



Archaeoleg Brython Archaeology

Ballswood Quarry: Proposed Extension
Written Scheme of Investigation

Document Number B2208.WSI.MIT.01

Ballswood Quarry, Llay Proposed Extension

Written Scheme of Investigation: Mitigation

Prepared for Cheshire & North Wales Sand and Gravel LTD.

by Karl Macrow

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1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by KEDD Limited, on behalf of Cheshire & North Wales Sand and Gravel LTD to prepare a Written Scheme of Investigation for the archaeological mitigation in advance of the proposed extension to Ballswood Quarry, Llay (NGR SJ34995664, See Figure 1)

Clwyd Powys Archaeological Trust (CPAT) Planning Services, the archaeological curators, have indicated that mitigation will comprise a programme of Strip, Map and Record followed by full archaeological excavation of any identified archaeology in Area A of the extension.

All works will be undertaken to meet the standards of the Chartered Institute for Archaeologists Standard and Guidance for Archaeological Excavation (2020).

Ballswood Quarry

Changes to the Limit of Extraction within the Existing Planning Permission Boundary

Aim of Proposals:

- To avoid the sterilisation of mineral within the Permitted Planning Permission Boundary (Application Boundary)

Please note: this plan represents a combination of the proposals, including both working and restoration, and should not be read that these would all take place at the same time.

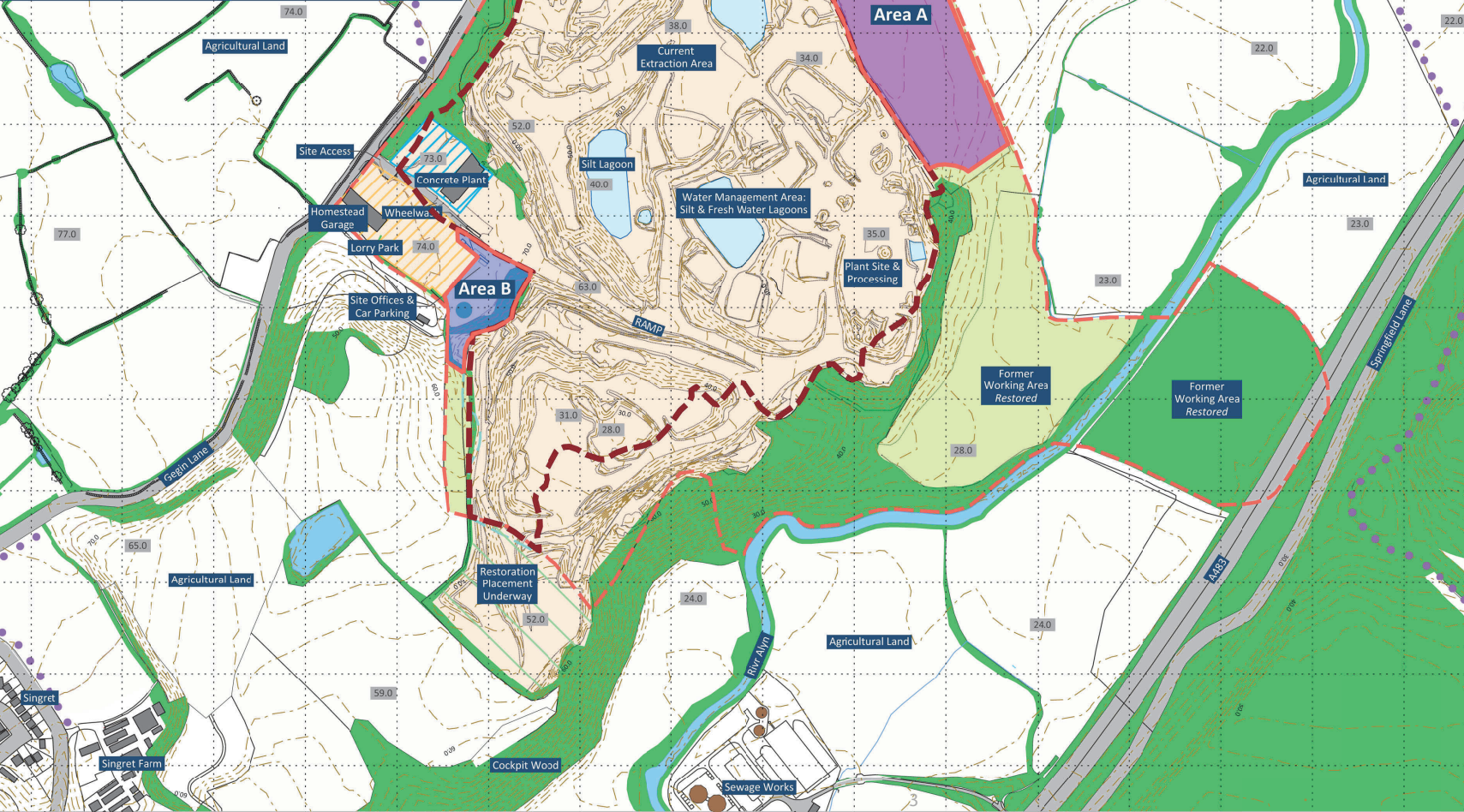
Due to the geological nature of the site, Areas A and B, together with the limited remaining consented mineral, are to be worked concurrently to ensure suitable product splits and blending opportunities of both sands and gravels is possible.

