

Proposed Cheshire IVC Plant, Leighton Grange, Leighton, Cheshire, CW1 4QQ. January 2019 V 1.0





Archaeological Watching Brief Project Code: A0178.1 Report no. 0189



# Proposed Cheshire IVC Plant, Leighton Grange, Leighton, Cheshire, CW1 4QQ. June 2018

Report no. 0189 v1.0

Archaeological Watching Brief

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Project Code: A0178.1 Date: 30/01/2018

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#### 1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by Ashcourt Group Ltd, to carry out an archaeological watching brief during the groundworks associated with the construction and operation of an In Vessel Composting (IVC) facility with associated Aerated Static Pile (ASP) composting, screening and blending operations on land to the west of Middlewich Road, Leighton Grange, Crewe CW1 4QQ (centred on NGR SJ 67067 57249). Full planning permission (18/0552N)

The archaeological watching brief at Leighton Grange, Crewe revealed the remains of the Middlewich to Whitchurch Roman road alignment - with the two drainage ditches situated to the east and west of the road respectively, serving to promote a northeast to southwest alignment. This correlates with the alignment already suggested by 19th-century Ordnance Survey mapping. These remains had been quite heavily truncated during the construction of the existing trackway in the mid-20<sup>th</sup> Century.

#### 2.0 INTRODUCTION

Aeon Archaeology was commissioned by Ashcourt Group Ltd, hereafter the Client, to carry out an archaeological watching brief during the groundworks associated with the construction and operation of an In Vessel Composting (IVC) facility with associated Aerated Static Pile (ASP) composting, screening and blending operations on land to the west of Middlewich Road, Leighton Grange, Crewe CW1 4QQ (centred on NGR SJ 67067 57249).

Through consultation with the Development Management Archaeologist (DMA) at Cheshire Archaeology Planning Advisory Service (Total Environment) Cheshire Shared Services, hereafter CAPAS, the following condition was assigned to full planning permission (18/0552N):

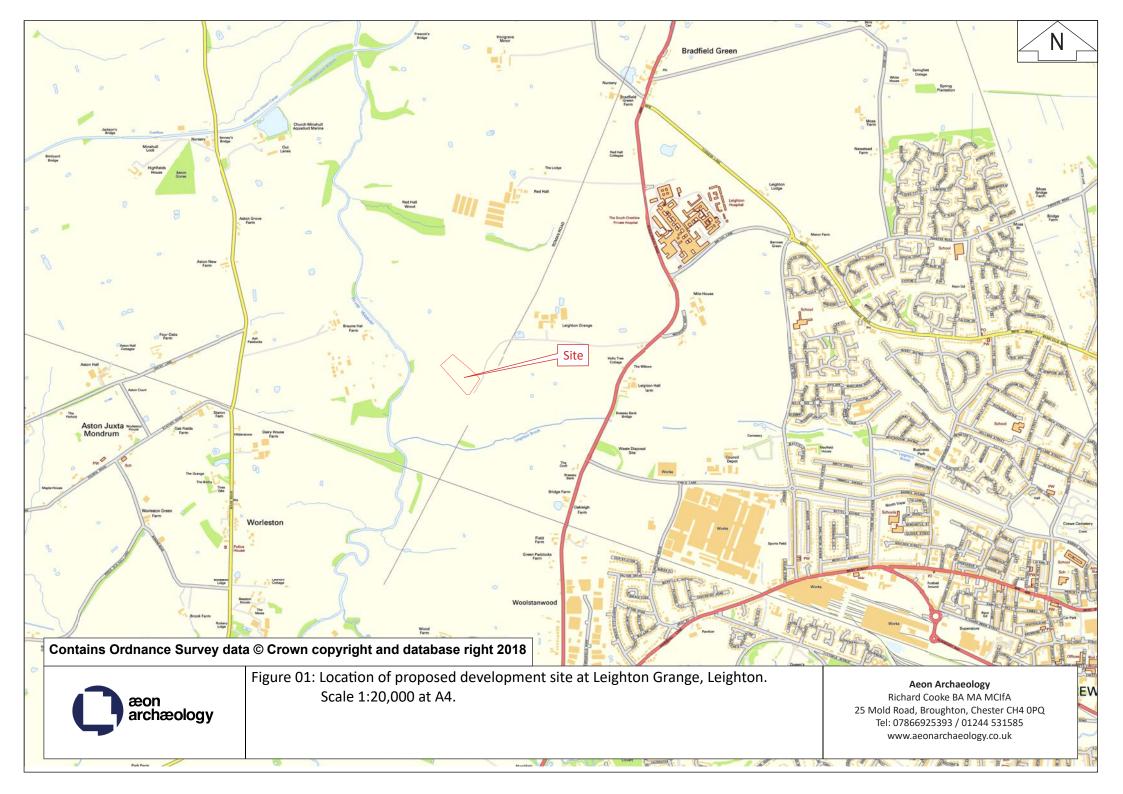
#### Condition 27

No ground disturbance shall take place within the area of the Roman Road as identified in the Landscape and Visual Impact Assessment until the applicant, or their agents or successors in title, have secured the implementation of a programme of archaeological investigation and recording in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Local Planning Authority. The scheme shall thereafter be carried out as approved.

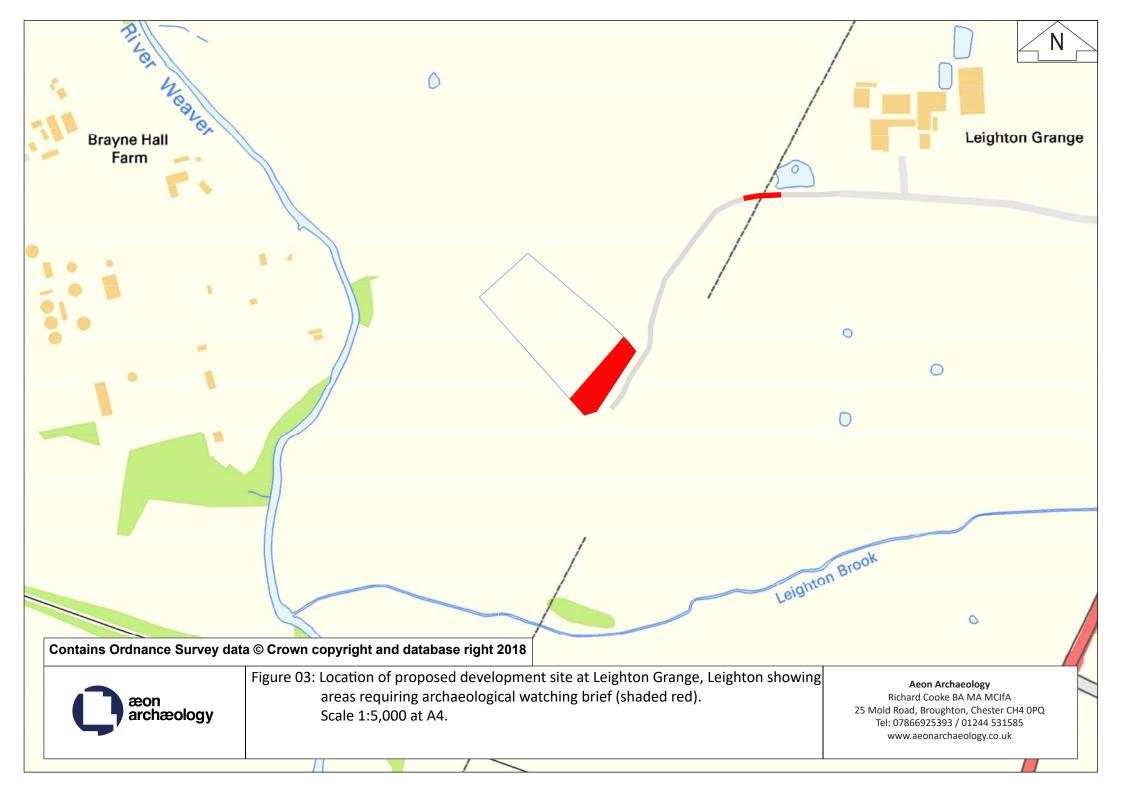
Reason: To enable sites of archaeological interest to be adequately investigated and recorded.

