

PRELIMINARY ECOLOGICAL APPRAISAL

JUNE 2022

Mercury 62
Cronton Road,
Prescot
Merseyside

U R B A N
G R E E N



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NON-TECHNICAL EXECUTIVE SUMMARY

Maro are proposing to develop land at Cronton Road in Prescott (hereafter referred to as 'the Site'). The applicant will be seeking approval for the proposed erection of a single warehouse unit (Use Class B8) with ancillary office space, associated parking, access, landscaping, and other works.

Urban Green have been appointed to complete a Preliminary Ecological Appraisal of the Site. The objectives of the assessment are to identify habitats on Site and determine the suitability for any 'protected and/or notable' species that may occur on Site. Ecological mitigation has been recommended to aim to minimise potential impacts on ecology, due to the proposed development.

Following the survey work, the key recommendations are summarised in the following table

Current Site Use and Adjacent Site Use	The Site contains undeveloped land with woodland present in the western section. Cronton Road borders the Site to the south and the M62 borders the Site to the west.
Potential Impacts on Designated Sites	A Local Wildlife Site is present within the Site. Without mitigation there is the potential for the integrity of this site to be adversely impacted through construction related activities. It is recommended that a CEMP is implemented during the construction process to manage potentially harmful activities to minimise their effects.
Habitats	The Site comprised predominantly neutral grassland, with semi-natural broadleaved woodland, running water, a ditch, marshy grassland, and tall ruderal vegetation was also present.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: • A non-statutory designated site was present on site. • Suitable habitats for invertebrates, common amphibians, nesting notable bird species, bats, hedgehog, brown hare, otter, and badger was present on site.
Recommended Ecological Mitigation	The following mitigation measures are recommended to minimise potential impacts due to the proposed development: • Precautionary Working Methods during the construction phase for amphibians, hedgehog, otter, and badgers. • If any vegetation require removal, it should be completed outside of the breeding bird season (March to September, inclusive). If this is not feasible, a Nesting Bird Check is to be completed by a qualified ecologist within 48 hours before removal is completed.
Recommended Further Surveys and Reports	No further surveys are required to facilitate this development. However it is recommended that a CEMP and LEMP are implemented to minimise adverse effects during construction and to ensure the long-term management of the habitats to be created on site.
Recommended Ecological Enhancements	The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment. The proposed development provides the opportunity to enhance the Site and ecological enhancements have been recommended.

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1 Introduction

1.1 Background to the Scheme

Maro are proposing to develop land off Cronton Road in Prescot, Merseyside (hereafter referred to as 'the Site'). The applicant is seeking approval for the erection of a single warehouse (Use Class B8) with ancillary office space, associated parking, access, landscaping, and other works. Urban Green have been appointed to undertake a Preliminary Ecological Appraisal (PEA) of the Site.

The author of the report is Mark Blacker, ACIEEM, Senior Ecologist at Urban Green. Mark has experience providing ecological consulting services for a range of development schemes across the UK, including residential, commercial, and large infrastructure schemes.

1.2 Site Context

The Site is located at National Grid Reference SJ 46758 89304 and comprises a total area of approximately 8.87ha (see Figure 1).

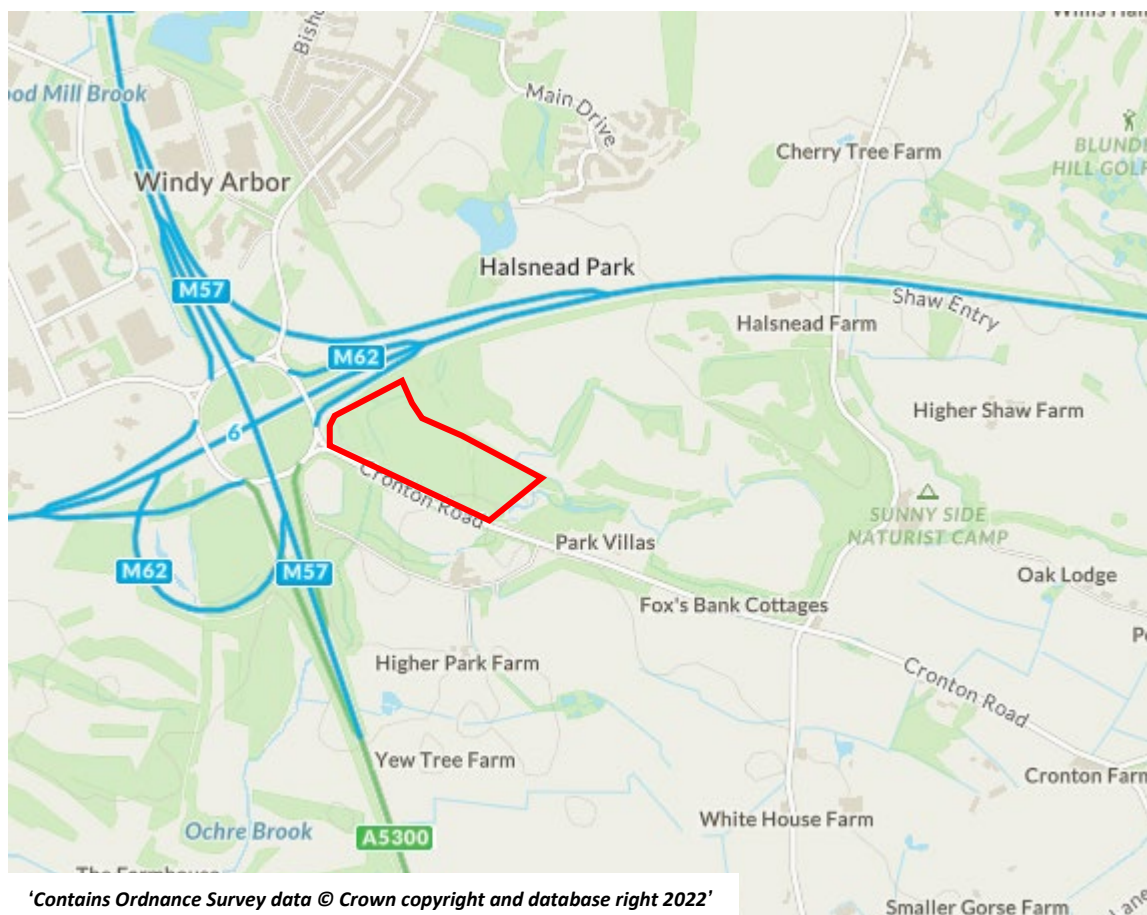


Figure 1 – Site Extent

The Site is located to the east of Junction 6 of the M62, bound by Tarbock roundabout to the west, M62 to the north, Cronton Road to the south and undeveloped land to the east. The Site is irregular in shape and comprises approximately 8.87ha of undeveloped land.

Whilst the surrounding area is undeveloped, land adjacent to the east of the Site is subject to two large development proposals: construction of a new country park, which awaits determination (ref: 20/00578/FUL); and a hybrid application which secured full consent for the development of 15,273sqm

of storage and distribution floorspace (B8) and outline consent for a further 77,629sqm of storage and distribution floorspace (B8) (ref: 20/00494/HYB) which was approved at planning committee on 10th June 2021. These developments, once brought forward in accordance with the adopted Halsnead Garden Village Masterplan SPD will inevitably change the character, use, and appearance of the area.

1.3 Purpose of this Report

This report has been produced to set out the methods, results, and conclusions of a PEA. The purpose of the PEA report is to identify habitats on Site and determine the Sites potential value for protected and/or notable fauna and flora, with the addition of potential impacts on designated Sites. This will inform the need for any further ecological surveys and/or mitigation to minimise the potential impacts on ecology on Site and within the local area.

Further information and details of UK legislation for those species which are formally protected is defined in Appendix 1, which are considered throughout the assessment.

The National Planning Policy Framework (NPPF) (2021) and other Local Planning Policies are considered with the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.

2 Previous Surveys

An Extended Phase 1 Habitat Survey was carried out in May 2021 by Andy Harmer Ecology Services. This is within the optimum time to conduct habitat surveys.

