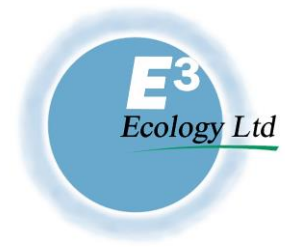


ECOLOGICAL IMPACT ASSESSMENT

GARWOOD STREET, SOUTH SHIELDS



CLIENT:	IBA Architects
PROJECT NUMBER:	7494
AUTHOR:	Sam Gate
POSITION:	Ecologist
CONTACT DETAILS:	sam.gate@e3ecology.co.uk

DOCUMENT & QUALITY CONTROL

Report Version	Status	Date	Changes	Author	Proof Read	Version Approved by
R01	Draft	24/01/2024	1 st Draft	SG	RT	MEM

COPYRIGHT, CONFIDENTIALITY & LIABILITY

This report has been prepared by E3 Ecology Ltd and contains opinions and information produced with all reasonable skill, care and diligence within the terms of the Contract with the client. Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that E3 Ecology Ltd performed the work. No explicit warranty is made in relation to the content of this report. E3 Ecology Ltd assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others.

Copyright to all written or recorded work howsoever held on whatever medium is vested in E3 Ecology Ltd. On settlement of all agreed fees, written work produced specifically for the named clients is thereafter regarded as joint copyright between the named client and E3 Ecology Ltd for the specific purposes for which the report was produced. No attempts should be made to reproduce any element of this report for commercial or other purposes, without explicit written permission from E3 Ecology Ltd.

Further information is provided at Appendix 1 – Copyright, Confidentiality & Liability.

CONTENTS

A.	SUMMARY	5
B.	INTRODUCTION	9
B.1	AUTHOR, SURVEYORS & QUALIFICATIONS.....	9
B.2	OBJECTIVES	9
B.3	PROPOSED DEVELOPMENT SITE.....	9
B.4	DEVELOPMENT PROPOSALS	11
C.	METHODOLOGY	12
C.1	SCOPE OF STUDY	12
C.2	DESK STUDY	12
C.3	FIELD SURVEY.....	12
C.3.1	METHODOLOGY	13
C.3.2	SURVEY EQUIPMENT	14
C.3.3	ENVIRONMENTAL CONDITIONS.....	14
C.4	SURVEY CONSTRAINTS	14
C.5	ASSESSMENT METHODOLOGY	15
D.	RESULTS.....	17
D.1	DESK STUDY	17
D.1.1	PRE-EXISTING INFORMATION	17
D.1.2	CONSULTATION	18
D.2	FIELD SURVEY.....	20
D.2.1	HABITATS.....	20
D.2.2	SPECIES	26
D.2.3	BAT PRELIMINARY ROOST ASSESSMENT	28
E.	IMPACT ASSESSMENT & RECOMMENDATIONS.....	30
E.1	POTENTIAL IMPACTS, MITIGATION, COMPENSATION & FURTHER SURVEY	30
E.2	RESIDUAL & CUMULATIVE IMPACTS	32
E.3	MONITORING	32
E.4	ADDITIONAL ENHANCEMENT RECOMMENDATIONS	32
F.	CONCLUSIONS.....	33
	APPENDICES	34
	APPENDIX 1 – COPYRIGHT, CONFIDENTIALITY & LIABILITY	34
	APPENDIX 2 - PLANNING POLICY AND LEGISLATIVE CONTEXT.....	35
	NATIONAL PLANNING POLICY	35
	PROTECTED SPECIES LEGISLATION	37
	INVASIVE SPECIES LEGISLATION	38
	PROTECTED SITE LEGISLATION.....	39
	PRIORITY SPECIES	40

TABLES

TABLE 1: LEAD SURVEYORS.....	9
TABLE 2: ASSESSMENT OF BAT ROOSTING SUITABILITY OF BUILDINGS/STRUCTURES & TREES	13
TABLE 4: SURVEY CONDITIONS	14
TABLE 5: ECOLOGICAL RECEPTOR VALUATION.....	15
TABLE 6: CONSULTATION RECORDS	18
TABLE 7: OVERVIEW OF HABITATS AND SETTING.....	28
TABLE 8: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT.....	35
TABLE 9: SUMMARISED SPECIES LEGISLATION.....	37
TABLE 10: SUMMARISED INVASIVE SPECIES LEGISLATION.....	39
TABLE 11: BIODIVERSITY ACTION PLANS	40

FIGURES

FIGURE 1: SITE BOUNDARY.....	10
FIGURE 2: SITE AND 500M SETTING	10
FIGURE 3: DEVELOPMENT PROPOSALS.....	11
FIGURE 4: MAPPED PRIORITY HABITAT	18
FIGURE 5: NON-STATUTORY DESIGNATED SITES WITHIN 2KM (ERIC NE).....	19
FIGURE 6: HABITAT MAP	21

A. SUMMARY

E3 Ecology Ltd was commissioned to undertake an ecological impact assessment (EcIA) of a parcel of land at Garwood Street, South Shields. It is proposed to develop nine industrial units at the site with associated parking. A desk study was completed, including consultation with DEFRA's MAGIC website and the Environmental Records Information Centre North East (ERIC NE), and an ecological walkover survey was undertaken on 23rd October 2023 in order to inform this assessment. An updating walkover survey was undertaken on 15th December 2023 to further assess a mammal hole recorded at the site.

The results of the desk study indicate that there are no statutorily protected sites within 2km of the proposed development site. The site does not lie within a Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ) for this type of development.

Open Mosaic Habitat on Previously Developed Land (OMHPDL) and Deciduous Woodland, Priority Habitats, are mapped on the MAGIC website within the site. No granted great crested newt (GCN) European Protected Species (EPS) mitigation licences, eDNA survey record (2017-2019) or GCN survey licence returns are shown within 2km of the site. There are four records of granted EPS mitigation licences for works affecting bats within 2km. The closest of these was for the destruction of a common pipistrelle resting place, located approximately 50m west of the site.

The proposed development site covers approximately 1.73ha and is dominated by gravelled bareground with OMHPDL at the eastern extent of the site and a belt of woodland at the south-west. Introduced scrub is located along the majority of the site boundary as well as a small number of scattered trees. A small section of planting is located at the western extent, which has a mixture of habitats including semi-improved neutral grassland, scrub, introduced shrub and tall ruderal. The site is surrounded by palisade fencing. A number of cotoneaster species *Cotoneaster* spp. (invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) were recorded within the majority of the introduced shrub along the site boundary.

The site is considered of up to local value for bats, badger, birds, common amphibians (excluding GCNs but including common toad) and hedgehog with other protected and priority species likely to be absent.

The results of the site survey combined with the desk study have highlighted the following ecological mitigation or compensation requirements. Further work required prior to submission of a planning application is listed in **bold text**, and it should be noted that this requirement may restrict a full assessment of ecological impacts until those works are completed.