An extensive drilling exercise took place in 2019 which has been geologically assessed to identify the location, nature and quality of remaining mineral contained within the Permitted Planning Boundary (Application Boundary).

The summary of the remaining on-site Sand and Gravel being:

Remaining mineral contained within the permitted limit of extraction	200,000 tonnes
Area A (4.37 Hectares)	500,000 tonnes
Area B (0.68 Hectares)	190,000 tonnes
Total Additional Mineral Estimate	690,000 tonnes

Note: all proposals are contained within the existing permitted planning boundary



LEGEND

- Proposed Planning Application Boundary
- Existing ROMP / Planning Permission Boundary
- Limit of Extraction (1997)
- Quarry Operational Land
- Current Restoration Areas
- Homestead Garage
- Mount Alyn
- Concrete Batching Plant
- Agricultural Land within the Planning Permission Boundary
- Contours (2m) and Spot Heights
- Surrounding Water Bodies
- Existing Woodland, Trees, Shrubs and Hedgerows
- Existing Buildings, Structures, Roads and Tracks
- Public Rights of Way (PROW)

Proposals

- Proposed Additional Extraction Areas (A & B) - Total Area: 5.05 Hectares
- Operational Waterbodies / Lagoons

Note: all proposals are contained within the existing permitted planning boundary

CHESHIRE & NORTH WALES SAND & GRAVEL LTD.



PROJECT:
Ballswood Quarry

TITLE:
Proposals Plan

REF NO:
KD.BLWQ.2.D.007

DATE:
December 2021

SCALE:
1:5,000 @ A3

STATUS:
FINAL



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2 Background

2.1 Project background

The current project is for the extension of Ballswood Quarry, Llay. Consultation with Clwyd Powys Archaeological (CPAT) Planning Services has confirmed that archaeological mitigation will be required prior to extraction in Area A (See Figure 1).

CPAT have made comments through the consultation process that:

"We note the changes to the quarry extraction areas which are varied from application P2016/0110 under the previous application P/2021/0486. The archaeological assessment report for the earlier application clearly indicated that there is some potential for unrecorded prehistoric archaeology of Neolithic and later date in the fields surrounding the development area and suggested a programme of mitigation in 5.12.

Of the two proposed extraction areas Area A, which is currently still under agricultural use, has the highest potential for archaeological survival. Area B has been extensively altered by topsoiling, vehicle passage and ongoing extraction and is of no concern.