No statutory designated sites were identified within 2km of the Site; however one non-statutory designated Site is present within the Site, and a further seven non statutory designated sites are present within 1km of the Site. Strettles Bog, Tarbock Local Wildlife Site (LWS) is located in the western section of the Site. Immediately adjacent to the Site to the north lies The Old Wood, South LWS and immediately adjacent to the east lies Mine Waste, Cronton LWS. Dagger's Bridge Wood LWS lies on the opposite side of Cronton Road (A5080) from the Site. All of these Sites have been designated for their woodland habitats, with some supporting waterbodies and grassland.

Habitats identified on Site comprised:

- Ephemeral/ Neutral Grassland/ Scrub Mosaic;
- Continuous scrub and Scattered Scrub;
- Marshy Grassland;
- Tall, Ruderal Herb;
- Semi-natural Broad-leaved Woodland;
- Running Water; and
- Bare Ground.

The Site was also found to contain suitable habitat to support the following protected/ notable species:

- Birds;
- Bats;
- Water vole;
- Badger; and
- Otter.

Following the completion of the survey, the following recommendations for ecology were made:

- Further survey effort for badger should be conducted within the Site and within 30m of the Site (where access is possible) to understand the use of the Site by badger.
- No vegetation clearance should be conducted between March to August (inclusive). If clearance works are required during this period, then a check for the presence of nesting birds should be conducted no more than 48 hours prior to removal.
- An appropriate buffer zone should be established to protect the integrity of the non-statutory designated Sites identified on Site and adjacent.
- Landscaping scheme should include provision of species-rich native habitats such as grassland, scrub, and new ponds.

- Bird and bat boxes could be erected onto retained trees within the Site.

3 Methods

The PEA assessment and Report follows the good practice methodology as detailed within the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2019).

3.1 Desk Study

3.1.1 Online Resources and Local Records Centre

Due to the size and low impact of the proposed development and being located within an urban/rural fringe area of Merseyside a 1km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.

Sources of information used in the desk study are presented in Table 1.

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
MAGIC webSite (www.magic.gov.uk)	06/06/2022	Locations of statutory designated Sites within 1km of the Site boundary. Locations of Natura 2000 Sites (Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA)) within 5km of the Site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Natural England (https://designatedSites/.naturalengland.org.uk/)	06/06/2022	Relevant statutory designated Site citations.
JNCC (https://jncc.defra.gov.uk/)	06/06/2022	Information on European wildlife Sites. Details of relevant Section 41 species and habitats.
Merseyside BioBank	06/06/2022	Locally designated wildlife Sites within 1km of Site boundary. Records of protected and notable species within 1km of the Site boundary.
Merseyside Local Biodiversity Action Plans	06/06/2022	Species and habitats which are given special conservation status at the local level.
Catchment Data Explorer	06/06/2022	Summary of data relating to river condition and catchment data, provided The Environment Agency (EA)

3.2 Field Survey

3.2.1 Vegetation

The Site was subject to a field survey on 6th June 2022 by Mark Blacker ACIEEM. The weather conditions were 15°C, overcast (7/8 oktas), wind speed 1 Beaufort scale.

The methods were based on the standard methodology as detailed by *JNCC Handbook for Phase 1 Habitat Survey* (JNCC, 2010). A Phase 1 Habitat Plan has been produced to demonstrate habitats within the proposed development and the surrounding area. The mapping techniques are based on *the Phase 1 Habitat Survey* (JNCC, 2010) guidance.

Flora species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and/or uncommon habitats, were searched for during the survey.

Species abundance is described using the DAFOR scale as shown in Table 2. Percentages are an approximate indication rather than a quantitative measure.

Table 2 – Key to Species Abundance

		Description	Indicative Percentage Ranges
D	Dominant	Covers most of the area	90% or greater
A	Abundant	Very common throughout the area.	50 – 90%
F	Frequent	Common or with many individuals.	20 – 50%
O	Occasional	Occurs in several places but not throughout. Populations are not large.	5 – 20%
R	Rare	Occurs in low numbers in relation to size of area.	Less than 5%
“L” will be used to indicate abundance in a localised area, e.g. LA = Locally abundant			

Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were noted during the field survey when sighted.

3.2.2 Fauna

A Site search for field signs of protected and notable fauna was undertaken, and incidental sightings are detailed. The searches completed were as follows:

- Suitability of any ponds to support notable and protected amphibians, and the suitability of the Site’s terrestrial habitats to support amphibians.
- Suitability of the Site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- Search of any watercourses for signs or suitability for white clawed-crayfish (*Austropotamobius pallipes*), water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts and foraging signs.
- Suitability of the Site to support notable bird species. Bird nests and droppings of notable and protected bird species.
- Suitability of the Site to support notable invertebrates.
- Search of the Site for any invasive species.
- Badger (*Meles meles*) field signs such as setts, mammal, paths, snuffle holes and latrines.

- Suitability of the Site to support notable terrestrial mammals including harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*).

3.3 Bat Assessment

3.3.1 Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) was carried out on the Site trees using a high-powered torch and close-focussing binoculars.

The PRA methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 3rd edition (Collins, 2016). The categorisation within this report is based on that set out in Table 3, which is used as a basis for determining the requirement for further surveys.

Table 3 – Suitability of Buildings and Trees for Roosting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics	Further Survey Requirements
High Roost Suitability	A structure/tree with one or more potential roost Sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September, with at least two surveys between May and August.
Moderate Roost Suitability	A structure/tree with one or more potential roost Sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but are unlikely to support a roost of high conservation status.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September with at least one survey between May and August.
Low Roost Suitability	A structure/tree with one or more potential roost Sites that could be used by individual bats opportunistically. However, these potential roost Sites do not provide enough space, shelter, protection, appropriate condition and/or suitable surrounding habitat to be used on a regular basis by larger numbers of bats.	Structures: one emergence/re-entry survey between May and August. Trees: No further survey required but precautionary methods of felling recommended.
Negligible Suitability	Negligible habitat features on Site likely to be used by roosting bats.	No further work required.

3.3.2 Commuting and Foraging Bats

The Site was assessed for its suitability for use by commuting and foraging bats.

The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 3rd edition (Collins, 2016). The categorisation within this report is

based on that set out in Table 4, which is used as a basis for determining the requirement for further surveys.

Table 4 – Suitability of Site for Foraging and Commuting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics
High Suitability	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting or foraging bats such as; river valleys, streams, hedgerows, lines of trees or woodland edge. Site is close to or connected to known roosts.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats such as lines of trees, scrub or linked back gardens. Habitat connected to wider landscape that could be used for bats for foraging such as; trees, scrub, grassland or water.
Low Suitability	Habitat that could be used by small number of commuting bats such as; defunct hedgerow, isolated features not well connected to surrounding habitat or Isolated habitat that could be used by a small number of foraging bats such as a lone tree or patch of scrub.
Negligible Suitability	No features on Site suitable for use by commuting and foraging bats.

3.4 Habitat Suitability Index

No ponds were present on Site; however, a further four ponds (P1, P2, P3, and P4) were identified within 250m of the Site boundary (see Section 3.3.10 for further details). As great crested newts' upper dispersal limit is generally considered to be up to 250m from a waterbody (though occurrence of greater distances does exist), ponds beyond this distance were not assessed due to limited connectivity (English Nature, 2001).

These ponds were considered for their suitability to support great crested newts (*Triturus cristatus*) and they underwent a Habitat Suitability Index (HSI) assessment following the methodology set out in ARG UK Advice Notice 5 (Oldham *et al.*, 2010). Ten habitat suitability indices were assessed and inputted into the HSI equation, which generates a score between 0 and 1. The calculated score corresponds to the estimated pond suitability for great crested newt, as outlined in Table 5. Refer to Appendix 5 for further details.

Table 5 – Pond Suitability Scores for Great Crested Newts

HSI Score	Habitat Suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good

HSI Score	Habitat Suitability
>0.8	Excellent

3.5 Constraints to the Survey

Whilst every effort has been made to provide a comprehensive description of the Site, no investigation could ensure the complete characterisation and prediction of the natural environment.

The Site is directly adjacent to the M62; therefore, it was not possible to fully survey the motorway verge that was present within 30m of the site boundaries. A full survey of the site boundary adjacent to the motorway was surveyed for evidence of badger and any results have been considered precautionarily.

This PEA does not constitute a full botanical survey. The protected species assessment provides a view of the likelihood of protected species occurring on the Site based on the known distribution of species in the local area and the suitability of the habitat. It should not, however, be taken as providing a full and definitive survey of any protected species group.

