136	G2601_Seion_WwTW	F5 topsoil strip		SE	1x1m	Anne Marie	01/07/2019	Gwynedd	
						Oattes		Archaeological Trust	
G2601_137	G2601_Seion_WwTW	F5 topsoil strip		SE	1x1m	Anne Marie	01/07/2019	Gwynedd	11
						Oattes		Archaeological	
								Trust	
G2601_138	G2601_Seion_WwTW	Topsoil strip in		ЗS	1x1m	Anne Marie	01/02/2010	Gwynedd	
		punodwoo				Oattes		Archaeological	
								Trust	
G2601 <u>1</u> 39	G2601_Seion_WwTW	Linear 1 in pipe	[32] (38)	MN	1x1m	Anne Marie	01/02/2010	Gwynedd	
		trench				Oattes		Archaeological	
								Trust	
G2601_140	G2601_Seion_WwTW	Linear 1 in pipe	[37] (38)	ΝN	1x1m	Anne Marie	01/07/2019	Gwynedd	12
		trench				Oattes		Archaeological Trust	
G2601_141	G2601_Seion_WwTW	Linear 1 in pipe	[37] (38)	MN	1x1m	Anne Marie	01/07/2019	Gwynedd	
		trench				Oattes		Archaeological	
								Trust	
G2601_142	G2601_Seion_WwTW	Topsoil strip		NE	1x1m	Anne Marie	02/02/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	

PLATES	25		13					18
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DATE OF CREATION OF DIGITAL PHOTO*	02/07/2019	02/07/2019	02/07/2019	02/07/2019	02/07/2019	02/07/2019	02/07/2019	02/07/2019
CREATOR OF DIGITAL PHOTO*	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes
SCALE(S)	not used	1x1m	1x1m	not used	not used	1x1m	1x1m	1x1m
VIEW	SE	WN	WN	SE	NN.	SE	E C	SW
CONTEXT NUMBER (S)								
DESCRIPTION*	Topsoil strip	NW facing section of Linear 1	NW facing section of Linear 1	Topsoil strip	Topsoil strip	Shot of slate fence before breakthrough	View to S along slate fence	View to N along slate fence
PROJECT NAME	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW
PHOTO RECORD NUMBER*	G2601_143	G2601_144	G2601_145	G2601_146	G2601_147	G2601_148	G2601_149	G2601_150

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
KECOKU NUMBER*			NUMBER (S)	Z S		DIGITAL PHOTO*	CKEATION OF DIGITAL PHOTO*		
G2601_151	G2601_Seion_WwTW	Slate fence remove showing depth of track material		>	1x1m	Anne Marie Oattes	02/07/2019	Gwynedd Archaeological Trust	
G2601_152	G2601_Seion_WwTW	Slate fence remove showing depth of track material		>	1x1m	Anne Marie Oattes	02/07/2019	Gwynedd Archaeological Trust	
G2601_153	G2601_Seion_WwTW	View to NW (field 6 and woods)		SE	not used	Anne Marie Oattes	02/07/2019	Gwynedd Archaeological Trust	17
G2601_154	G2601_Seion_WwTW	View of top track with slate fence		S	not used	Anne Marie Oattes	02/07/2019	Gwynedd Archaeological Trust	
G2601_155	G2601_Seion_WwTW	View of top track with slate fence		S	1x1m	Anne Marie Oattes	02/07/2019	Gwynedd Archaeological Trust	
G2601_156	G2601_Seion_WwTW	Field boundary viewed from top track pre-ex		MN	1x1m	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	19