The use of such a condition is in line with the guidance set out in paragraph 141, Section 12 (Conserving and Enhancing the Historic Environment) of the National Planning Policy Framework (2012), published by the Department for Communities and Local Government and Managing Significance in Decision Taking in the Historic Environment, Historic Environment Good Practice Advice in Planning: 2 (Historic England 2015).

The work will adhere to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).







#### 3.0 SITE & LOCAL HISTORY

The proposed development area lay between two non-designated heritage assets, which included the Roman Road from Middlewich to Whitchurch (CHER: 1189/1/6) and the location of the former WW2 Anti-Aircraft Battery and Nissan Hut Compound at Leighton Grange (CHER: 4121/0/2).

Although the development lay c.50.0m west of the centre line of the Roman Road there was the potential for associated features such as cemeteries or roadside settlements to be present at the eastern limit of the proposed development site. Moreover, the previous access road crossed the line of the Roman Road and the required improvements involved stripping the existing road surface which succeeded in uncovering the bases of the road drains below (although these remains were ephemeral).



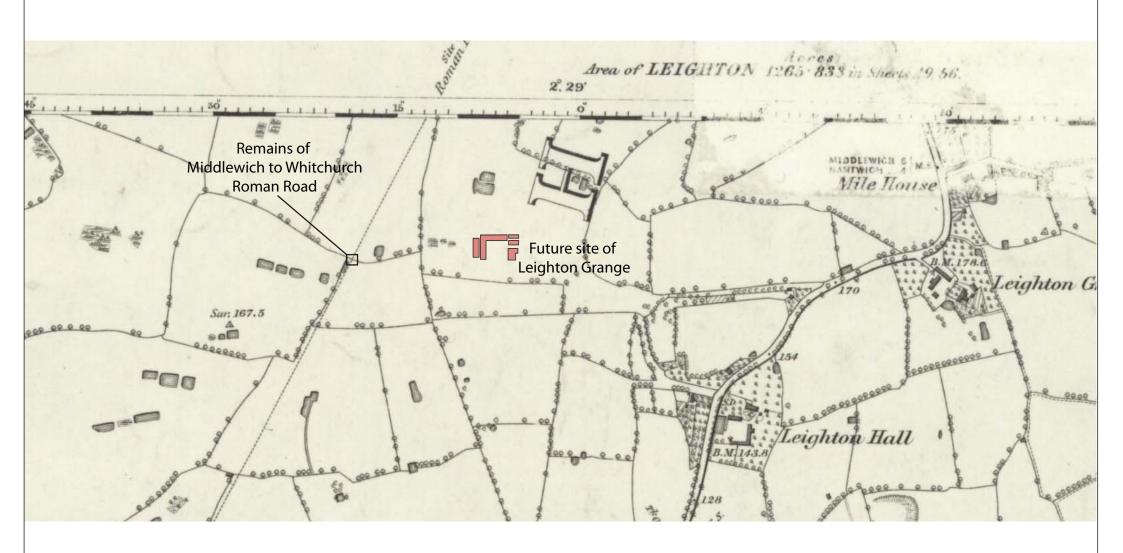




Figure 04. OS six inch map 1882 showing location of excavated roman road and the future location of Leighton Grange.



## CHESHIRE. SHEET LVI. N. W

LEIGHTON PH.

Remains of Middlewich to Whitchurch Roman Road 167 Roman Road 168 Roman Road 168 Roman Road 169 Road 1



Figure 05. OS six inch map 1899 showing location of archaeological remains found along the projected route of the Middlewich to Whitchurch roman road.

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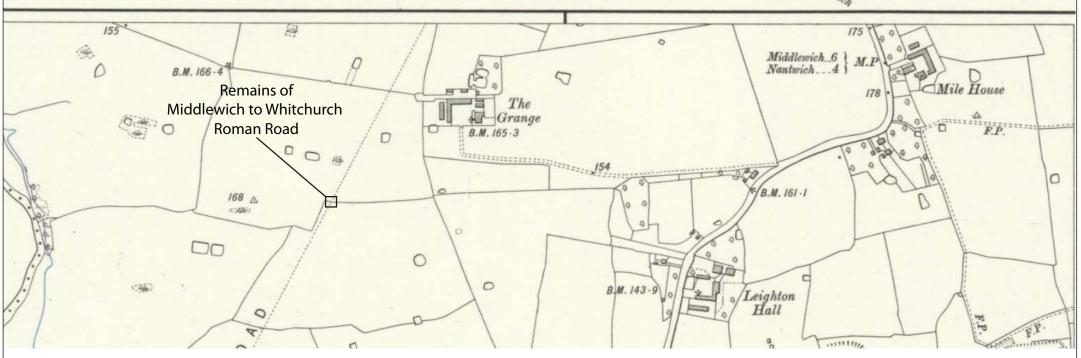




Figure 06. OS six inch map 1911 showing location of archaeological remains found along the projected route of the Middlewich to Whitchurch roman road.

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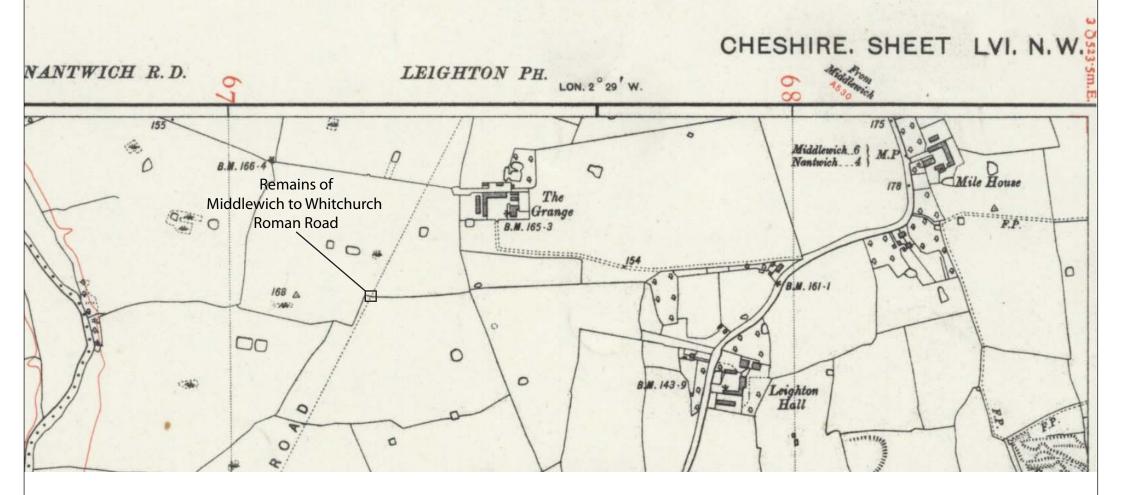




Figure 07. OS six inch map 1946 showing location of archaeological remains found along the projected route of the Middlewich to Whitchurch roman road.

#### 4.0 METHODOLOGY

#### 4.1 Archaeological Watching Brief

The methodology for the watching brief has been prepared with reference to the CIfA's document Standards and Guidance for Archaeological Watching Brief (2014) and was to be kept under constant review during the project, in order to see how far met the terms of the aims and objectives, and in order to adopt any new questions which may have arisen.