Ecological Receptor	Impact	Mitigation
<i>Protected Sites</i>		
Northumberland SPA, Durham SAC and LWSs	No direct impacts are expected due to the distance to adjacent protected sites and the proposed use of the site. Indirect impacts (such as air and water pollution) to the SPA and SAC are considered unlikely due to the distance to the	Preliminary measures should be taken (including design and works plans) to avoid and reduce indirect impacts to LWSs associated with the River Tyne during and post-construction.

	designated sites (i.e. >400m). Indirect impacts (such as air and water pollution) without mitigation, could occur to the closest LWSs as a result of the proposed development.	
Habitats		
Woodland	Damage/disturbance.	Woodland areas will be retained and protected from disturbance during construction by Heras fencing.
Trees	Loss (if required) and damage to retained trees, including those immediately adjacent to site.	It is anticipated that all trees will be retained. In the event that any tree removal is required, this will be compensated for through planting of new trees with a 2:1 replacement ratio (or otherwise informed by a BNG Assessment). Only native species will be planted. Works will be undertaken in accordance with BS5837-2012 'Trees in relation to construction' and retained trees will be protected, including protection of roots.
Open mosaic of habitats on previously developed land (OMHPDL)	Loss of habitat mosaic.	It is recommended that areas of OMHPDL are retained within the site design, enhanced if possible and protected with Heras fencing. Retention and enhancement will also reduce the need for offsite compensation measures to offset biodiversity losses on site. However, in order to facilitate development of the site, some open mosaic habitat would need to be lost. Some of these losses may be compensated for in the site design, e.g. through creation of brown roofs with translocated seedbanks from the existing open mosaic habitats. However, there is still likely to be a residual loss and therefore off site opportunities to provide increased or enhanced areas of open mosaic habitats will need to be explored, which may require early consultation with the Local Planning Authority ecologist.
Grassland	Loss and degradation during construction and operational phase.	Wildflower grasslands or wildflower bulb planting, will be incorporated into the landscape proposals.
Invasive species	Spread of cotoneaster species on and off site.	Works will be undertaken to a precautionary invasive species method statement.
Biodiversity (general)	Loss of biodiversity as a result of development of the site.	Retention of woodland and trees and as much OMHPDL as possible. Habitat losses are to be balanced on site through habitat enhancement and creation if possible, or if not possible then off-site opportunities will need to be explored so that the development provides a net gain in biodiversity. A BNG Assessment is submitted separately.

<i>Species</i>		
Bats	Increased lighting affecting foraging/commuting areas potentially used by bats (and other nocturnal wildlife)	Light levels around foraging/commuting areas, particularly the retained woodland, will be low level, below 2m in height, and low lux (below 1 lux 5m from the light source). Warm-light LEDs with very low UV will be used, with cowls designed to accurately target which areas are lit.
	Loss of bat foraging/commuting habitat of up to site value	Landscape planting is to include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain the food resource for bats and wildlife generally.
Common amphibians (excluding GCN)	Harm/disturbance to common amphibians, including common toad	Works will be undertaken to a precautionary amphibian method statement.
Birds	Harm/disturbance to nesting birds if vegetation clearance is carried out during the bird breeding season	A pre-commencement check for nesting birds will be undertaken by a suitably experienced ornithologist if tree, scrub or shrub clearance is undertaken between March and August inclusive.
	Loss of bird foraging opportunities of up to local value	If incorporated into the site design, landscape planting is to include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain the food resource for birds and wildlife generally.
	Loss of bird nesting opportunities of up to local value	Installation of two general purpose bird nest boxes, installed on retained trees. Bird boxes are usually to be sited a minimum of 3-4m high, ideally on a north through to east aspect.
Badger	Potential for badger setts to be created within 30m of working area and harm/disturbance to badger	A checking survey will be undertaken within 3 months prior to works commencing to confirm badger setts remain absent. Works will be undertaken to a precautionary badger method statement. Dense scrub scheduled for removal will be sensitively cut back using brush cutters, with operatives taking care to search for any possible mammal holes as the vegetation is cut back. If suspected badger sett entrances are found, works are to temporarily cease in the vicinity of the suspected sett and the project ecologist is to be contacted for advice.
Hedgehog	Harm/disturbance to hedgehog	Works will be undertaken to a precautionary hedgehog method statement including a hand search of suitable refugia prior to removal.
	Creation of barriers to hedgehog movement	Close boarded fences will be avoided, or gaps 13cm x 13cm will be provided in fences between landscaped areas to allow hedgehogs to forage and commute across the site.

Wildlife (general)	Entrapment of wildlife during construction if trenches are left open overnight	Any excavations left open overnight will have a means of escape for wildlife that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°.
--------------------	--	--

The development presents an opportunity for ecological benefit within the site and councils will require enhancement in biodiversity as part of the development, which include a Biodiversity Net Gain (BNG) calculation. The following are recommended, in addition to any gains detailed within the separately submitted BNG Assessment:

- Landscape planting is to be designed to enhance structural diversity and will include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain food resources for wildlife in general.
- Installation of two open fronted bird nest boxes and two bat boxes on retained trees. Bird boxes are usually to be sited a minimum of 3-4m high, ideally on a north through to east aspect. Bat boxes are to be sited at a minimum of 4m high, ideally on a southerly aspect.
- Creation of hedgehog /amphibian hibernacula or habitat piles.

Depending on the proposed habitat compensation and enhancement measures and BNG Assessment conclusions, a Biodiversity Management and Monitoring Plan (BMMP) may be required to ensure that the site (or offsetting site if needed) is managed to maximise the benefit to wildlife in the operational phase of the development. This may be secured by a suitably worded planning condition if required.

The local planning authority is likely to require the means of delivery of the mitigation to be identified. It is recommended that mitigation, compensation and enhancement proposals are incorporated into the planning documents.

The development will result in the loss of OMHPDL. Recommendations include retaining OMHPDL where possible or compensating through BNG offsetting (potentially off-site or through the council). Provided that the recommendations in this report are implemented, it is anticipated that proposals may proceed with no significant adverse effect on other notable species and/or habitats. Ecological enhancement opportunities include landscaping focused on biodiversity, hedgehog /amphibian hibernacula and bat and bird nest box provision, contributing to local and national conservation targets.

If you are assessing this report for a local planning authority and have any difficulties interpreting plans and figures from a scanned version of the report, E3 Ecology Ltd would be happy to email a PDF copy to you. Please contact us on 01434 230982.

B. INTRODUCTION

E3 Ecology Ltd was commissioned by IBA Architects to undertake an EclA of a proposed development site at Garwood Street, South Shields.

This assessment has been prepared taking account of the Chartered Institute of Ecology and Environmental Management's (CIEEM) "Guidelines for Ecological Impact Assessment in the UK and Ireland" (2019).

