



AESC UK

AESC PLANT 3

HABITAT SURVEY

APRIL 2024

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1 INTRODUCTION

1.1 Terms of Reference

- 1.1.1 Wardell Armstrong LLP (WA) was commissioned by AESC UK to undertake an update Habitat Survey in support of a proposed AESC Plant 3, which forms part of the International Advanced Manufacturing Park (IAMP) development Scheme. The site is located along Washington Road, Sunderland (approximate central Ordnance Survey (OS) grid ref: NZ 32934 58939).
- 1.1.2 This report has been produced with reference to current guidelines for UK Habitat (UKHAB) Classification V2 (UKHab, 2023), Guidelines for Preliminary Ecological Appraisal (CIEEM 2017¹) and Biodiversity – Code of Practice for Planning and Development (BSI 2013²).
- 1.1.3 This planning application seeks permission to develop c.42 hectares (ha) of land located within the south-western part of the IAMP site for a battery manufacturing facility, packing and warehouse building for storage and distribution, office building, ancillary MEP plant rooms, gatehouse, substation and carparking provision, with associated drainage and landscaping.
- 1.1.4 Previous ecological surveys and Phase II protected species surveys of the site and the wider IAMP site development have been undertaken by various consultants over the years. This survey has been undertaken to inform will be to inform the Biodiversity Net Gain Assessment and the Ecology Chapter (WA, 2024)

1.2 Scope of Report

- 1.2.1 The purpose of the Habitat and Protected Species Survey is in broad terms to undertake the following:
- Identify and report to the project team the likely ecological constraints associated with a project, such that the site design can adequately take account of ecological features;
 - Identify any mitigation and compensation measures likely to be required, following the ‘Mitigation /Compensation Hierarchy’³;
 - Inform the Biodiversity Net Gain Assessment and the Ecological Impact Assessment (EcIA).

¹ Chartered Institute of Ecology and Environmental Management (CIEEM 2017).

² British Standard BS 42020:2013 (BSI 2013).

³ As defined in BS 42020:2013 (BSI 2013).

- Identify the opportunities offered by a project to deliver ecological enhancement.
- 1.2.2 Certain species, habitats and nature conservation sites receive legislative protection which is detailed fully within Appendix 1. Other species/groups and habitats are notable due to their identification in national and/or local planning policy or via local records. An indicative assessment of potential adverse effects to such receptors is provided, although this is not a substitute for full EcIA (CIEEM 2018) which may be required to fully inform any subsequent planning application along with additional surveys and assessments.

1.3 Site Context

- 1.3.1 The site is situated on land off Washington Road in Sunderland as shown on Figure 12.1 (Site Location Plan).
- 1.3.2 The planning application area comprises species poor neutral grassland and unmanaged modified grassland covering approximately 42.39 hectares (henceforth known as the Application Site). The study site (the Site) includes all land within the Application Site plus additional land 50m from the site boundary, where feasible. The Site is bounded to the north by the Usworth Burn LWS and to the west and south by hedgerows. The irregular boundary to the east is generally unmarked. The AESC Plant 2 is located immediately adjacent to the application area to the southeast, with open arable and pastoral farmland dominating the wider landscape.

1.4 Description of Development

- 1.4.1 This planning application seeks permission to develop 42.39 hectares (ha) of land located within the south-western part of the IAMP site for a battery manufacturing facility, packing and warehouse building for storage and distribution, office building, ancillary MEP plant rooms, gatehouse, substation and carparking provision, with associated drainage and landscaping.

1.5 National Planning Policy Framework (NPPF)

- 1.5.1 The NPPF⁴ requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan.

⁴ <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (last updated December 2023).

In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological that are more resilient to current and future pressures.

2 METHODOLOGY

2.1 Desk Study

2.1.1 The desk study was informed by review of existing available information provided by Ecological Records and Information Centre North-east (ERIC – North-east) and from available internet-based resources for a 2km search radius from the Site boundary. The search area was extended to and 10km for statutory sites designated for bats. Ordnance Survey (OS) and satellite mapping was also used to gain contextual habitat information.

2.1.2 Specific information was sought for:

- Statutory designated sites⁵;
- Locally designated sites;
- Ancient woodland⁶;
- Protected and priority species;
- Priority (s.41) Habitats and Species⁷;
- Local Biodiversity Action Plan (LBAP) priority habitats and species.

2.1.3 The ecological desk study was carried out by a competent Ecologist who is a full member of CIEEM, who has completed numerous ecological desk studies within the last 20 years.

2.2 Extended UKHab Classification Survey

2.2.1 WA carried out an update UK Habitat (UKHab) Classification Survey of the Site on 13th September 2023 and 10th April 2024. The survey was carried out by experienced WA ecologists. The survey was completed by a full and qualifying members of CIEEM, who have completed numerous ecological habitat surveys..

2.2.2 The survey followed the ‘UK Habitat Classification Version 2’ (UKHab 2023) methodology with each of the main habitats classified according to the relevant criteria including vegetation composition expressed according to the DAFOR⁸ system.

⁵ Locations provided by MAGIC <http://magic.defra.gov.uk/MagicMap.aspx>

⁶ As defined by Natural England in their Inventory of Ancient Woodlands http://www.naturalengland.org.uk/pubs/gis/tech_aw.htm

⁷ As defined under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

⁸ D = dominant, A = abundant, F = frequent, O = occasional, R = Rare

Five quadrats were taken within each habitat parcel to accurately assess species richness and diversity.

