

15 ARCHAEOLOGY AND CULTURAL HERITAGE

15.1 Introduction

15.1.1 This chapter of the Environmental Statement (ES) has been prepared by Wardell Armstrong LLP (WA) and presents an assessment of the likely significant effects on Cultural Heritage in relation to effects arising from the construction and operational phases of the proposed AESC Plant 3 development (hereafter referred to as the 'proposed development'). Mitigation measures are identified, where appropriate, to avoid, reduce or offset any significant adverse impacts identified and / or enhance likely beneficial impacts. The nature and significance of the likely residual effects are then reported.

15.1.2 Detailed descriptions of the site and the proposed development are provided in Chapters 1 and 3 of this ES. This chapter is supported by the following appendices:

- Appendix 15.1: Gazetteer of Cultural Heritage Assets/ Receptors;
- Appendix 15.2: Heritage Impact Assessment (Lichfields, 2023);
- Appendix 15.3: Geophysical Survey Report (WA, 2022);
- Appendix 15.4: Specification for Trial Trench Evaluation; and
- Appendix 15.5: Cumulative Effects Assessment.

15.1.3 This chapter is also supported by the following figures:

- Figure 15.1: Known Heritage Assets within 1km study area; and
- Figure 15.2: Location of forthcoming evaluation trenches.

15.2 Methodology

Policy and guidance

15.2.1 The following legislation is applicable to the proposed development:

- Planning (Listed Buildings & Conservation Areas) Act (1990);
- Ancient Monuments & Archaeological Areas Act (1979); and
- Hedgerows Regulations (1997).

15.2.2 The following national planning policy is relevant to the proposed development:

- The National Planning Policy Framework (NPPF) (amended 2023), with particular reference to Section 16: Conserving and Enhancing the Historic Environment.

15.2.3 The following local planning policy is applicable to the proposed development:

- Sunderland Core Strategy & Development Plan 2015-2033 (Adopted 2020); and
- IAMP Area Action Plan (AAP) 2017-2032 (Adopted 2017).

15.2.4 The following guidance is applicable to the proposed development:

- Planning Practice Guidance, Section 16: Conserving and Enhancing the Historic Environment;
- Historic Environment Good Practice Advice in Planning Note 2. Managing Significance in Decision Taking in the Historic Environment: Historic England;
- Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets: Historic England (2017);
- Historic Environment Statement of Heritage Significance: Analysing Significance in Heritage Assets: Historic England Advice Note 12: Historic England (2019);
- Standards and Guidance for Historic Environment Desk-Based Assessment Chartered Institute for Archaeologists (CifA) (2020);
- Code of Conduct: Chartered Institute for Archaeologists (CifA) (2020); and
- Principles for Cultural Heritage Impact Assessment in the UK: Institute of Environmental Management and Assessment (IEMA), the Institute of Historic Building Conservation (IHBC) and the Chartered Institute for Archaeologists (CifA) (July 2021).

Significance criteria

15.2.5 The assessment of significance methodology has been informed by the following:

- Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS 2011);
- Principles of Cultural Heritage Impact Assessment in the UK (IEMA, IHBC and CifA 2021);
- The Setting of Heritage Assets (Historic England 2017); and
- Design Manual for Roads and Bridges (DMRB), LA104: Environmental Assessment and Monitoring (Highways England 2020).

15.2.6 The purpose of the assessment approach is to understand the cultural heritage assets affected and evaluate the consequences of change. The consequences of change will be evaluated using the following steps:

1. Understanding change – providing factual statements of how the proposed development would affect a cultural heritage or its setting;
2. Assessing the impact – measuring the degree to which any change would impact on cultural significance; and
3. Evaluating the significance of the effect – using a combination of the assessed impact resulting from the change and the value or importance of the cultural heritage asset to be impacted.