B.1 AUTHOR, SURVEYORS & QUALIFICATIONS

The author's professional qualifications and survey licences are detailed in the table below, as well as those of additional lead surveyors who completed survey work at the proposed development site:

TABLE 1: LEAD SURVEYORS			
Name	Position	Professional Qualifications	Natural England Survey Licence Numbers
Sam Gate	Ecologist	BSc ACIEEM	2022-10573-CL08-GCN (GCN*) 2023-11433-CL17-BAT
Richard Thompson	Ecologist/ Ornithologist	BSc MSc Field Identification Skills Certificate Level 4 (certified)	2023-11254-CL17-BAT (Bats)
*GCN: Great Crested Newt			

Further details of experience and qualifications are available at www.e3ecology.co.uk.

All surveyors have the knowledge, skills and experience identified within the relevant CIEEM Competencies for Species Survey guidance or were under the supervision of a surveyor with the required competencies.

B.2 OBJECTIVES

The objectives of the assessment are to:

- Establish baseline ecological conditions and determine the importance of ecological features present or potentially present within the survey area;
- Identify and describe potentially significant ecological constraints and effects associated with the proposed development;
- Make recommendations for design options to avoid significant effects on important ecological resources at an early stage of development planning where possible;
- Identify the potential requirement for further surveys on protected species and habitats which may be present on site;
- Set out the mitigation, compensation and enhancement measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects;
- Identify how these measures could be secured; and
- Identify any requirements for post-construction monitoring of the site.

B.3 PROPOSED DEVELOPMENT SITE

The site is located in South Shields, at an approximate central grid reference of NZ 35642 65852.

The figures below illustrate firstly the survey boundary and secondly the broad habitats present on site and within an approximate 500m buffer zone.



FIGURE 1: SITE BOUNDARY
(Reproduced under licence from Google Earth Pro.)

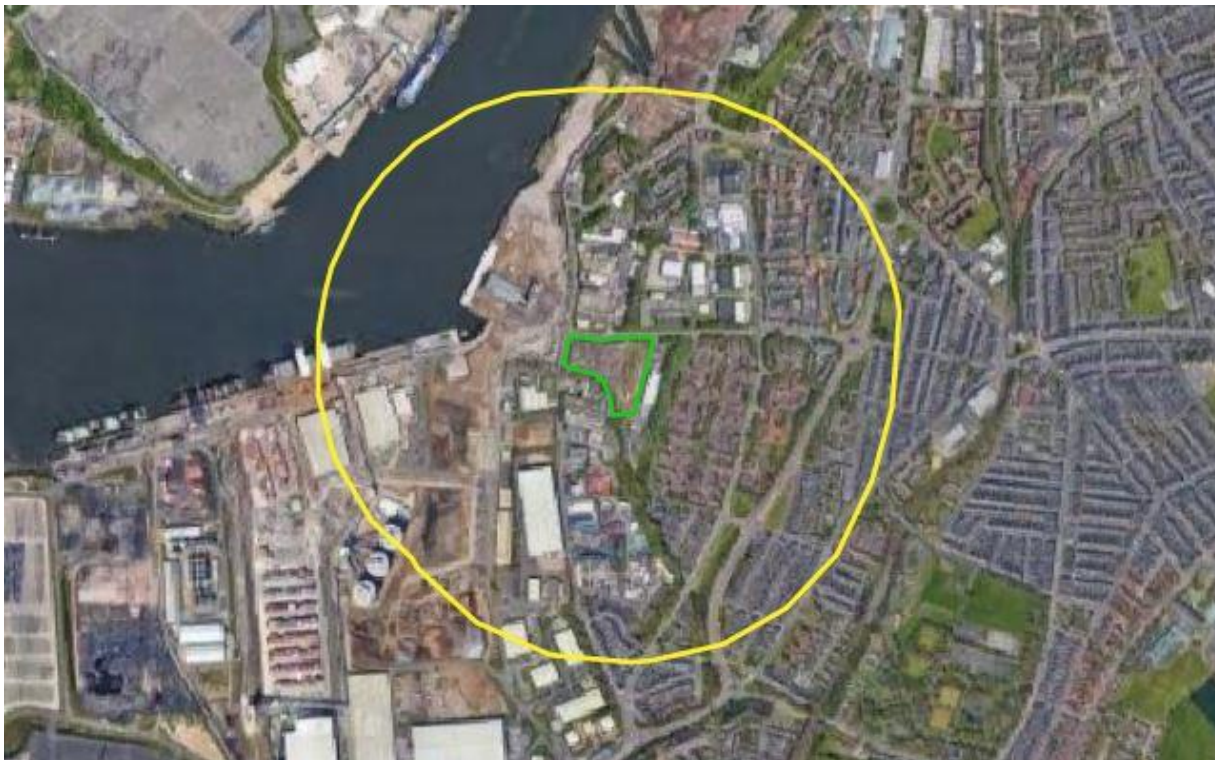


FIGURE 2: SITE AND 500M SETTING
(Reproduced under licence from Google Earth Pro.)

B.4 DEVELOPMENT PROPOSALS

The proposed development is for nine industrial units at the site with associated parking. Development proposals are shown in the figure below.



FIGURE 3: DEVELOPMENT PROPOSALS

C. METHODOLOGY

C.1 SCOPE OF STUDY

The scope of the study, in terms of the survey area and the desk study area, is based on professional judgement. The likely zone of influence of the proposal has been considered, including both potential direct effects, such as habitat loss, and potential indirect effects, such as disturbance. Consideration has been given to potential effects both during the construction and operational phases of the development.

For this site the survey area comprised the green line boundary as defined within the figures in Section B.

In some circumstances field signs and habitat suitability may indicate the potential presence of nearby protected species and/or habitats immediately adjacent to the site which may fall within the zone of influence. In this scenario, if access was available the survey boundary was extended to include these areas. If access was not possible at the time of initial survey, the ecological impact assessment and required mitigation measures have been prepared taking this limitation into account.

The desk study included an assessment of land-use in the surrounding area and a data search covering a 2km buffer zone (see below for further detail).

The following types of ecological receptors have been considered:

- Statutorily designated sites for nature conservation;
- Non-statutorily designated sites for nature conservation;
- Species protected by law;
- Species and/or habitats listed under the NERC Act (2006) as being of principal importance for conservation of biodiversity; and
- Species and/or habitats listed in relevant local biodiversity action plans.

Further details on planning and legislative context are provided in the appendices of this report.

C.2 DESK STUDY

Initially, the site was assessed from aerial photographs and 1:25,000 Ordnance Survey maps.

Following this, a data search was submitted to the Local Records Centre in October 2023, requesting data relating to protected or otherwise notable species and non-statutory sites for nature conservation within 2km of the survey area.

In addition, a search was made of the MAGIC website¹ for all statutorily protected sites for nature conservation within 2km of the survey area, as well as notable habitats or species records.