We would agree with the conclusions set out in section 5 and 5.1.2 of the cultural heritage assessment report and therefore recommend that Area A is the subject of archaeological mitigation using a programme of strip/map/excavate monitoring during initial topsoil and subsoil removal works. Machines should use toothless buckets to clear upper soil levels to reveal any potential archaeology beneath. Vehicles should not track over these stripped areas until the archaeological team have confirmed that no archaeology is present, or it has been fully recorded. This should be completed under close archaeological supervision and any archaeological remains identified must fully excavated, recorded, reported and archived in accordance with CIFA standards and guidance. I have included a condition below which will allow these works to progress:"

Suggested planning condition to facilitate a scheme of archaeological investigation / excavation of Area A as a condition of consent.

"No development shall take place within the application area until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work 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 archaeological programme of work will be undertaken and completed in accordance with the relevant Standards and Guidance laid down by the Chartered Institute for Archaeologists. A copy of the resulting report should be submitted to the Local Planning Authority and the Development Control Archaeologist, (Clwyd-Powys Archaeological Trust, The Offices, Coed y Dinas, Welshpool, SY21 8RP Email: mark.walters@cpat.org.uk Tel: 01938 553670). After approval by the Local Planning Authority, a copy of the report and resulting archive should be sent to the Historic

Environment Record Officer, Clwyd-Powys Archaeological Trust for inclusion in the regional Historic Environment Record and to the National Monuments Record, RCAHMS.

Reason: To secure preservation by record of all archaeological remains which will be impacted by the development in Area A

2.2 Archaeological background

An archaeology and cultural heritage desk-based assessment of the archaeological potential of land at Ballswood Quarry in relation to the 2 proposed changes to the extraction boundary has been carried out. The findings of the assessment are summarised below:

The assessment involved the examination of available records relating to the quarry and the 2 proposed changes to the extraction area including documentary, cartographic and aerial photographic from sources such as Historic Wales, Archwilio (the Welsh Historic Environment Records online), the Clwyd-Powys Regional Historic Environment Record and the Archaeological Assessment carried out by The Clwyd-Powys Archaeological Trust (November 2002) in relation to a planning application for an extension to Ballswood Quarry (ref: P/2003/0357).

No sites are currently recorded within the existing quarry or the 2 proposed changes to the extraction area in the SMR. Seven sites as set out in Archaeological Assessment carried out by The Clwyd-Powys Archaeological Trust (November 2002) have been identified in an area related to a refused planning application for an extension to Ballswood Quarry (ref: P/2003/0357). These 7 sites, will not be affected by the proposed development in its present form.

There remains the possibility that sub-surface traces of further sites are present within the 2 proposed changes to the extraction area. In order to ensure that the potential for these sub-surface archaeological remains is taken into account, a watching brief should be undertaken during the stripping of topsoil and overburden. Sufficient time and resources should be allowed to ensure the preservation by record of any archaeologically significant features which may be revealed.

In terms of cultural heritage, listed structures or the Marford Conservation Area are not affected visually by the current Works or the proposed development.

Overall, no clear archaeological or cultural heritage constraints have been identified that would render the proposals contrary to the objectives and policies of the development plan. The objectives of the Development Plan, the emerging Wrexham Local Development Plan 2 and other material policy considerations are met.

(From CPAT report 500, 2002)

Prehistory

The earliest evidence suggesting activity in the area is represented by the find of a Neolithic stone axe (PRN 106384), on the bank of the River Alyn to the north of Gresford, 900m to the south-east of the extension area. Further prehistoric finds have been reported from the locality, including two flint scrapers (PRN 102880), at a location 600m to the west of the extension area. These finds suggest that there was some domestic occupation in this area during the Neolithic period, but it is impossible to ascertain where this may have been located.

