



Preliminary Ecological Appraisal

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1. Introduction

1.1. Background

Hilson Moran has been commissioned by ACR to conduct a Preliminary Ecological Appraisal (PEA) of a proposed development of land within the Whiston Enterprise Park, located in Prescot (National Grid Reference SJ 46201 90205), as identified in Figure 1.1.

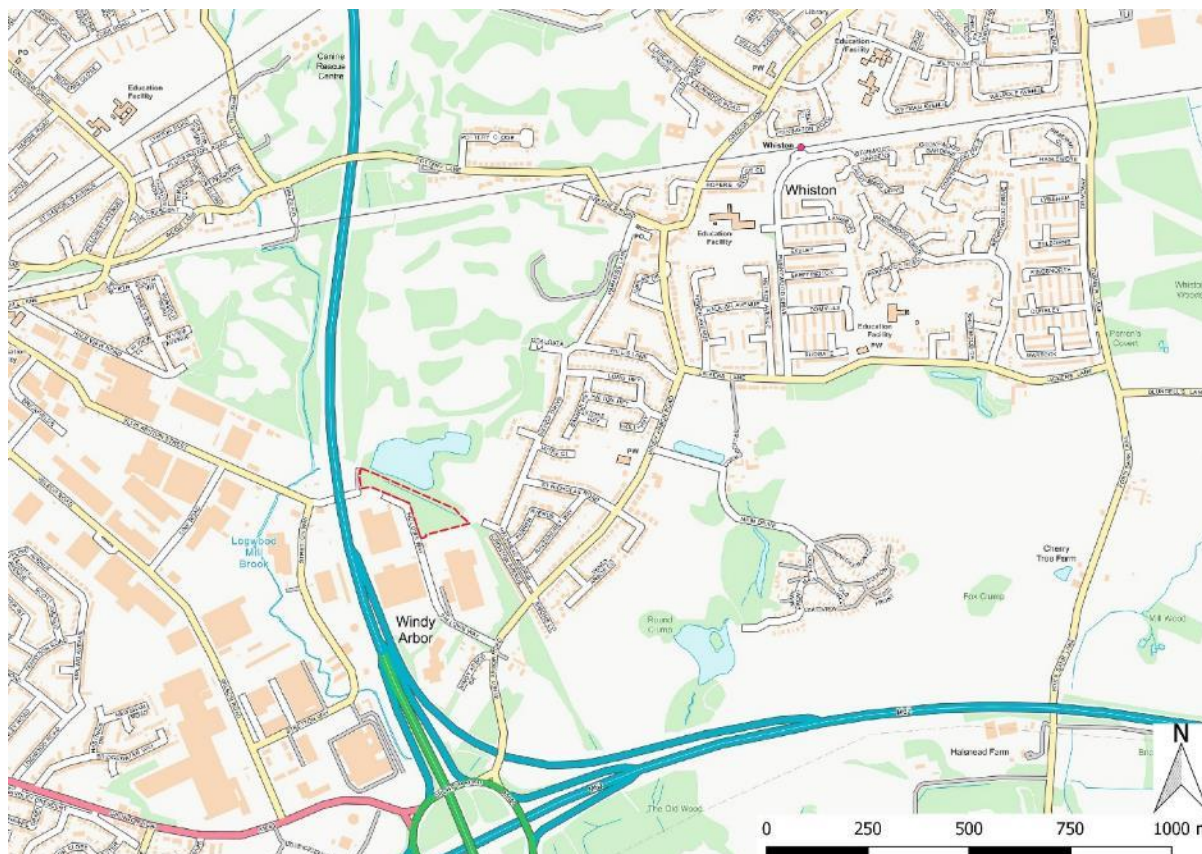


Figure 1.1 *Fallows Way Site Location* (©Crown Copyright Licence Number 150000033)

The first phase of the development comprises the provision of a workshop/technical support area, perimeter security fencing, re-fuelling facilities, service apron, vehicle wash facility, septic tank, security lighting and signage and parking facilities for staff parking and lay-over spaces for executive coaches and vans. The second phase will see an extension to the parking space provision for both staff vehicles and coaches, along with minor re-positioning of some facilities.

1.2. Purpose

This report provides an initial assessment of the biodiversity potential of the identified site within the Whiston Enterprise Park and identification of potential constraints to the future development of this site. The survey documented in this report has been carried out in order to identify the habitats present on site and provide an initial assessment of their biodiversity value and potential to support species of conservation interest. This enables an appraisal of the habitats present and species potentially present on the site and identification of constraints to the future development of the site.

The information presented within this report provides an assessment that informs the design of appropriate mitigation measures, which can be incorporated within the completed scheme. The need for further surveys is also discussed where these may be required.