C.3 FIELD SURVEY

An ecological walkover survey of the site was completed, comprising a Phase 1 Habitat Survey and a preliminary appraisal for protected and otherwise notable species.

¹ MAGIC Website: www.magic.gov.uk

C.3.1 METHODOLOGY

C.3.1.1 PHASE 1 HABITAT SURVEY

The field survey of the proposed site was conducted using the methodology of the Joint Nature Conservation Committee's Phase 1 Habitat Survey, as outlined in their habitat-mapping manual². Each parcel of land was assessed by a trained surveyor and classified as one of ninety habitat types. These were then mapped and the habitat information supplemented by dominant and indicator species codes and target notes where appropriate. Where areas within the study area do not fall into the Phase 1 Habitat Survey classification, alternative methods of classification have been used.

C.3.1.2 PRELIMINARY PROTECTED/NOTABLE SPECIES APPRAISAL

A preliminary appraisal of the site was completed to search for field signs or evidence of protected or notable³ species and to assess the suitability of habitats to support such species.

When conducting the survey, particular focus was concentrated on, but not restricted to, the following taxa:

- Amphibians, including GCN
- Badger
- Bats
- Birds
- Brown hare
- Hedgehog
- Notable butterfly species
- Non-native invasive species
- Otter
- Red squirrel
- Reptiles
- Water vole
- White-clawed crayfish

Assessment of habitat suitability to support such species was based on professional judgement and experience, species-specific habitat preferences, knowledge of local and broad geographical species distribution and connectivity to other areas of suitable habitat.

Where it is considered likely that there is a significant risk of protected or otherwise notable species being affected, or where habitats are of particularly high value, additional specialist survey work has been recommended. Further survey work may also be recommended where development proposals have the potential to affect statutorily designated sites in the vicinity.

BATS

Where present, the bat roosting suitability of any buildings/structures and trees on site, or within the zone of influence, were appraised in accordance with the guidelines provided within the Bat Conservation Trust (BCT) Bat Survey: Good Practice Guidelines⁴ and these are detailed within the table below.

TABLE 2: ASSESSMENT OF BAT ROOSTING SUITABILITY OF BUILDINGS/STRUCTURES & TREES (TO BE APPLIED USING PROFESSIONAL JUDGEMENT, TAKEN FROM TABLE 4.1 OF BCT'S BAT SURVEY GUIDELINES)	
Suitability	Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure 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,

² Handbook for Phase 1 habitat survey, A Technique For Environmental Audit, JNCC, 2010

³ To include national priority species as listed in Section 41 of the NERC Act (2006) and local or regional priority species as listed within the relevant Biodiversity Action Plan

⁴ Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust

	protection, appropriate conditions and/or suitable surrounding habitat to be used by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A building/structure or 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 unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A building/structure or 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.

Note that any comments within this report on the state or condition of buildings/structures relate solely to their potential use by bats and must not be taken as a professional assessment of the structural integrity or safety of the structures.

C.3.2 SURVEY EQUIPMENT

The following equipment was used during the phase 1 habitat survey:

- Binoculars
- Camera
- Torch

C.3.3 ENVIRONMENTAL CONDITIONS

The table below details the environmental conditions during the survey.

TABLE 3: SURVEY CONDITIONS				
Date	Temperature (°C)	Cloud Cover (%)	Precipitation	Wind Conditions (Beaufort scale)
23/10/2023	12	100	0	1
15/12/2023	7	50	0	1

C.4 SURVEY CONSTRAINTS

Certain plant species may not be identifiable throughout the year. However, it is considered that sufficient botanical identification was possible to facilitate a robust assessment of habitats for the purposes of this report. In particular, due to limited extent of semi-natural habitats within the OMHPDL and the nature of the site, which has been very frequently disturbed since at least 2020, it is considered a reasonable precautionary assessment of its value has been possible.

Dense scrub and woodland habitat adjacent to the site may have obscured field signs of protected species such as badger. However, where possible, searches of the edges of such habitats could still be completed to look for breaches and mammal paths leading into the vegetation. This limitation has been taken into account when preparing the impact assessment and mitigation strategy.

Trees were only assessed from ground level and from within the site. Furthermore, tree assessments may sometimes need to be undertaken in summer, while in full leaf, which may obscure potential roosting features during the assessment of bat roosting potential. However, the trees were assessed from various angles on site using good quality binoculars and professional judgement was used based on the tree characteristics to supplement the assessment. Where trees could not be confidently assessed, further survey has been recommended.

C.5 ASSESSMENT METHODOLOGY

The relative value of the ecological receptors (habitats, species and designated sites) was assessed using a geographical frame of reference. For designated sites this is generally a straightforward process with the assigned designation generally being indicative of a particular value, e.g. Sites of Special Scientific Interest are designated under national legislation and are therefore generally considered to be receptors of national value. The assignment of value to non-designated receptors is less straightforward and as recognised by the Guidelines for Ecological Impact Assessment produced by CIEEM⁵, is a complex and subjective process and requires the application of professional judgement.

When assessing the value of species and habitats, relevant documents and legislation are considered including the lists of species and habitats of principal importance annexed to the NERC Act (2006) and those provided within relevant local Biodiversity Action Plans. Data provided through consultation is also considered. These data sources can provide context at a local, regional and national scale.

The table below provides examples of receptors of value at different geographical scales.

TABLE 4: ECOLOGICAL RECEPTOR VALUATION	
Level of Value	Examples
International	An internationally designated site or candidate site.
	A site meeting criteria for international designation.
	A substantial* area of a habitat listed on Annex I of the EC Habitats Directive or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population with internationally important numbers (i.e. >1% of the biogeographic population)
National	A nationally designated site.
	A substantial* area of a habitat listed as a Habitat of Principal Importance within Section 41 of the NERC Act (2006) or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population with nationally important numbers (i.e. >1% of the national population)
Regional	An area of habitat that falls slightly below the criteria necessary for designation as a SSSI but is considered of greater than county value.
	The site is of functional importance** to a species population with regionally important numbers (i.e. >1% of the regional population)
County	A Local Wildlife Site (LWS) or equivalent, designated at a County level
	A substantial* area of a habitat listed within the relevant County Biodiversity Action plan or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population of county value (i.e. >1% of the county population)
District	A Local Wildlife Site (LWS) or equivalent, designated at a District level
	A substantial* area of a habitat listed within the relevant District Biodiversity Action plan or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population of district value (i.e. >1% of the district population)
Parish	Area of habitat or species population considered to appreciably enrich the habitat resource within the context of the parish.
	Local Nature Reserves

⁵ Chartered Institute for Ecology and Environmental Management (2019) Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal

TABLE 4: ECOLOGICAL RECEPTOR VALUATION

Level of Value	Examples
Local	Habitats and species that contribute to local biodiversity but are not exceptional in the context of the parish.
Low	Habitats that are unexceptional and common to the local area.
<i>*Substantial defined as 'of considerable size or value within that area based on professional judgement, rather than a small, inconsequential area'</i> <i>** Functional importance defined as 'a feature which, based on professional judgement, is of importance to the day to day functioning of the population, the loss of which would have a detectable adverse effect on that population'</i>	

The site lies within South Tyneside District which covers approximately 6,700ha and is mainly an urban setting at its northern extent with extensive commercial, industrial and residential areas. The southern extent of the district comprises agricultural land and small parcels of woodland with scattered urban areas. The South Tyneside coastline runs along the eastern boundary of the district with the River Tyne running along the northern boundary.