- 2.2.3 In addition to the mapping and description of habitats, the survey was ‘extended’ to include the incidental observations of protected and/or notable species and the potential for such species to occur on Site (and in the surrounding landscape where relevant) were also recorded onto secure digital media for mapping and data collection. The extended element of the survey was based on professional judgement.
- 2.2.4 Specific habitat features are mapped on Figure 12.4 (Habitat Plan) with appropriate reference numbers identifying features of particular note.

2.3 Evaluation and Assessment of Features

- 2.3.1 Evaluation of the importance / likely importance of ecological features and the likelihood of impacts affecting important features was made, where possible, using professional judgement in accordance with published guidance (CIEEM 2017).
- 2.3.2 Protected and s.41 species were evaluated in order to identify potential adverse effects in Table 2, based on the following criteria:
 - Desk study records;
 - Evidence found during the survey;
 - Presence, extent, quality and viability of suitable on-site habitat;
 - Ecological connectivity to viable off-site habitats; and
 - Perceived impacts of habitat loss/impact to individuals in relation to proposals.
- 2.3.3 A ‘traffic light’ system is used in Tables 1, 2 and 3 to highlight potential constraints and opportunities whereby:
 - **Green:** No constraint or limited constraint unlikely to be of planning and/or legal significance.
 - **Amber:** Potential constraints which require further survey and/or mitigation and may be of planning and/or legal significance depending on the outcome of further survey/assessment.
 - **Red:** Constraints which have already been identified by the PEA survey/desk-based assessment and are likely to be of planning and/or legal significance.

2.4 Nomenclature

2.4.1 Vascular plant names follow '*New Flora of the British Isles*' (Stace 2019) with vernacular names as provided in the Botanical Society of the British Isles website (BSBI, 2013)⁹. All other flora and fauna names following the National Biodiversity Network (NBN) Atlas (NBN Atlas Partnership, 2021). The common and scientific name of species/taxa is provided (if available) when first mentioned in the text, with only the vernacular name referred to thereafter.

2.5 Limitations / Deviations

- 2.5.1 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in September and, therefore, represents a valid sample of ecological evidence present on that date/season. The report is not designed, nor is it required to present a complete inventory of flora/fauna.
- 2.5.2 The absence of desk study records is not relied upon to determine absence of a particular species/habitat. Often, the absence of records is a result of under-recording within the given search area and as such the experience of the ecologist concerned together with a range of additional factors, in particular the presence/absence of potentially supporting habitat; is used to infer likely presence/absence of ecological receptors.

2.6 Quality Assurance & Environmental Management

- 2.6.1 The surveys and assessments have been overseen by and the report checked and verified by a full member of CIEEM, who is bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in British Standard BS 42020, and as stated within specialist guidance, as appropriate and referenced separately.

⁹ <http://rbg-web2.rbge.org.uk/BSBI/intro.php>

3 RESULTS AND EVALUATION

3.1 Statutory and Non-Statutory Designated Sites

- 3.1.1 Desk study results for designated sites are evaluated in Table 1, below.
- 3.1.2 Designated sites which are considered potentially sensitive to the development proposals by virtue of their supported species or habitat assemblages, the distance/ecological connectivity to the Site and the nature of the perceived impacts are discussed in detail in the final sections of the report.
- 3.1.3 Designations for which potential adverse effects are not anticipated are excluded from further assessment.

Table 1: Designated Sites Evaluation

Site Name and Status ¹⁰	Distance and direction from Site	Reason for Designation/identification	Potential Constraints
Durham Coast SAC	7.6km NE	The SAC is designated on account of the presence of the Annex I habitat Vegetated Sea Cliffs of the Atlantic and Baltic Coasts.	The application site lies wholly outside the designated site by a significant distance (greater than 7km). Additionally, there is considered to be no ecological connectivity between the sites. No direct negative effects will occur; however, indirect effects may occur as a result in changes to air quality through the operation phase.
Northumbria Coast SPA	7.3km E	The SPA is classified for the presence of breeding populations of little tern <i>Sterna albifrons</i> , and overwintering turnstone <i>Arenaria interpres</i> and purple sandpiper <i>Calidris maritima</i> .	The application site lies wholly outside the application by at least 7km. No suitable breeding habitat or over-wintering habitat for qualifying bird species is present within the application area. Therefore, no adverse effects are considered likely.
Northumbria Coast Ramsar Site	7.3km E	The reasons given for designation are similar to that of the SPA (i.e. that the site supports internationally important wintering populations of turnstone and purple sandpiper).	
Durham Coast Site of SSSI	7.3km E	The SSSI is designated variously for its considerable biological, geological and physiographic interest. It contains most of the para-maritime Magnesian Limestone vegetation in Britain, as well as a species-rich dune system, and supports nationally important numbers of wintering shore birds and breeding little terns which contribute to the internationally important populations of the northeast coast.	The application site lies wholly outside the designated site by at least 7km. Additionally, there is considered to be no ecological connectivity to the application area. Given the distance from site there is no direct negative effects. However, indirect effects may occur as a result in changes to air quality during the operation phase.

¹⁰ **SPA** – Specially Protected Area, **SAC** – Special Area for Conservation, **Ramsar** – site designated under the Ramsar Convention, **SSSI** – Site of Special Scientific Interest, **NNR** – National Nature Reserve, **LNR** – Local Nature Reserve.