1.3. Legislative Context

Legislative protection is afforded to a range of sites, habitats and species through a number of national statutes. The principal means by which features of biodiversity interest are protected are:

- The Conservation of Habitats and Species Regulations 2010 (as amended), which implements protection for European protected sites and species, consolidating and updating the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) with the level of protection remaining the same;
- The Wildlife and Countryside Act 1981 (as amended), which comprises the principal means of protecting wildlife in the UK, including the identification and protection of Sites of Special Scientific Interest (SSSIs) and provides the mechanism by which a number of international directives are implemented in the UK;
- The Countryside and Rights of Way (CROW) Act 2000, which strengthens the Wildlife and Countryside Act 1981 (as amended) in relation to the protection of SSSIs and threatened species; and,
- The Natural Environment and Rural Communities (NERC) Act 2006, which places an obligation on public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.

1.3.1. Legislative Protection for Species

The following summarises the legislative protection afforded to species identified as potentially present within the study area.

1.3.1.1. Flora

All wild plants are protected under Schedule 13 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to uproot a plant, defined as '*to dig up or otherwise remove the plant from the land on which it is growing*', without permission from the land owner or occupier. A number of higher and lower plants receive additional protection under Schedule 8 of the Act, which makes it an offence to intentionally pick, uproot, destroy or trade in these plants.

Schedule 9 of the Act identifies invasive plant species and makes it an offence to plant these species or otherwise cause them to grow in the wild. The protection has been strengthened through the inclusion of a new schedule, as a result of Section 23 of the Infrastructure Act 2015, which enables environmental authorities to require works to be undertaken to remove or prevent their establishment. Any material containing Japanese knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum mantegazzianum*) is identified as 'controlled waste' under the Environmental Protection Act 1990 and must be disposed of appropriately.

1.3.1.2. Birds

All wild birds in England and Wales are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs. Additional protection is afforded to species listed in Schedule 1 of the Act from disturbance whilst it is building a nest, or at a nest containing eggs or young, or to disturb the dependent young of a bird.

Furthermore, amendments to the provisions under the Conservation of Habitats and Species Regulations 2010 (as amended) require local planning authorities to have regard to '*the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK*' in the exercising of their functions. As a result, it is important to consider the habitat loss as a result of a development and opportunities for the provision of habitats.

1.3.1.3. Bats

All bat species in England and Wales are fully protected through inclusion within the Conservation of Habitats and Species Regulations 2010 (as amended) as European Protected Species (EPS). Under this legislation it is an offence to deliberately capture, injure or kill individuals of any native bat species. It is also a strict liability offence to damage or destroy sites or places which bat species use as a breeding site or resting place. Bats are also protected under the Regulations from deliberate disturbance which is likely to:

- a) impair its ability:
 - i. to survive, breed or reproduce, or to rear or nurture their young; or,
 - ii. in the case of animals of a hibernating or migratory species to hibernate or migrate; or,
- b) to affect significantly the local distribution or abundance of the species to which they belong.

It may be possible to apply for a licence from Natural England to allow activities that would otherwise be an offence under these Regulations. However, it is an offence to breach a condition imposed by any such licence.

All bats are also partially protected in England and Wales through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to intentionally or recklessly disturb a bat whilst it is using a place of rest or shelter.

2. Methodology

2.1. Study Area and Survey Area

As identified in Section 1.1, the Proposed Development is located on Fallows Way in Prescot, Liverpool. The site is part of the Whiston Enterprise Park, located equi-distant from Liverpool and Warrington, with Stadt Moers Park to the north, the country park entrance and M57 motorway located to the west, Fallows Way to the south and an occupied industrial unit to the east.

The land incorporated within and immediately adjacent to the Site comprises the 'field survey area', and was subject to field survey as discussed in Section 4.4. In addition, surrounding land up to 1km from the Proposed Development was subject to a desk study, referred to as the 'study area', to provide contextual information about local ecological conditions.

2.2. Desk Study

Information regarding local biological records was collected through an online search of information sources and a data request to the local biological records centre, RECORD. Information requested from the local biological records centre included statutory and non-statutory designated sites and legally protected and ecologically significant species. To supplement this request, the following web-based resources were used to collate historical biological records within the study area:

- Multi-Agency Geographic Information for the Countryside website (www.magic.defra.gov.uk); and,
- National Biodiversity Network (NBN) Atlas website (www.nbnatlas.net).

As species distributions are variable over time, information obtained through the desk study has been restricted to records post-2000 to ensure records are up-to-date. Any species records with no record in the last 17 years are unlikely to remain present within the study area.