Curatorial monitoring of the archaeological work on behalf of the Council was be carried out by the DMA at CAPAS. To facilitate the curatorial monitoring, the officer was to be provided with a minimum of two weeks' notice of the start of the archaeological work. A suitably qualified and experienced archaeologist(s) from Aeon Archaeology was then commissioned for the maintenance of the watching brief. On arrival on site, the archaeologist(s) reported to the site manager and conformed to the arrangements for notification of entering and leaving site. The archaeologist(s) was to keep a record of the date, time and duration of all attendances at site, the names and numbers of archaeologists deployed and of any actions taken. The archaeologist was to be provided with a Health & Safety Induction by the construction contractor and wear a safety helmet, safety footwear and high visibility jacket/vest at all times.

Any deposits and or artefacts that may have been exposed during excavations for the development which required recording and recovery, it may have been necessary to delay works whilst the proper investigation and recording took place. Watching brief recording can often be undertaken without delay to groundworks, depending upon the specific circumstances and flexibility of all the staff on site.

Within the constraints of the terms of the watching brief work, the archaeologist was not to cause unreasonable disruption to the maintenance of the work schedules of other contractors on site. In the event of archaeological discoveries the treatment of which (either arising from the volume/quantity of material and/or the complexity/importance of the material) was beyond the resources deployed the Client was to be notified and a site meeting/telephone consultation arranged with the DMA at CAPAS.

The aim of the meeting would have been to confirm that an archaeological find has been made for which the resources allocated to the watching brief itself were not sufficient to support treatment to a satisfactory and proper standard and identify measures which would have been sufficient to support treatment to a satisfactory and proper standard prior to destruction of the material in question.

Any archaeological deposits, features and structures identified which could be investigated and recorded under the terms of the watching brief were to be excavated manually in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project – subject to the limitations on site access.

It may not have been necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures were to be investigated sufficient to address the aims and objectives of the project and the complete stratigraphic sequence to geologically lain deposits were to be investigated where practicable.

The method of recording was to follow the normal principles of stratigraphic excavation and the stratigraphy was to be recorded in written descriptions even where no archaeological deposits were identified. The archaeologist was to record archaeological deposits using proformae recording forms and locate them on a large-scale site plan related to the Ordnance Survey National Grid and Datum references.

The groundworks excavations were to be undertaken using a mechanical excavator fitted with a toothless ditching bucket.

The drawn record was to comprise plans at scale 1:20 and sections at scale 1:10; propriety electronic hardware and software to prepare site drawings may have been used as appropriate.

The photographic record was to be maintained throughout using a digital SLR camera (Canon Rebel T2i) set to maximum resolution (72 dpi) and all archaeological features were to be recorded photographically with photographs taken in RAW format and later converted to TIFF format for long-term storage and JPEG format for presentation and inclusion in the archive. The standards for the digital archive were to adhere to those set out in 'Digital Archiving: Appendix 6. Digital Archive Repository Requirements (Archaeological Data Service, 2015).

The archive produced will be held at Aeon Archaeology under the project code A0178.1.

#### 4.2 Watching brief report

#### 4.2.1 Post-excavation Assessment

A report on the results of the watching brief, in accordance with the recommendations in *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006), and in the Chartered Institute for Archaeologists *Standard and Guidance for an archaeological watching brief* (2014) will be required to be produced upon conclusion of the archaeological fieldwork. The report will be completed within a maximum of two months of completion of work on site and may include examination and quantification leading to the identification of function, form, date, method of manufacture, material/fabric type, source, parallels, attributes and condition of artefacts; of the exploitation of wild or domesticated resources; the reconstruction of environments; and the nature of human populations.

Full analysis of the results of the project, including: dating and interpretation of excavated features; pottery and other finds analysis; analysis of industrial residues by an appropriate specialist or specialists; analysis of samples for environmental data (including pollen, plant macrofossils and beetles) by an appropriate specialist or specialists; radiocarbon dating; discussion of the results in their local, regional and national context, including relating the excavated features and palaeoenvironmental data to evidence from nearby sites, and discussion of the results in their local, regional and national context may be required.

The scope of post-excavation assessment will subject to a specification for approval by the Cheshire Archaeology Planning Advisory Service Cheshire Shared Services Development Planning Archaeology Officer, upon the conclusion of the fieldwork project and preliminary report.

#### 4.2.2 Post-excavation Report

Following completion of the stages outlined above, a report will be produced that will include:

- A non-technical summary.
- A table of contents.
- An introduction with acknowledgements, including a list of all those involved in the project and the location and description of the site.
- A statement of the project aims.
- An account of the project methodology undertaken, with an assessment of the same to include a statement on preservation bias and the means of data collection and sampling strategies.
- A factual summary of the history, development and use of the site.
- A statement setting out the nature, quantity and condition of the material archive

(artefacts and ecofacts) including commentary on any bias observed due to collection and sampling strategies and commentary on long-term storage requirements.

- A statement setting out the nature and quantity of the documentary archive (notes, photographs, drawings, digital data).
- A general site plan indicating the position and size of the areas subject to watching brief and the locations of archaeological deposits identified and recorded during the works.
- Plans and sections at appropriate scales, augmented with appropriate photographs. All plans and sections will be related to the Ordnance Survey datum levels and to the National Grid.
- Other maps, plans, drawings, stratigraphic matrices and photographs as appropriate.
- Summary assessment reports on the artefact, bio-archaeological, dating and other assessments/analyses.
- A discussion of the location, extent, date, nature, condition, quality and significance of any archaeological deposits and finds identified during the project.
- A discussion of any research implications arising from the archaeological work.
- Notes on consultations with conservators and the nominated archive repository related to the immediate and long-term conservation and storage requirements for the data held in the site archive and recommendations of retention/discard of artefacts and ecofacts.
- A bibliography of sources consulted.
- Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive and a statement on its location/proposed repository.
- In addition the post-excavation report will summarise and draw together the findings of all of the phases of work.

#### 4.3 Archive

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged with the regional Historic Environment Record (HER).

Bound copies of the report and an archive CD will be sent to the regional HER, the Cheshire Archaeology Planning Advisory Service Cheshire Shared Services Development Management Archaeologist, and to the OASIS database for long term archiving. Copies of all digital files (inc. photos, report as PDF and Word, spreadsheets, databases, survey data etc) to be presented to each of above on optical disc (ie DVD).

### 5.0 QUANTIFICATION OF RESULTS

### **5.1** The Documentary Archive

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

Watching brief day record sheets 6
Digital photographs 72
Context sheets 8

Drawings 1 on 1 sheet

#### 6.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

The archaeological watching brief was maintained on the 7<sup>th</sup>-10<sup>th</sup> and the 16<sup>th</sup>-17<sup>th</sup> January 2019 during changeable weather conditions varying from overcast, bright and sunny and bouts of heavy rain during the watching brief. The watching brief took place in two areas; initially to watch the removal of a portion of an access track that ran south of *The Grange* from east to west, past a fishpond and then to watch the ground reduction of a 25m wide corridor towards the far eastern limit of the site. The area of trackway was the subject of watching brief due to the known alignment of the Middlewich to Whitchurch roman road shown on OS maps (1882-1945, Figures. 04-07). The 25m corridor was sufficiently near (within 50m) to the line of the roman road that there was potential for associated features such as cemeteries or roadside settlements to be present at the site. The excavations were conducted with tracked machinery and utilised a toothless ditching bucket at all times throughout the reduction of ground levels. Details of archaeological contexts used in the following descriptions are presented in appendix I.

#### 6.1 Access Track

#### Description

The archaeological watching brief was maintained while the existing access track was removed in order for the new road foundations to be established. This took place within the red highlighted area (to the southwest of the pond) in Figure 03.

Initially two test pits were excavated by machine in order to conduct California Bearing Ratio (CBR) tests in two locations along the route. Both of these were 1m<sup>2</sup> and observed by the archaeologist and no archaeological remains were encountered during this exercise (see Plates 05-08).