RECORD NUMBER*	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER (S)	VIEW	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL	COPYRIGHT*	PLATES
							РНОТО*		
G2601_157	G2601_Seion_WwTW	View to		S	not used	Anne Marie	03/02/2019	Gwynedd	
		breakthrough in				Oattes		Archaeological	
		F6						Trust	
G2601_158	G2601_Seion_WwTW	Location shot		z	not used	Anne Marie	03/07/2019	Gwynedd	
						Oattes		Archaeological Trust	
G2601 <u>159</u>	G2601_Seion_WwTW	View of trench		NN	not used	Anne Marie	03/07/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
62601_160	G2601_Seion_WwTW	Pre-ex shot of		SE	1x1m	Anne Marie	03/07/2019	Gwynedd	
		clawdd boundary				Oattes		Archaeological	
								Trust	
G2601_161	G2601_Seion_WwTW	View along FB F7		SE	1x1m	Anne Marie	03/07/2019	Gwynedd	
		to NW				Oattes		Archaeological	
								Trust	
G2601 <u>_</u> 162	G2601_Seion_WwTW	View along FB F7		SE	not used	Anne Marie	03/07/2019	Gwynedd	
		to NW				Oattes		Archaeological Trust	
G2601_163	G2601_Seion_WwTW	Pre-ex shot of F7		NN	not used	Anne Marie	03/07/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_164	G2601_Seion_WwTW	Pre-ex shot of F7		SE	1x1m	Anne Marie	03/02/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601 <u>165</u>	G2601_Seion_WwTW	Topsoil removed		NN	not used	Anne Marie	03/02/2019	Gwynedd	
		NW end of F7				Oattes		Archaeological	
_								Trust	

PHOTO	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM	•	DIGITAL PHOTO*	CREATION OF DIGITAL		
							PHOTO*		
G2601_166	G2601_Seion_WwTW	Depth of topsoil		NE	1x1m	Anne Marie	03/02/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_167	G2601_Seion_WwTW	Topsoil removed		ΜN	1x1m	Anne Marie	03/02/2019	Gwynedd	
						Oattes		Archaeological	
								Trust	
G2601_168	G2601_Seion_WwTW	Topsoil removed		SE	1x1m	Anne Marie	03/07/2019	Gwynedd	20
						Oattes		Archaeological	
								ırust	
G2601_169	G2601_Seion_WwTW	Field boundary		NN	1x1m	Anne Marie	03/07/2019	Gwynedd	
		F7 before				Oattes		Archaeological	
		breakthrough						Trust	
G2601_170	G2601_Seion_WwTW	Field boundary		NE	1x1m	Anne Marie	03/07/2019	Gwynedd	
		F7 before				Oattes		Archaeological	
		breakthrough						Trust	
G2601_171	G2601_Seion_WwTW	Pre-ex clawdd		NE	1X1m	Anne Marie	03/07/2019	Gwynedd	
		boundary F7/F8				Oattes		Archaeological Trust	
G2601_172	G2601_Seion_WwTW	Clawdd		MN	not used	Anne Marie	03/07/2019	Gwynedd	21
		boundary before				Oattes		Archaeological	
		breakthrough						Trust	
G2601_173	G2601_Seion_WwTW	Clawdd		NN	1x1m	Anne Marie	03/07/2019	Gwynedd	
		boundary				Oattes		Archaeological Trust	

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL		
G2601_174	G2601_Seion_WwTW	Clawdd boundary		NN N	1x1m	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	
G2601_175	G2601_Seion_WwTW	Boundary at NW end of F9		SE	1x1m	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	
G2601_176	G2601_Seion_WwTW	Location shot view to compound		NN N	not used	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	
G2601_177	G2601_Seion_WwTW	Location shot view to F8		SE	not used	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	
G2601_178	G2601_Seion_WwTW	Pipe trench excavated NW end of F7		NN.	1x1m	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	
G2601_179	G2601_Seion_WwTW	Pipe trench excavated F7 mid field		N/N	1x1m	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	
G2601_180	G2601_Seion_WwTW	Pipe trench excavated at SE of F7 showing bedrock		WN	1xm	Anne Marie Oattes	03/07/2019	Gwynedd Archaeological Trust	