2.3. Field Survey

A walkover survey of the field survey area was carried out on 10th October 2017 and incorporated immediately adjacent areas. The survey was undertaken on a relatively warm (17 °C) yet overcast day with no rain during the survey, conditions that are considered to be appropriate for this type of survey.

The habitats present on site were identified using the standard Phase 1 Habitat survey methodology¹, with habitat types recorded on an appropriately scaled map and dominant flora identified. Although detailed species surveys were not undertaken at this time, the potential for the field survey to support any legally protected or valuable species was assessed. Field signs or sightings of such species were recorded as seen, and the presence of any invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was also identified. Any potentially suitable refugia capable of sheltering wildlife, such as plastic or metal sheeting, were lifted.

Dominant vegetation species on site was identified in accordance with Blamey *et al.* (2003)².

2.4. Assessment Methodology

Information from the desk study and field survey were analysed to determine the biodiversity value of the site, based upon the Guidelines for Ecological Impact Assessment in the United Kingdom³, published by CIEEM.

For this, it is essential to distinguish between the biodiversity value of a receptor and its legal status. Features of high biodiversity value may not necessarily attract legal protection and vice versa. For example, a viable area of ancient woodland is likely to be considered of high biodiversity value even if it does not receive any formal statutory designation.

In accordance with the CIEEM guidelines, each biodiversity feature should be assessed as valuable, or potentially valuable, based on the following geographic frame of reference; some examples of ecological receptors that may be potentially valuable at each geographic scale are presented below:

- International – *e.g.* existing or warranting designation as a Special Protection Area (SPA) and/or of significant conservation status for Europe;
- National – *e.g.* existing or warranting designation as a Site of Special Scientific Interest (SSSI) and/or of significant conservation status for England;
- Regional – *e.g.* habitats or species valuable at a regional level and/or of significant conservation status for the north-west of England;
- Metropolitan – *e.g.* existing or warranting designation as a Local Nature Reserve and/or of significant conservation status for Merseyside;
- Local – *e.g.* existing or warranting designation as a Local Wildlife Site and/or of significant conservation status within a local context (*e.g.* within 1km of the proposed scheme);
- Within the immediate survey area only – *e.g.* habitats or species populations of significant conservation status for the site and immediate surrounding lands;
- Negligible – *e.g.* habitats or species whose presence does not contribute to the local biodiversity resource or has negative effects on local biodiversity (*e.g.* invasive species).

2.5. Survey Limitations

Data collected from the field survey should be treated as a preliminary assessment of the habitats on site. Some species or field signs may not be present at time of survey. Although the recommended optimum survey months for habitats are typically between April and September, completion of the field survey in October is acceptable as the habitats present are relatively common and the main species dominating the habitats remained identifiable. Furthermore, completion at this time, when trees had begun to drop their leaves, enabled a better inspection of the trees for their potential to support features of interest for roosting bats.

3. Results

3.1. Desk Study

3.1.1. Designated Sites

The study area does not include any statutory designated sites of nature conservation importance, however the study area does include a total of 10 Local Wildlife Sites, the details of which are provided in Table 3.1. No further designated sites were identified in the 1km study area radius.

Table 3.1 *Designated Sites Identified within the Study Area*

Site	Citation	Area (ha)	Proximity to Site
<i>Local Wildlife Sites</i>			
Tushingham's Pond, Stadt Moer's Country Park	Large open pond with varied habitats around its edges, from marsh to alkaline grassland to scrub to woodland	2.62	Adjacent to the north
Stadt Moers Q4	A large area of semi-improved neutral grassland with areas of scrub and developing broadleaf woodland.	32.73	Adjacent to the north
Stadt Moers Q3	A mix of grassland, scrub and woodland habitats forming part of the Country Park at Stadt Moers.	14.23	135m north-west
Big Water and Big Water Wood, Halsnead	A lake that is regularly fished with good mix of aquatic and emergent plants. Broadleaf woodland borders the lake.	3.25	480m south-east
The Old Wood, North	A mature broadleaf woodland set in a clough valley with rock outcrops and a former quarry. The woodland was separated from the Old Wood South by the construction of the M62 motorway.	1.44	660m south-east
Stadt Moers Q2 and Visitor Centre	A small area of dense woodland with neutral grassland areas re-colonised on bare substrate.	1.56	680m north
Coppice Lane Council Depot, Huyton	A mix of grassland and scrub habitats with areas of damp grassland with rabbit grazing.	2.02	690m south
The Old Wood, South	A predominantly broadleaf woodland with ditch and marsh habitats. Bracken dominated areas can also be found.	3.49	765m south-east
Strettles Bog, Tarbock	A small area of broadleaf woodland and neutral grassland bisected by Chapel Brook.	1.75	790m south
Lickers Lane Wood	A long, narrow broadleaf woodland with a dense canopy and associated neutral grassland.	1.11	875m east

3.1.2. Habitats

A search of the MAGIC website identifies that the development site is part of the deciduous woodland BAP habitat, which extends to the north into Stadt Moers Park and along the dismantled railway to the south-east, with additional areas including the Local Wildlife Sites to the south and parts of the soft landscaping associated with the M62. Parts of Tushingham's Pond are identified by the inventory on Magic as lowland fen habitat and a small section of the landscaping surrounding the MerseyRail railway line and Huyton Quarry element of Stadt Moers Park supports lowland meadow.