The track itself was removed by a mechanical excavator which cut through a 0.08m layer of mixed overburden consisting of a a mid-grey clay-silt (113) which was followed by a 0.05m deep layer of hard, dark black-grey degraded tarmac/asphalt (109). Beneath this layer was a 0.06m deep layer of mid-red-brown sandstone and red brick rubble comprising of frequent medium sub-angular cobble and pebble inclusions (110). Lying beneath this was a 0.17m deep deposit of quite firm, mid orange-brown silt-sand with very frequent small to large angular/sub-angular pebble inclusions and fragments of red-brick (116). Below this layer was a 0.15m deep deposit of mid yellow-brown crushed limestone with occasional large flat/angular cobble inclusions (111). Below this was a 0.05m deep layer of soft black clinker (104) which lay above the natural clay (101) which extended >0.15m in depth; this clay was a dark yellow brown with occasional mottling of grey.

#### Discussion

The excavation of the trackway suggests that there may have been two distinct phases to its construction; the initial foundation for the track appears to have been a layer of black clinker that was laid directly onto the mid-yellow brown clay beneath; this material may have an industrial origin and is commonly found in the foundation of roads and houses in the region. Placed onto this clinker was a crushed limestone used to form the main aggregate of the road before a layer of mid orange-brown 'crush and run' or finishing material was used to coarsely metal the surface – fragments of angular stone and red brick forming a rough track suitable for agricultural machinery or off-road vehicles.

There appears to have been an apparent second phase to the road construction consisting of another layer of aggregate – the mid red-brown sandstone rubble which would have keyed into the angular stone and red-brick beneath when compacted. Finally this was then finished with an asphalt or tarmac in order to create a service road or access track which ran from just south of *The Grange* away to the west before turning south. It is not possible to understand the exact dates associated with the



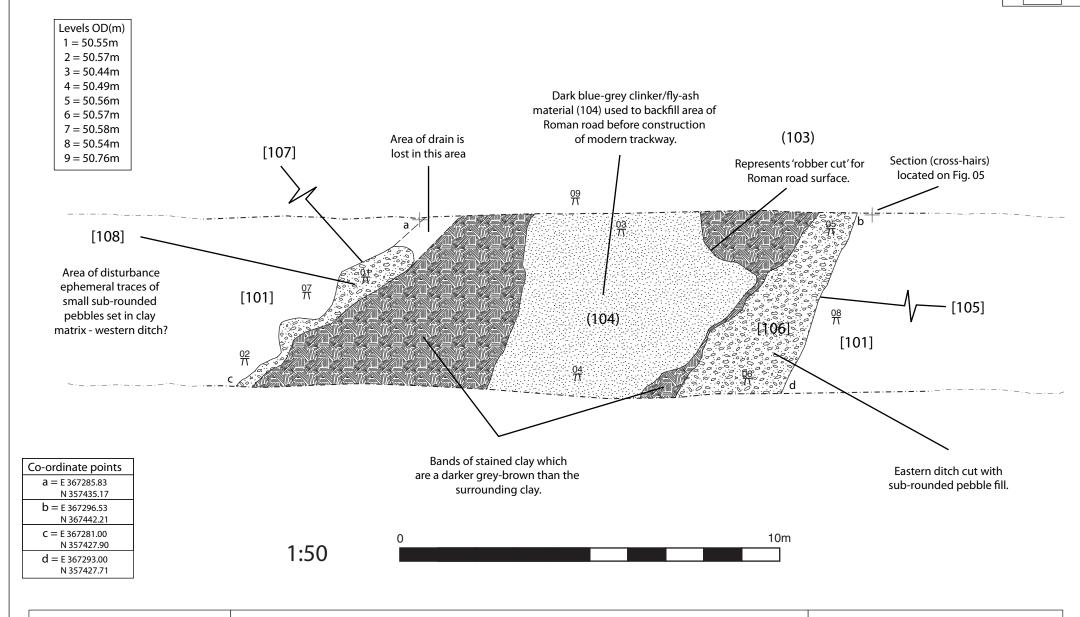




Figure 08. Plan showing Middlewich to Whitchurch roman road with spot heights and coordinates (also shown are crossshairs for section drawing visible on Figure 09) Scale 1:50 @ A4.

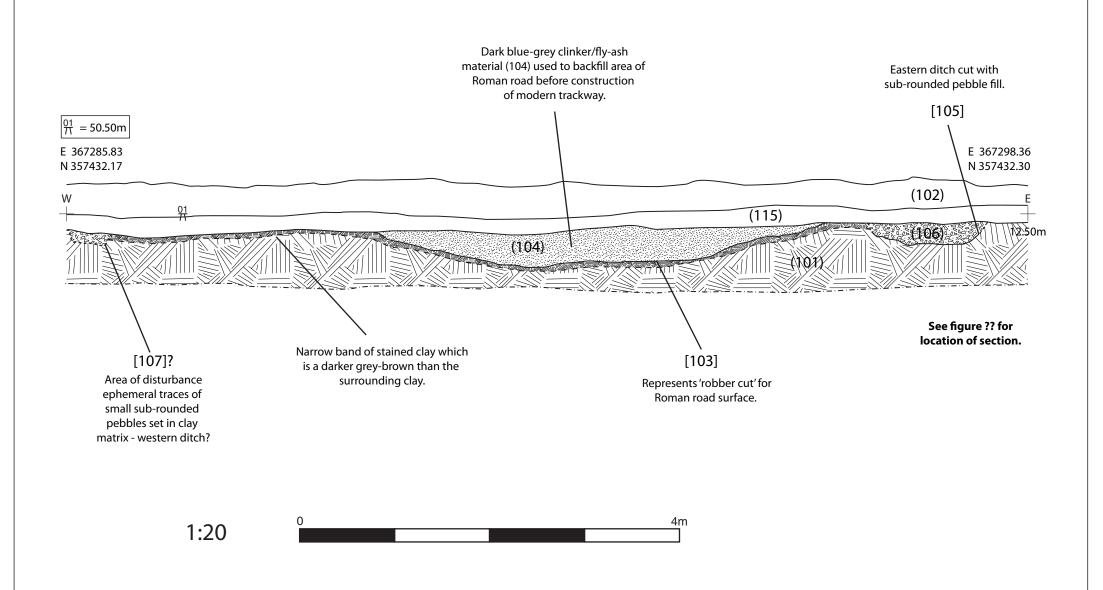




Figure 09. Section across Roman road showing [103] robber cut, [105] eastern ditch and [107] possible western ditch. Scale 1:20 @ A4.



Plate 01: Pre excavation shot of modern trackway - from the east - scale 1m





Plate 02: Pre excavation shot of modern trackway - from the southwest - scale 1m





Plate 03: Shot from northern field orientated along projected line of the Roman road - from the northeast - scale 1m





Plate 04: Shot from southern field orientated along projected line of the Roman road - from the southwest - scale 1m





Plate 05: Test Pit 1 in Plan - from the west - scale 1m





Plate 06: Section of Test Pit 1 - from the south - scale 1m





Plate 07: Test Pit 2 in Plan - from the west - scale 1m





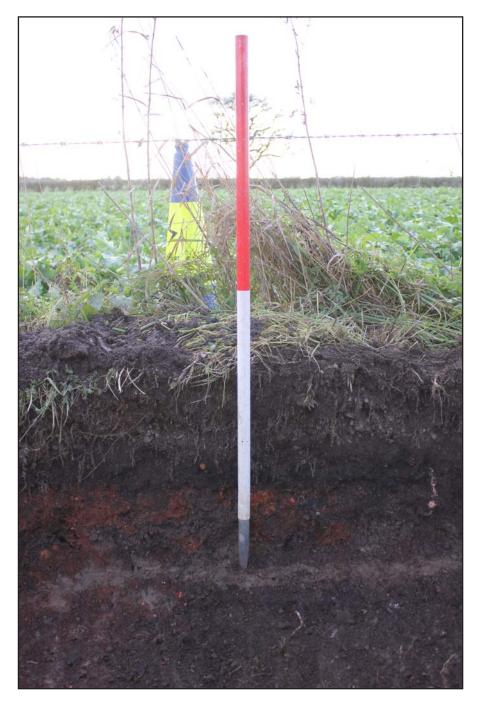
Plate 08: Section of Test Pit 2 - from the north - scale 1m