15.2.7 The value or importance of a cultural heritage asset will be assessed on an individual basis, with regional variations and individual qualities taken into account, where applicable, based on the following:

Table 15.1: Value of Cultural Heritage Asset	
Assigned Value / Sensitivity	Typical Description/attribute
Very High	International importance with very limited potential for substitution, e.g. World Heritage Sites, Scheduled Monuments, Grade I Listed Buildings, Grade I Registered Parks and Gardens, archaeological remains of equal significance to a scheduled monument.
High	National importance and rarity with limited potential for substitution, e.g. Grade II* Listed Buildings, some Grade II listed buildings, some Conservation Area, Grade II* and some Grade II Registered Parks and Gardens, Registered Battlefields. Non-designated cultural heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance. Well-preserved historic landscape character areas, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	Regional importance and rarity with limited potential for substitution, e.g. some Grade II listed buildings, some Conservation Areas, some non-designated heritage assets which retain a high degree of integrity and authenticity. Non-designated cultural heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable regional importance. Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth or other critical factor(s). Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible.
Low	Local importance and rarity, e.g. some non-designated cultural heritage assets including locally listed buildings and archaeological sites, historic buildings, parks, gardens or landscapes that can be shown to have demonstrable local importance. Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher value
Very Low	Local importance and rarity, e.g. non-designated heritage assets which have been largely altered previously, for example in terms of fabric or context. Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher value. Landscapes with no or little significant historical merit.

15.2.8 To understand the change to a heritage asset as a result of the proposed development, a four-point scale will be applied, based upon the following:



Grade	Typical Description/attribute
High	Changes such that the asset and its significance is totally altered or destroyed. Comprehensive change to, or total loss of, elements of setting that would result in harm to the asset and the ability to understand and appreciate its significance.
Medium	Changes such that the asset and its significance is significantly altered or modified. Changes such that the setting is notably different, affecting the significance and resulting in changes in the ability to understand and appreciate the significance of the asset.
Low	Changes such that significance of the asset is slightly altered. Changes to the setting that have a slight impact on significance, resulting in changes in an ability to understand and appreciate the significance of the asset.
Very Low	Changes to the asset that hardly affect significance. Changes to the setting that have little effect on significance, and no real change in an ability to understand and appreciate the significance of the asset.

15.2.9 The overall significance of the effect (whether it is significant or not significant in EIA terms) is determined through the consideration of the value/sensitivity of the asset and the changes which would occur as a result of the proposed development, as summarised in Tables 15.1 and 15.2, above. The assessment is based on a combination of these factors, using the matrix within Table 15.3, below.

		Value/ Sensitivity				
		Very High	High	Medium	Low	Very Low
Change / Magnitude	High	Very Major Adverse / Beneficial	Major Adverse / Beneficial	Major-Moderate Adverse / Beneficial	Moderate-Minor Adverse / Beneficial	Minor Adverse / Beneficial
	Medium	Major Adverse / Beneficial	Major-Moderate Adverse / Beneficial	Moderate Adverse / Beneficial	Minor Adverse / Beneficial	Minor - Negligible
	Low	Moderate Adverse / Beneficial	Moderate-Minor Adverse / Beneficial	Minor Adverse / Beneficial	Minor - Negligible	Minor - Negligible
	Very Low	Minor Adverse / Beneficial	Negligible	Negligible	Negligible	Negligible

15.2.10 Major or moderate effects are considered to be Significant for the purposes of EIA Regulations, in accordance with standard EIA practice. Once the effect has been identified, additional mitigation can be used to offset, reduce or compensate for any significant adverse effects identified. Industry standards maintain that mitigation measures should be implemented where adverse effects of moderate or higher are identified. Reassessing the significance of the effect after applying any additional mitigation allows the level of residual effect to be assessed.

15.2.11 The cumulative impact assessment considers in-combination impacts where the predicted impacts of the proposed development could interact with impacts arising from other plans and / or projects on the same asset based on a spatial and / or temporal basis. For the proposed development, the relevant adjacent projects identified for consideration are summarised and assessed in Appendix 15.5 of this ES.

