



**STEPHENSON
HALLIDAY**

Planning, Landscape & Environment
an **RSK** company

MAES Y DROELL QUARRY EXTRACTION OF INDUSTRIAL SAND

Environmental Statement
Volume II

Chapter 08: Cultural Heritage

Silica Sand Mold Limited

Prepared by Andrew Josephs Associates

Chapter 08: Cultural Heritage

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8 CULTURAL HERITAGE

8.1 Introduction

- 8.1.1 This Chapter provides a summary of the potential archaeological impacts of the Proposed Development within the Site and the surrounding area, as detailed in the report included in **ES Volume III, Appendix 8.1: Archaeology and Cultural Heritage**.
- 8.1.2 Heneb – Clwyd-Powys Archaeological Trust advised that Heritage and Archaeology should be Scoped into the Environmental Impact Assessment (EIA), as parts of Phase 1B, Phase 3, some of the habitat creation areas and Phase 4 have not been subject to systematic archaeological assessment and their archaeological potential therefore remains uncertain. In particular, Phase 4 is considered to have potential for previously unrecorded archaeological remains, which may comprise both surface and sub-surface features from a range of archaeological periods.

Baseline Methodology

- 8.1.3 The preparation of this baseline assessment included the collection and consideration of data from Heneb Historic Environment Record (HER), Cadw's database for the locations of designated sites, Coflein (the online catalogue of archaeology, buildings, industrial and maritime heritage in Wales), reports of previous archaeological investigations, maps and readily available local history materials.
- 8.1.4 Additionally, a site walkover was completed to assess the survival of archaeological remains within the Site, and a site visit was undertaken to assess the setting of cultural heritage assets within the study area.
- 8.1.5 The assessment has been undertaken by Andrew Josephs Associates, Archaeological and Cultural Heritage Consultancy. The assessment has been carried out following the guidelines of the Chartered Institute for Archaeologists (CIfA), the Standard and Guidance for Historic Environment Desk-Based Assessment 2014, revised 2021.
- 8.1.6 The study area extends to 1km beyond the boundary of the proposed workings. This was based on topographical modelling and was considered an appropriate distance for assessing archaeological potential and the effects on designated heritage assets. Heritage assets identified as sensitive to visual change were visited and assessed to assess potential impacts on the setting.

8.2 Assessment Methodology

Scope of Assessment

- 8.2.1 This assessment is concerned with impacts upon heritage assets. It identifies assets that may be affected by the Proposed Development, including the setting of heritage assets.
- 8.2.2 Following the characterisation of the baseline conditions, the methods used to define the potential effects on archaeological assets associated with the proposed scheme are as follows:

- Definition of baseline conditions, comprising desk-based study and visits to heritage assets, leading to the identification of heritage assets potentially affected by the Proposed Development;
- Assessment of the magnitude of impacts (direct and indirect physical, and setting (including cumulative) during the operation of the Proposed Development on the cultural significance of heritage assets;
- Assessment of the significance of effects, broadly a product of the asset's importance and the magnitude of the impact;
- Proposal of mitigation measures to avoid, reduce or offset significant adverse effects where necessary; and,
- Presentation of residual effects.

8.3 Significance Criteria

Assessment of the importance/Sensitivity of the Receptor

- 8.3.1 The importance of a heritage asset is a scaled measure of the level of protection its cultural significance is afforded in the planning system, reflecting its statutory designation or, in the case of non-designated assets, the professional judgement of the assessor.
- 8.3.2 Relative importance of each identified heritage asset potentially affected by the Proposed Development has been determined using the scaled measure to provide a framework for comparison between different heritage assets and to inform subsequent stages of archaeological assessment and the development of any appropriate mitigation which may be required.
- 8.3.3 Determination of the importance of archaeological assets is based on existing statutory designations and, for non-designated assets, professional judgement informed by their archaeological interest, condition, rarity and contribution to the historic environment.
- 8.3.4 Five categories of sensitivity are identified. These are expanded in **Table 8-1**.

Table 8-1: Criteria for Assessing the Importance of Heritage Assets

Value (Sensitivity) of receptor/resource	Definition
Very High	Sites and settings of international importance, for example World Heritage Sites.
High	Sites and settings of national importance. Scheduled Monuments, Registered Battlefields, Grade I and Grade II* Listed Buildings, and Registered Historic Parks and Gardens. 'Outstanding' Registered Landscapes. Sites may also be discovered as a result of new research that are also of national importance and are candidates for scheduling.
Moderate	Sites and settings of regional importance. Archaeological sites and features that are not considered sufficiently important or well-preserved to be protected as Scheduled Monuments. Grade II Listed Buildings and Registered Historic Parks and Gardens. 'Special' Registered Landscapes.

Low	Sites and structures, and other components of the historic environment that contribute to the local landscape.
Very Low	Archaeological sites and other components of the historic environment of very low importance.