Where a lack of records is found during the desk search for a defined geographical area, it does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

The conclusions and recommendations detailed in this report are based upon the Site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the Site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.

3.6 Lifespan of Report

In accordance with CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of **18 months** from the date of the survey (i.e. until 6th December 2023). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

3.7 Definitions

For the purposes of this report, the term 'protected and notable species' relates to:

- Species included on Schedules 2 and 4 of *The Conservation of Habitats and Species Regulations 2017*;
- Species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see section 9[5] and 13[2]);
- Invasive non-native species included on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended);

- Species of principal importance for the conservation of/maintaining and enhancing biodiversity as required under: Section 41 of the *Natural Environment and Rural Communities Act 2006* (England), Section 7 of the *Environment (Wales) Act 2016*, Section 2[4] of the *Nature Conservation (Scotland) Act 2004*;
- Local species of importance as identified within various local biodiversity action plans; and,
- Badgers, which are protected under the *Protection of Badgers Act 1992*.

4 Baseline Ecological Conditions

4.1 Desk Study

4.1.1 Site Location

The Site is located to the east of Junction 6 of the M62, bound by Tarbock roundabout to the west, M62 to the north, Cronton Road to the south and undeveloped land to the east. The Site is irregular in shape and comprises approximately 8.87ha of undeveloped land.

Ochre Brook is present within the Site, flowing north to south within the Site from a culvert beneath the M62 then being culverted beneath Cronton Road A5080. It is anticipated these habitats will provide suitable foraging, resting, and commuting resources within the local area for a variety of wildlife, such as birds, bats and other terrestrial and aquatic mammals.

Habitats within the surrounding area include industrial and residential developments, agricultural fields and a quarry. Major roads are also present within close proximity of the Site.

4.1.2 Designated Sites

No Sites that form part of the National Site Network were located within 5km of the Site boundary and no statutory designated Sites were present within 1km of the Site. Eight non-statutory designated Sites were located within 1km of the Site and are detailed within Table 6.

Table 6 – Designated Sites within the Search Areas

Designated Site	Approx. Distance from Site	Details
Strettles Bog, Tarbock	Within the Site	A small area of broadleaved woodland bisected by a minor watercourse.
The Old Wood, South	Immediately adjacent to north of Site	Designated area of Ancient Woodland. A predominantly broadleaf woodland with a ditch and marsh habitats. Bracken dominated areas can also be found.
Mine Waste, Cronton	Immediately adjacent to east of Site	A predominantly wooded site with ponds present on the north western side. A mix of dry and wet acid grasslands is present around the ponds and to the south
Daggers; Bridge Wood	Immediately adjacent to south of Site	Broadleaf woodland dissected by two watercourses, with the confluence of these two watercourses within the woodland
The Old Wood, North	300m 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 construction of the M62 motorway
Ochre Brook, Tarbock	470m south	A minor watercourse that flows south through Merseyside, joining up with Dog Clog Brook 1.2km south of the Site
Big Water and Big Water Wood, Halshead	500m north	Standing water habitats which support populations of rare plant species.
Ox Lane Wood, Tarbock	750m south west	Section of broadleaf woodland with a ditch also present.

The Site also falls within the Impact Risk Zone of the Mersey Estuary SSSI present 6.5km south of the Site, based on consultation with MAGIC. This Site is designated for supporting internationally important

populations of wildfowl and containing large areas of intertidal sand and mudflats, as well as salt-marsh, brackish marsh, and boulder clay cliffs.

4.1.3 Flora and Fauna

The following section summarises protected and/or notable species records that have been recorded within 1km of the Site.

Vascular Plant

88 records of bluebell (*Hyacinthoides non-scripta*) were returned in the data search. Three records of the vascular plant species grape-hyacinth (*Muscari neglectum*) and spreading hedge-parsley (*Torilis arvensis*) were returned. The closest record was attributed to bluebell and was located onsite in 2017.

Bluebell are listed under Schedule 8 of the Wildlife and Countryside Act (1981) and the North Merseyside LBAP, with both other species listed under Section 41 of the NERC act (2006).

The data search returned 60 records of notable vascular plant species, namely aggregate-headed hawkweed (*Hieracium aggregatum*), dittander (*Lepidium latifolium*), fly honeysuckle (*Lonicera xylosteum*), fringed water-lily (*Nymphoides peltata*), grape-hyacinth (*Muscari neglectum*), jacob's-ladder (*Polemonium caeruleum*), large-leaved lime (*Tilia platyphyllos*), northern yellow-cress (*Rorippa islandica*), rock stonecrop (*Sedum forsterianum*), spreading hege-parsley (*Torilis arvensis*), water-soldier (*Stratiotes aloides*), and welsh poppy (*Meconopsis cambrica*).

Invertebrates

110 records of dragonfly were returned in the data search, namely blue-tailed dragonfly (*Ischnura elegans*), broad-bodied chaser (*Libellula depressa*), brown hawker (*Aeshna grandis*), common blue damselfly (*Enallagma cyathigerum*), common darter (*Sympetrum striolatum*), common hawker (*Aeshna juncea*), emperor dragonfly (*Anax imperator*), four-spotted chaser (*Libellula quadrimaculata*), migrant hawker (*Aeshna mixta*), and southern hawker (*Aeshna cyanea*). Ten records of wall butterfly (*Lasiommata megera*) were also returned in the data search. The closest records were attributed to blue-tailed damselfly add broad-bodied chaser and were located approximately 125m southeast in 2008.

All dragonfly species returned are listed under the North Merseyside LBAP, with wall butterfly listed under Section 41 of the NERC act (2016).

Two records of the notable invertebrate species branded general (*Stratiomys potamida*) were returned in the data search.

Amphibians

26 records of common toad (*Bufo bufo*) were returned in the data search, with the closest record approximately 30m east of the site from 2008.

Eight records of great crested newt were returned, with the closest record approximately 780m southwest of the site from 2010.

Common toad is listed on Section 41 of the NERC act (2006). Great crested newt is listed under the Wildlife and Countryside Act (1981), Section 41 of the NERC act (2006), and the North Merseyside LBAP.

A MagicMap search returned no granted EPSL relating to great crested newts present within 1km of the Site.

Eel

Nine records of eel (*Anguilla anguilla*) were returned in the data search, the nearest located approximately 70m southeast in 2008.

Eel are listed under Section 41 of the NERC act (2006).

Birds

A total of 91 records of protected or notable birds were returned in the data search as detailed in Table 6.

Table 6 – Protected or notable birds recorded within 1km

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance	Date
<i>Tyto alba</i>	Barn owl	Sch. 1****, Sch.9	<1km	1999
<i>Pyrrhula pyrrhula</i>	Bullfinch	S41****	<1km	1999
<i>Emberiza calandra</i>	Corn bunting	LBAP, S41****	<1km	1999
<i>Cuculus canorus</i>	Cuckoo	S41****	<1km	1998
<i>Prunella modularis</i>	Dunnock	S41****	150m	2008
<i>Locustella naevia</i>	Grasshopper warbler	S41****	150m	2008
<i>Perdix perdix</i>	Grey partridge	LBAP, S41****	150m	2005
<i>Delichon urbicum</i>	House martin	LBAP	<1km	1999
<i>Passer domesticus</i>	House Sparrow	LBAP, S41****	<1km	1999
<i>Alcedo atthis</i>	Kingfisher	Sch. 1****	<1km	2014
<i>Vanellus vanellus</i>	Lapwing	LBAP, S41****	560m	2006
<i>Dryobates minor</i>	Lesser spotted woodpecker	S41****	<1km	1999
<i>Linaria cannabina</i>	Linnet	S41****	<1km	2002
<i>Charadrius dubius</i>	Little ringed plover	Sch. 1****	<1km	2005
<i>Emberiza schoeniclus</i>	Reed bunting	S41****	150m	2008
<i>Alauda arvensis</i>	Skylark	LBAP, S41****	560m	2007
<i>Turdus philomelos</i>	Song thrush	LBAP, S41****	150m	2008
<i>Muscicapa striata</i>	Spotted flycatcher	S41****	<1km	1999
<i>Sturnus vulgaris</i>	Starling	LBAP, S41****	150m	2008
<i>Apus apus</i>	Swift	LBAP	<1km	1999
<i>Passer montanus</i>	Tree sparrow	S41****	<1km	2007
<i>Streptopelia turtur</i>	Turtle dove	S41****	<1km	1998

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance	Date
<i>Poecile montanus</i>	Willow tit	S41****	150m	2005
<i>Motacilla flava</i>	Yellow wagtail	S41****	<1km	1998
<i>Emberiza citrinella</i>	Yellowhammer	S41****	<1km	2005

* Red list of BoCC5 (2021)

** Amber list of BoCC5 (2021)

*** Black list BoCC5 (2021)

**** Section 21 of the NERC Act (2009)

***** Schedule 1 or 5 of the WCA (1981)

Bats

41 records of bats were returned in the data search, including records of unidentified bat species (*Chiroptera/Vespertilionidae*), brown long-eared bat (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), daubenton's bat (*Myotis daubentonii*), unidentified mouse-eared bat species (*Myotis sp.*), common noctule (*Nyctalus noctula*), unidentified pipistrelle species (*Pipistrellus sp.*), soprano pipistrelle (*Pipistrellus pygmaeus*), and whiskered/brandt's bat (*Myotis mystacinus/brandtii*). The closest record was attributed to an unidentified bat species, located 50m north of the site in 1991.