One of the most significant sites which demonstrates prehistoric activity in the vicinity of the extension area is a cropmark (PRN 101843), identified on an aerial photograph. The cropmark is thought to represent the ploughed-out remains of a Bronze Age burial mound and is located approximately 900m to the east of the extension.

Evidence for occupation of Iron Age date is provided by the oval enclosure of Y Gaer (PRN 100351), which is protected as a scheduled ancient monument (SAM De 058). This site is located on the outskirts of Llay, approximately 500m to the west of the extension area, and demonstrates the importance of this locality in the latter part of the prehistoric period.

Roman

There are no known Roman sites within the immediate area, although the close proximity of the industrial complex at Holt and recent discoveries at Plas Coch, Wrexham (Grenter et al. 1994 and 1995; Wait 1996) indicate the presence of Roman occupation in the surrounding area.

Medieval

The only direct evidence of medieval activity in the immediate vicinity consists of the site of the Croes Howell cross (PRN 100353). The cross was mentioned in 1479-80, but the only surviving remains consist of a socket stone and the lower part of a square shaft, which have subsequently been moved from their original location to a site 400m to the north-east of the extension area.

Although there is little evidence of confirmed medieval activity in the immediate area, it is strongly suggested by the field pattern which has survived, both within, and surrounding, the extension area. The appearance of the modern field boundaries to the north of Cae Mawr suggests that they represent the fossilised remains of an area of open-field arable cultivation (Site 2) belonging to the medieval period, which was most likely enclosed during the post-medieval period. The location of any settlement sites which relate to the cultivation is unknown, but they are most likely to have been alongside the minor road to the north of the proposal.

Post-medieval

The only site which has been recorded by the SMR in the immediate vicinity of the extension area is a milestone of post-medieval date, first depicted on the Ordnance Surveyor's drawing of 1819, which lies on the verge of the B5102 at the north-west corner of the area. This is recorded as having the inscription 'To Chester 8 miles', but is noted to be badly weathered. The first edition OS 1:2,500 map (Denbighshire 21.12, dated 1873) suggests that it may also have been inscribed 'To Minera 5 miles'. The presence of the milestone denotes the fact the 'Straight Mile' forms a section of a former turnpike road (Site 1) linking the two named settlements.

The site of the former Cae Mawr farm (Site 8) falls within the proposed extension. The farmhouse is no longer extant, but it was depicted on Ordnance Surveyors' drawing and all subsequent cartographic sources, prior to the modern Ordnance Survey mapping and is likely to be of postmedieval date. The farm buildings consisted of the house, a large L-shaped range, and a number of small outbuildings of unknown function; a well was located to the north of the house (see 1873 and 1899 Ordnance Survey 1:2,500 maps). Palmer (1904, 45) describes Cae Mawr as 'an old holding', and it is probable that the farm post-dates the enclosure of the medieval open-field arable cultivation described above.

In addition to Cae Mawr, a number of the other houses and buildings in the surrounding area appear on 19th-century cartographic sources, including Llyntro Farm, Rackery Farm, and Croes Howell, all of CPAT Report No 500,28/11/02 Page 4 which are depicted on the Ordnance Surveyors' drawing of 1819. None of these sites is recorded in the SMR, which does, however, record a small number of listed

buildings of 19th-century date, including 'The Stone House' (PRN 41684) and Mount Alyn Lodge (PRN 41685). During the latter part of the post-medieval period, the overall pattern of landscape utilisation on the plateau appears to have comprised a mixture of discrete industrial areas, set within farmland occupied by a dispersed population. The extension area falls within the agricultural part of this landscape.