РНОТО	PROJECT NAME	<b>DESCRIPTION*</b>	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL		
7	H . W	T		7 4 11 4	7		PHOTO*		
62601_181	GZ601_Seion_Ww1W	lopsoil strip NW		<b>&gt;</b>	lx1m	Anne Marie	03/0//5019	Gwynedd	
		end of field				Oattes		Archaeological	
								1 USC	
G2601_182	G2601_Seion_WwTW	View to FB F8/F9		SE	not used	Anne Marie	03/07/2019	Gwynedd	
		location shot				Oattes		Archaeological	
								Trust	
G2601_183	G2601_Seion_WwTW	Topsoil strip		MN	1x1m	Anne Marie	03/02/2019	Gwynedd	
						Oattes		Archaeological Trust	
G2601 184	G2601 Seion WwTW	SW facing	(26) (22)	SW	1x1m	Anne Marie	03/07/2019	Gwynedd	
ı	1	dp: 102 d+ 00:+000	(00) (00)			*****	•	Archaeological	
		section through clawdd field	(67) (87)			Oattes		Trust	
		boundary							
G2601 185	G2601 Seion WwTW	SW facing	(26) (22)	WS.	1x1m	Anne Marie	03/02/2019	Gwynedd	
)		0	( , = ) ( > = )	· )	-	)	0404/10/00		
		section through clawdd field	(28) (29)			Oattes		Archaeological Trust	
		boundary closer							
		view							
G2601_186	G2601_Seion_WwTW	SW facing	(26) (27)	SW	1x1m	Anne Marie	04/07/2019	Gwynedd	
		section FB F7/F8	(28) (28)			Oattes		Archaeological	
								Trust	
G2601_187	G2601_Seion_WwTW	SW facing	(26) (27)	SW	1x1m	Anne Marie	04/07/2019	Gwynedd	22
		section FB F7/F8	(28) (28)			Oattes		Archaeological	
								Trust	

<b>DESCRIPTION*</b>
NUMBER (S)
SW facing (26) (27)
section FB F7/F8 (28) (29)
NE facing section
FB F7/F8
NE facing section
FB F7/F8
Boundary
breakthrough
NE facing section
of boundary
breakthrough
Breakthrough
Topsoil strip
Topsoil strip
Topsoil strip

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_197	G2601_Seion_WwTW	SW facing section boundary breakthrough	(30) (31)(32) (33) (36)	SW	1x1m	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_198	G2601_Seion_WwTW	Location shot F8/F9 boundary breakthrough		S	1x1m	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_199	G2601_Seion_WwTW	NW facing section boundary breakthrough	(30) (31)(32) (33) (36)	NZ NZ	1x1m	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_200	G2601_Seion_WwTW	NW facing section boundary breakthrough	(30) (31)(32) (33) (36)	NZ NZ	1x1m	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	24
G2601_201	G2601_Seion_WwTW	Topsoil strip		N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/	not used	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_202	G2601_Seion_WwTW	Topsoil strip		SE	not used	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_203	G2601_Seion_WwTW	Location shot		SSW	not used	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	

PHOTO RECORD NUMBER*	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER (S)	VIEW	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	COPYRIGHT*	PLATES
G2601_204	G2601_Seion_WwTW	Pipe trench stripped to natural showing bedrock		NN N	not used	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_205	G2601_Seion_WwTW	Pipe trench stripped to natural		NZ NZ	not used	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	23
G2601_206	G2601_Seion_WwTW	Pipe trench stripped to natural showing bedrock		N.	not used	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_207	G2601_Seion_WwTW	NW facing section FB F7/top track		N.	1x1m	Anne Marie Oattes	04/07/2019	Gwynedd Archaeological Trust	
G2601_208	G2601_Seion_WwTW	NW facing section FB F7/top track		NZ NZ	1x1m	Anne Marie Oattes	05/07/2019	Gwynedd Archaeological Trust	
G2601_209	G2601_Seion_WwTW	Boundary before breakthrough		NE NE	1x1m	Anne Marie Oattes	05/07/2019	Gwynedd Archaeological Trust	