Table 1: Designated Sites Evaluation

Site Name and Status ¹⁰	Distance and direction from Site	Reason for Designation/identification	Potential Constraints
Usworth Burn LWS	Parallel to the northern boundary.	A tributary of the River Son south.	Whilst adjacent to the site, the burn is located wholly outside the designated area and the development site will be over 20m distant. A buffer area of vegetation is proposed within the development, so no direct impacts are considered likely. However, indirect effects such as pollution from site clearance works may occur without appropriate mitigation.
Barmston Pond LNR, LWS	0.9.km S	A large subsidence pond lying amongst pasture with an extensive rush dominated marsh border, and many submerged plants. The wetland and grassland areas have been enhanced by recent management, while planting to the east has also provided extra cover for many nesting and wintering birds. The pond is noted for attracting migrant wading birds, while its population of great crested newts is also of particular interest.	The site is located wholly outside the designated area and is at least 0.9km distant. The site is also separated by the A1290 road leading from the A19 and is considered a major barrier to dispersal. The range of habitats present on site are not considered to be of value to migrant wading birds. Given the distance from the application, the separation by a major barrier and the general unsuitability for migrant wading birds no negative effects are considered likely.
Hylton Dene Tilesheds LNR, LWS	1.9kmSE	Ancient woodland and wildflower Meadows.	The site is located wholly outside the designated area at al least 1.9kn distant. The site is also separated by the A19 road corridor The Gateshead community college and the AESC Plant 2 development. Given the distance from site and the lack of ecological connectivity no significant effects are considered likely.
Elliscope FarmEast/Hylton Bridge LWS	0.52km NE	The LWS consists of two small woodlands and the linking section of the River Don, leading east from Hylton Bridge Farm. Elliscope Farm East is a linear, mature broadleaf plantation dominated by sycamore, with ash and elder. The understorey has bramble and species-poor neutral grassland.	The site is located wholly outside the designated area by at least 0.52km, so no direct impacts are considered likely. The site is however ecologically connected by the Usworth Burn a tributary of the River Don. Indirect effects such as pollution from site clearance works may occur without appropriate mitigation.

Table 1: Designated Sites Evaluation

Site Name and Status ¹⁰	Distance and direction from Site	Reason for Designation/identification	Potential Constraints
River Don LWS	0.41km N	<p>The River Don LWS consists of the two kilometre stretch of the River Don between Hylton Bridge and the disused Wardley to Washington rail line. In places the river has been deeply cut and embanked, in order to drain the farmland. The river increases noticeably in size downstream of the inflow from the Usworth Burn. The aquatic vegetation has few species; stands of branched bur-reed are the main emergent, with some soft rush, reed canary grass and yellow flag. Water cress, water mint and water starwort are present along the length of the river.</p>	<p>The site is located wholly outside the designated area by at least 0.4km, so no direct impacts are considered likely. The site is however ecologically connected by the Usworth Burn a tributary of the River Don. Indirect effects such as pollution from site clearance works may occur without appropriate mitigation.</p>
Usworth Pond LWS	0.70km W	<p>A shallow, well established, mining subsidence pond is fringed with emergent vegetation and provides a habitat for breeding birds and a staging post for migrant birds. Amphibians are well represented, as are invertebrates.</p>	<p>The application site is located at least 0.7km distant. Given the distance from the application, and the general unsuitability of habitats on site for migrant wading birds no negative effects are considered likely.</p>
Severn Houses LWS	0.45km SW	<p>The site includes an elongated subsidence pond located within old ridge and furrow pasture which is locally dominated by gorse scrub and is particularly notable for a large population of great crested newt which is present together with other amphibians.</p>	<p>The site is located at least 0.45 km from the designated site and separated by the A1290 which is considered to be a major barrier to dispersal. No negative effects are considered likely.</p>
Peepy Plantation LWS	0.4km S	<p>A mature plantation with interesting woodland flora and fauna is also notable for invertebrate and woodland birds.</p>	<p>The site is located at least 0.4km to the south beyond industrial development with limited connectivity. No negative impacts are considered likely.</p>
Hylton Plantation LWS	0.83km SE	<p>A mixed plantation dominated by coniferous trees with scattered broad-leaved trees. Trees and scrub provide shelter for a thriving woodland bird community.</p>	<p>The site is located wholly outside the designated area and is at least 0.83km distant. The site has limited connectivity to the site and is</p>

Table 1: Designated Sites Evaluation

Site Name and Status ¹⁰	Distance and direction from Site	Reason for Designation/identification	Potential Constraints
			separated by the A1290. No negative effects are considered likely by the proposed development.
Follingsby Pond/River Don Streambank/River don LWS	0.78km NW	Pond and stream habitats of particular botanical interest exhibit luxuriant flora associated with steep clay river banks and overhanging crack willow. The SNCI is partly located within Gateshead and South Tyneside MBC's.	The site is located wholly outside of the designated area and is at least 0.78 km distant. The designated site lies upstream of the application site and therefore no direct or indirect impacts to the section of the River Don is considered likely.
Wardley Colliery LWS	0.97km NW	A former colliery site mostly comprising a large raised area of colliery spoil. It's the largest early successional brownfield site in South Tyneside. The site is largely naturally regenerated but supports some planted trees. Site supports wall brown, and dingey skipper butterflies which are s.41 species of principle importance.	The application site is located wholly outside the designated area and 1km distant, therefore no direct impacts shall occur. Although there is good connectivity between the site and the colliery LWS, given the distance of the proposed works no indirect effects are considered likely.
Strother House farm LWS	0.9km N	The LWS is situated to the north of Strother House Farm and occupies an area of marshy ground approximately 0.3 ha in extent, bound by a ditch to the south and east. The candidate LWS qualifies as a LWS as it meets the definition of lowland fen habitat.	No direct impacts will occur as the application site lies wholly outside the designated area. No indirect impacts are likely to occur due to lack of hydrological connectivity. No negative effects are considered likely.
Make me Rich Meadow LWS	1.4km NE	The site comprises damp species rich meadow adjacent to (and includes a section) of the Rove Don, located between the A19 and the A184. The lowland meadow is a Durham BAP Habitat and the river done supports water vole and otter.	No direct impacts shall occur as a result of the proposed development, however as the designated stretch of the River Don lies downstream of the application area, indirect effects may occur as a result of the site works without appropriate mitigation.
Bolden Lake LWS	2km NE	A man-made lake with species rich damp grassland immediately adjacent. Both the lake and the grassland are Durham BAP priority habitats of principle importance.	The site is located wholly outside of the designated area. No direct impacts are considered likely. Given the distance of the designated area from site no indirect effects are considered likely to occur. No negative effects are anticipated.