The study area also includes a section of ancient woodland to the south-east, severed by the M62 into two component parts, lowland fen habitat to the north associated with the lake in Stadt Moers Park and lowland meadow BAP priority habitat in Stadt Moers Park on the western side of the M57.

3.1.3. Species

3.1.3.1. LBRC

The local biological records from Mersey BioBank identified the presence of a number of protected species within the study area, however this incorporates a wide variety of habitat types including freshwater, woodland, floodplain, and urban habitat types. As a result, the information provided has been carefully analysed to identify the species that are likely to be present within the habitats associated with the development site to help inform understanding of the species likely to be utilising the development area.

The data received included 10 species of bird identified as being specially protected, under the Wildlife and Countryside Act 1981 (as amended) or ecologically significant, through identification as a BAP priority species or as a red or amber listed species of conservation concern. Of particular note is the presence of dunnoek (*Prunella modularis*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*), willow tit (*Poecile montana*) and kingfisher (*Alcedo atthis*), the latter of which may utilise the adjacent open water habitat.

The data also identified the presence of 10 mammal species that are legally protected or ecologically significant, notably the presence of hedgehog (*Erinaceus europaeus*) and 6 species of bat: common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), Daubenton's bat (*Myotis daubentonii*), noctule bat (*Nyctalus noctula*) and whiskered/Brandt's bat (*Myotis mystacinus/brandtii*). Four of the bat species (common pipistrelle, soprano pipistrelle, Daubenton's and noctule) were recorded in association with the adjacent Tushingham's Pond.

The data also identified 19 species of plant, three species of amphibian and 12 species of invertebrate that are considered ecologically significant or legally protected, with common toad (*Bufo bufo*) of particular note associated with Tushingham's Pond. Although great crested newt was identified as present, this is not in an area close to the development site.

The data also included the presence of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), with water fern (*Azolla filiculoides*), Canadian waterweed (*Elodea canadensis*), floating pennywort (*Hydrocotyle ranunculoides*), Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*), Japanese rose (*Rosa rugosa*), Montbretia (*Crocsmia pottsii x aurea*) and Rhododendron (*Rhododendron ponticum*) recorded within the study area. Of particular note, Japanese knotweed was recorded along Fallows Way in the area of the car park for Batleys Cash & Carry, and the presence of water fern, floating pennywort and Japanese knotweed associated with Tushingham's Pond to the north.

3.1.3.2. NBN Atlas

A search of the National Biodiversity Network Atlas was undertaken to identify any supplementary species records to that provided by Mersey BioBank. The data search identified an additional 1 mammal species, badger (*Meles meles*), and 61 species of bird, including: black-headed gull (*Chroicocephalus ridibundus*), bullfinch (*Pyrrhula pyrrhula*), collared dove (*Streptopelia decaocto*), great spotted woodpecker (*Dendrocopos major*), house sparrow (*Passer domesticus*), long-eared owl (*Asio otus*), mallard (*Anas platyrhynchos*), Mediterranean gull (*Larus melanocephalus*), mistle thrush (*Turdus viscivorus*), nuthatch (*Sitta europaea*), short-eared owl (*Asio flammeus*), yellow-legged gull (*Larus megalopterus*).

3.1.3.3. MAGIC

The study area includes a single Natural England licence for bats, which is for a license to permit the destruction of a resting place associated with common pipistrelle, soprano pipistrelle, brown long-eared and Natterers bat species with an end date of September 2014. The site is approximately 1km to the south and associated with a site alongside the A5300.

3.2. Field Survey

3.2.1. Habitats

The following sections describe the habitats that were identified on site according to the JNCC habitat definitions given in best practice guidelines. The habitat descriptions should be read in conjunction with the Phase 1 Habitat survey map, see Figure 5.1, and site photographs, see Appendix B.