DESCRIPTION* CONTEXT VIEW SCALE(S) CREATOR OF NUMBER FROM DIGITAL
Location shot 1x1m
NW facing NW 1x1m section FB F7/top track
NW facing NW 1x1m section FB F7/top track
Topsoil stripped NW not used
Boundary SE not used removed
Working shot FB SW not used 5/lower track
SW facing SW 1x1m section FB 5/lower track
SW facing SW 1x1m section FB 5/lower track

PROJECT NAME		DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_Seion_WwTW NW facing section FB F5/lower track	NW facing section FB F5/lower track			N N N N N N N N N N N N N N N N N N N	1x1m	Anne Marie Oattes	05/07/2019	Gwynedd Archaeological Trust	
G2601_Seion_WwTW NW facing section FB F5/lower track	NW facing section FB F5/lower track			N N N N N N N N N N N N N N N N N N N	1x1m	Anne Marie Oattes	05/07/2019	Gwynedd Archaeological Trust	
G2601_Seion_WwTW Location shot view to F5	Location shot view to F5			SE	1x1m	Anne Marie Oattes	05/07/2019	Gwynedd Archaeological Trust	
G2601_Seion_WwTW  boulders possibly removed from FB5/lower track (not seen when removed)	Shot of large boulders possibly removed from FB5/lower track (not seen when removed)			wsw	1x1m	Anne Marie Oattes	05/07/2019	Gwynedd Archaeological Trust	
G2601_Seion_WwTW ID Board field boundary compound/ field 10	ID Board field boundary compound/ field 10			N/A	1x1m	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	

	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
6260	G2601_Seion_WwTW	Boundary at compound/Field 10 before breakthrough		SW	1x1m	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	
626	G2601_Seion_WwTW	Location shot		N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/N/	not used	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	
626	G2601_Seion_WwTW	Working shot of boundary breakthrough		SW	not used	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	
929	G2601_Seion_WwTW	Working shot of boundary breakthrough showing stones in the clawdd		SE	1x1m	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	
62(	G2601_Seion_WwTW	Topsoil strip, end of Field 10		SW	1x1m	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	
62	G2601_Seion_WwTW	Topsoil strip of Field 10		SW	1x1m	Anne Marie Oattes	19/08/2019	Gwynedd Archaeological Trust	

CONTEXT VIEW SCALE(S) CREATOR OF NUMBER FROM DIGITAL (S)
SW not used
NE 1x1m
SW not used
SE 1x1m
SE 1x1m
SE 1x1m

PHOTO RECORD	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER	VIEW	SCALE(S)	CREATOR OF DIGITAL	DATE OF CREATION	COPYRIGHT*	PLATES
NUMBER*			(S)			РНОТО*	OF DIGITAL PHOTO*		
G2601_235	G2601_Seion_WwTW	Southeast face of clawdd after breach		SE	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_236	G2601_Seion_WwTW	Southeast face of clawdd after breach		SE	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	27
G2601_237	G2601_Seion_WwTW	Topsoil strip of Field 10		SW	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	28
G2601_238	G2601_Seion_WwTW	Section through [43]	43, 44	SE	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	34
G2601_239	G2601_Seion_WwTW	Location shot of [43]	43, 44	SE	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_240	G2601_Seion_WwTW	Location shot of [43]	43, 44	NN NN	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_241	G2601_Seion_WwTW	Location shot of linear [43]	43, 44	ш	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_242	G2601_Seion_WwTW	W facing section of [45]	45	<b>X</b>	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	

PLATES	29							
COPYRIGHT*	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust	Gwynedd Archaeological Trust
DATE OF CREATION OF DIGITAL PHOTO*	23/07/2019	23/07/2019	23/07/2019	23/07/2019	23/07/2019	23/07/2019	23/07/2019	23/07/2019
CREATOR OF DIGITAL PHOTO*	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes	Anne Marie Oattes
SCALE(S)	not used	1x1m	not used	not used	not used	not used	not used	not used
VIEW	SE	S	SW	SE	SW	SW	SE	SW
CONTEXT NUMBER (S)								PRN 71209
DESCRIPTION*	Pipe trench through bedrock	Topsoil strip	Topsoil strip	Small area at entrance to compound from Field 10	Topsoil strip - Field 10	Topsoil strip - Field 10	Breach through field boundary F10/F11	Removed slate and wire of fence
PROJECT NAME	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW	G2601_Seion_WwTW
PHOTO RECORD NUMBER*	G2601_243	G2601_244	G2601_245	G2601_246	G2601_247	G2601_248	G2601_249	G2601_250