All species of bat returned are listed under Schedules 2 and 5 of the Wildlife and Countryside Act (1981) and the North Merseyside LBAP. Brown long-eared bat, common noctule, and soprano pipistrelle are also listed under Section 41 of the NERC act (2006).

MAGIC also detailed the presence of one granted EPSL within 1km of the Site (Ref: EPSM2013-5867). This licence was to allow destruction of a resting place for common pipistrelle, soprano pipistrelle, brown long-eared bat, and natterer's bat between 2013 - 2014. It was located approximately 250m south-west of the site.

Hedgehog

21 records of hedgehog were returned in the data search, with the closest record located on the southwestern border of the site in 2019.

Hedgehog are listed under Section 41 of the NERC act (2006).

Brown hare

10 records of brown hare (*Lepus europaeus*) were returned in the data search, with the closest record located approximately 130m north of the site in 2012.

Brown hare are listed under Section 41 of the NERC act (2006).

Ferret

One record of feral ferret (*Mustela putorius subsp. furo*) was returned in the data search, located within 1km of the site in 1993.

Ferret are listed under Section 41 of the NERC act (2006).

Water vole

14 records of water vole were returned in the data search, with the closest record located approximately 20m north of the site in 1989.

Water vole are listed under Schedule 5 of the Wildlife and Countryside Act (1981) and Section 41 of the NERC act (2006).

Otter

1 record of otter was returned in the data search, located approximately 630m southwest of the site in 2017.

Otter are listed under Schedules 2 and 5 of the Wildlife and Countryside Act (1981) and Section 41 of the NERC act (2006).

Invasive Non-native Species

Fauna

Eight records of non-native invasive animal species were returned in the data search, namely canada goose (*Branta canadensis*), ruddy duck (*Oxyura jamaicensis*), american mink (*Neovison vison*), and eastern grey squirrel (*Sciurus carolinensis*). The closest record was attributed to eastern grey squirrel and was located onsite in 2017.

All species are listed under Schedule 9 of the Wildlife and Countryside Act (1981).

Flora

224 records of invasive non-native plant species were returned in the data search, namely water fern (*Azolla filiculoides*), Canadian waterweed (*Elodea canadensis*), floating pennywort (*Hydrocotyle ranunculoides*), himalayan balsam (*Impatiens glandulifera*), himalayan cotoneaster (*Cotoneaster simonsii*), japanese knotweed (*Fallopia japonica*), japanese rose (*Rosa rugosa*), Variegated yellow archangel (*Lamium galeobdolon subsp. argentatum*), montbretia (*Crocodymia pottsii x aurea = C. x crocosmiflora*), rhododendron ponticum (*Rhododendron ponticum*), and virginia-creeper (*Parthenocissus quinquefolia*). The closest record was attributed to Himalayan balsam and was located onsite in 2017.

All species are listed under Schedule 9 of the Wildlife and Countryside Act (1981).

No Records Returned

The data search returned no records for:

- White-clawed crayfish
- Reptiles
- Hazel dormice (*Muscardinus avellanarius*)
- Badger

4.2 Field Survey

The Site habitats and accompanying Target Notes are presented in the Phase 1 Habitat Map in Appendix 2.

4.2.1 Mixed Scrub

Dense scrub exists along the southern boundary of the site and is also present as a well established edge layer around the broadleaved semi-natural woodland. Species present within this scrub comprised frequent hawthorn (*Crataegus monogyna*), goat willow (*Salix caprea*), and blackthorn (*Prunus spinosa*), with common gorse (*Ulex europaeus*) present rarely on the soil mounds present within the site.



Photograph 1 – Dense scrub present along the southern site boundary.



Photograph 2–Dense scrub present adjacent to the broadleaved semi-natural woodland within the site.

4.2.2 Marshy Grassland

Marshy grassland was present in a couple of patches within the Site (TN3 and TN4). This was mostly dominated by soft rush (*Juncus effusus*) and reed canary-grass (*Phalaris arundinacea*), with occasional hairy willowherb and rare wild angelica (*Angelica sylvestris*) present.



Photograph 3 – Marshy Grassland present within the eastern section of the site.



Photograph 4 – Marshy Grassland present within the western section of the site.

4.2.3 Tall Ruderal

A small area of tall ruderal vegetation had developed around a mound that had been created within the centre of the site, possibly from where excavated material had been deposited. Plant species present within this habitat included occasional hairy willowherb (*Epilobium hirsutum*), common nettle (*Urtica dioica*), hogweed (*Heracleum sphondylium*), bramble (*Rubus fruticosus* agg.), with field woundwort (*Stachys sylvatica*) present rarely.

4.2.4 Semi-Natural Broadleaved Woodland

Broadleaved semi-natural woodland is present within the Site towards the western section of the site which forms the area designated as Strettle's Bog, Tarbock LWS. The species present in the canopy comprised sycamore (*Acer pseudoplatanus*), pedunculate oak (*Quercus robur*), ash (*Fraxinus excelsior*), silver birch (*Betula pendula*) and hawthorn. Fallen deadwood was present within this woodland, with the ground covered in a dense layer of leaf litter throughout. Evidence of woodland regeneration was present with some sycamore and oak saplings present within the ground layer. No evidence of management practices was observed within the woodland. Some mature trees were present to the western extent of the woodland, but none qualified as being veteran.

Ground flora species present within this woodland included bluebell (*Hyacinthoides non-scripta*), dogs mercury, remote sedge (*Carex remota*), creeping soft grass (*Holcus mollis*), with Hart's tongue fern (*Phyllitis scolopendrum*) also present in the wetter area. A dense stand of Himalayan balsam (*Impatiens glandulifera*) was also present within the woodland at TN1 and TN2.



Photograph 5 – Broadleaved semi-natural woodland with bramble ground layer present within the western section of the site.



Photograph 6 – Broadleaved semi-natural woodland present within the western section of the site.

4.2.5 Running Water

Ochre Brook flows through the broadleaved woodland present within the western section of the site (TN6). This watercourse was heavily shaded, fast flowing, with minimal aquatic or marginal vegetation present. The watercourse was approximately 2m in width and the water was approximately 50cm deep. The banks were steep to vertical in places throughout the site and reached a maximum height of 3m above the water level. The substrate of the watercourse consisted of large rocks and pebbles which covered in a layer of silt, additionally the water showed evidence of pollution, likely attributed to runoff from the motorway present adjacent to the site.

Two ditches are also present on site that flow from a culvert adjacent to the northern boundary into Ochre Brook (TN5 and TN7). This flows through a deep cutting in the northern section of the site which had been subject to extensive earthworks and therefore had minimal vegetation established on the banks. Aquatic vegetation including hard rush (*Juncus inflexus*), field horsetail (*Equisetum arvense*), and hairy willowherb.



Photograph 7 – Ochre Brook within the woodland, showing culvert present at western extent of site.



Photograph 8– Drainage ditch that flows into Ochre Brook within the deep cutting.