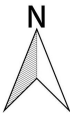


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Do not scale from this drawing.
Verify dimensions by site measurement.
Read this drawing in conjunction with the latest architectural and structural drawings.
This drawing is based on the following information:

- Legend
- Target Notes
 - Site Boundary
 - Phase 1 Habitat
 - A1.1.1 - Broadleaved woodland - semi-natural
 - A2.1 - Scrub - dense/continuous
 - C3.1 - Other tall herb and fern - ruderal
 - G1.3 - Standing water - oligotrophic
 - J1.2 - Cultivated/disturbed land - amenity grassland
 - J1.3 - Cultivated/disturbed land - ephemeral/short perennial
 - J5 - Hardstanding



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Project

Fallows Way

Drawing Title

Habitat Map

Scale	Sheet Size	Checked	Approved
1:1,500	A4	TH	TH
Status			
FOR INFORMATION			
Drawing No.	24606/S/ECO-01	Rev	00

Software: Bluebeam Revu

3.2.1.1. Broadleaved Woodland

Broadleaved woodland dominates the site, forming a boundary habitat type around the eastern side of the site and extending across the whole of the western part of the site where it narrows alongside Fallows Way. The broadleaved woodland is comprised of relatively common and typical species, with ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), silver birch (*Betula pendula*), wild cherry (*Prunus avium*), sessile oak (*Quercus petraea*), rowan (*Sorbus aucuparia*), field maple (*Acer campestre*), hazel (*Corylus avellana*), alder (*Alnus glutinosa*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), crack willow (*Salix fragilis*) and goat willow (*Salix caprea*) present.

The woodland on the eastern side of the site had a largely bare understorey, with some scrub present in the form of bramble (*Rubus fruticosus* agg.), which along with the presence of similar aged trees suggests the habitat has developed from plantation woodland but is yet to fully establish as semi-natural woodland.

The woodland in the north-east corner of the site appeared to be more natural and less indicative of plantation woodland, with samplings and smaller scrub species present which included elder (*Sambucus nigra*) and dogwood (*Cornus sanguinea*) with honeysuckle (*Lonicera periclymenum*) present.

Similarly, the woodland across the western half of the site was indicative of semi-natural woodland habitat. Although the understorey was bare in places, it included a range of different age trees and included a range of species in the understorey including bramble, male fern (*Dryopteris filix-mas*) and ruderal species, as discussed below.

The woodland habitat along the southern edge is dominated by a row of poplar (*Populus* sp.) along the edge of the site with additional trees on the Fallows Way side with a dense understorey of shrubs and scrub designed to screen the site and prevent access. The scrub/shrub understorey includes those identified above alongside cherry laurel (*Prunus laurocerasus*) and coralberry (*Symphoricarpos orbiculatus*).

Broadleaved woodland habitat is a relatively common habitat locally and nationally, however it is considered to comprise part of the UKBAP deciduous woodland priority habitat. In establishing the value of the woodland habitat, it is important to consider the context of the habitat in the wider environment, with extensive woodland habitat present to the north associated with the Stadt Moers Park and M57 embankment. The broadleaved woodland present is not of special interest on account of the species or structure present, and as a result is considered to be of biodiversity value at no more than the **local scale**.

3.2.1.2. Scrub

In addition to its presence as an understorey to the broadleaved woodland habitat, a small area around the entrance gates to Fallows Way supports dense scrub habitat with the species present dominated by woody species with a height under 5m creating a relatively impenetrable stand of vegetation. The species present include sycamore, osier (*Salix viminalis*), ivy (*Hedera helix*), hawthorn and coralberry.

A short section of wall is present separating the dense scrub and woodland habitats on the eastern boundary of the site, see Target Note 1, which supports a thick cover of ivy with stems greater than the size of an adult's wrist.

Dense scrub is a common habitat both locally and nationally, and as a result is not considered to comprise part of a BAP Priority habitat at any scale. Consequently, the habitat is considered to be of biodiversity value **within the immediate survey area only**.

3.2.1.3. Ephemeral/Short-Perennial

The main area of habitat on the eastern half of the site is best described as ephemeral/short-perennial habitat with a patchy plant species present with all less than 25cm in height and based on a shallow soil containing a high proportion of hardcore and stone and bare habitat. However, the drainage of the habitat is impeded in places, with standing water present, and the habitat was largely dominated by the presence of great willowherb (*Epilobium hirsutum*) with an extensive moss and a thallose liverwort species (likely to be *Pellia epiphylla*). In addition to these, a number of species were present in limited extent including redleg (*Persicaria maculosa*), common spotted orchid (*Dactylorhiza fuchsii*), curled dock (*Rumex crispus*), field horsetail (*Equisetum arvense*), mugwort (*Artemisia vulgaris*), ox-eye daisy (*Leucanthemum vulgare*), annual meadow grass (*Poa annua*) and jointed rush (*Juncus articulatus*).