D. RESULTS

D.1 DESK STUDY

D.1.1 PRE-EXISTING INFORMATION

D.1.1.1 ORDNANCE SURVEY MAPPING AND AERIAL PHOTOGRAPHY

The most recent aerial photograph of the site (2023) indicates that the site is mostly bare ground used for commercial/industrial storage. A woodland is present at its south-western extent and the eastern side appears to have developed into a brownfield area. Scrub/shrubs are present around the boundary.

The woodland belt to the south west appears to have been partially felled between 2020-2021. Other habitats on site appear to have remained the same since at least 2020.

Historic imagery dating back to 2001 suggests that the site was formerly used as car park with commercial/industrial storage around the eastern perimeter until around 2012, after which it appeared to be disused until its current occupation (2020).

D.1.1.2 MAGIC WEBSITE⁶

PROTECTED SITES

There are no internationally or nationally statutorily designated sites within 2km of the survey area.

The Northumberland Special Protection Area (SPA) and Durham Special Area of Conservation (SAC) are located approximately 2.5km and 2.7km east, respectively.

The site does not fall within a SSSI IRZ for this type of development.

HABITATS

Open Mosaic Priority Habitat is mapped within the site, at its eastern extent. The woodland at the south-western extent of the site is mapped as Deciduous Woodland Priority Habitat displayed in the figure below.

⁶ Multi Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk

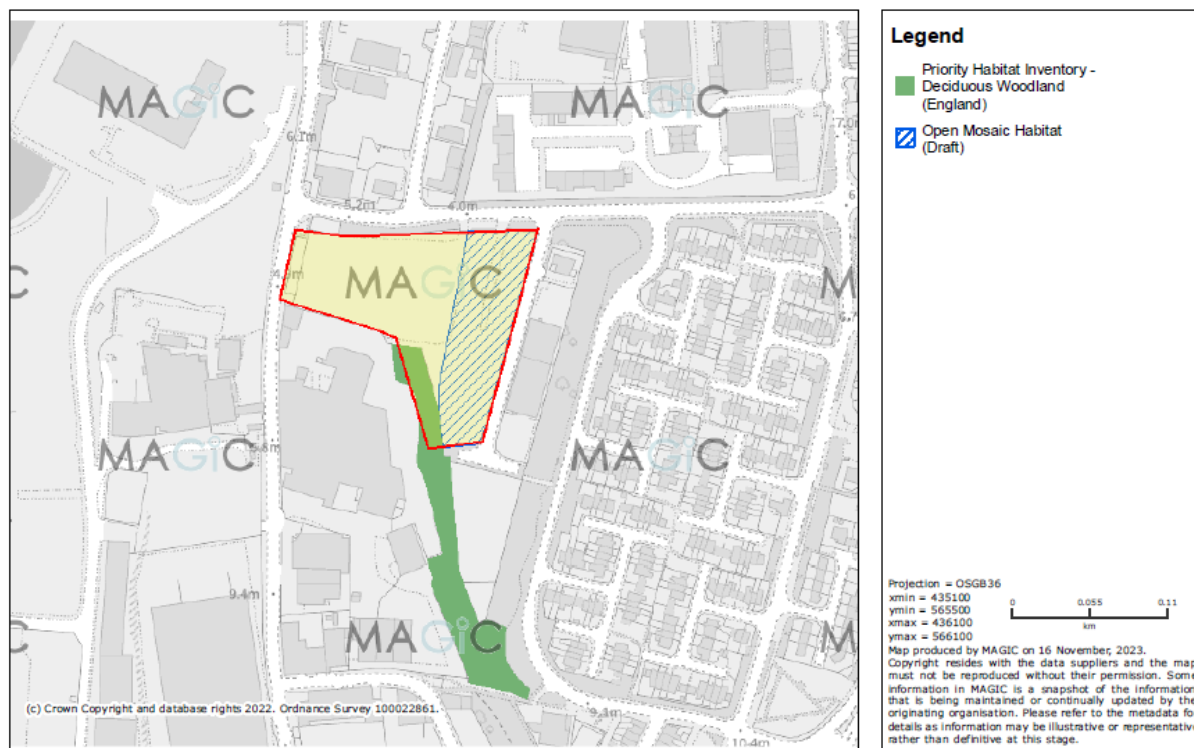


FIGURE 4: MAPPED PRIORITY HABITAT (MAGIC)

SPECIES

No granted GCN EPS mitigation licences, GCN survey licence returns or eDNA survey records (2017-2019) are shown within 2km of the site.

There are four records of granted EPS mitigation licences for works affecting bats within 2km. The closest of these was for the destruction of a common pipistrelle resting place, located approximately 50m west of the site.

D.1.2 CONSULTATION

LOCAL RECORD CENTRE

The table below summarises the records provided by the local records centre. The full data search results can be provided on request.

TABLE 5: CONSULTATION RECORDS			
Species	No. of Records	Closest distance (m – if sufficient record resolution provided)	Most recent date
Amphibians			
Common Frog	2	1959	May 2017
Common Toad	4	1942	17/03/2023
Smooth Newt	1	1995	29/04/2012
Terrestrial Mammal			
Common Pipistrelle	30	355	29/09/2022
Eastern Grey Squirrel	22	825	02/12/2022
Eurasian Badger	1	1817	1980

Eurasian Otter	17	1753	27/04/2019
Eurasian Red Squirrel	3	1716	2011
European Water Vole	9	-	31/08/2013
Myotis Bat species	1	355	27/09/2022
Nathusius's Pipistrelle	1	-	01/05/2017
Noctule Bat	1	355	29/09/2022
Pipistrelle	3	1099	2009
West European Hedgehog	41	859	25/10/2021
Notable invertebrates			
Dingy Skipper	11	183	24/05/2019
Small Heath	16	1399	24/06/2022
Wall	15	847	15/05/2014

The records centre also provided records for 23 moth species. Extensive records for 183 species of bird were provided, 40 species of which are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Though no notable moth or bird records appear to be for the site itself, where relevant, species will be discussed further in the results section.