Industrial activity of post-medieval date is evident, although it is generally of fairly minor importance in relation to the industry of the surrounding district. In the immediate locality, good examples of relevant sites include the mid-19th century brickworks (PRN 17079), which was found within the ramparts of the Iron Age enclosure of Y Gaer (PRN 100351) during excavations there in 1961, and the largely intact Llay Smithy (PRN 102931). Sand and gravel quarrying appears to have commenced in a minor role during the 19th century, with a small quarry (presumably the precursor of the Ballswood Quarry) of this type evident to the south-east of the former Ball's Wood house on the Ordnance Survey 1:2,500 maps of 1873 and 1899. Three ponds (Site Nos 3, 4, and 6), which are depicted within the extension area on late 19th-century Ordnance Survey maps, might be water-filled clay pits associated with the brick-making industry, but are more likely to be marl pits producing material used as agricultural fertiliser in the adjoining fields; Site 3 is also depicted on the 1842 Tithe map.

Modern

The village of Llay is a relatively modern settlement, with 19th-century cartographic sources showing little more than a dispersed hamlet. The subsequent growth of the village to its present size is likely to have been a result of the need to house workers engaged in local industry, such as the nearby collieries of Gresford and Llay.

The pattern of landscape use evident in the 19th century appears to have continued to the present. The only major differences are a result of the significant expansion of sand and gravel quarrying from their minor beginnings during the previous period.

2.3 Topography and geology

The British Geological Survey's Geology of Britain Viewer shows that the superficial deposits consist of River Terrace Deposits - Sand And Gravel which formed up to 3 million years ago in the Quaternary Period in a local environment previously dominated by rivers. The Underlying bedrock consists of sandstone of the Kinnerton Sandstone Formation, which formed approximately 247 to 252 million years ago in the Triassic Period. In an environment previously dominated by hot deserts. (BGS, 2022)

3 Aims and objectives

The aims of the work are:

- To identify any archaeological deposits and features within the development area.
- To mitigate impact to the identified archaeology by excavation and recording.

The objectives of the work will be to

- Identify archaeological features revealed during the initial stripping of the compound area.
- Create a comprehensive record of all identified features.
- Interpretation of all identified features and their relationship to previously identified archaeology.
- Increase understanding of the archaeology and historical development of the area.
- Inform future management of the site.

4 Specific methodology

4.1 Scope of works

The new extraction area will be subject to a programme of Strip, Map and Record under the constant direction of an archaeologist. All identified archaeological features will be surveyed, investigated and fully recorded. All collected information will be collated, interpreted, archived and summarised in a report. Results will be disseminated via appropriate publications, media outlets and public engagement.

4.2 Programme

The date for commencement of the work has not been confirmed but is likely to be in the third quarter of 2022.

4.3 Strip, map and record

Strip, Map and Record is an effective technique to identify all archaeological features within a defined area and is typically employed in areas of high archaeological potential.

During the controlled stripping:

- An archaeologist will direct the excavator at all times.
- Soil will be removed in shallow spits as dictated by the archaeologist.
- The archaeologist will determine the depth at which stripping will cease – this will either be when archaeology is encountered or at the depth which the natural glacial subsoil is encountered.
- The excavator will be fitted with a toothless, flat ditching bucket.
- No vehicles will travel on stripped areas until they have been officially signed off by the curator.
- All potential archaeological features will be investigated by cleaning and limited evaluation. Features which do not prove to be archaeological in origin will be dismissed and no further action taken, those which are archaeological will be marked, surveyed and fully investigated.
- The area will be surveyed using a Leica GPS System.
- A photographic record of progress will be made using a Nikon DSLR camera, images will be stored in .NEF/RAW format.

4.4 Excavation

Specific excavation methodologies will be devised and implemented for features following initial investigation, these will not generally be formalised unless a Further Archaeological Works Design (FAWD) is required, *see para. 6*.

General excavation procedure will involve:

- Cleaning of the feature by hand to identify limits and to check for associated features in the immediate vicinity.
- Pits, post holes and similar features will be half-sectioned and a minimum of 50% of each feature excavated. Examples containing artefacts and all those thought to be prehistoric or early medieval in date will be 100% excavated.