PHOTO	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATE OF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_251	G2601_Seion_WwTW	Topsoil strip/breach of boundary		NZ.	not used	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_252	G2601_Seion_WwTW	Clawdd and slate/wire fence		SE	not used	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_253	G2601_Seion_WwTW	Clawdd and slate/wire fence		NN.	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_254	G2601_Seion_WwTW	Clawdd and slate/wire fence		ш	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	30
G2601_255	G2601_Seion_WwTW	Clawdd and slate/wire fence		ш	1x1m	Anne Marie Oattes	23/07/2019	Gwynedd Archaeological Trust	
G2601_256	G2601_Seion_WwTW	Topsoil strip Field 11		SW	not used	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_257	G2601_Seion_WwTW	Topsoil strip Field 11		SW	not used	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_258	G2601_Seion_WwTW	Breached clawdd		NN N	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	

PHOTO RECORD	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER	VIEW	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION	COPYRIGHT*	PLATES
			0			)	PHOTO*		
G2601_259	G2601_Seion_WwTW	Breached clawdd and slate/wire fence		NN	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_260	G2601_Seion_WwTW	Breached clawdd and slate/wire fence		NN.	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	32
G2601_261	G2601_Seion_WwTW	Pipe trench reduced to natural		NE	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	33
G2601_262	G2601_Seion_WwTW	Pre-ex of linears 43 & 45		NN.	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_263	G2601_Seion_WwTW	Pre-ex of linears 43 & 45		SE	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_264	G2601_Seion_WwTW	W facing section through [45]		>	not used	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_265	G2601_Seion_WwTW	Slot through [45]		z	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	31
G2601_266	G2601_Seion_WwTW	Location shot of [45]		ш	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	

РНОТО	PROJECT NAME	DESCRIPTION*	CONTEXT	VIEW	SCALE(S)	CREATOR OF	DATEOF	COPYRIGHT*	PLATES
RECORD NUMBER*			NUMBER (S)	FROM		DIGITAL PHOTO*	CREATION OF DIGITAL PHOTO*		
G2601_267	G2601_Seion_WwTW	Location shot of [43] and [45]		Е	1x1m	Anne Marie Oattes	24/07/2019	Gwynedd Archaeological Trust	
G2601_268	G2601_Seion_WwTW	Section of clawdd (northern field boundary of compound) before removal	42	MS	1x1m	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_269	G2601_Seion_WwTW	Location of proposed breach in relation to compound entrance	42	MN	not used	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_270	G2601_Seion_WwTW	Clawdd being breached by tracked excavator	42	NN N	not used	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_271	G2601_Seion_WwTW	Northwest face of breach through north field boundary/clawd d	39-42	N/N	1x1m	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	

PHOTO RECORD NUMBER*	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER (S)	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	COPYRIGHT*	PLATES
G2601_272	G2601_Seion_WwTW	Southeast face of breach through north field boundary/clawd d	39-42	SE	1x1m	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_273	G2601_Seion_WwTW	Close-up of southeast face of clawdd	39-42	SE	1x1m	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_274	G2601_Seion_WwTW	Location of topsoil strip in the northwest corner of the compound/treat ment works		>	1x1m	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_275	G2601_Seion_WwTW	Topsoil strip by tracked excavator with dumper		ш	not used	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	
G2601_276	G2601_Seion_WwTW	Area topsoil stripped		ш	not used	Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	26

PHOTO RECORD NUMBER*	PROJECT NAME	DESCRIPTION*	CONTEXT NUMBER (S)	VIEW	SCALE(S)	CONTEXT VIEW SCALE(S) CREATOR OF NUMBER FROM DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	COPYRIGHT* PLATES	PLATES
G2601_277	G2601_277 G2601_Seion_WwTW	Area topsoil stripped		8	not used	not used Stuart Reilly	21/08/2019	Gwynedd Archaeological Trust	