In addition, the records centre provided information relating to the non-statutory designated sites shown in the below figure, which lie within the search area:

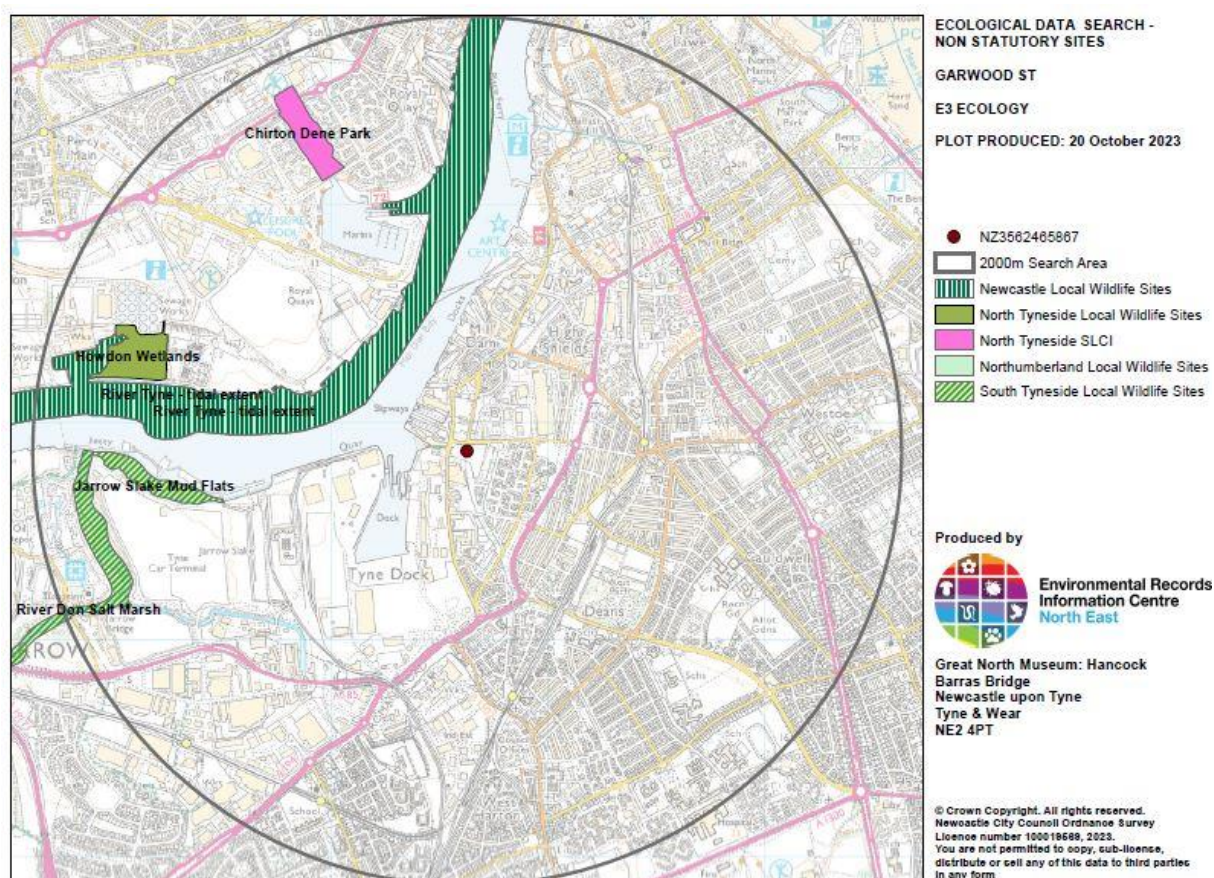


FIGURE 5: NON-STATUTORY DESIGNATED SITES WITHIN 2KM (ERIC NE)

D.2 FIELD SURVEY

D.2.1 HABITATS

The proposed development site covers approximately 1.73ha and is dominated by gravelled bareground with OMHPDL at the eastern extent of the site and a belt of woodland at the south west. Introduced scrub is located along the majority of the site boundary as well as a small number of scattered trees. A small section of planting is located at the western end, which has a mixture of habitats including semi-improved neutral grassland, scrub, introduced shrub and tall ruderal. The site is surrounded by palisade fencing.

D.2.1.1 PHASE 1 HABITAT MAP

The habitats present within the survey area are illustrated within the figure below and described in more detail below. Due to the complex habitats located within the planting at the west of the site, they have been mapped according to their composition within the mix (see Habitat Descriptions below for further details).