- Linear features, with the exception of post-medieval field drains and service trenches, will be investigated by slotting. Unless otherwise agreed with the curator a minimum of 10% of all linear features will be excavated.
- Extensive layers or deposits will be recorded in plan and slotted to record depth and may be fully excavated by hand or removed by machine under constant direction by an archaeologist to check for underlying features.
- A full record will be made of all deposits and features, see para. 5.1.

5 General methodology

5.1 Recording

General recording of the investigation area following completion of mechanical excavation will include:

- The entire area will be recorded by means of a GPS survey and written records, where appropriate a full photogrammetry survey may also be undertaken.
- General photographs with scales will be taken of the stripped area.
- If required, portions of the baulk sections will be hand drawn to scale.
- Written descriptions of all deposits will be made on context sheets.

All archaeological features and deposits will be fully recorded by appropriate means.

This will generally involve:

- Each deposit, cut and structure will be allocated a unique context number for ease of reference. A register will be maintained of all allocated numbers.
- A written record of all contexts will be made on ABA pro-forma sheets, examples of which are available on request.
- A photographic record of features will be maintained using a Nikon DSLR camera, images will be stored in .NEF/RAW format. Each photograph will be uniquely numbered and information including description, orientation, scales used, originating person and date will be recorded for future reference and archiving.
- Cross sections of features will be drawn at a scale of 1:10, or 1:20 if more appropriate, on gridded drafting film (permatrace).
- Features will be drawn in plan at a scale of 1:20, 1:10 or 1:50.
- All drawings will be allocated unique numbers to aid cross referencing.
- If deemed more appropriate, and following agreement by curators, some features may be recorded by means of photogrammetry supplemented by GPS or EDM survey.
- ODN heights will be obtained by GPS or EDM survey.

5.2 Artefacts

Recovered artefacts or 'finds' will be collected, cleaned, labelled and stored according to the Standard and Guidance for the collection, documentation, conservation and research of archaeological materials (ClfA 2020) and First Aid for Finds (Watkinson and Neale 2001).

General procedure for finds will involve:

- All recovered artefacts will be allocated a unique number to aid cross referencing.
- Emergency conservation will be undertaken as required.
- If necessary specialists will be consulted whilst fieldwork is ongoing.

5.3 Ecofacts

Deposits containing charred plant remains or artefacts will be bulk sampled to recover palaeoenvironmental material and small artefacts.

General procedure for this will involve:

- Collection of >40 litres of extensive deposits and >100% of discrete feature fills.
- All samples will be allocated a unique number to aid cross referencing.
- The identification of extensive peat deposits will require specialist input and the submission of a FAWD.

6 Further archaeological works

The discovery of complicated or significant archaeological remains, or extensive peat and anaerobic deposits requiring specialist excavation are identified, a revised WSI for archaeological investigation, the scope of which will be determined by the archaeological curator, may need to be submitted. If this occurs the Further Archaeological Works Design (FAWD) process will be triggered.

General procedure in the event of FAWD will involve:

- The client and curator will be informed of the discovery.
- A suitable method of investigation and recording will be verbally agreed with the curator and client.
- If required, a revised WSI will be prepared and submitted to curator and client for approval.
- Additional costs will be submitted to the Client for approval.
- Once all documents and costs have been approved the necessary work will be undertaken.

7 Unexpected discoveries

7.1 Human remains

In the event of the discovery of human remains:

- All work in the vicinity will cease.
- The remains will be left in situ, shielded from general view and protected.
- The client, coroner and curator will be informed of the discovery immediately.
- If removal of the remains is unavoidable it will be done under the appropriate regulations, with due regard for health and safety and respect.
- All work will be undertaken to comply with Section 25 of the Burials Act 1857 which states that a licence must be applied for to excavate and remove human remains from a place of burial.
- If required the licence will be applied for.

7.2 Treasure

Under the Treasure Act 1996, the following are considered to be treasure:

- 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 or her 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 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 declare 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.