4.2.6 Other neutral grassland

The majority of the site comprised a mosaic of low-growing neutral grassland and ephemeral/short perennial vegetation, with some tall ruderal species also present. The site showed evidence of heavy machinery using the site, with deep wheel ruts evident, so this habitat had likely become established following a period of disturbance. At the time of survey this habitat was damp although no evidence of standing water was observed within the site. This habitat was observed to be more species rich than agricultural land, although none of the species present were notable and likely to be common within the surrounding area.

Yorkshire fog (*Holcus lanatus*) was present abundantly within this habitat. Species present frequently within this habitat comprised common sorrel (*Rumex acetosa*), creeping cinquefoil (*Potentilla reptans*), creeping thistle (*Cirsium arvense*), and marsh thistle (*Cirsium palustre*). Species present occasionally within this habitat included field horsetail, creeping bent (*Agrostis stolonifera*), hard rush, wild angelica, hogweed, common vetch (*Vicia sativa*), northern marsh orchid (*Dactylorhiza purpurella*), glaucous sedge (*Carex flacca*), field forget-me-not (*Myosotis arvense*). Square-stalked StJohn's-wort (*Hypericum tetrapterum*) was present rarely.



Photograph 9 – Neutral grassland present within the majority of the site



Photograph 10 - Neutral grassland present within the majority of the site.

4.3 Site Suitability for Protected and Notable Species

4.3.1 Species Discounted from Assessment

Hazel dormouse (*Muscardinus avellanarius*) mainly occur in southern counties, especially in Devon, Somerset, Sussex and Kent. There are few recorded localities north of the Midlands, though they are present in parts of the Lake District and in scattered Welsh localities (Matthews *et al.*, 2018). The species are not generally known to be present within the Merseyside area (Wembridge *et al.*, 2016). The habitats on Site are of limited value due to limited areas of extensive woodland and scrub. As such, the species are reasonably discounted from Site

Red squirrel have been discounted from the assessment. Red squirrel populations are limited to small areas of northern England and, although populations exist within Merseyside, no previous records returned in the data search and no suitable habitat is present on Site. It is anticipated that high abundances of grey squirrel (*Sciurus carolinensis*) are present within this region (Shuttleworth/RSST n.d.). This species will displace red squirrel through competition as well as cause increased red squirrel mortality through the spread of squirrel pox (The Mammal Society, 2020).

4.3.2 Vascular Plants

The habitats found on Site are common within the surrounding area and have developed relatively recently due to the level of previous disturbance on Site.

The woodland at the western extent of the Site contained bluebell, dog's mercury (*Mercurialis perennis*) which are commonly considered to be indicators of ancient woodland.

4.3.3 Invertebrates

A diversity of habitats were present on Site, including broadleaved woodland with dead wood, running water and ephemeral/grassland/scrub mosaic.

These habitats will likely provide a range of habitats to support invertebrates at all life stages, although due to the location of the Site on an urban/industrial fringe, the assemblage is likely to be restricted to common and widespread species.

4.3.4 White-Clawed Crayfish

Ochre Brook was present within the Site which contained large rocks/pebbles that would provide sheltering habitats for white clawed crayfish. No evidence of undercutting or overhanging roots were seen along the banks.

However, the brook is culverted beneath the motorway and is likely to be subject to a high degree of run off, making the brook unsuitable to support white-clawed crayfish. Additionally, no records of this species were returned from within 1km of the Site during the desk study.

White-clawed crayfish have been reasonably discounted from this assessment and are not discussed further within this report.

4.3.5 Amphibians

No ponds were located within Site and four ponds were identified within 250m of the Site boundary. Ponds greater than 250m away were not considered as great crested newts' upper dispersal limit is generally considered to be up to 250m from a waterbody (though occurrence of greater distances does exist) (English Nature, 2001).

These ponds were generally of poor quality, being heavily shaded and mostly containing low levels of water.

The location of the ponds identified within 250m of the Site is provided in Figure 2. An HSI assessment of all ponds was conducted in June 2022, and found the following results:

- Pond 1: Average suitability;
- Pond 2 and Pond 3: Below Average suitability;
- Pond 4: Poor suitability.

Previous surveys conducted in 2020 by TEP on these ponds and others within the surrounding area found no evidence of GCN, with the ponds also testing negative for GCN eDNA. The ponds identified within this report were subject to standard bottle trapping surveys and no evidence of great crested newts was recorded. Due to these surveys being undertaken recently and that the overall quality of the ponds has not changed from when previous surveys were conducted, GCN are still likely to be absent from the ponds. The M62 present to the west and the A5080 provide a significant barrier to amphibian dispersal across the environment, and the ponds identified are isolated from other ponds.

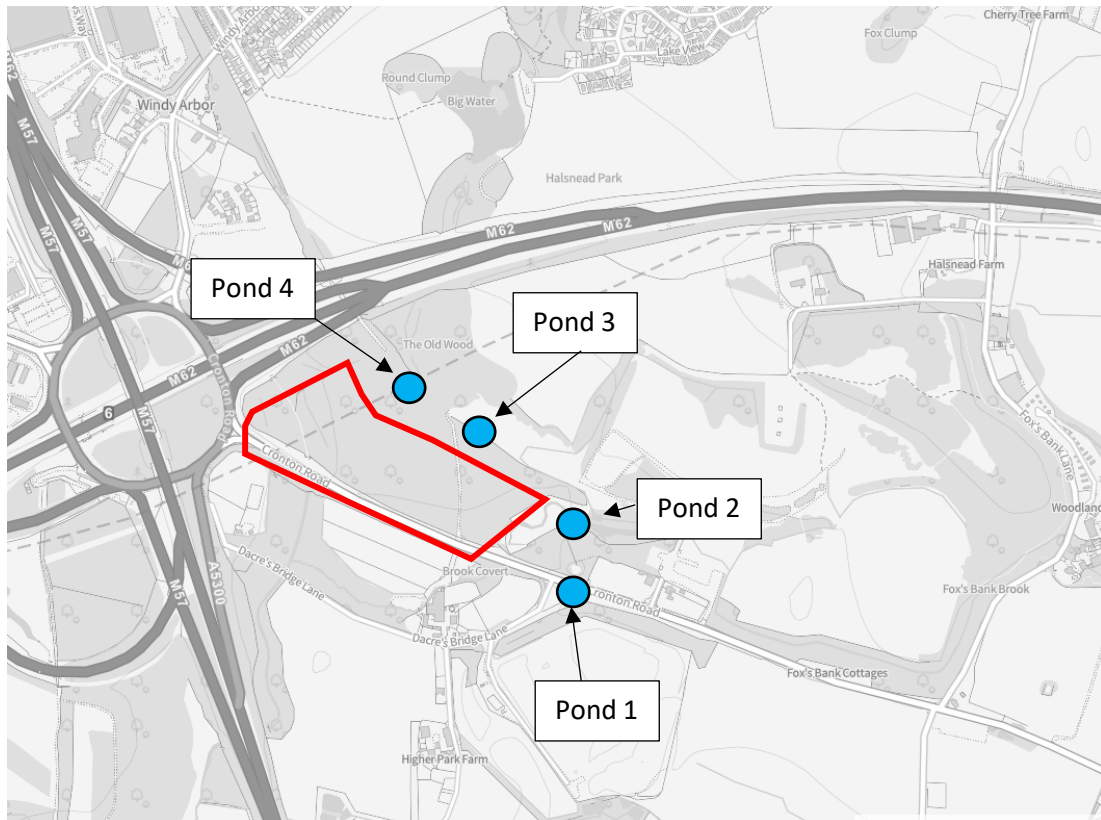


Figure 2: Locations of ponds within 250m of the Site.

The Site comprised a mosaic of habitats with a high abundance of soft rush, with connections to other aquatic habitats within the surrounding area which may provide suitable foraging resources and cover for common amphibians such as common toads.

The presence of great crested newts within the Site is reasonably discounted, though common amphibians may occur on Site.

4.3.6 Reptiles

The Site was found to provide limited value for reptiles, due to the lack of open space for basking within the majority of the Site and the high level of anthropogenic disturbance present due to the proximity of nearby major roads. The woodland and scrub habitats present could provide some terrestrial cover for the species, though these are generally confined to the boundaries.

Overall, the habitats on Site were of limited value and no records of the species group were identified. Reptiles are not considered to be present on Site.