Study area and scope

- 15.2.12 The purpose of the study area is to ensure appropriate and comprehensive data capture, encompassing all heritage assets (both designated and non-designated), including archaeological sites, historic buildings, conservation areas and registered parks and gardens. All of the data reviewed is detailed within Appendixes 15.1: Gazetteer of Cultural Heritage Assets and 15.2: Heritage Statement, and drawn from Appendix 15.3 Geophysical Survey. Those assets with the potential to be affected by the proposed development have been taken forward for assessment in this chapter. Impacts to heritage assets relate to the existing baseline conditions (as of 2023) and the construction phase and operational phases of the proposed development.
- 15.2.13 The study area for the collation of information on known heritage assets has been defined as a 1km radius from the proposed development site boundary (i.e. 'the site'), which has been judged as appropriate to identify known archaeological assets and assess the potential for the survival of any archaeological remains within the site, given the nature, size and location of the proposed development (see Figure 15.1).
- 15.2.14 Sources of information that have been consulted to establish the current baseline conditions, include the following:
- The Historic Environment Record (HER) dataset (dated February 2024) incorporated into a Gazetteer at Appendix 15.1;
 - The results of the Heritage Impact Assessment (see Appendix 15.2); and
 - The results of the Geophysical Survey (see Appendix 15.3).
- 15.2.15 The cultural heritage assets discussed within this assessment, including designated and non-designated heritage assets, are identified by their unique identification numbers, as assigned by the National Heritage List for England (NHLE) for designated assets and by the HER for non-designated heritage assets. Where any new assets have been identified as a result of the work undertaken to inform the cultural heritage baseline, these have been provided with a unique identification number prefixed with WA and numbered sequentially. All assets are identified within the text using their unique identification number and can be cross-referenced to the tables in Appendix 15.1 of this ES.
- 15.2.16 A geophysical (detailed magnetometry) survey was undertaken to refine and augment the desk-based data. The scope and specification of this conformed to the specification provided by Sophie Laidler, Tyne & Wear Archaeology Officer, in May 2022. The geophysical survey was undertaken in two phases due to ground conditions and crops; the first in June 2022 and the second in November 2022. The results of

these surveys were then combined into a single report (Appendix 15.3: Geophysical Survey Report) and incorporated into the assessment of impact in this chapter (see also Figure 15.2).

15.3 Baseline conditions

15.3.1 The nearest designated heritage asset to the site boundary is the Grade II listed Hylton Grove Bridge (NHLE 1185305; HER 2300), which is located c.375m to the north of the eastern extent of the site. A thorough assessment of impacts on this structure is provided in the 2023 Heritage Impact Assessment prepared by Lichfields. There are no other designated heritage assets recorded within the 1km study area.

15.3.2 Within 1km of the site, there are 42 non-designated heritage assets recorded on the Tyne & Wear HER. These include 29 assets that have since been demolished/excavated and built over, and, therefore, are not at risk of impact from the proposed development (see Appendix 15.1). Of the remaining 13 non-designated heritage assets, two comprise the site of a mine shaft (HER 2609) and areas of ridge and furrow (HER 11731) that may or may not have been built-over. There are also five upstanding assets where intervisibility with the proposed development site is restricted, including Usworth Colliery and associated settlement (HER 365), Waterloo terraced housing (HER 6779), Waterloo Cottage (HER 6780), The Three Horseshoes (HER 16800), and the pre- New Town (including flats at Edith Avenue) (HER 9726).

15.3.3 The remaining six known non-designated heritage assets consist of four post medieval farmsteads outside the site boundary, but with the potential to be indirectly affected by the development in terms of indirect impacts to setting as a result of intervisibility and impacts to their agricultural, rural setting (HER 6775, HER 6776, HER 6777 and HER 6778), and two assets within the site boundary comprising a fifth farmstead, North Moor Farm (HER 6774) and geophysical anomalies of probable archaeological origin identified by the 2022 geophysical survey (WA001; Figure 15.2). The four farmsteads outside the site boundary have been considered in the 2023 Heritage Impact Assessment.

15.3.4 The geophysical anomalies of probable archaeological origin are likely to be of no greater than low value, based on similar features in the study area. North Moor Farm is included within the HER dataset and known from Greenwood's 1820 map. However, historic mapping indicates that the original house at North Moor Farm was to the north of the extant dwelling and that the farmstead was substantially reconfigured after 1896. It has been confirmed that the existing structures are of 20th century origin

and, thus of no value, retaining no historic or architectural significance, and thus North Moor Farm does not require further consideration.