Magnitude of impact on Heritage significance

- 8.3.5 The magnitude of change to an archaeological asset or landscape is considered in terms of its vulnerability, its current condition, and the nature of the impact upon it.
- 8.3.6 The magnitude of effects is identified as Substantial, Moderate, Minor and Negligible/None. Effects can be direct or indirect, adverse or beneficial. The criteria for assessing the magnitude of effects are set out in **Table 8-2**.

Table 8-2: Criteria for Assessing the Magnitude of Impact on Heritage

Magnitude of Impact (Change)	Effect	Typical Description
Major	Adverse	Loss of resource and/or quality and integrity of the resource; severe damage to key characteristics, features or elements.
Major	Beneficial	Large-scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate	Adverse	Loss of resource but not adversely affecting integrity; partial loss of or damage to key characteristics, features or elements.
Moderate	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of or alteration to one (or more) key characteristics, features or elements.
Minor	Beneficial	Minor benefit to, or addition of, one (or more) key characteristics, features or elements; some beneficial impact on attributes or reduced risk of a negative impact occurring.
Negligible / Neutral	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
Negligible / Neutral	Beneficial	Very minor benefit to, or positive addition of, one or more characteristics, features or elements.

Determination of the Significance of Effect

- 8.3.7 The significance of the effect of the Proposed Development on heritage assets is determined by:
- The importance of the asset; and
 - The magnitude of effect to the asset.

Table 8-3: Criteria for Assessing the Significance of Effect

		Baseline Sensitivity				
		Very High	High	Moderate	Low	Very Low
Magnitude of Change	Major Beneficial	Major Beneficial	Major-Moderate Beneficial	Moderate Beneficial	Moderate / Minor Beneficial	Minor Beneficial
	Moderate Beneficial	Major-Moderate Beneficial	Moderate Beneficial	Moderate / Minor Beneficial	Minor Beneficial	Minor / Negligible Beneficial
	Minor Beneficial	Moderate Beneficial	Moderate / Minor Beneficial	Minor Beneficial	Minor / Negligible Beneficial	Negligible
	Neutral	Negligible	Negligible	Negligible	Negligible	Negligible
	Minor Adverse	Moderate Adverse	Moderate / Minor Adverse	Minor Adverse	Minor / Negligible Adverse	Negligible
	Moderate Adverse	Major-Moderate Adverse	Moderate Adverse	Moderate / Minor Adverse	Minor Adverse	Minor / Negligible Adverse
	Major Adverse	Major Adverse	Major-Moderate Adverse	Moderate Adverse	Moderate / Minor Adverse	Minor Adverse

8.4 Overview of the Historic Environment

- 8.4.1 The full list of known heritage assets is included in **ES Volume III, Appendix 8.1: Archaeology and Cultural Heritage**.

Designated heritage assets

- 8.4.2 There are no designated heritage assets within the Site.
- 8.4.3 There are also no Scheduled Monuments, designated historic landscapes, registered parks or conservation areas within 1 km of the Site.
- 8.4.4 There are four listed buildings within 1 km of the Site. One listed structure lies within 500 m of the Site, *Mine Chimney at Castell* (Grade II), which sits on private land circa 210 m west of the northern part of the Site. A cluster of three Grade II listed buildings sits to the south of the B4530 at Bryn Ffynnon, about circa 675 m west of the Site.

Non-designated Heritage Assets

- 8.4.5 The HER contains 51 non-designated heritage assets within the study area on the Heneb (Clwyd-Powys) HER.
- 8.4.6 There are three non-designated heritage assets recorded within the Site comprising:
- 19224, Modern Quarry, Llanarmon-yn-ial;

- 18109, Post-Medieval Lead Mine / Post-Medieval Silver Mine, Llanarmon-yn-ial; and,
- 125316, Post-Medieval Mine Shaft, Llanarmon-yn-ial.

Archaeological Background

Prehistoric

- 8.4.7 A Bronze Age barrow to the north of the Site and a ring ditch to the east are the earliest remains identified in the study area (87900). The barrow was identified from documentary evidence but was not visited to confirm whether it still exists. The ring ditch has a diameter of 10m and was identified from crop mark evidence, due to land use in the area, it is believed to be evidence of a sheep feeder rather than evidence of prehistoric activity (101804).

Medieval

- 8.4.8 Placename evidence 'Llys' towards the eastern part of the Site may have reflected a building of significance (142273); however, nothing was identified on Site.