4.3.7 Birds

Ground Nesting

The Site was considered to be unsuitable to ground nesting species, however the boundary habitats and woodland habitats may provide value to species such as skylark, records of which were returned within the desk study.

The Site may provide value to ground nesting bird species.

Passerine

The broadleaved woodland, aquatic habitats and boundary trees all provide suitable habitat to support nesting bird species.

Wintering

The Site offers limited suitable habitat to support wintering birds due to the high level of anthropogenic disturbance present on Site from the adjacent motorway. Additionally, the habitat present on Site is largely of poor quality and would provide limited food sources during winter months to support over wintering birds.

Barn Owl

No mature trees with potential to support a barn owl were recorded on Site. The wider Site and environment provide limited foraging habitat due to the high levels of anthropogenic disturbance present.

4.3.8 Bats

Preliminary Roost Assessment

No buildings were present on Site, and no trees with bat roost potential were identified within the Site. Mature trees were present within the woodland in the western section of the Site, however none with potential to support roosting bats were present.

Commuting and Foraging Bats

The woodland and aquatic habitats on Site are anticipated to provide value for foraging bats due to providing suitable commuting route within the Site and across the wider environment, as well as providing a range of habitats to support invertebrate prey. The trees and scrub present along the Site boundaries, is likely to be of value to bats as it connects to the wider environment. The habitats within the Site were relatively common and widespread within the surrounding area.

The Site does not have potential to support roosting bats whilst the broadleaved woodland, aquatic habitats, and Site boundaries may provide foraging and commuting value.

4.3.9 Hedgehog

The broadleaved woodland and scrub habitats will provide suitable cover and foraging habitats for the species. Hedgehog are potentially present within the Site.

4.3.10 Water Vole

Ochre Brook is present within the broadleaved woodland present in the western section of the Site. The banks on this watercourse were approximately 3m high and were steep to vertical throughout most of the Site. The banks were mostly unvegetated, with the watercourse itself being approximately 3m across with a moderate to high flow rate present.

Due to the lack of suitable bankside vegetation and the steepness of the banks, Ochre Brook was considered unsuitable to support water vole.

A ditch joined into Ochre Brook from the north of the Site which was approximately 0.5m across with approximately 10cm depth of water. This drainage ditch also had steep banks and no suitable bankside vegetation that could support water vole.

The desk study did not return any records of water vole within 1 km of the Site.

The Site was considered to be unsuitable to support water vole, and this feature has therefore been reasonably discounted from the assessment and is not discussed further within this report.

4.3.11 Otter

Ochre Brook and the drainage ditch which joins into Ochre Brook were thoroughly searched for signs of otter, including spraints, prints, and slides. No evidence of otter use was found along Ochre Brook, whilst the drainage ditch was considered to be too small to be of value to otter.

The brook is culverted under the adjacent motorway to the west of the Site, which will potentially reduce the value of Ochre Brook as a commuting or foraging route for otter. Additionally, Ochre Brook is culverted to the south of the Site beneath the A5080.

The broadleaved woodland could provide some suitable habitat as a resting place for otter; however, no evidence was observed and no trees with over hanging roots were observed along the banks.

The Site provides limited value to the local otter population; however, it may be used infrequently as a commuting route.

4.3.12 Badger

No evidence of badger was seen on Site or within 30m of the Site. The broadleaved woodland present on Site contained dense vegetation, however no evidence of a mammal pathway or signs of foraging were noted.

The broadleaved woodland was partially on a slope which provided suitable habitat for badger sett construction.

The broadleaved woodland and surrounding vegetation likely provide value as a foraging resource for local badger populations, although the presence of a major road in close proximity to the Site will likely limit the use of the Site by badger.

The wider landscape was assessed as having suitability for the species based on the areas of woodland which connect the Site to the wider area. The Site provides potential sett-building opportunities within the broadleaved woodland and scrub, whilst fruiting trees will provide suitable foraging resources.

The Site potentially provides value to local badger populations.

4.4 Invasive Species

4.4.1 Flora

Himalayan balsam was noted within the Site during the field survey at TN1 and TN2 and a large stand was also present within the broadleaved woodland present on Site. This species is listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) as an invasive non-native species.

5 Ecological Constraints and Recommended Mitigation

5.1 Proposed Development

Maro are proposing to develop land off Cronton Road in Prescott, Merseyside. The applicant is seeking approval for the erection of a single warehouse (Use Class B8) with ancillary office space, associated parking, access, landscaping, and other works.

5.2 Designated Sites

The nearest statutory designated Site is Clington Wood Local Nature Reserve (3.7km south-east of the Site). There are no impacts anticipated to this Site as result of the proposed development as it is located a sufficient distance away and is separated by anthropogenic barriers such as the residential areas and major roads such that no impacts as a result of development are anticipated.

The Site lies within the IRZ of the Mersey Estuary SSSI. This site is located approximately 6.5km south of the Site and is designated for supporting internationally important populations of wildfowl and estuarine habitats. The Site provides limited potential to support these species due to its size and the high level of anthropogenic disturbance present, which means it is unlikely to act as functional land associated with this designated site.

Strettles Bog, Tarbock LWS, a non-statutory protected Site, is located within the Site. Immediately adjacent to the Site to the north is The Old Wood, South LWS and immediately adjacent to the Site to the east is Mine Waste, Cronton LWS. Dagger's Bridge Wood LWS lies on the opposite side of the A5080 from the site. None of the LWS's or habitats they are designated for will be directly impacted by the development. However due to the proximity of the proposed development to Strettles Bog, Tarbock LWS, measures should be implemented to ensure that construction activities do not degrade this designated site.

5.2.1 Construction Environmental Management Plan

Therefore, it is recommended that a detailed Construction and Environment Management Plan (CEMP) specific to the proposed development is created (and adhered to throughout the course of construction works) to avoid, minimise and mitigate for negative impacts resulting from construction practices on the LWS present within the Site and the associated habitats that the Site is designated for.

This plan will detail measures to avoid, minimise or mitigate any potential negative effects caused by construction practices on the environment on and surrounding the Site including:

- The control of run-off from areas of arisings to prevent any pollutants/contaminants entering the onsite and nearby watercourses.
- Appropriate measures to suppress dust during hot, dry and/or windy conditions.
- Excavations should be sealed overnight or should have at least one shallow-sloping side to allow any animals that may fall in to escape.
- An ecologist should be contacted for advice should any protected species be discovered during construction.

5.2.2 Landscape and Ecological Management Plan

A Landscape and Ecological Management Plan (LEMP) could be compiled and implemented on-Site to enhance the biodiversity and overall ecology of the Site, whilst providing methods and management

practices to ensure the quality of the LWS present on Site does not deteriorate as a result of the proposed development. This document would also take into consideration the landscaping of the development and ensure they reach the full potential and quality as intended.

This could provide an initial assessment of the Site from a landscape perspective to inform the opportunities and constraints. Develop external works / landscape proposals relevant to the Site context and proposed uses.

The LEMP could include the details of the following:

- Full details of both hard and soft landscape proposals, a schedule of landscape maintenance for a minimum of 5 years, and thereafter a 30-year long term management plan.

5.3 Habitats

The Site comprised habitats that were found to be widespread within the local area; however, they did contain value for wildlife such as bats, birds and terrestrial mammals. The semi-natural broadleaved woodland and running water are of highest value, though the site may provide limited value as a foraging resource for bats.

5.3.1 Broadleaved Woodland and Trees

Generally, the protection measures of retained trees and woodland will be through use of temporary protective demarcation fencing to protect the trees and shrubs. The fencing must extend outside the canopy of the retained trees and must remain in position until the development is complete to ensure protection is provided throughout the construction phase.

The fencing will be in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations.

The Arboriculture Impact Assessment conducted for this Site (Urban Green, 2022) details the partial loss of some areas of broadleaved woodland present along the southern boundary of the Site. It is recommended that replacement tree planting is carried out to compensate for loss of any trees. It is recommended that the planting comprises native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species.

5.3.2 Watercourse

Ochre Brook flows through the site within the broadleaved woodland present in the western section of the site and is therefore at risk of being negatively impacted as a result of construction processes. The implementation of a CEMP (as detailed in Section 5.2.1) should control for any negative impacts to this habitat, whilst the implementation of a LEMP (as detailed in Section 5.2.2) will allow for long term management of the habitat to ensure it does not become neglected.