Table 1: Designated Sites Evaluation

Site Name and Status ¹⁰	Distance and direction from Site	Reason for Designation/identification	Potential Constraints
Mount Pleasant Marsh LWS	1.7km NE	Mount Pleasant Marsh is within the grounds of an electricity substation and is the setting for the Bolden Environmental Education Centre. The site supports ponds, species rich damp grassland, and fen habitats.	The site is located outside the designated area and is at least 1.7km distant. No direct impacts shall occur as a result of the proposed development. The site is separated from site by a series of agricultural fields and the A19 corridor. No direct impacts are also considered likely as a result of the proposed development.
Downhill Old Quarry LWS	1.8km NE	A former magnesian limestone quarry which is shown on OS maps from 1855. The site support exposed limestone cliff, magnesian limestone grassland and broadleaved woodland.	The site lies 1.8km distant from the designated area and separated from site by A19 corridor. No director indirect impacts are anticipated as a result of the proposed works.
Downhill Meadows LWS	1.7km E	The site incorporates large areas of calcareous grassland with areas of tree planting, rank neutral grassland and small amounts of scattered scrub.	The site lies 1.7km distant from the designated area and separated from site by A19 corridor. No director indirect impacts are anticipated as a result of the proposed works.
Wear Riverbank Woods LWS	2km S	The steep slopes of the River Wear Valley support areas of mixed deciduous woodland of considerable nature conservation interest. The structure and canopy of the numerous woodlands including their ground floras vary according to the type of soil (predominantly calcareous) and their position above the river, producing a rich and varied collection of plant communities.	The application site lies 2km from the designated area and the site has no hydrological connections to the River Wear. The site is separated by industrial buildings and the A1290 bypass. No direct or indirect impacts are considered likely as a result of the proposed development.
Calf Close Burn LWS	2km N	Calf Close Burn is a linear site that follows the course of a small burn as it flows across agricultural land towards the Fellgate Estate. The site supports lowland Fen vegetation, a Durham BAP priority habitat.	Located at least 2km distant from the application site and separated from site by Follingsby Lane and the A18 with no hydrological connections. No direct or indirect impacts are considered likely as a result of the proposed development.

3.2 Habitats

- 3.2.1 All habitats within the Site are described in Table 2, below, together with an indication of their s.41 status and status and reference within the Durham Local BAP¹¹.
- 3.2.2 Habitats which could be subject to adverse effects (amber or red) are discussed in the latter sections of the report. Habitats for which potential adverse effects are not anticipated are excluded from further assessment. The location and extent of habitats are shown on Drawing Number Figure 12.4 (Habitat Plan).

¹¹ <https://www.durham.gov.uk/article/3918/Biodiversity>

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Other Neutral grassland</u> <p>A large proportion of the site to the north supports species poor – other neutral grassland habitat. The fields have been left unmanaged for at least 18 months. The fields support abundant Yorkshire fog, frequent perennial rye-grass <i>Lolium perenne</i>, crested dog's-tail <i>Cynosurus cristatus</i>, creeping buttercup <i>Ranunculus repens</i>, Timothy <i>Phleum pratense</i>, dandelion <i>Taraxacum agg</i>, and occasional ribwort plantain <i>Plantago lanceolata</i>, hogweed <i>Heracleum spondylium</i>.</p> <p>A corner of landscaped other neutral grassland (part of AESC Plant 2 development) which falls within the redline boundary is present to the eastern edge of the site. This grassland habitat comprises cock's-foot <i>Dactylis glomerata</i>, creeping bent <i>Agrostis stolonifera</i>, with frequent perennial rye-grass, false oat-grass <i>Arrhenatherum elatius</i>, and has been planted with scrub whips of gorse <i>Ulex europaeus</i>, and hawthorn <i>Crataegus monogyna</i>.</p>	<u>Primary Code</u> Other neutral grassland (g3c) <u>Secondary code</u> Mesic (501) Unmanaged (521) <u>Secondary codes</u> Scattered Scrub (10) Unmanaged (521)		None.	<p>The majority of this habitat shall be lost to accommodate the proposed development, however, this habitat is common and widespread in a local and national context.</p> <p>Any losses of grassland habitat shall be accounted for within the Biodiversity offsetting matrix.</p>

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Other Neutral grassland</u> Large stands of tall herbs are present along the banks of the Usworth Burn and comprise frequent common nettle <i>Urtica dioica</i> , creeping thistle <i>Cirsium arvense</i> , great willowherb <i>Epilobium hirsutum</i> , Himalayan Balsam <i>Impatiens glandulifera</i>	<u>Primary code</u> Other neutral grassland (g3c) <u>Secondary code</u> Tall forbs (16) Unmanaged (521)		None.	The majority of this habitat shall be retained within the proposed development. No negative effects are considered likely. Any losses of tall herbs grassland habitat shall be accounted for within the Biodiversity offsetting matrix.

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Modified grassland</u> An area of formerly modified grassland is situated in fields to the south of the site and comprises abundant perennial rye-grass and frequent soft brome. The grassland has been left in an unmanaged state and has become colonised by frequent spear thistle <i>Cirsium vulgare</i> , creeping thistle <i>Cirsium arvensis</i> and occasional common ragwort <i>Senecio jacobaea</i> to the southwest of the Site.	<u>Primary Code</u> Modified grassland (g4)		None.	This habitat may be partially lost to facilitate the proposed development.