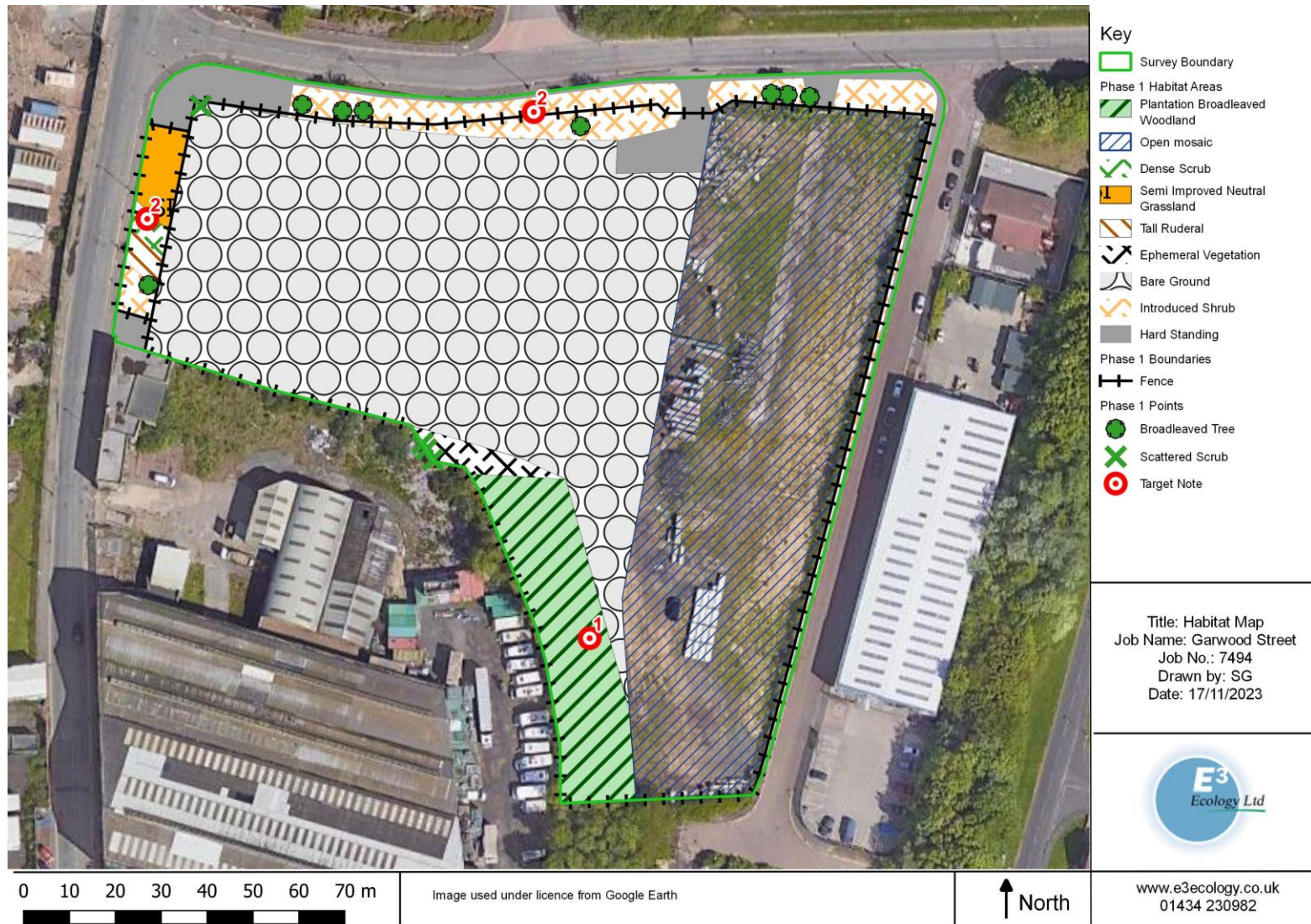


FIGURE 6: HABITAT MAP

D.2.1.2 TARGET NOTES

TARGET NOTE 1

A mammal hole with a trail leading up to it was recorded along the southern woodland belt. No field signs of any animals that could be associated with the hole were recorded.

The hole was considered to be too shallow for badger during an update walkover on 15th December and no updated field signs were recorded.



TARGET NOTE 2

A number of cotoneaster species *Cotoneaster* spp. (invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)), were recorded within the majority of the introduced shrub along the site's boundary (target note locations on the Habitat Map are indicative only).



D.2.1.3 HABITAT DESCRIPTIONS

WOODLAND

A belt of woodland is located to the south west of the site, along the top of an embankment. The woodland appears to have been partially felled, which has been confirmed on aerial imagery. Trees within the woodland are semi-mature, with two age classes present. Species comprise oak *Quercus* sp., pine *Pinus* sp., hornbeam *Carpinus betulus*, willow *Salix* sp. with hawthorn *Crataegus monogyna*, dogwood *Cornus* sp. and buddleia *Buddleja davidii* in the canopy. The ground layer was mostly covered in dense bramble *Rubus fruticosus* agg. and field bindweed *Convolvulus arvensis*. Occasional cock's-foot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus*, common nettle *Urtica dioica*, creeping thistle *Cirsium arvense* and mugwort *Artemisia vulgaris* were recorded in the ground layer.



OPEN MOSAIC HABITAT ON PREVIOUSLY DEVELOPED LAND

The eastern extent of the site comprises OMHPDL. Habitats within the mosaic comprise bareground, gravel areas, ephemeral and ruderal vegetation, grassed areas and limited scattered scrub/saplings. Piles of rubble/stored building materials were scattered across the area and a moderate amount of disturbed ground is present. Species composition is relevantly low and comprises red fescue *Festuca rubra*, cock's-foot, false oat-grass *Arrhenatherum elatius*, Yorkshire fog, broadleaved dock *Rumex obtusifolius*, Lady's bedstraw *Galium verum*, yellow-wort *Blackstonia perfoliata*, red clover *Trifolium pratense*, herb-robert *Geranium robertianum*, limited bird's-foot trefoil *Lotus corniculatus*, ribwort plantain *Plantago lanceolata*, dandelion *Taraxacum officinale*, creeping thistle, common nettle, yarrow *Achillea millefolium*, teasel *Dipsacus fullonum*, mugwort, common ragwort *Jacobaea vulgaris*, cut-leaved crane's-bill *Geranium dissectum*, common toadflax *Linaria vulgaris* and bramble.

Scrub was limited across the area with scattered saplings infrequently recorded. Species comprise silver birch *Betula pendula*, cherry *Prunus* spp., hornbeam and buckthorn *Hippophae rhamnoides*.

No pools of water were recorded, though a small area to the south appears to be damper.



WESTERN PLANTING AREA

An area to the west of the site is bound by a low-level wooden fence and contains a mix of semi-improved neutral grassland, scrub, tall ruderal and introduced shrub. The habitats have been mapped to show their approximate composition of the mix; 55% semi-improved neutral grassland and 15% each respectively of scrub, tall ruderal and introduced shrub. The grassland

area comprises grass species and forbs similar to those recorded within the OMPHDL on site, though horsetail *Equisetum* sp. is frequent in this area. Scrub species include buddleia, bramble, cherry saplings and dog rose *Rosa canina*. Teasel, creeping thistle and common nettle tall forbs are present in areas and cotoneaster shrubs are scattered across the habitat mix.



INTRODUCED SHRUB

Dense introduced shrub planting is located along the north of the site boundary as well as a narrow strip (approximately 0.5m wide) along the eastern boundary of the site. Species mainly comprise a number of cotoneaster species (see Target Note 2), buddleia, snowberry *Symphoricarpos* sp. and ornamental species. A small number of scattered native species are present in these areas including dog rose, dogwood, sycamore *Acer pseudoplatanus* saplings and elder *Sambucus nigra*.



SCATTERED TREES

A total of eight semi-mature trees are located around the site's boundary, oversailing introduced shrub. A single silver birch is located within the planting at the west of the site, two cherry and a hornbeam at the north-west boundary, a single cherry at the centre of the northern boundary and two multi-stemmed sycamore and a single hawthorn are located at the north-east of the site.



EPHEMERAL / RUDERAL VEGETATION

A small patch of ephemeral / ruderal vegetation is located at the north of the woodland. Species comprise those found within the OMHPDL, though there is greater vegetation cover likely due to less disturbance.



BAREGROUND, HARDSTANDING AND FENCES

The majority of the site is comprised of gravelled bareground used for building material storage. Small areas of hardstanding are located at the entrances to the site and along footpaths. The site is surrounded by palisade fencing.



SURROUNDING HABITATS

The surrounding area is comprised of industrial/commercial land, built development and roads.



D.2.1.4 HABITAT ASSESSMENT

The development site is considered to be of up to parish value for the habitats it supports, due to the relatively small number of areas of OMHPDL within the parish, particularly in the area surrounding the site.

D.2.2 SPECIES

BATS

See following section of report.

GREAT CRESTED NEWT

No mapped ponds are located within 500m and no records for GCN within 2km were provided during the desk study.

The habitats present on the proposed development site are generally of limited use to GCN in their terrestrial phase due to the coverage of gravelled bare ground. Rubble piles were recorded that may offer shelter (if the species is present in the surrounding area), the woodland and scrub/introduced shrub adjacent to the site could also offers sheltered foraging opportunities.

However, due to the absence of records and identified ponds, and the overall limited suitability of the site, GCNs are considered to be likely absent. Common amphibians, including common toad, may be present on occasion. If present, the site is likely to be of up to local value to these common amphibian species.