5.4 Fauna

5.4.1 Vascular Plants

The most valuable habitat for vascular plant diversity on Site is the area of broadleaved woodland present within the western section of the Site. This area is to be retained within the development, therefore there are no adverse impacts to vascular plant diversity within the Site anticipated.

5.4.2 Amphibians

Great crested newts were deemed unlikely to be present on Site and no further consideration for the species is required. However, there is a possibility that common amphibians such as common toad may be present on Site.

It is recommended that Reasonable Avoidance Measures are to be followed during Site clearance. All Site contractors are to be inducted to the potential presence of the species. If any amphibians are encountered during Site/vegetation clearance works, they should be moved carefully, by hand, to outside of the development area.

5.4.3 Birds

Vegetation removal should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably experienced ecologist should check the habitat for breeding bird activity no more than 48 hours before clearance. If nesting activity is found, nests must be left in situ until the young have fledged.

The habitats of highest value to birds within the Site, i.e. broadleaved woodland and aquatic habitats will be retained. There will be some loss of scrub within the Site, therefore the landscape proposals for the Site should contain a range of habitats to support a variety of nesting bird species. The drainage ditch north of the broadleaved woodland had bare unvegetated banks which provide opportunity within the Site to increase the overall habitat provision to support bird species, therefore planting or seeding of these banks should be included within the landscape proposals for this Site.

5.4.4 Bats

The habitats of highest value to bats within the Site, i.e. broadleaved woodland and aquatic habitats will be retained within the development, therefore the overall value of the Site to foraging and commuting bats should not be affected. It is recommended that the landscape designs for this Site include native flowering perennial plants that will provide long term value for invertebrates.

Slow-flying species such as brown long-eared and Myotis species, which are known to be in the local area, are sensitive to lighting and may be impacted by the proposed development, should no mitigation for lighting be considered.

Lighting mitigation should follow the guidance outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Bats and Artificial Lighting in the UK” (2018).

Construction lighting should not be directed towards retained and surrounding habitats including the broadleaved woodland and watercourses. The construction lighting may impact bats which are sensitive to light. Directional lighting will be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these.

An External Lighting Scheme had not been produced on the writing of this report. As such, the following recommendations are to be considered within the scheme during its condition, to minimise impacts of lighting. The recommendations are as follows:

- Keep Site lighting to minimum levels.
- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
- Lighting should feature peak wavelengths greater than 550nm.

- Internal lighting should be positioned away from windows to minimise light spill, where appropriate.
- Light placement should be downward facing to prevent excess horizontal or vertical light spill.
- The use of integrated fittings such as cowls, shields, louvres, and hoods, that effectively contain light spill from unintended areas, where appropriate.
- The use of hard landscaping features to block light and create dark corridors.
- Avoid illuminating any suitable retained bat habitats, particularly the hedgerows and trees, that are potential commuting and foraging habitat for bats.
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use, where appropriate.
- Column heights of lighting can be considered to minimise light spill.

5.4.5 Hedgehog

Hedgehog may be present on Site, as such checks for hedgehogs should be carried out prior to grassland and scrub removal to avoid harming this species during works.

5.4.6 Otter

No impacts are anticipated to occur directly to Ochre Brook and the implementation of a CEMP as outlined in Section 5.2 will control for any indirect impacts to the watercourse.

Otter may use the broadleaved woodland present along Ochre Brook as a resting place. No works are anticipated to occur within the broadleaved woodland adjacent to Ochre Brook therefore the impact to otter as a result of this scheme should be minimal.

The following Reasonable Avoidance Measures should be followed throughout the construction phase:

- All Site personnel are to be inducted through use of a toolbox talk, on the presence of otters, their legal protection and working limits.
- Regular inspections of the watercourse and its banks for any sign of otter holts or activity. These should be undertaken by an ecologist at regular intervals during the operation of the Site.
- Any man-made excavations, trenches or pits relating to the development that must remain open overnight, will either be securely fenced off or covered up overnight to avoid entrapment of otters, if left open, access ramps (e.g., mammal ladders, a roughened plank or even a ramp of earth) will be placed within the excavation each night near to crossing points to allow any animals that accidentally fall into the excavation a means of climbing out.
- Any temporarily exposed open pipe system will be capped in such a way as to prevent otters gaining access, as this may happen when contractors are off-Site.

If in the unlikely chance an otter is discovered on Site, the project ecologist is to be contact immediately and Natural England are to be informed.

5.4.7 Badgers

Although no evidence of badger use within the Site was observed, the Site does have potential to support badger. The following Precautionary Working Methods will be adhered to during construction phase to ensure that no badgers are impacted by the proposed development:

- All Site operatives will be inducted to the potential presence of the species and the species legal protection.
- All Site operatives will be inducted as to identifying potential badger setts and should be vigilant if they suspect they locate a new sett during works and inform the Site manager immediately. A minimum 20m buffer will be maintained from the potential sett until an ecologist has been to Site.
- All excavations will be battened at a 45-degree angle or ramps to be positioned to allow escape should animals become trapped.
- All Site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year when extra care is needed to avoid potential impacts on pregnant females.

5.5 Invasive Species

Non-native invasive flora species Himalayan balsam was identified during the Site walkover. As such, it is recommended, prior to the development, that an invasive species specialist should be contracted to map the extent of invasive species present within the Site and produce a detailed management plan for the removal and eradication of such species onsite.

6 Further Surveys

No further surveys are required for this site to facilitate the development.

7 Opportunities for Enhancement

The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.

Paragraph 174 states that this should be achieved by (in terms of this assessment only):

- a) *protecting and enhancing valued landscapes, Sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

Specific enhancement recommendations for the Site include the following:

- Bat and bird boxes could be placed on the new building / retained trees. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- The inclusion of 'hedgehog refugia' to provide additional hibernation habitat to promote use of the Site by hedgehogs should be implemented within the design for the Site.
- An ecologically sensitive planting scheme could be incorporated on the Site to promote invertebrate use of the Site, which could benefit local bat and bird species.
- The ditch present within the northern section of the site has bare earth banks on the majority of its length. These can be enhanced through the planting of marginal species which will stabilise the banks and decrease the level of sediment entering the watercourse.

An assessment of the change in ecological value provided by the scheme will be conducted using The Biodiversity Metric 3.1 from Natural England.

8 Conclusion

The PEA has met the objectives of the report, by demonstrating the following:

- The major habitats identified on Site included broadleaved semi-natural woodland, marshy grassland, neutral grassland, mixed scrub, and tall ruderal.
- Potential ecological constraints identified included amphibians, nesting birds, commuting, and foraging bats, hedgehog, otter, and badger and are detailed in Section 4.
- Mitigation recommendations to be completed prior and during the construction phase for amphibians, nesting birds, commuting, and foraging bats, hedgehog, otter, and badger have been detailed in Section 5.
- No further surveys are required to determine presence or absence and inform relevant mitigation requirements and therefore to facilitate development.
- General ecological enhancements are listed within Section 7.

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Appendix 1 – Relevant Legislation

Legislation relating to European Protected Species (e.g. bats, otter, great crested newt)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 transpose the European Union's 'Habitats Directive' (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to sale, possession and control of wild animals listed in Schedule 5.

- Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:
- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely:
- to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or;
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;
- to affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal, or;
- Damage or destroy a breeding Site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Great crested newt, otter and several species of bat are listed as a SoPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Legislation for white-clawed crayfish

White-clawed crayfish are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this act it is an offence to:

- Intentionally take white-clawed crayfish from the wild; and,
- Sell or attempt to sell, any part of a white-clawed crayfish, alive or dead, or advertise that one buys or sells, or intends to buy or sell any part of a white-clawed crayfish.

The white-clawed crayfish is listed under Annex II and V of the EC Habitats Directive. The Conservation of Habitats and Species Regulations 2010 implements the European Union's 'Habitats Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and of Wild Fauna and Flora) in Great Britain. Annex II requires that Special Areas of Conservation (SAC) are established specifically to conserve this and other listed species. In a SAC designated for white-clawed crayfish a precautionary principle must be applied when considering the potential impacts of any operations that may affect white-clawed crayfish and their habitat.

White clawed crayfish are listed as a SoPI under Section 41 of NERC Act 2006.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species, smooth newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*) receive limited protection through section 9(5) only which makes selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to reptiles

All native reptile species have some degree of protection in the UK, through section 9(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). There are two different levels of protection afforded to reptiles through this legislation according to species and this is described in more detail below.