- 15.3.5 The wider area has been subjected to a number of archaeological interventions, associated with planning application proposals in the vicinity (see Appendix 15.5). A number of these have extended to include areas of the site boundary; largely non-intrusive desk-based assessments. The most recent was produced in 2021 in association with overhead line diversions on land at the International Advanced Manufacturing Park (IAMP), impacting an area assessed to have moderate potential for post medieval and modern agricultural remains. The report recommended an archaeological watching brief during intrusive works associated with the overhead cable diversion.
- 15.3.6 Additional works have also been undertaken at the site, including a 2017 geophysical survey as part of the IAMP ONE development that included the eastern extent of the site and recorded possible soil-filled features, field boundaries and traces of former ridge and furrow. This was supported by an archaeological watching brief during ground investigation test pits and a trial trench evaluation that revealed agricultural furrows, but no features of archaeological significance. Other archaeological investigations associated with adjacent developments have included the recording of farmsteads ahead of demolition, including Elliscope Farm and West Moor Farm, both non-designated heritage assets recorded within the Tyne & Wear HER dataset.
- 15.3.7 The 2022 geophysical survey of the site targeted areas not previously subjected to survey or evaluation (Appendix 15.3; Figure 15.2). The results confirmed the potential for the site to retain features of post medieval agricultural origin, as identified within the eastern part of the site subject to previous investigation works, which took the form of former ridge and furrow cultivation features and probable former field boundaries. Two of these respect historic boundaries known from historic Ordnance Survey (OS) mapping.
- 15.3.8 Other anomalies of possible archaeological origin included numerous discrete positive anomalies across the site, which have the potential to be cut and infilled pits or pit clusters, and a group of positive anomalies that appear to include a penannular form within the southern part of the site. The 2022 survey also detected two probable palaeochannels (approximately aligned north to south) across the site, interpreted as likely former braided channels flowing into the watercourse at the northern boundary of the site.

- 15.3.9 It is anticipated that the baseline conditions in the future baseline year of 2066 would remain the same as set out above, though additional non-designated heritage assets of an archaeological nature within the vicinity of the site may be identified through archaeological evaluation and investigation works, and some further farmsteads may require demolition should proposed developments be approved.
- 15.3.10 In summary, having accounted for the desk-based baseline information, the potential cultural heritage receptors (heritage assets) identified as being potentially sensitive to the proposed development are listed in Table 15.4, below.

Table 15.4: Known heritage assets with the potential to be impacted		
Asset reference	Description	Value
HER 6775	Hylton Bridge Farm	Low
HER 6776	Hylton Grove Farm	Low
HER 6777	Strother House Farm	Low
HER 6778	East House Farm	Low
NHLE 1185305; HER 2300	Grade II listed Hylton Grove Bridge	Medium
WA001	Geophysical anomalies of probable archaeological origin	Low

15.4 Assessment of effects

- 15.4.1 A full description of the proposed development is included within Chapter 3 of this ES. The site is 42.39 ha in size and the proposed development includes a factory building for the manufacture of batteries, an assembly and warehouse building for storage and distribution, an office building, ancillary MEP plant rooms, a gatehouse, car parking provision, bicycle and motorcycle shelter, high voltage (HV) substation, landscaping and drainage.
- 15.4.2 The construction phase is anticipated to comprise the removal of topsoil from areas proposed for built development (including roads and parking areas) and construction of the access road(s) into the development plot(s). It is assumed that this will affect the entirety of the area within the site boundary, albeit external boundaries comprising hedgerows may be retained and, therefore, all heritage assets within the site boundary will be directly impacted.
- 15.4.3 Indirect impacts are possible to known heritage assets located to the west, north and east of the site boundary; areas least impacted by modern development and with increased intervisibility.
- 15.4.4 As outlined in Table 15.4, above, a total of six known heritage assets have been identified with the potential to be impacted by the proposed development. For those outside the proposed site boundary, the four post medieval farmsteads and Hylton Grove Bridge (a full assessment for which is included within the supporting Heritage

Impact Assessment), impacts would indirect, affecting their agricultural setting, and would amount to a low level of change (see Table 15.2). This would give an overall significance of effect of minor adverse (Not Significant), at most. The remaining heritage asset is situated within the site boundary and is, therefore, at risk of direct impact, the level of change resulting from the proposed development could result in their loss, and therefore would be high (significant). Impacts to all known heritage assets are included in Appendix 15.1. Table 15.5 below, summarises impacts to the seven identified known heritage assets for which impacts are anticipated.