## Appendix III

**Reproduction of Context Register** 

#### G2601 - Seion WwTW

### **Context Register**

Context No.	Description
01	Topsoil
02	Subsoil
03	Natural
04	Stony patch Field 02
05	Boundary wall between Field 02 & 03
06	Boundary wall adjacent to compound/road
07	Dark brownish black fill
08	Orangey brown fill in [06]
09	Stones in clawdd wall
10	Earth packing on outside of stones (09)
11	Cut of possible ditch between road and [06]
12	Earth packing between stones
13	Possible ditch fill
14	Upcast soil and stones in clawdd [06]
15	Stones in field boundary between Field 02 & 03
16	Slate fence between Field 03 & 04
17	Boulders in field boundary between Field 03 & 04
18	Slate fence between Field 0 & 05
19	Stone wall between Field 04 & 05
20	Clawdd between Field 07 & top track
21	Grey/white clay
22	Orange brown clayey sand
23	Light grey brown sand
24	Dark brown slightly clayey silty sand
25	Mid brown silty sand
26	Orange brown silty sand
27	Dark brown black sandy silt
28	Dark brown black sandy silt
29	Mid greyish brown slightly clayey sandy silt
30	White light grey clay
31	Dark brown black clayey silty sand
32	Dark brown black clayey silty sand
33	Light grey brown sand
34	Outer stones of clawdd
35	Stones of clawdd
36	Dark brown black silty clay
37	Cut of linear
38	Fill of linear
39	Fill of clawdd

Context	
No.	Description
40	Fill of clawdd
41	Fill of clawdd
42	Outer layer of clawdd
43	Linear
44	Fill of [43]
45	Foundation cut for slate fence
46	Fill of [45]
47	Clawdd
48	Layer of clawdd
49	Hedge & large boulders boundary of Field 05 & track
50	Slate fence between Field 06 & track
51	Clawdd between Field 07 & 08
52	Clawdd between Field 08 & 09
53	Clawdd between Field 09 & 10
54	Slate panels set within [54]
55	Slate & wire fence between Field 06 & main access track

# Appendix IV

Reproduction of Drawing Register

#### G2601 Seion WwTW

### **Drawing Register**

Drawing No.	Sheet No.	Size	Scale	Description	Date	Initials
				NE facing		
				section		
				through Field		
01	01	A4	1:10	Boundary [05]	26/06/19	AMO
				N facing		
				section		
00	00		4.40	through Field	00/00/40	4140
02	02	A4	1:10	Boundary [06]	26/06/19	AMO
				E facing section		
03	03	A4	1:10	through [17]	29/06/19	AMO
03	03	A4	1.10	ENE facing	29/00/19	AIVIO
				section		
				through wall		
04	04	A4	1:10	[19]	29/06/19	AMO
				SW facing		
				section		
				through		
05	05	A4	1:10	clawdd	04/07/19	AMO
				NNW facing		
				section		
06	06	A4	1:10	through [20]	05/07/19	AMO
				NW facing		
		l		section		
07	07	A4	1:10	through [52]	05/07/19	AMO
				NW facing		
08	08	A 4	1.10	section	00/07/40	4140
		A4	1:10	through [37]	02/07/19	AMO
09	08	A4	1:20	Plan of [37]	02/07/19	AMO
				SE facing		
40	00	A 4	4.40	section	00/07/40	4440
10	09	A4	1:10	through [53]	22/07/19	AMO
				SW facing section		
11	10	A4	1:10	through [43]	24/07/19	AMO
11	10	A4	1.10	Plan of [43] &	24/07/19	AIVIO
12	10	A4	1:20	[45]	24/07/19	AMO
14	10	/\-	1.20	SW facing	24/01/13	AIVIO
				section		
13	11	A4	1:20	through [45]	24/07/19	AMO