Post-medieval and Industrial

- 8.4.9 A number of monuments were identified of post-medieval date, relating to either post-medieval farms or industry activity. A total of nineteen post-medieval farm complexes were recorded on the 2nd edition OS Map which were considered likely to contain traditional farm buildings (69927, 69928, 199905, 199921). One of these examples (Bryn Ffynnon 69928) was further divided with records for the main house (99864), barn (99861) and cart shed (99866) which are Grade II listed. A further building in the HER was the tabernacle Chapel that was the subject of a photographic record, (132635).
- 8.4.10 Two bee boles have been recorded in drystone walls (17726 & 101646). Additionally, aerial photos have identified earthworks comprising post mediaeval pillow mounds/rabbit warrens (106406).
- 8.4.11 Industrial monuments comprise quarries and mines working silica and lead. Four records are for mines where the mineral is not specified (15905, 25316, 53642 & 53643), six are lead mines (18083, 18104, 18109, 18137, 18226 & 18227), and two records are for chimneys associated with the mine engines (99874).
- 8.4.12 Five records relate to quarries (15907, 1514, 19223, 19224 & 53630).
- 8.4.13 Of the above industrial monuments, four are identified as being within the red line boundary. Two of these are quarries located in the southern part of the Site (19223 and 19224), both of which are recorded as modern features. In the northern part of the Site are the remains of a nineteenth- to early twentieth-century lead and silver mine (18109), together with a separate mine shaft (125316). The HER confirms that no surface structural remains of the lead and silver mine survive.
- 8.4.14 Two lime kilns (58335 & 58337) and a well (69926) have been recorded from Ordnance Survey maps. A probable post medieval agricultural enclosure (100011), formed of a bank 0.4 m high and 1.75 m wide is present at the summit of a small hill.

8.5 Statement of Significance and Importance

Known Archaeological Potential within the Site

There are three non-designated heritage assets recorded at the Site, these are the metal mine (18109), and mine shaft (125316) were visited during the site visit. Due to the topography, the precise location could not be directly assessed, and no visible Site remains could be identified.

- 8.5.1 The southern area of the Site has been subject to disturbance associated with 20th-century quarrying activities. The one quarry identified on the HER (19224) within this area is therefore likely not to be visible within, and has been affected by, subsequent modern quarrying operations.

Unknown Archaeological Potential

- 8.5.2 Two areas within the Site have been identified as not having been previously quarried. No above-ground archaeology was identified in the areas.

Setting of Heritage Assets in the Study Area

- 8.5.3 The 19th-century chimney is associated with a former lead mine. A cluster of three Grade II listed buildings sits to the south of the B4530 at Bryn Ffynnon, about circa 675 m west of the Site. There would be no intervisibility with the Site due to topography, vegetation and distance; as such, there would be no adverse effects upon the setting of statutorily designated heritage assets

Table 8-4: Cultural Heritage – Summary Assessment Matrix

Heritage Asset	Description of Impact	Value of Asset	Magnitude of Impact	Significance of Effects	Proposed Mitigation Measures
19224, Modern Quarry,	Operational phase: Total removal as a result of soil stripping and extraction	Low	Moderate Adverse	Minor Adverse	None proposed.
18109, Metal Mine	Operational phase: Total removal as a result of soil stripping and extraction	Low	Moderate Adverse	Minor Adverse	Site walkover after scrub clearance Strip Map and Sample under the supervision of an archaeologist A watching brief may be appropriate during extraction on the vicinity of the metal mine
125316, Mine Shaft	Operational phase: Total removal as a result of soil stripping and extraction	Low	Moderate Adverse	Minor Adverse	Site walkover after scrub clearance Strip Map and Sample under the supervision of an archaeologist A watching brief may be appropriate during extraction on the vicinity of the metal mine

8.6 Assessment of Direct Impacts of the Proposed Development

- 8.6.1 The cultural heritage assessment has reviewed available evidence for known archaeological potential within the Site in order to identify any constraints and implications associated with the proposed mineral extraction activities.
- 8.6.2 Direct impacts on known or previously unrecorded buried archaeological remains may occur during operations as a result of mineral extraction works.
- 8.6.3 The assessment has confirmed that there are no visible archaeological remains within the Site. However, there remains potential for archaeological features to be present within the grassland area and in the vicinity of the former metal mine.

8.7 Mitigation and Residual Effects

Archaeological Remains

- 8.7.1 A phased scheme of archaeological investigation works is proposed, comprising a site walkover following scrub clearance, a strip, map and sample exercise, and an archaeological watching brief during excavation works in the northern area, particularly in the vicinity of the metal mine. This would be secured via planning condition.

Residual Effects

- 8.7.2 There is the potential for Minor Adverse residual effect upon potential archaeological deposits resulting from the implementation of the Proposed Development. Mitigation via a watching brief will reduce the level of the effect, but there is the potential for the loss of archaeological deposits.

Cumulative Effects

- 8.7.3 Cumulative operational effects can occur when the contribution made to the cultural significance of a heritage asset by its setting is directly altered by the Proposed Development in combination with other developments.
- 8.7.4 There are no other planned developments within the vicinity of the Site that would have an impact upon the setting of designated assets.

8.8 Summary

- 8.8.1 In conclusion, this assessment has identified that the proposal has limited potential to cause direct physical impacts on archaeological features during the development's operational phase as the archaeological potential is limited.
- 8.8.2 Mitigation is proposed, including a phased scheme of archaeological investigation. A Written Scheme of Investigation would be agreed with Denbighshire County Council, and its implementation would be secured by planning condition.