 $\textbf{Plate 09:} \ \textbf{Section of northern field to north of trackway - from the south - scale \ 1m$ 





 $\textbf{Plate 10:} \ \textbf{Section through trackway - from the north - scale 1m}$ 





Plate 11: Shot of exposed Roman Road alignment (from high angle) - from the west - scale 1m





Plate 12: Eastern ditch [105] of roman road - from the southwest - scale 1m





Plate 13: Remnant of (104) clinker ash backfill material within robber cut [103] and clay staining - from the southwest - scale scale 1m





Plate 14: Ephemeral trace of western ditch [107] of roman road - from the southwest - scale 1m





Plate 15: Shot of exposed Roman Road alignment (from lower angle) - from the west - scale 1m





Plate 16: Section through ditch [105] - from the south - 1m scale





Plate 17: Section showing robber cut [103] - (east-west trench) - from the south - 1m scale





 $\textbf{Plate 18:} \ Section \ through \ ephemeral \ western \ ditch \ [107] \ - from \ the \ south \ - \ scale \ 1m$ 





Plate 19: Pre excavation shot of 25m wide development corridor (eastern end of site) - from the northwest - 1m scale





Plate 20: Northern area of development corridor (following ground reduction) - from the southeast - 1m scale





Plate 22: Generic section showing stratigraphy (in 25m development corridor area) - from the southwest - 0.50m scale



construction phases of the trackway – as there is no ceramic evidence to refer to, although the redbrick fragments do suggest that the initial phase happened sometime after the 18<sup>th</sup>/19<sup>th</sup> century. More refinement on the date of the initial construction is afforded following study of the OS six inch maps (Figures 04-07) which demonstrate that no trackway was recorded in this area up to and including 1946 although it is recognised as the site of a Nissen Hut Compound and Heavy AA Battery probably constructed during the 2<sup>nd</sup> World War. Therefore the initial trackway is most likely associated with the Army compound around this time and is probably of military origin - as is the secondary phase of works which provided the track with a smoother asphalt surface.

#### 6.2 Remains of Middlewich to Whitchurch Roman road

## Description

During the excavation of the access of the track in the area directly to the southwest of the fishpond (NGR SH 367296 357442 – 367281 357427) the ephemeral remains of the Middlewich to Whitchurch Roman road (CHER 1189/1/6) were uncovered below the amalgamated layers of the track. The road consisted of two stone filled ditches [105] and [107] aligned northeast to southwest crossing the existing track way at an acute angle. The eastern ditch cut [105] was linear in plan and measured >6.4m in length by 1.70m in width and 0.29m at its maximum depth. The cut [105] of the ditch had gradually curving sides leading to a slightly concave base which appeared to have a slight fall from southwest to northeast. The eastern ditch had a single fill (106) consisting of a firm, bright yellow-grey silt-clay with abundant small sub-rounded pebble and cobble inclusions.

The western ditch cut [107] was also linear in plan although more sinuous toward its southern extent, it measured >6.67m in length by 0.95m in width (maximum) by 0.11m deep (very indistinct). The cut [107] of the ditch was almost imperceptible in section with the base being either concave or flat. The western ditch had a single fill (108) consisting of a very firm, bright yellow-grey silt-clay with occasional small sub-rounded pebble inclusions. The area between the ditches measured 10.70m and was partially filled by a remnant of the soft clinker material (104) seen in the trackway located above. In the area either side of the soft clinker (104) the natural clay (101) was revealed which like other areas was stained a dark blue-grey colour – however this was perhaps more evident within the confines of the two ditches [105] and [107].

## Discussion

The remains of the Roman road that were encountered were very ephemeral, with both drainage ditches appearing to represent only the very base of their initial drainage cuts. The eastern drainage ditch [105] appeared to have survived to a greater extent than the western drainage ditch [107]; the eastern ditch was considerably wider when viewed in plan (1.70m maximum) and possessed some definition when viewed in section exhibiting a soft concave base (0.29m depth). The comparative narrowness and/or poor survivability of the western ditch [107] can be explained in one of two ways; either it was not as deeply cut into the natural as the eastern ditch or that the land surface into which the roman road itself was cut into was not altogether level – with the road having been cut into land which was sloping gently from west to east.

The area between the road's ditches was unfortunately devoid of any Roman material – it had previously been reduced via a broad and uniform cut [103] which was probably associated with the construction of the new (east-west) trackway probably during the war years. This 'robber cut' [103] was possibly made with a mechanical bulldozer which removed all of the roman stratigraphy above the two ditches, visible during the watching brief. The area between the ditches had apparently been overcut by the robber cut [103] in the centre and the road foundation material of soft clinker (104) was then laid across the whole area of the trackway infilling the 'overcut' between the two ditches.

The dark staining of the clay could also be explained by water percolating through the road foundation and causing the discoloration of the clay beneath.

Information garnered from this watching brief alludes to the configuration of the Middlewich to Whitchurch Roman road with two stony filled drainage ditches flanking a reasonably substantive roadway almost 11m wide. Furthermore the alignment and location of this archaeological feature recorded by the six inch OS maps (Figures 04-07) proved to be an entirely accurate and predictable way of locating the archaeological resource in this circumstance; any further works that might encroach on this alignment in the future would most likely encounter Roman remains of potentially quite high survivability.

## 6.3 Corridor of land (25m wide) to east of site

#### **Description**

Towards the south-easternmost area of the site a 25m corridor of land was also subject to watching brief. This area measured approximately 25m wide by 110m long and was reduced by a 32 tonne mechanical excavator with toothless ditching bucket. The machine cut through 0.12m of a soft, dark black-brown clay-silt topsoil (102), which lay above 0.22m of a firm, mid grey-brown clay-silt subsoil (114) with infrequent sub-angular small pebble inclusions, which lay above >0.08m of a very firm, yellow-brown natural clay (101).

#### Discussion

The subsoil can be characterised as having being pushed into the natural clay by the plough by 0.05-08m. These plough marks were roughly 0.24m apart and uniform across the area, running from north to south. Furthermore there were three examples of cylindrical clay field drains laid within machine cut trenches which ran the length of the site northeast to southwest. The overwhelming archaeological signature of this area was of modern agricultural processes; cultivation via the plough and the installation of drainage by mechanical means. Apart from this there were no other archaeological remains encountered during the watching brief.

#### 7.0 CONCLUSION

The archaeological watching brief located west of Middlewich road, near Leighton Grange, Crewe revealed the ephemeral archaeological remains of the Middlewich to Whitchurch Roman road (CHER 1189/1/6); the alignment of which was visible on the 19th-century Ordnance Survey mapping. The confirmation of the presence of the Roman road in the location and alignment specified by these maps is testament to the continuing usefulness of those documents; both in designing archaeological projects and in informing suitable mitigatory responses to planning applications which may impact archaeological assets. The remains of the road are ephemeral – representing the bases of two drainage ditches which flanked the Roman road. However the value of the discovery is twofold in that it provides physical information on the Roman road via its width, profile and construction materials but also that it provides a mandate for further incursions along this alignment. The area in which the watching brief was conducted produced limited results but another excavation along the route in the future may offer the opportunity to observe structural archaeological remains of a much higher survivability and potential value.