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Line of Trees</u> Two lines of mature trees are present within the site. One line of trees is located along the western boundary and comprises Ash <i>Fraxinus excelsior</i> , elm sp <i>Ulmus</i> sp, crack willow <i>Salix fragilis</i> , Sessile Oak <i>Quercus petraea</i> , and Field maple <i>Acer campestre</i> . A second line of trees was located within an internal field boundary to the north of the site and comprises a line of semi-mature elm trees.	<u>Primary code</u> Other broadleaved woodland (w1g) <u>Secondary codes</u> Ecologically Valuable Line of trees (34) Native (47)		None.	The line of trees along the western boundary shall be retained. The line of trees along the internal field boundary shall be lost to development. Any losses of trees shall be accounted for within the BNG metric.

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Hedgerows with trees</u> Twelve hedgerows (H1-H12) were recorded within the application area. The majority were supporting standard trees. A full description of Hedgerows is given in Appendix 2.	<u>Primary code</u> Native Hedgerow (h2a) Secondary codes Native (47) Hedgerow with Trees (11)		s.41/LBAP Priority Habitat	All peripheral hedgerows shall be retained and incorporated into the proposed development scheme. However, the internal field boundary hedgerows shall be lost to development. Resulting in a loss of priority habitat of principle importance.
<u>Scrub</u> Dense and scattered scrub is present along the Usworth Burn. Scrub comprises hawthorn, blackthorn <i>Prunus spinosa</i> , crack willow, elder <i>Sambucus nigra</i> and bramble <i>Rubus fruticosus</i>	<u>Primary code</u> Mixed scrub (h3h)		LBAP Priority Habitat	The scrub and habitat immediately adjacent shall be retained.

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
				
<u>Ditches</u> Eight ditches (D1-D8) are present on site of which four were dry Ditch 1 (D1) was located to the north of Northmoor Farm. The ditch was approximately 1m wide at the base with shallow turbid water and steep banks. The Southern bank was heavily shaded by the mature hedge and the northern most embankment was vegetated with species poor neutral grassland which extended from the field margins. Ditch descriptions are provided in Appendix 3.	<u>Primary code</u> Standing open water and canals (r1) <u>Secondary Code</u> Ditch (191)		None.	All peripheral hedgerows shall be retained and incorporated into the proposed development scheme. However, the internal field boundary ditches shall be lost to development.

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Usworth Burn</u> A tributary of the River Don runs along the northern boundary of the site. The stream is heavily shaded by dense and scattered scrub and tall bankside vegetation comprising common nettle, great willowherb, creeping thistle, false oat-grass and field bindweed <i>Convolvulus arvensis</i> . The channel is approximately 1m wide with slow to moderate flowing water. The water flows west to east.	Priority Habitat Other rivers and streams (r2b)		s.41 Priority Habitat	The Usworth burn corridor lies immediately outside the boundary of the site and shall be retained with a suitable buffer. No direct impacts are anticipated as a result of the proposed works. Indirect effects such as pollution will occur without mitigation.

Table 2: Habitat Descriptions and Evaluation

Habitat Description	UK Hab Classification	Photograph	Local BAP/s.41	Potential Constraints
<u>Standard Trees</u> Standard trees are present along the Usworth burn and are present as a component of the mature hedgerows on site. Species comprise oak sp <i>Quercus</i> sp, ash, sycamore, elm and field maple.	<u>Secondary code</u> Scattered trees (11) Mature Tree (203)		None.	Some mature trees shall be lost as result of clearance of internal hedgerow boundaries. These shall be covered by hedgerow removal. Other mature trees along the Usworth Burn shall be retained and incorporated into the proposed landscape scheme. Any losses of mature trees shall be accounted for within the BNG metric.
<u>Artificial unvegetated, unsealed surface</u> Newly created gravel vehicle routes have been laid throughout grassland fields to provide access for the disconnection and relocation of existing electricity pylons. The hard standing access tracks and vehicle routes divide the larger grassland fields. Areas of bare ground are present where the North Moor Farm has been demolished (Previous bat roost and barn owl suitability provided within Appendix 4 for context).	<u>Primary code</u> (u1c) <u>Secondary Code</u> Track (839)		None.	The hard standing gravel access tracks and bare earth areas are likely to be temporary in nature. These areas are of negligible ecological value.

3.3 Species

- 3.3.1 A search for badger activity/setts was carried out during the habitat assessment. No evidence of badgers in the form of setts or other activity was recorded within the application site. This validates results of previous surveys of the IAMP sites that have been undertaken by various consultants since 2014.
- 3.3.2 Ten trees were recorded within the application area with features that are considered suitable for roosting bats. The features of interest are detailed within Appendix 4 and the locations of the trees are provided on NT16249 / Figure 12.5 (Bat Roost Suitability).