8 Post excavation

Following completion of the fieldwork elements of the project either a post-excavation assessment report or final report will be produced. The necessity and scale of a post-excavation assessment report, and any subsequent work required will depend on the results of the fieldwork.

This procedure is formalised in the guidelines specified in Management of Archaeological Projects (English Heritage, 1991), and relevant guidelines from Management of Research Projects in the Historic Environment (English Heritage 2006). Five stages are specified:

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

Post-excavation is undertaken during Phases 3 to 5.

When considering the necessity and scope of the post-excavation analysis (Phase 3), specific reference will be made to the original aims of the project. Any subsequent research and analysis of records and materials will be appropriate to the aims and purpose of the project.

8.1 Post excavation analysis

The discovery of archaeology during fieldwork will necessitate specialist analysis and reporting, this will in turn necessitate additional costs. As a minimum this will involve the digitising of photogrammetric images and site drawings and additional cross referencing of site records.

Recovered artefacts will require emergency conservation and cleaning and may require specialist analysis and long-term conservation.

Bulk soil samples will require processing by wet sieving and floatation for the recovery of macroscopic artefacts, faunal remains and charred plant remains. Recovered artefacts are likely to require specialist analysis and any charred plant remains will require palaeoenvironmental analysis.

It is possible that radiocarbon dating will be required to date some artefacts and deposits.

Unexpected discoveries may require additional specialist processing and analysis.

The scope and cost of this phase of work cannot be predicted at this stage and will be determined during and following fieldwork. If this phase is likely to be extensive an assessment report will be produced (see Para. 8.2)

8.2 Assessment report

If a significant post-excavation programme is required post-excavation assessment report will be prepared (Phase 3).

As a minimum a post-excavation assessment report will include:

- Introduction
- Original research aims and copy of specification
- Summary of the historic and archaeological background

- Interim results of fieldwork
- Quantification and summary of the site archives, finds, samples and documentary sources
- Discussion of how the site archive can be utilised to meet the aims of the project
- Summary of the potential importance of the data in local, regional, national and international terms
- Supporting information including plans, photographs and drawings

8.3 Final report

Following the implementation of work outlined in the post-excavation assessment report, or if it is decided that one is not required then a final report will be prepared (Phase 4) and submitted (Phase 5).

As a minimum the final post-excavation report will include:

- Non-technical summary in both Welsh and English
- Introduction
- Original research aims and copy of specification
- Detailed historic and archaeological background
- Detailed results of fieldwork including
 - Location plan
 - Plan showing location of all works
 - Plan showing all identified features
 - Digitised drawings of identified features
 - Written descriptions of all identified features
- A copy of any specialist reports commissioned
- A bibliography of sources consulted
- A digital archive on CD

Providing that specialists are available the final report will be submitted to the HER within six months of the completion of all fieldwork on site.

8.4 Archive selection strategy

All data created during the project will be managed in accordance with the Data Management Plan (DMP) which is reproduced in Appendix I. The strategy for the selection of the Archaeological Archive will be formalised in a Selection Strategy which will outline the selection and de-selection strategy for all elements of the archaeological archive.

The full selection strategy is reproduced in Appendix II but will be reviewed during the fieldwork and post-excavation programmes.

In brief the selection strategy will involve:

Digital Data

- All digital data will be prepared and managed in accordance with the RCAHMS Guidelines for Digital Archiving.
- Copies of non-selected digital data will be retained by ABA for a minimum of 12 months after archive deposition.

Documents

- All site drawings will be retained.

- Selected documents will be indexed and prepared in accordance with the National Monuments Record of Wales (NMRW) requirements.
- All documents will be scanned and digital copies of all documents will be retained by ABA for a minimum of 12 months after archive deposition.
- De-selected documents will be shredded.

Artefacts

- All post-medieval material identified during the work will be noted and retained on-site, a representative selection of material will be retained for assessment.
- All other material will be retained for assessment.