Although no evidence of roman "agger" road construction or associated roman ceramics was encountered, the archaeological work at The Grange, Leighton confirms the existence of a Roman road on the alignment shown in the 19<sup>th</sup> century six inch OS Maps. The archaeological remains discovered were ephemeral and had been subject to almost complete removal by the previous installation of a new trackway probably during the 1939-1945 War however these remains have now been committed to a full archaeological record.

#### 8.0 SOURCES

OS Maps

OS 1:10 000 Series sheet SJ 65 NE, SJ 65 SE, SJ 65 SW and SJ 65 NW.

First edition OS six inch (1882)

Second edition OS six inch (1899)

Third edition OS six inch (1911)

Fourth edition OS six inch (1945)

Published sources

British Geological Survey website. www.bgs.ac.uk

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The Chartered Institute for Archaeologists, 2014. Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology

The Chartered Institute for Archaeologists, 2014. Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials

The Chartered Institute for Archaeologists, 2014. Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives

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# APPENDIX I – DETAILS OF ARCHAEOLOGICAL CONTEXTS

Context	Description
101	Clay Natural
102	Topsoil
103	Robber Trench
104	Ash Clinker Foundation
105	Eastern drainage ditch cut
106	Single fill of [105]
107	Eastern drainage ditch cut
108	Single fill of [107]
109	Asphalt Road
110	Sandstone foundation
111	Limestone Aggregate
112	Void
113	Overburden
114	Subsoil
115	Group number (109), (110), (111)
116	Mid orange-brown silt-clay

APPENDIX II – WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL WATCHING BRIEF	ı
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Proposed Cheshire IVC Plant, Leighton Grange, Leighton, Cheshire CW1 4QQ.

Written Scheme of Investigation for Archaeological Watching Brief.

August 2018 v1.0



Project Code: A0178.1 Planning Ref: 18/0552N

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## 1.0 INTRODUCTION

Aeon Archaeology has been commissioned by Ashcourt Group Ltd, hereafter the Client, to provide a written scheme of investigation (WSI) for carrying out an archaeological watching brief during the groundworks associated with the construction and operation of an In Vessel Composting (IVC) facility with associated Aertaed Static Pile (ASP) composting, screening and blending operations on land to the west of Middlewich Road, Leighton Grange, Crewe CW1 4QQ (centred on NGR SJ 67067 57249).

A mitigation brief was not prepared for this scheme by the Development Management Archaeologist (DMA) at Cheshire Archaeology Planning Advisory Service (Total Environment) Cheshire Shared Services, hereafter CAPAS, but the following condition was assigned to full planning permission (18/0552N):

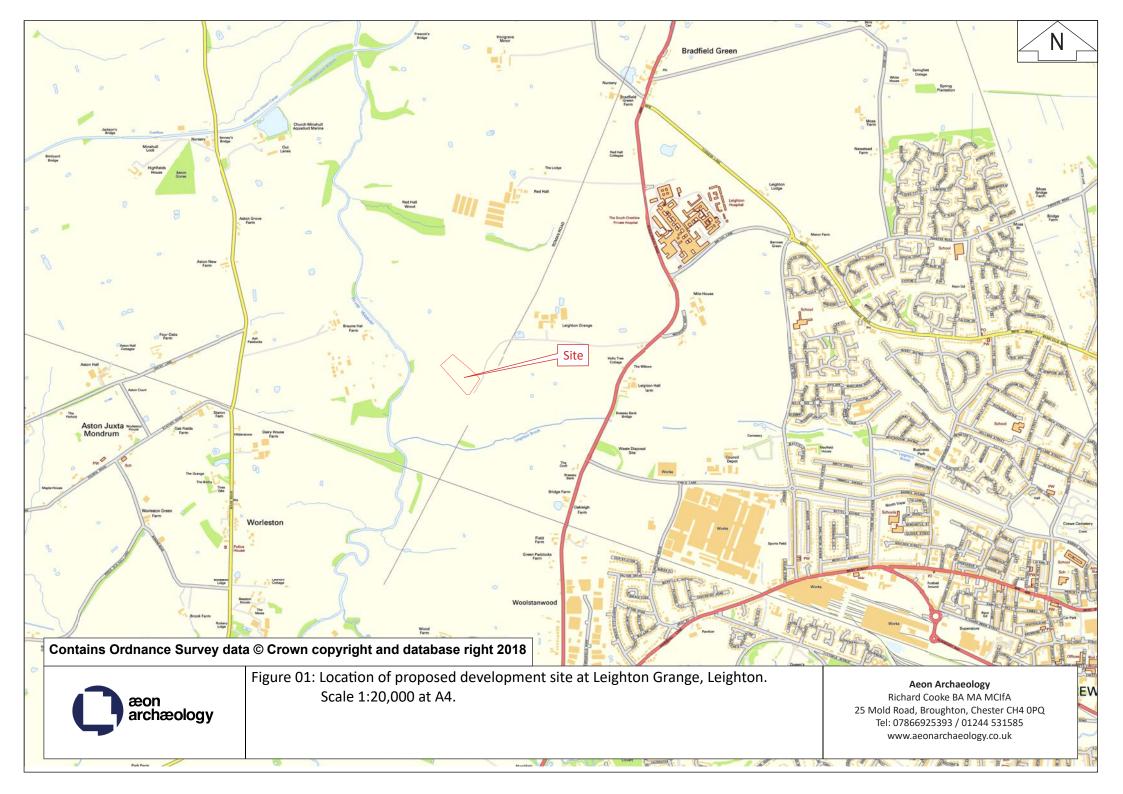
## Condition 27

No ground disturbance shall take place within the area of the Roman Road as identified in the Landscape and Visual Impact Assessment until the applicant, or their agents or successors in title, have secured the implementation of a programme of archaeological investigation and recording in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Local Planning Authority. The scheme shall thereafter be carried out as approved.

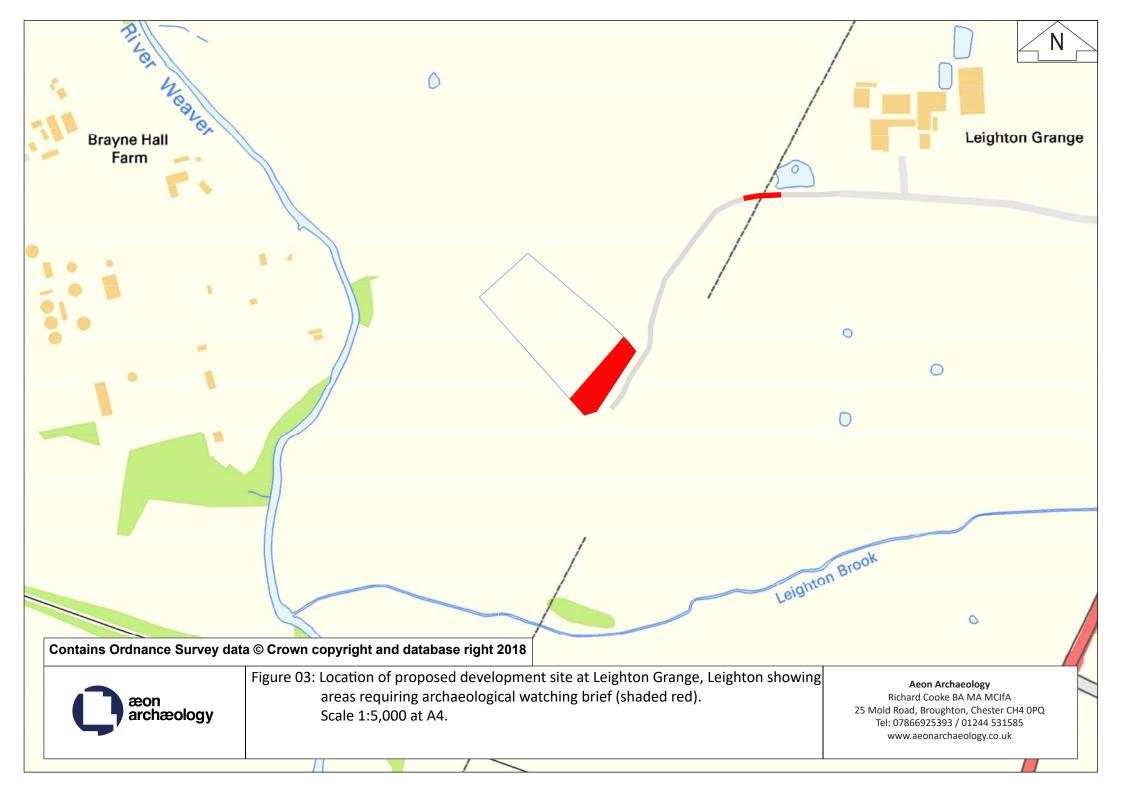
Reason: To enable sites of archaeological interest to be adequately investigated and recorded.