Ephemeral/short perennial is not an uncommon habitat and in this context is not considered to be of sufficient biodiversity interest to comprise part of a BAP Priority Habitat at any scale. Nonetheless, the habitat is considered to hold biodiversity value **within the immediate survey area only**.

3.2.1.4. Tall Ruderal

Tall ruderal species are present both as part of the understorey to the broadleaved woodland and as a habitat in its own right with a patch of tall ruderals dominating an area at the end of Fallows Way (see Target Note 2). The main ruderal species present within both habitat types include common nettle (*Urtica dioica*), curled dock, mugwort and hemlock (*Conium maculatum*).

Tall ruderal habitat is a common habitat both locally and nationally and is not considered to comprise part of a BAP habitat at any scale. As a result, the habitat is considered to be of biodiversity value **within the immediate survey area only**.

3.2.1.5. Amenity Grassland

Amenity grassland is present in a small area along Fallows Way forming a verge alongside the main site. The habitat has been subject to regular maintenance, with mowing to a short sward for aesthetic purposes. As a result of the short sward many of the grasses and herbaceous species were difficult to identify but did include fescue (*Festuca*), clover (*Trifolium* sp.), dandelion (*Taraxacum officinale* agg.), ribwort plantain (*Plantago lanceolata*), curled dock, daisy (*Bellis perennis*) and creeping thistle (*Cirsium arvense*). At the site boundary additional species could be identified that benefitted from an absence of mowing along the woodland edge which included red campion (*Silene dioica*) and common Michaelmas daisy (*Aster x salignus*).

Amenity grassland is a common habitat both locally and nationally and is not considered to be of sufficient diversity to comprise part of a BAP Priority Habitat at any scale. Consequently, the habitat is considered to be of biodiversity value **within the immediate survey area only**.

3.2.1.6. Standing Water

The ditch across the western part of the site supported standing water across its length, however this appears to be relatively temporary with no aquatic vegetation present along its length. The water is not considered to comprise part of a BAP priority habitat and as a result is considered to be of biodiversity value **within the immediate survey area only**.

3.2.2. Species

Although no targeted species surveys have been carried out, the following describes the presence or potential presence of species of ecological significance, both in terms of biodiversity and legislative and policy context, within the field survey area.

3.2.2.1. Flora

No specially protected floral species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) and no species listed on Schedule 9 of the Act as invasive were identified within the habitats on or adjacent to the site. The floral species present on site are considered to be of biodiversity value **within the immediate survey area only**.

3.2.2.2. Birds

The site has potential to support a range of breeding bird species, with the broadleaved woodland and scrub habitats providing extensive opportunities for common species to establish nests. This was evidenced by the presence of a number of old nests in the woodland area on the western part of the site.

The bird species present are likely to be relatively common and not of significant ecological interest, and are therefore considered likely to hold biodiversity value **within the immediate survey area only**. However, the presence of nesting birds would have legal implications to the development of the site.

3.2.2.3. Bats

Whilst the field survey area offers some foraging opportunity for bats, roosting opportunities for bats associated with the trees within the woodland habitat are very limited.

The trees present are generally of limited structure, with straight narrow trunks and an absence of features typically associated with roosting opportunities. A single tree in the western part of the site has a broken limb which has fallen from the tree recently (Target Note 3), evidenced by the lack of weathering to the trunk where the limb had been. However, no obvious cavity is present in the trunk, with the only potential for crevices being at the bottom of where the limb broke which is likely to be subject to rainwater ingress. Further to this, four semi-mature trees at the rear of the site supported limited ivy growth of relatively small thickness (see Target Note 4) and extent. However, the presence of the ivy on the trunk provides some opportunity for roosting bats in crevices between the ivy stem and trunk of the tree.

The trees with ivy coverage are considered to be of *low suitability for roosting bats* in line with BCT guidelines, as the opportunities could be used opportunistically by individual bats but does not contain enough space, shelter, protection of appropriate conditions to be used on a regular basis by large numbers of bats. The remaining trees on site are considered to be of negligible suitability for roosting bats as they do not contain features suitable for roosting bats.

In addition to the trees, the presence of thick ivy on the wall to the right of the existing entrance has potential to provide crevices between the thick ivy stems and the wall which are suitable for roosting bats, which is considered to be of *low suitability for roosting bats*.

The site as a whole does, however, contribute to the bat foraging habitat resource in the area as a result of its proximity to the Stadt Moers Park to the north. Although the standing water habitat is unlikely to provide habitat of value due to the absence of uncluttered flight paths through the wooded area on the banks of the ditch, the woodland edge habitat and ephemeral/short-perennial habitat within the site provides undisturbed foraging opportunities. However, the value of the site should be considered in light of the presence of significant woodland edge and grassland habitat to the north in Stadt Moers Park and open water habitat. The habitat is, therefore, considered to be of *low to moderate foraging suitability*.