Table 15.5: Summary of impacts applicable to the seven identified heritage assets				
Asset reference	Description	Value	Change	Significance
HER 6775	Hylton Bridge Farm	Low	Low	Minor adverse/ Negligible (Not Significant)
HER 6776	Hylton Grove Farm	Low	Low	Minor adverse/ Negligible (Not Significant)
HER 6777	Strother House Farm	Low	Low	Minor adverse/ Negligible (Not Significant)
HER 6778	East House Farm	Low	Low	Minor adverse/ Negligible (Not Significant)
NHLE 1185305; HER 2300	Grade II listed Hylton Grove Bridge	Medium	Low	Minor adverse (Not Significant)
WA001	Geophysical anomalies	Low	High	Moderate adverse (Significant)

15.5 Mitigation measures

15.5.1 As set out in Table 15.5, above, significant effects have been identified, potentially applicable to one heritage asset, the geophysical anomalies of probable archaeological origin encountered across the site (WA001). Consultation with the Tyne & Wear Archaeology Officer resulted in the preparation of an approved specification document (see Appendix 15.4) for future trial trench evaluation, supported by a trial trench location plan (Figure 15.2). This aims to provide additional information on the geophysical anomalies (WA001) and other parts of the site to help assess significance and value of the features. It is possible, dependent on the results, that further mitigation measures may be required, although the results of adjacent interventions suggest that this is not likely.

15.6 Residual effects

15.6.1 Taking into account the mitigation strategies as proposed above, the residual impacts of the proposed development on heritage asset subjected to mitigation can be seen lessened because the heritage asset will be permanently preserved by record, accessible in an archive; however, the physical effect of the proposed development will still result in loss, an effect not possible to mitigate against. The residual effects,

therefore, are comparable to the initial effects in terms of archaeology and cultural heritage.

15.7 Cumulative effects

- 15.7.1 It is a requirement of *Schedule 4 of the Town & Country Planning (Environmental Impact Assessment (EIA)) Regulations 2017* that an assessment of the potential for a proposed development to give rise to significant cumulative effects is included. This requires consideration of combination effects of the proposed development alongside other development proposals within the local area.
- 15.7.2 For the proposed development, a number of relevant projects have been identified, assessed individually in terms of effects on archaeology and cultural heritage in Appendix 15.5. This found that for 28 of the 39 identified projects, either no adverse impacts to archaeology or cultural heritage occurred as a result of the other developments or the projects are located beyond the 1km study area and, as a result, these are not considered further.
- 15.7.3 For the remaining eleven, a minor adverse impact occurred, resulting from the loss of features of low value/sensitivity; largely post medieval agricultural features such as furrows revealed by geophysical survey and/or trial trench evaluation, and non-designated post medieval farmsteads recorded on the Tyne & Wear HER dataset. A single shallow ditch containing palaeoenvironmental remains including Alder stemwood charcoal (radiocarbon dated to the Bronze Age) was also recorded prior to removal as a result of IAMP ONE (planning ref. 18/00092/HE4/HER17817). None were considered to be of significant archaeological interest. The resulting effect on significance is, therefore, assessed to be a maximum of minor-moderate adverse and Not Significant in EIA terms. Cumulatively, the loss of a number of individual heritage assets could be considered more significant than that assessed individually, but as most of those lost as a result of neighbouring developments were of post medieval agricultural origin, their lack of rarity and minimal importance in improving our understanding of this period would make the cumulative impact minor adverse (not significant).

15.8 Limitations of study

- 15.8.1 The information obtained from Historic England's datasets and the Tyne & Wear HER dataset (consulted in February 2024) is representative of the known recorded archaeology and cultural heritage resource of the study area. The archaeological potential of the site has been assessed, based on these datasets and on the

geophysical survey results and, thus, is not a truly comprehensive representation of the site's archaeological and cultural heritage resource. Information relating to the inter-visibility of nearby heritage assets with the site boundary have been determined by onsite observations made to inform the 2022 Heritage Impact Assessment.

15.9 Conclusion

15.9.1 The construction phase of the proposed development will result in the loss of one identified heritage asset, a number of geophysical anomalies of probable archaeological origin, and will indirectly affect the settings of four post medieval farmsteads and a Grade II listed road bridge in the wider (1km) study area. These changes would be permanent and continue into the operational phase. The maximum significance of effect would be moderate adverse (potentially applicable to one known non-designated heritage asset), and mitigation measures in relation to this have been agreed and programmed. The results of previous trial trench evaluations have revealed no features of significance that restricted development. It can be concluded from the above that the proposed development would result in **no significant effects in terms of archaeology and cultural heritage.**