Full Protection

Sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are afforded protection under The Conservation of Habitats and Species Regulations 2010 (are species of European importance) and are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the CRow Act (2000). The Conservation of Habitats and Species Regulations 2010 implements the European Union's 'Habitats Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and of Wild Fauna and Flora) in Great Britain. The relevant sections of this legislation make it an offence to:

- Intentionally kill, injure or capture or take a reptile;
- Possess or control (live or dead animal, part or derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct access to a breeding Site or any structure or place used for shelter or protection by a reptile;
- Disturb whilst the reptile is occupying such a structure or place; and

- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Sand lizard and smooth snake are listed as a SoPI under Section 41 of the NERC Act 2006.

Protection against killing, injuring and trade

This level of protection under section 9 (parts 1 and 5) applies to the four widespread species of reptile, namely the common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*) and adder (*Viper berus*). Only part of sub-section 9(1) applies, which make it an offence to:

- Intentionally kill or injure, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Grass snake, slow-worm and adder are all listed as SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

All birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird; and
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependent young of such a bird.

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (including peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), little ringed plover (*Charadrius dubius*) and black redstart (*Phoenicurus ochruros*) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

A number of bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Conservation status - Birds of Conservation Concern (Eaton et al. 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2011. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, red, amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25 years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the red list criteria): Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years), a UK breeding range contraction of between 25% and 49%, a reduction of breeding or non-breeding population of 25-49% in the last 25 years, a 5-year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer Sites, or where the breeding population in the UK represents 20% or more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Legislation relating to badger

Badgers are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- intentionally or recklessly damage, destroy or obstruct access to a badger sett; and
- disturb a badger when it is occupying a sett.

These provisions have implications for construction or preparation works undertaken in the vicinity of an active sett and may be confounded by distance from the sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable, then a licence may need to be obtained from Natural England before any works commence.

Legislation relating to water vole

The water vole is fully protected under Section 9 of the Wildlife & Countryside Act 1981 (as amended) through its inclusion in Schedule 5. The legal protection makes it an offence to:

- Intentionally kill, injure or capture or take a water vole;
- Possess or control (live or dead animal, part or derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct access to a breeding Site or any structure or place used for shelter or protection by a water vole;
- Deliberately (intentionally) or recklessly disturb a water vole whilst occupying such as structure or place, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Water vole is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to invasive plant species

Several non-native invasive plant species such as Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), Japanese rose (*Rosa rugosa*), variegated yellow archangel

(*Lamiastrum galeobdolon*), rhododendron (*Rhododendron ponticum*) and Japanese knotweed (*Reynoutria japonica*) are listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to ‘...plant or otherwise cause the species to grow in the wild’. This includes spreading or transferring contaminated soil from one area to another.

Estate Managers and landowners have a duty to pro-actively treat knotweed outbreaks. Under the Natural Environment and Rural Communities Act 2006 (NERC), subsection 14ZA (1), makes it is an offence to sell, offer or expose for sale, or to have in one’s possession or transport for the purpose of sale, any Schedule 9 animal or plant or anything from which such an animal or plant can be propagated, including rhizomes of Japanese knotweed. Under subsection 14ZA (2) it is also an offence to publish or cause to be published any advertisement for the purchase or sale of these animals and plants.

The Environmental Protection Act 1990 (EPA 1990) contains a number of legal provisions concerning controlled waste. Any Japanese knotweed contaminated soil or plant material that is intended for discard is likely to be classified as controlled waste.

The Environmental Protection (Duty of Care) regulations 1991 also imposes a ‘duty of care’ on persons concerned with controlled waste, which includes any materials incorporating Japanese knotweed including soil, grass cuttings, general wastes and ash arising from the burning of knotweed. The duty applies to any person, who produces, imports, carries, keeps, treats or disposes of controlled waste. Failure to appropriately dispose of any material containing Japanese knotweed may lead to prosecution under Section 33 and 34 of the EPA 1990 and Section 14 (2) of the Wildlife & Countryside Act 1981 (as amended).

If knotweed stands are to be treated with herbicides, The Control of Pesticides Regulations (1986) applies. These regulations require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. If pesticides are to be used in or near to a watercourse, the Environment Agency should be contacted, and approval must be sought (application to use herbicides in or near water).

Waste leaving the Site must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal. Waste must be transferred to an authorised person, who is either a registered waste carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

Additional legislation regarding the transport of Japanese knotweed contaminated materials is covered by the Hazardous Waste Regulations 2005 (HWR 2005). This contains provisions about the handling and movement of hazardous waste. Consignment notes must be completed when any hazardous waste is transferred, which includes details about the hazardous waste properties and any handling requirements. Untreated Japanese knotweed is not classed as hazardous waste, but material containing knotweed which has been treated with certain herbicides, may be classified as hazardous waste.

If any waste soil or knotweed is sent for landfill either before or after treatment, it must go to a landfill that is authorised to receive it.

Appendix 2 - Habitat Suitability Index Assessment

HSI Score	Standing water (P1)	
Photo		
Description	Located approximately 130m east of the Site. A large woodland pond, rounded in shape and covered in a layer of duckweed with no obvious areas of open water visible. The terrestrial habitat surrounding the ponds is of good quality with connectivity for amphibian species, however a major road is present directly south of the Site.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	250m ²	0.5
Sl3 - Pond drying	Never dries	0.9
Sl4 - Water quality	Poor	0.33
Sl5 - Shade	90%	0.4
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Possible	0.7
Sl8 - Ponds	4	0.72
Sl9 - Terrestrial	Good	1
Sl10 - Macrophytes	1-5%	0.35
Overall HSI score	0.63 – Average	

HSI Score	Standing water (P2)	
Photo		
Description	Located approximately 40m east of the site. A woodland pond with low water levels at the time of survey. The pond is highly shaded, with a border of common reed present around the pond. The terrestrial habitat surrounding the ponds is of good quality with connectivity for amphibian species, however a major road is present directly south of the Site.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	50 - 100m ²	0.1
Sl3 - Pond drying	Never dries	0.9
Sl4 - Water quality	Poor	0.33
Sl5 - Shade	95%	0.3
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Absent	1
Sl8 - Ponds	4	0.72
Sl9 - Terrestrial	Good	1
Sl10 - Macrophytes	20%	0.5
Overall HSI score	0.56 – Below Average	

HSI Score	Standing water (P3)	
Photo		
Description	Located approximately 45m north of the site. Shallow pond present within an open area adjacent to woodland. Pond had very shallow water at the time of survey and had clearly shrunk from a previous much larger size. The terrestrial habitat surrounding the ponds is of good quality with connectivity for amphibian species, however a major road is present directly north west of the pond.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	50 - 100m ²	0.1
Sl3 - Pond drying	Dries annually	0.1
Sl4 - Water quality	Poor	0.33
Sl5 - Shade	60%	1
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Absent	1
Sl8 - Ponds	4	0.72
Sl9 - Terrestrial	Good	1
Sl10 - Macrophytes	20%	0.5
Overall HSI score	0.51 – Below Average	

HSI Score	Standing water (P4)	
Photo		
Description	Located approximately 60m north of the Site. A small woodland pond with little water remaining at the time of survey. The pond had a substrate of leaf litter with no bankside or emergent vegetation present. The terrestrial habitat surrounding the ponds is of good quality with connectivity for amphibian species, however a major road is present directly north west of the pond.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	<50m ²	0.02
Sl3 - Pond drying	Dries annually	0.1
Sl4 - Water quality	Poor	0.33
Sl5 - Shade	75%	0.7
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Absent	1
Sl8 - Ponds	5	0.8
Sl9 - Terrestrial	Good	1
Sl10 - Macrophytes	0%	0.35
Overall HSI score	0.40 – Poor	

Appendix 3 - Habitat Map and Target Notes

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- Red Line Boundary
- TargetNotes



Habitat

- Artificial unvegetated, unsealed surface
- Mixed scrub
- Modified grassland
- Other broadleaved woodland types
- Other neutral grassland

Linear Habitat

- Line of trees
- Other Rivers and Streams



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Issue:
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Project: UG1602	Scale @ A3: 1:1750	Date: 9/6/2022
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