4 REFERENCES

- Botanical Society of the British Isles (2013) *Online atlas of the British and Irish Flora*. <https://plantatlas.brc.ac.uk/>
- British Standards Institute (2013) *Biodiversity – Code of Practice for Planning and Development*. BS 42020:2013.
- Institute of Environmental Assessment (1995) *Guidelines for Baseline Ecological Assessment*.
- CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.
- National Biodiversity Network (2017) *NBN Atlas* <http://data.nbn.org.uk/>
- Stace. C. A. (2021) *New Flora of the British Isles*. Cambridge University Press.
- UKHab Ltd (2023). UKHab Habitat Classification Version 2.0. Available from: <https://www.ukhab.org>

APPENDICES

Appendix 1
Legislation and Policy Summary

Appendix 1 – Legislation and Policy Summary

Legislation for Habitats/Sites

Designated Site/Habitat	Status
Ramsar Sites	Ramsar Sites are wetlands of international importance designated following the Ramsar Convention. RAMSAR sites have the same level of protection as SACs and SPAs under the Wildlife and Countryside Act 1981 (as amended).
SPA (Special Protection Areas)	SPAs seek to protect the habitats of rare and vulnerable European and UK birds. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) protect such sites in the UK.
SAC (Special Areas for Conservation)	SACs are strictly protected areas which represent important and threatened habitats in Europe and the UK. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) protect such sites in the UK.
SSSI (Sites of Special Scientific Interest)	SSSIs protect the best examples of the UK's flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were renotified under the Wildlife and Countryside Act 1981 (as amended). Modified provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000.
NNR (National Nature Reserves)	NNRs are examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981 (as amended). Legal protection of NNRs is provided under the Wildlife and Countryside Act 1981 (as amended).
Hedgerows	All hedgerows are protected by the Hedgerows Regulations 1997, under which it is an offence to remove or destroy certain hedgerows without planning consent or permission from the Local Planning Authority. These regulations do not apply to any hedgerow within the curtilage of, or marking the boundary of the curtilage of, a dwelling house.
LNR (Local Nature Reserves)	Designated by the National Parks and Access to the Countryside Act 1949, LNRs may be declared for nature conservation by local authorities after consultation with the relevant statutory nature conservation agency. Legal protection of LNRs is provided under the Wildlife and Countryside Act 1981 (as amended).

Legislation for Species

Species	Legal Status
Creeping Marshwort, Early Gentian, Fen Orchid, Floating-leaved Water Plantain, Killarney Fern, Lady's Slipper, Shore Dock, Slender Naiad, Yellow Marsh Saxifrage	Under the Conservation of Habitats and Species Regulations 2017 (as amended), it is illegal to deliberately pick, collect, uproot or destroy any such species.
Bats, Dormouse, Otter, Wild Cat, Great Crested Newt, Natterjack Toad, Sand Lizard, Smooth Snake, Large Blue Butterfly	<p>These animals and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended), which makes it illegal to:</p> <ul style="list-style-type: none">• Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs;• Deliberately disturb¹² such an animal; and• Damage or destroy a breeding site or resting place of such an animal. <p>European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely:</p> <ul style="list-style-type: none">• The development is for reasons of overriding public interest;• There is no satisfactory alternative; and• The favourable conservation status of the species concerned will be maintained and/or enhanced. <p>LPAs must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.</p>
Bats, Dormouse, Great Crested Newt, Heath Fritillary, High Brown Fritillary, Large Blue, Marsh Fritillary, Natterjack Toad, Pine Martin, Otter, Red Squirrel, Sand Lizard, Smooth Snake, Swallowtail, Water Vole, Wildcat	<p>These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal (subject to certain exceptions) to:</p> <ul style="list-style-type: none">• Intentionally kill, injure or take any such animal;• Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection; and

¹² Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

Species	Legal Status
	<ul style="list-style-type: none">• Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Adder, Common Lizard, Grass Snake, Slow Worm, White-clawed Crayfish	These animals receive partial protection under the Wildlife and Countryside Act 1981 (as amended), which provide protection against intentional killing or injury of any such animal.
Nesting Birds	All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal (subject to exceptions) to: <ul style="list-style-type: none">• Intentionally kill, injure or take any wild bird;• Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Wildlife and Countryside Act 1981 (as amended) Schedule 1 listed Birds	Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.
Badgers	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger or attempt to do so and to intentionally or recklessly interfere with a Badger sett. This includes: <ul style="list-style-type: none">• damaging or destroying an active sett;• obstructing access to a sett; and• disturbing a Badger while it is occupying a sett. Licences can be granted to permit sett closure and/or disturbance between July and November inclusive (i.e. outside the sow pregnancy/birth period).
Wild Mammals	The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals (as defined by the act) against the following actions: mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
Wildlife and Countryside Act 1981 (as amended) Schedule 9 listed invasive animals (Part 1) and plants (part 2)	Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife and Countryside Act 1981 (as amended) prohibits the release or allowed escape of animals listed in Schedule 9 to the Act and planting, or allowed growth, of any plant listed in Schedule 9 to the Act.

Policy Summary

Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to ‘have regard’ to the conservation of biodiversity when considering planning applications.

Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF).

The NPPF underpins the Government’s planning policies for England and how these are to be applied. The central theme of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF states:

When determining planning applications, local planning authorities should apply the following principles:

- *If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶³ and a suitable compensation strategy exists; and*

- *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*
- *The following should be given the same protection as habitats sites:*
 - a) *potential Special Protection Areas and possible Special Areas of Conservation;*
 - b) *listed or proposed Ramsar sites; and*
 - c) *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

The NPPF requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Appendix 2 – Hedgerow Descriptions