Environmental Samples

- All environmental samples collected on site will be retained for processing and assessment.

Flots and material recovered from residues will be retained for assessment.

9 Archiving and dissemination

9.1 Archiving

Upon completion of the project the paper archive and all digital data including photographs will be lodged with the Royal Commission on Ancient and Historical Monuments of Wales (RCAHMW) in Aberystwyth.

All data submitted to the HER will be prepared in accordance with the *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)*, (Welsh Archaeological Trusts, 2018).

It is recommended that all artefacts are deposited for long-term storage and curation at Wrexham County Borough Museum & Archives, Regent Street, Wrexham, LL81 1RB.

Digital copies of the report will be submitted to the Clwyd Powys Historic Environment Record (HER), RCAHMW, CPAT and Client. Printed versions will only be produced if specifically requested, only one printed and bound copy will be provided for free, additional copies will be charged at cost.

ABA will hold a digital version of the archive indefinitely.

9.2 Dissemination

If the results of the assessment are deemed to be of significance to the wider archaeological community efforts will be made to publish the results in an appropriate journal.

ABA also believe that the promotion of results to the general public can benefit all parties involved and are happy to prepare material for press releases, social media and public talks.

10 Health and safety

As ABA is not the principal contractor on site we will be subject to the health and safety procedures of the appointed principal contractor.

A risk assessment will be produced prior to work being undertaken on site, all ABA staff will be inducted and asked to sign the risk assessment. The risk assessment is not final, risks should be added to the assessment and relevant steps taken to mitigate against them on a dynamic basis.

Relevant Personal Protective Equipment (PPE) must be worn at all times whilst on site. ABA will provide relevant PPE which in this case will consist of hard hat, gloves, eye protection, long sleeved high-visibility vest/coat, high-visibility trousers and safety boots.

A first aid kit will be present in the ABA vehicle at all times.

10.1 Insurance

Archaeoleg Brython Archaeology is insured for:

- Public Liability £10,000,000
- Professional Indemnity £5,000,000
- Employers Liability £10,000,000

Policy details available on request.

11 Staffing and timetable

All archaeological works will be managed by Iwan & Laura Parry, and undertaken by ABA employees, CV's available on request.

The strip, map and sample will initially be undertaken by a single experienced archaeologist per working excavator. If further archaeologists are required, a minimum ratio of 5:1 archaeologists to supervisors will be maintained during fieldwork.

If required additional appropriately qualified staff may be employed during the course of the project. In exceptional circumstances elements of the work may be sub-contracted to a suitably qualified archaeological contractor.

Work is expected to commence in Summer/Autumn 2022.

11.1 Specialists

The following is not a comprehensive list of specialists to be employed, the final list will depend on discoveries made.

Metalworking debris - Dr Tim Young, GeoArch

Metalwork – Phil Parkes, Cardiff University

Roman Pottery – Peter Webster, freelance specialist

Roman Artefacts – Evan Chapman, National Museum of Wales

Prehistoric Pottery – Frances Lynch, freelance specialist

Glass – Rachel Tyson, freelance specialist

Human Remains – Ciara Butler, ABA PhD Student, Cardiff University

Palaeoenvironmental Sampling and Geoarchaeology – Dr Tudur Davies, freelance specialist

Palaeoenvironmental Analysis – Roz McKenna, freelance specialist

Radiocarbon Dating – SUERC, East Kilbride/ Direct AMS, Seattle

12 Monitoring procedures

The project will be monitored by Mark Walters of Clwyd Powys Archaeological Trust Planning Services. A charge of £150 will be made by CPAT Planning Services for each monitoring visit.

CPAT Planning Services will be informed in writing of proposed start dates and will subsequently receive regular updates on progress by ABA.

All documents relating to archaeological works including designs and reports will be reviewed and approved by CPAT Planning Services.

13 Bibliography and sources consulted

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