As a whole, the site offers some albeit limited opportunities for bats and is subsequently considered likely to be of biodiversity value **within the immediate survey area only** on account of the wider site context.

3.2.2.4. Other Species

A single common frog (*Rana temporaria*) was identified on the site along the northern boundary by the standing water, which provides suitable opportunities for a range of common amphibian species. The standing waterbody on site is not considered suitable for the presence of great crested newt (*Triturus cristatus*) due to its temporary nature with absence of macrophytic vegetation and extensive shading. The waterbody alongside the site to the north is also considered unsuitable for great crested newt due to the presence of significant fish and avian species within the lake. No other species were considered likely to be present based on the habitat present and an absence of field signs.

3.3. Evaluation of Features

Table 3.1 provides a summary of the significant ecological receptors within the study area. These include designated sites, important habitats and confirmed and potential faunal species present. For the purpose of this assessment, a significant ecological feature is any designated site, habitat or species that is considered to be of at least local biodiversity value and/or have legal protection or are referenced in policy.

Table 3.2 *Summary of Significant Ecological Receptors*

Biodiversity Feature	Likely Biodiversity Value	Legal Status and Relevant Protective Policies/Guidance
Local Wildlife Sites	Local	No statutory protection, but protected through local policies.
Deciduous Woodland	Local	UKBAP, and may receive protection through local policies.
Invasive Floral Species	Negligible	Prevented from spread under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), disposal of some covered under the Environmental Protection Act 1990.
Breeding Birds	Within immediate survey area only	Protection under the Wildlife and Countryside Act 1981 (as amended) from killing and injury and/or damage or destruction to an active nest. Some may be protected from disturbance whilst nesting.
Bats	Within immediate survey area only	Fully protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and Wildlife and Countryside Act 1981 (as amended). Species listed in Annex II of the Habitats Directive protected under the Environmental Damage (Prevention and Remediation) Regulations 2009 from damage significantly impacting the conservation status of the species. UKBAP and Local BAP.

4. Summary and Recommendations

The following sections provide a summary of the biodiversity features that are likely to comprise a constraint to development of the site and recommendations for mitigation and/or further survey.

4.1. Summary of Potential Constraints

4.1.1. Local Wildlife Sites

Given the proximity of the development site to two of the Local Wildlife Sites, impacts associated with construction activities such as dust and noise generation could have adverse impacts on the sites. However, the site does not support features that are vulnerable to dust generation, with the value of the sites falling below that identified in best practice guidance⁴ screening criteria for the consideration of impacts on ecological receptors. Furthermore, the Design Manual for Roads and Bridges⁵ gives a useful indication of the level at which dust and particular matter can impact upon plants, with the most sensitive species affected by deposition at levels above 1000 mg/m²/day which is five times greater than the level at which most dust deposition may start to cause a perceptible nuisance to humans. Many plant species are unaffected until rates are much higher than this.

4.1.2. Broadleaved Woodland

Development of the site would result in the loss of broadleaved woodland habitat on the site, which is identified as being part of the deciduous woodland BAP habitat at the national scale. However, the woodland present is of relatively low biodiversity interest and contains relatively common species with no veteran trees present. Consequently, given the extent of the habitat in the local area, the loss of this habitat within the site is not considered to be of significant concern although does represent a minor adverse impact (albeit less than that identified in the MAGIC database as the whole site does not support woodland).

4.1.3. Invasive Species

Although no invasive species were identified to be present during the walkover survey, the risk of spread to the site from the adjacent Stadt Moers Country Park exists, with a number of those readily spread identified as present. As the development site is accessible in a number of locations, there is a risk that access from the Country Park side could result in the transference of an invasive species into the habitat present.

4.1.4. Breeding Birds

Breeding birds, which are likely to nest in the woody vegetation associated with the broadleaved woodland and scrub habitats, are only likely to pose a constraint to any proposed works during the breeding season (March to August inclusive).

4.1.5. Bats

The walkover survey has identified the presence of four trees on the northern boundary with low suitability for roosting bats and a vegetated wall also with low suitability for roosting bats. It is understood that three of these trees are likely to be removed as a result of the development, and as a result pose a potential constraint to the development. Recommendation for dealing with this potential are provided, which includes either the completion of further surveys (see Section 4.3) or removal of the features under a Low Impact Bat Class Licence (see Section 4.2).