Hedge Number	Description
H1	Mature hedge with trees, greater than 30 years old. 4m high and 2.5m wide. Comprises abundant hawthorn, and occasional blackthorn, elder and dog rose. Mature tree species present include elm spp., sessile oak ash and field maple. Hedge bottom flora includes false oat-grass, cock's-foot, hogweed, common nettle and bramble. Dry ditch beneath
H2	Mature hedge, greater than 30 years old with standards greater than every 50m, with elm, hawthorn and mature sycamore trees. Hedge bottom flora comprises false oat-grass, cock's-foot, creeping thistle and bramble. Wet ditch beneath.
H3	Mature hedge with standards greater than every 50m. Comprises hawthorn, elm with ash and elm trees. Hedge bottom flora comprises false oat-grass, cock's-foot and bramble. Wet ditch beneath.
H4	Mature hedge with hawthorn. Hedge bottom flora comprises false oat-grass, cock's-foot, creeping thistle and bramble. Dry ditch beneath
H5	Mature hedge, greater than 30 years old. No ditch and no trees, supports ubiquitous hawthorn. 3.5m high x 2.5 m wide. Hedge bottom flora comprises common couch, hogweed, common nettle, and cow parsley.
H6	A recently planted (young) hedge comprising hawthorn, guelder rose and blackthorn. Tree guards still present. No ditch and no standard trees.
H7	A recently planted edge which comprises hawthorn, guelder rose, hazel and blackthorn. Tree guards still present.
H8	Mature hedge, greater than 30 years old with standard trees. The unmanaged hedge comprises hawthorn, elder, dog rose with mature crack willow trees. Ditch beneath.
H9	Newly planted hedge with hawthorn, blackthorn, guelder rose and willow sp.
H10	Mature hawthorn hedge, greater than 30 years old with mature standard trees. Mature trees comprise ash and sycamore. Dry ditch beneath.
H11	Mature hedge with occasional standard trees along A1290. The hedge is gappy 2.5m high x 2m wide. Species comprise abundant hawthorn with occasional dog rose and sycamore trees. Hedge bottom flora comprises false oat-grass, cock's-foot, common ragwort, hogweed and creeping thistle.
H12	A short section of hedge (approximately 100m) along southern end of western boundary. Hedge is mature hawthorn with sycamore. Hedge bottom flora comprises false-oat-grass and bramble. Dry ditch present along hedge.

Appendix 3 – Ditch Descriptions

Ditch Number	Description
1	The ditch was approximately 1m wide at the base with shallow turbid water and steep banks. The Southern bank was heavily shaded by the mature hedge and the northern most embankment was vegetated with species poor neutral grassland which extended from the field margins. The ditch is culverted beneath the field access track but opens up again and continues beyond.
2	Dry ditch beneath tree and hedge line. No evidence of recently holding water. channel is less than 1m wide at the base, with bare earth due to overshading and common nettle, bramble.
3	Wet ditch beneath mature hedgerow with trees. The ditch is less than 1m wide at the base with steep banks more than 1m high. Bank tops are lined with young willow scrub, bramble, false oat-grass and common nettle and great willowherb in more open areas.
4	Wet ditch overshadowed by mature hedge with trees. The channel is less than 1m wide with steep bare earth banks. Some dense bramble scrub in places.
5	Dry ditch alongside hedgerow with trees. A continuation of D2. Ditch heavily shaded by dense bramble scrub and common nettle.
6	Dry Ditch along side mature hedge with trees. Channel less than 1m wide at the base with bare earth and occasional common nettle. The Southern bank supports a mature hedge with trees, the northern bank supports unmanaged modified grassland which extends on to bank top.
7	A partially wet and partially dry ditch. The channel is generally dry and overshadowed by mature hedge and scrub. A cleared section of hedge and ditch approximately 15m long supports water.
8	Newly created dry ditch, within open field.

Appendix 4 – Building Descriptions and Summary of Bat Roost Suitability and Barn Owl Roosts