The use of such a condition is in line with the guidance set out in paragraph 141, Section 12 (Conserving and Enhancing the Historic Environment) of the National Planning Policy Framework (2012), published by the Department for Communities and Local Government and Managing Significance in Decision Taking in the Historic Environment, Historic Environment Good Practice Advice in Planning: 2 (Historic England 2015).

The work will adhere to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).







## 2.0 ARCHEOLOGICAL BACKGROUND

The proposed development area lies between two non-designated heritage assets, which include the Roman Road from Middlewich to Whitchurch (CHER: 1189/1/6) and the location of the former WW2 Anti-Aircraft Battery and Nissan Hut Compound at Leighton Grange (CHER: 4121/0/2).

Although the development lies c.50.0m west of the centre line of the Roman Road there is the potential for associated features such as cemeteries or roadside settlements to be present at the eastern limit of the proposed development site. Moreover, the current access road crosses the line of the Roman Road and required improvements will involve stripping the existing road surface which could uncover parts of the monument below.

## 3.0 WATCHING BRIEF - ARCHAEOLOGICAL AIMS

The archaeological watching brief shall be maintained:

- 1. During improvements to the existing access track in proximity to the line of the Middlewich to Whitchurch Roman Road.
- 2. Within a 25.0m wide corridor at the easternmost limit of the development footprint.
- 3. During the excavation of utility trenches in proximity to the line of the Middlewich to Whitchurch Roman Road.

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

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

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2014). The watching brief will take place within a specified area within the Site where there is a possibility that archaeological deposits may be disturbed or destroyed.

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

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

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

The aims of the watching brief are:

- To allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of archaeological remains on the Site affected by excavations and groundworks, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.
- To provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

The specific objectives of the watching brief are:

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

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

## 4.0 METHODOLOGY

## 4.1 Archaeological Watching Brief

The methodology for the watching brief has been prepared with reference to the CIfA's document Standards and Guidance for Archaeological Watching Brief (2014) and will be kept under constant review during the project, in order to see how far it is meeting the terms of the aims and objectives, and in order to adopt any new questions which may arise.

Curatorial monitoring of the archaeological work on behalf of the Council will be carried out by the DMA at CAPAS. To facilitate the curatorial monitoring, the officer shall be provided with a minimum of two weeks' notice of the start of the archaeological work.

A suitably qualified and experienced archaeologist(s) from Aeon Archaeology will be commissioned for the maintenance of the watching brief. On arrival on site, the archaeologist(s) will report to the site manager and conform to the arrangements for notification of entering and leaving site. The archaeologist(s) will keep a record of the date, time and duration of all attendances at site, the names and numbers of archaeologists deployed and any actions taken. The archaeologist will be provided with a Health & Safety Induction by the construction contractor and wear a safety helmet, safety footwear and high visibility jacket/vest at all times.

If deposits and or artefacts are exposed during excavations for the development which require recording and recovery, it may be necessary to delay works whilst the proper investigation and recording takes place. Watching brief recording can often be undertaken without delay to groundworks, depending upon the specific circumstances and flexibility of all the staff on site.

Within the constraints of the terms of the watching brief work, the archaeologist will not cause unreasonable disruption to the maintenance of the work schedules of other contractors on site. In the event of archaeological discoveries the treatment of which (either arising from the volume/quantity of material and/or the complexity/importance of the material) is beyond the resources deployed the Client will be notified and a site meeting/telephone consultation arranged with the DMA at CAPAS. The aim of the meeting will be to confirm that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard and identify measures which would be sufficient to support treatment to a satisfactory and proper standard prior to destruction of the material in question.

Any archaeological deposits, features and structures identified which can be investigated and recorded under the terms of the watching brief will be excavated manually in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project – subject to the limitations on site access.

It may not be necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures will be investigated sufficient to address the aims and objectives of the project and the complete stratigraphic sequence to geologically lain deposits will be investigated where practicable.

The method of recording will follow the normal principles of stratigraphic excavation and the stratigraphy will be recorded in written descriptions even where no archaeological deposits have been identified. The archaeologist will record archaeological deposits using proformae recording forms and

locate them on a large-scale site plan related to the Ordnance Survey National Grid and Datum references.

The groundworks excavations shall be undertaken using a mechanical excavator fitted with a <u>toothless</u> <u>ditching bucket</u>.

The drawn record will comprise plans at scale 1:20 and sections at scale 1:10; propriety electronic hardware and software to prepare site drawings may be used as appropriate.

The photographic record will be maintained throughout using a digital SLR camera (Canon 600D) set to maximum resolution (72 dpi) and all archaeological features will be recorded photographically with photographs taken in RAW format and later converted to TIFF format for long-term storage and JPEG format for presentation and inclusion in the archive. The standards for the digital archive will adhere to those set out in 'Digital Archiving: Appendix 6. Digital Archive Repository Requirements (Archaeological Data Service, 2015).

The archive produced will be held at Aeon Archaeology under the project code **A0178.1**.

## 4.2 Watching brief report

## 4.2.1 Post-excavation Assessment

A report on the results of the watching brief, in accordance with the recommendations in *Management of Research Projects in the Historic Environment Project Manager's Guide* (Historic England 2015), and in the Chartered Institute for Archaeologists *Standard and Guidance for an archaeological watching brief* (2014) will be required to be produced upon conclusion of the archaeological fieldwork. The report will be completed within a maximum of two months of completion of work on site and may include examination and quantification leading to the identification of function, form, date, method of manufacture, material/fabric type, source, parallels, attributes and condition of artefacts; of the exploitation of wild or domesticated resources; the reconstruction of environments; and the nature of human populations.

Full analysis of the results of the project, including: dating and interpretation of excavated features; pottery and other finds analysis; analysis of industrial residues by an appropriate specialist or specialists; analysis of samples for environmental data (including pollen, plant macrofossils and beetles) by an appropriate specialist or specialists; radiocarbon dating; discussion of the results in their local, regional and national context, including relating the excavated features and palaeoenvironmental data to evidence from nearby sites, and discussion of the results in their local, regional and national context may be required.

The scope of post-excavation assessment will be subject to a specification for approval by the DMA at CAPAS upon the conclusion of the fieldwork project and preliminary report.