4.2. Mitigation

4.2.1. Local Wildlife Sites

The implementation of best environmental practice, such as those identified in the IAQM best practice guidance⁶, will ensure impacts associated with dust generation on site are minimised. This could include sensitive location of dust generating activities, erection of hoarding around the site, *etc.*

4.2.2. Invasive Species

Although not currently present on site, it will be important that construction personnel are briefed as to the potential for spreading of invasive species to the site and the methods by which transference could occur. The main invasive species in the area should be recognisable and a prompt of the species potentially present located on a notice board prominently. Toolbox talks should also be given regarding the potential and staff informed of the potential to spread species to the site if exploring the Stadt Moers Country Park or other sites locally. Japanese knotweed, the most impacting of those present, is known to be present along the MerseyRail railway line and at stations locally.

If any invasive species is encountered on site, works should stop immediately and further ecological advice be sought.

4.2.3. Breeding Birds

The removal of woody vegetation should be undertaken outside the breeding season between September and February (although care should be taken as conditions may allow for an extension to the period in which birds are breeding and enable a second brood).

However, if vegetation removal during the breeding season is unavoidable, then suitable vegetation should be checked for the presence of active nests by an appropriately qualified ecologist prior to removal. If active nests are found, then all work within close vicinity to the nest should cease until the young have fledged.

4.2.4. Bats

It is recommended that the trees and vegetated wall, if impacted by the development, are inspected by a licensed bat ecologist using an endoscope to identify the potential for bats to be present within any crevices present. If no bats or signs of activity are found then the trees, and in the case of the wall the ivy, should be removed as soon as possible following the survey. In the event that a bat or evidence of bats is found, then the trees could potentially be removed under a Low Impact Bat Class Licence provided the roost meets the identified criteria. Upon discovery of the roost during the endoscope survey, the site would need to be registered with Natural England prior to removal under supervision of the licensed ecologist. The tree may require removal in a systematic manner to ensure any bats potentially present could be identified and moved to safety and is likely to require provision of an artificial roost into which bats found could be placed.

4.3. Further Surveys

Further detailed surveys to determine the potential presence or likely absence of bats within the field survey area should be carried out to ensure the works can progress in a legally compliant manner. Targeted survey of the trees of low suitability and wall should be carried out by a licensed bat surveyor using an endoscope to investigate any crevices between the ivy and the trunk/wall. This will require access to elevated parts of the trees and wall using a ladder.

Appendix 1 Site Photographs

Photograph 1:
Existing Site Entrance



Photograph 2:
Woodland habitat along
Fallows Way



Photograph 3:
Woodland and amenity
grassland habitat along
Fallows Way



Photograph 4:
Woodland habitat along
Fallows Way



Photograph 5:
Woodland habitat along
southern boundary of the
site



Photograph 6:
Thick ivy growth on
boundary wall on eastern
boundary of the site



Photograph 7:
Woodland habitat along
the eastern boundary
with tall ruderal
vegetation in the middle
of the eastern part of the
site



Photograph 8:
Woodland habitat along
the northern boundary of
the site



Photograph 9:
Woodland habitat along
the northern boundary of
the site



Photograph 10:
Woodland habitat on the
western side of the site



Photograph 11:
Mature tree and
woodland habitat on the
western half of the site



Photograph 12:
Standing water within
drain along northern side
of the site with
surrounding woodland
habitat



Photograph 13:
Standing water within
drain along northern side
of the site



Photograph 14:
Tree with damage from
broken limb



Photograph 15: Trees along northern boundary with ivy cover	 A photograph showing a dense thicket of trees and ivy along a boundary. The trees are mostly deciduous with green leaves, and there is a significant amount of ivy cover on the lower parts of the trees and on the ground.
Photograph 16: Ivy covered tree along northern boundary of the site	 A close-up photograph of a tree trunk and branches heavily covered in ivy. The ivy leaves are green and dense, obscuring much of the tree's bark. The background shows more green foliage.

Photograph 17:
Woodland habitat along
northern boundary of the
site and to the north as
part of Stadt Moer Park



Photograph 18:
Woodland habitat along
northern boundary of the
site and to the north as
part of Stadt Moer Park



Photograph 19:
Open water habitat to
the north of the site
which is regularly fished
and supports a number of
large waterfowl



References

- ¹ Joint Nature Conservation Committee (2007) Handbook for Phase 1 Habitat survey – A Technique for Environmental Audit. Peterborough, UK.
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- ³ Chartered Institute of Ecology and Environmental Management (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland. CIEEM, Winchester.
- ⁴ Holman *et al* (2014). IAQM Guidance on the assessment of dust from demolition and construction. Institute of Air Quality Management, London.
- ⁵ Highways Agency (2007) Design Manual for Roads and Bridges, Volume 11, Section 3 – Air Quality, Part 1. HA 207/07.
- ⁶ Holman *et al* (2014). IAQM Guidance on the assessment of dust from demolition and construction. Institute of Air Quality Management, London.