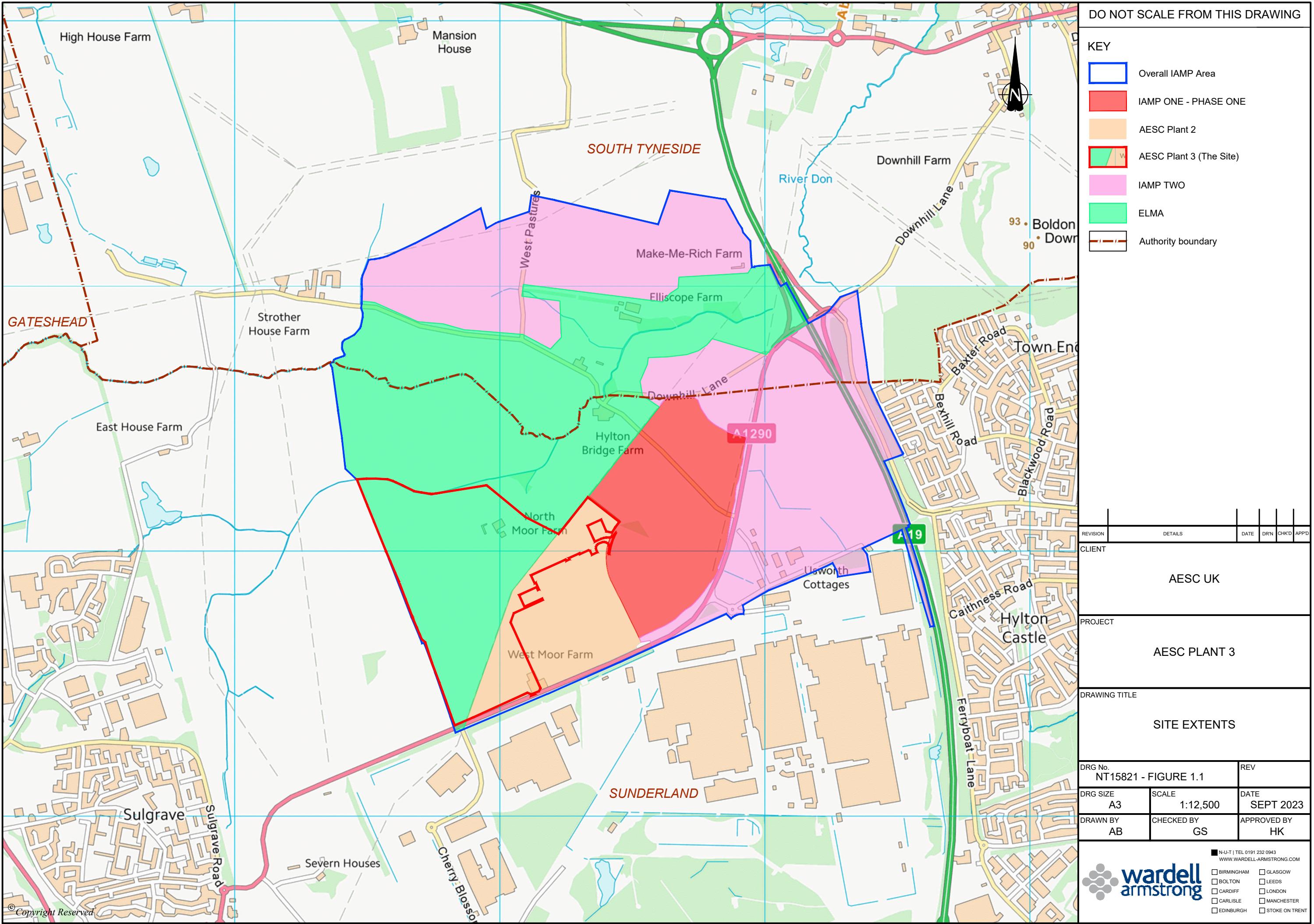
Building Number	Building Number in Previous Report (DWS, 2022)	Building Description	Features of Interest for Bats	Barn Owl Roost (confirmed by DWS, 2002)	Confirmed roost in 2021	Suitability
B1	B5	Single story bungalow with pitched roof covered in clay tiles. With timber and plastic fascia boards on the gable ends and soffit boxes at the wall roof junction. Brick walls are generally in good condition and all windows and doors are boarded with steel sheeting. A single story flat roofed extension is also present with bituminous roofing felt and fascia boards.	<ul style="list-style-type: none"> • Gaps at gable end • Gaps beneath slipped roof tile • Gaps beneath ridge tiles • Gaps beneath fascia boards and soffits • Gaps beneath fascia and bituminous roofing felt on the extension/lean-to. 	No	No	Moderate
B2	B2	A large steel framed open fronted barn. The pitched roof and sides are covered in corrugated steel sheets, with clear plastic sheets providing natural internal light. The building is currently in use as a workshop/storage area. Internally clear plastic sheeting in the roof provides high internal light levels. Visible birds nests are visible between girders and steel sheeting.	n/a	Yes	No	Negligible
B3	B3	Former Stables now unoccupied. A single-story L-shaped building with a flat bituminous felt covered roof. Beneath the felt is plyboard sheeting. Roofing felt is ripped and torn in many places causing water damage. Where roof is missing wall plate is exposed. Stable doors are missing	<ul style="list-style-type: none"> • Beneath roofing Felt • Gaps within exposed wall plate 	Yes	No	Low

Appendix 5 – Tree Schedule with Features Suitable for Roosting Bats

Tree number	Species	Age	Feature of Interest	Suitability Score
T1	Crack willow	Mature	Peeling bark, fissure and splits in main trunk	Moderate
TG2	Crack willow	Mature	Peeling bark, fissures in main trunk and branches	Low
TG3	Crack willow	Mature	Fissures and splits within the trunk and branches	Moderate
T4	Ash	Mature	Tree with ash dieback. Cavity present within ringed callus at approximately 5m.	High
T5	Field maple	Mature	Standing dead wood, peeling bark and decay in upper limbs	Moderate
T6	Elder	Early mature	Decay and cavities in main branch. Fractures in branches.	Moderate
T7	Hawthorn	Mature	Decay in cavity within main trunk, small fracture at 2m.	Low
TG8	Crack willow	Mature	Two mature trees with fissures in main trunks.	Low
T9	Ash	Mature	Fracture in upward pointing branch.	Moderate
T10	Sycamore	Mature	Roadside tree. Decay in main trunk is evident, check for additional cavities in crown, top of main trunk.	Low

*Trees within the Development footprint

DRAWINGS





KEY	
■	Site Boundary
■	c1c - cereal crops
■	g3c - other neutral grassland
■	g4 - modified grassland
	h3 - mixed scrub
	h3d - bramble scrub
	r1a eutrophic standing water
	s - sparsely vegetated land
	u1b - developed land, sealed surface
	u1b6 - other developed land
	u1c - artificial unvegetated unsealed surface
—	h2a - hedgerow (priority habitat)
—	w1g6 - line of trees
—	r1e - canal or ditch

Notes:

Boundaries are indicative

Aerial imagery shown for context purposes only.

EVISION	DETAILS	DATE	DRAWN	CHKD	APPD
CLIENT					

AESC UK

PROJECT

AESC PLANT 3

DRAWING TITLE

FIGURE 12.1
HABITAT PLAN

ORG No. NT15821/FIGURE 12.4		REV A
ORG SIZE A3	SCALE 1:5,000	DATE 12/04/2024
DRAWN BY SRW	CHECKED BY AD	APPROVED BY TP



**wardell
armstrong**





REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
CLIENT					
AESC UK					
PROJECT					
AESC PLANT 3					
DRAWING TITLE					
FIGURE 12.5 BAT ROOST SUITABILITY					
DRG No.	NT15821/FIGURE 12.5	REV	P01		
DRG SIZE	A3	SCALE	1:5,000	DATE	09/10/2023
DRAWN BY	SRW	CHECKED BY		APPROVED BY	
 					

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