# 4.2.2 Post-excavation Report

Following completion of the stages outlined above, a report will be produced that will include:

- A non-technical summary.
- A table of contents.
- An introduction with acknowledgements, including a list of all those involved in the project and the location and description of the site.
- A statement of the project aims.
- An account of the project methodology undertaken, with an assessment of the same to include a statement on preservation bias and the means of data collection and sampling strategies.
- A factual summary of the history, development and use of the site.
- A statement setting out the nature, quantity and condition of the material archive (artefacts and ecofacts) including commentary on any bias observed due to collection and sampling strategies and commentary on long-term storage requirements.
- A statement setting out the nature and quantity of the documentary archive (notes, photographs, drawings, digital data).
- A general site plan indicating the position and size of the areas subject to watching brief and the locations of archaeological deposits identified and recorded during the works.
- Plans and sections at appropriate scales, augmented with appropriate photographs. All plans and sections will be related to the Ordnance Survey datum levels and to the National Grid.
- Other maps, plans, drawings, stratigraphic matrices and photographs as appropriate.
- Summary assessment reports on the artefact, bio-archaeological, dating and other assessments/analyses.
- A discussion of the location, extent, date, nature, condition, quality and significance of any archaeological deposits and finds identified during the project.

- A discussion of any research implications arising from the archaeological work.
- Notes on consultations with conservators and the nominated archive repository related to the immediate and long-term conservation and storage requirements for the data held in the site archive and recommendations of retention/discard of artefacts and ecofacts.
- A bibliography of sources consulted.
- Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive and a statement on its location/proposed repository.
- In addition the post-excavation report will summarise and draw together the findings of all of the phases of work.

Illustrations will include plans of the location of the study area and archaeological sites. Historical maps, when appropriate and if copyright permissions allow, will be included. Photographs of relevant sites and of the study area where appropriate will be included.

A draft copy of the report will be sent to the DMA at CAPAS and to the client for comment and approval prior to production of the final report.

## 5.0 FURTHER ARCHAEOLOGICAL WORKS DESIGNS (FAWDs)

The discovery of substantial archaeological remains and/or features during the archaeological works may result in the requirement for an extended programme of archaeological mitigation. This may require the submission of revised quotes to the client as well as a new specification which will be required to be approved by DMA at CAPAS prior to implementation.

## 6.0 ENVIRONMENTAL SAMPLES

Relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains. Other bulk samples, for example from middens, may be taken for small animal bones and small artefacts.

Bulk environmental samples will also be taken from any fills, deposits or structures which yield archaeological artefacts, charcoal flecks/ fragments, bone, or any other historic remains.

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

For guidance purposes the following volume criteria represent the minimum feature sampling requirements:

- 50% of each discrete feature (e.g. pits and postholes)
- 25% of the exposed areas of each liner feature and all terminals/intersections
- 50% of structural features (e.g. beamslots, ring-ditches)
- 50%-100% of domestic/industrial working features (e.g. hearths and ovens)

## 7.0 HUMAN REMAINS

Any finds of human remains will be left *in-situ*, covered and protected, and both the coroner and the DMA at CAPAS and the Inspector of Ancient Monuments at Historic England informed. If removal is necessary it will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a 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. This will be applied for should human remains need to be investigated or moved.

## 8.0 ARTEFACTS

All artefacts and ecofacts will be retrieved for identification and recording and will be treated in accordance with CIfA 2008 Guidelines for the collection, documentation, conservation and research of archaeological materials (Chartered Institute for Archaeologists, 2014).

All artefacts are the property of the landowner but it is recommended that finds are deposited with the rest of the project archive within an appropriate museum. Furthermore, the client agrees to granting access to all artefacts recovered by Aeon Archaeology for analysis, study and publication as necessary. All finds would be treated according to advice provided within *First Aid for Finds* (Rescue 1999). Aeon Archaeology staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants.

The recovery policy for archaeological finds will be kept under review throughout the archaeological works. Any changes in recovery priorities will be under guidance from an appropriate specialist and agreed with the DMA at CAPAS. There will be a presumption against the disposal of archaeological finds regardless of their apparent age or condition.

All finds will be collected and processed including those found within spoil tips. Their location and height will be plotted; finds numbers attributed, bagged and labelled as well any preliminary identification taking place on site. Where specialist advice is required provision will be made to do so at the earliest possible convenience.

After processing, artefacts which are suitable will be cleaned and conserved in-house. Artefacts requiring specialist cleaning and conservation will be sent to the relevant specialist. All artefacts will then be sent to a specialist for analysis, the results of which will then be assessed to ascertain the potential of the finds assemblage to meet the research aims of the project. The value of the finds will also be assessed in terms of the wider educational and academic contributions.

Depending upon the material of the remains the following experts will be consulted regarding the conservation of waterlogged material:

- Organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)
- Non-organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)

Depending upon the material of the remains the following experts will be consulted regarding the conservation and analysis of artefacts:

- Bone: Nora Bermingham
- Glass: Hilary Cool, Barbican Research Associates.
- Metal artefacts: Phil Parkes, Cardiff Conservation Services, Cardiff.
- Slag, burnt clay, hammerscale: Dr. Tim Young, Geoarch, Cardiff.
- Stone artefacts: George Smith, Gwynedd Archaeological Trust, Bangor.
- Wood artefacts: Jane Foley, Foley Conservation, Builth Wells.
- Leather: Quita Mould, Barbican Research Associates.
- Environmental Material: Dr Mike Allen, Allen Environmental Archaeology.
- Numismatics: Peter Guest, Barbican Research Associates.
- Ceramics: Leigh Dodd

If well preserved materials are found it may be necessary to employ additional staff. Furthermore, it may be necessary to suspend work within a specific region of the site, or across the whole site, while conservation and excavation/recording takes place.

## 9.0 UNEXPECTED DISCOVERIES: TREASURE TROVE

Treasure Trove law has been amended by the Treasure Act 1996. The following are Treasure under the Act:

- Objects other than coins any object other than a coin provided that it contains at least 10% gold or silver and is at least 300 years old when found.
- Coins all coins from the same find provided they are at least 300 years old when found (if the coins contain less than 10% gold or silver there must be at least 10. Any object or coin is part of the same find as another object or coin, if it is found in the same place as, or had previously been left together with, the other object. Finds may have become scattered since they were originally deposited in the ground. Single coin finds of gold or silver are not classed as treasure under the 1996 Treasure Act.
- Associated objects any object whatever it is made of, that is found in the same place as, or that had previously been together with, another object that is treasure.
- Objects that would have been treasure trove any object that would previously have been
  treasure trove, but does not fall within the specific categories given above. These objects have
  to be made substantially of gold or silver, they have to be buried with the intention of
  recovery and their owner or his heirs cannot be traced.

The following types of finds are not treasure:

- Objects whose owners can be traced.
- Unworked natural objects, including human and animal remains, even if they are found in association with treasure.
- Objects from the foreshore which are not wreck.

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.

The British Museum 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.

# 10.0 ARCHIVING

A draft copy of the report will be produced within two months of the completion of the fieldwork and sent to the Client and the DMA at CAPAS for comment prior to finalisation of the report and dissemination. Bound copies of the report and an archive CD will be sent to the regional HER, and the Oasis online database for long term archiving. Furthermore, a summary of the project will be sent to relevant journal for publication if required.

## 11.0 PERSONNEL

The work will be managed by Richard Cooke BA MA MCIfA, Archaeological Contractor and Consultant at Aeon Archaeology.

## 12.0 MONITORING AND LIAISON

Regular liaison and site monitoring meetings will take place during all stages of work. The DMA at CAPAS will be informed of the start date and of discreet subsequent stages.

## 13.0 HEALTH AND SAFETY

Aeon Archaeology has a Health and Safety Policy Statement which can be supplied upon request. Furthermore, site-specific Risk Assessments and Method Statements are compiled and distributed to every member of staff involved with the project prior to the commencement of works.

## 14.0 INSURANCE

Liability Insurance – Insignia Underwriting Policy 347002

Employers' Liability: Limit of Indemnity £10m in any one occurrence Public Liability: Limit of Indemnity £2m in any one occurrence Legal Defence Costs (Health and Safety at Work Act): £250,000

The current period expires 07/09/18

Professional Indemnity Insurance – Insignia Underwriting Policy 347002

Limit of Indemnity £500,000 any one claim

The current period expires 07/09/18