BIRDS

The OMHPDL on site is of relatively low suitability to support ground nesting birds due to the cover of gravelled bare ground and high levels of disturbance (from storage and frequent heavy vehicles across the site). The woodland, trees and scrub/introduced shrub provide nesting and foraging opportunities to an assemblage of locally common bird species.

The site is likely to be of up to local value for birds.

BADGER

The site provides some limited suitable foraging opportunities for badger. However, the woodland embankment provides suitable sett excavation opportunities. A mammal hole that was wide enough for use by badger was recorded during the survey. Although no other signs of badger were recorded, evidence to indicate other species was also absent. The hole was inspected in greater detail during an updating walkover on 15th December and considered to be too shallow for badger; no field signs were recorded.

The site is likely to be of site to local value for badger.

REPTILES

Overall, with the exception of the woodland and rubble piles, the site lacks cover and the typical mosaic of habitats use by reptile. The high levels of disturbance and lack of records within 2km of the site is considered to further reduce the likelihood of reptile being present. As such, reptile are considered to be likely absent from the site.

RED SQUIRREL

The nearest record for red squirrel is approximately 1.72km from the site. Although woodland is present at the site, it lacks connectivity with areas of greater woodland cover. Furthermore, no dreys or other field signs were found during the survey. They are therefore considered likely to be absent from the site.

INVERTEBRATES

Key larval food-plants for priority butterfly and moth species were either absent or only present in small numbers (e.g. bird's-foot trefoil or significant areas of fine-leaved grasses). Although dingy skipper records were provided within 200m of the site, the site generally lacks significant amounts of key larval food-plants for priority butterfly and moth species. Further, sufficient vegetation cover is limited due to the predominance of gravelled bare ground, and high levels of disturbance at the site is considered likely to prevent sufficient levels of key food plants being present during the key flowering period (spring/summer). Notable populations of priority butterfly and moth species are considered likely to be absent.

OTTER, WATER VOLE & WHITE-CLAWED CRAYFISH

There are no aquatic habitats on or within the vicinity of the site with suitability to support these species and they are considered likely to be absent from the site.

OTHER NATIONAL PRIORITY AND LOCAL BAP SPECIES

The site contains some suitable habitat for hedgehog and common toad and is considered to be of site to local value for these species.

D.2.3 BAT PRELIMINARY ROOST ASSESSMENT

D.2.3.1 HABITATS

FORAGING HABITATS & COMMUTING ROUTES

Woodland, scrub and introduced shrub along the boundaries of the site provides some foraging and commuting opportunities for bats. The invertebrate presence likely to be associated with the OMHPDL also means this area provides suitable foraging habitat.



SHELTERED FLIGHT AREAS

There are no sheltered flight areas for foul weather foraging or light sampling on site.

ALTERNATIVE ROOST LOCATIONS

Though they may be limited by materials/construction, commercial/industrial buildings in the surrounding area may provide alternative roosting locations.

D.2.3.2 TREES

Trees located within the site had no potential roosting features. As such, they were considered to be of negligible roosting suitability.

D.2.3.3 OVERVIEW OF BAT SUITABILITY

TABLE 6: OVERVIEW OF HABITATS AND SETTING ⁷				
	NEGLECTIBLE	LOW	MODERATE	HIGH
HABITATS AND COVER WITHIN 200M	City Centre	Open, industrial/commercial, or relatively built up with some limited semi-natural habitat	Hedges and trees linking site to wider countryside, mature linked gardens	Excellent cover with mature trees/ woodland and/or good hedges
HABITATS WITHIN 1KM	City Centre	Limited tree cover, few hedges, urban, scattered green spaces	Semi-natural habitats e.g. trees, hedgerows	Good network of woods, wetland and hedges
ALTERNATIVE ROOSTS WITHIN 1KM	City centre	Numerous alternative roosting opportunities of a similar nature	A number of similar buildings in the local area	Few alternative buildings and site of good quality for roosts
SETTING	Inner city	Urban with little green space	Built development with green-space, trees	Rural Lowland with woodland and trees.
DISTANCE TO WATER/ MARSH	>1km	500m-1000m	200m-500m	<200m
DISTANCE TO WOODLAND/ SCRUB	>1km	500m-1000m	200m-500m	<200m

⁷ Building and habitat risk assessment technique audited in a research project with York University which compared the risk assessment scoring with the results of detailed field assessment for over 100 sites. Statistically significant associations were found between habitat setting and building features and the presence of absence of different bat species. For example habitat connections and nearby woodland were significant for brown long-eared bats and the presence of species-rich grassland is important for many species.

TABLE 6: OVERVIEW OF HABITATS AND SETTING⁷

COMMUTING ROUTES	Isolated by development, major roads, large scale agriculture	No direct potential flyways linking site to wider countryside	Some potential commuting routes to and from site	Site is well connected to surrounding area with multiple flyways
-------------------------	---	---	--	--

Overall, the site is situated in an area of low to moderate suitability for foraging and commuting bats. However, it does not support any suitable roosting features.

E. IMPACT ASSESSMENT & RECOMMENDATIONS

E.1 POTENTIAL IMPACTS, MITIGATION, COMPENSATION & FURTHER SURVEY

The likely impacts of the proposed development, without appropriate targeted mitigation and/or compensation, are detailed in the table below.

Further survey, avoidance, mitigation and compensation measures are also provided to address these impacts, which are based upon information available to date. Further work required prior to submission of a planning application is listed in **bold text**, and it should be noted that this requirement may restrict a full assessment of ecological impacts until those works are completed.

Ecological Receptor	Impact	Mitigation
<i>Protected Sites</i>		
Northumberland SPA, Durham SAC and LWSs	No direct impacts are expected due to the distance to adjacent protected sites and the proposed use of the site. Indirect impacts (such as air and water pollution) to the SPA and SAC are considered unlikely due to the distance to the designated sites (i.e. >400m). Indirect impacts (such as air and water pollution) without mitigation, could occur to the closest LWSs as a result of the proposed development.	Preliminary measures should be taken (including design and works plans) to avoid and reduce indirect impacts to LWSs associated with the River Tyne during and post-construction.
<i>Habitats</i>		
Woodland	Damage/disturbance.	Woodland areas will be retained and protected from disturbance during construction by Heras fencing.
Trees	Loss (if required) and damage to retained trees, including those immediately adjacent to site.	It is anticipated that all trees will be retained. In the event that any tree removal is required, this will be compensated for through planting of new trees with a 2:1 replacement ratio (or otherwise informed by a BNG Assessment). Only native species will be planted. Works will be undertaken in accordance with BS5837-2012 'Trees in relation to construction' and retained trees will be protected, including protection of roots.
Open mosaic of habitats on previously developed land (OMHPDL)	Loss of habitat mosaic.	It is recommended that areas of OMHPDL are retained within the site design, enhanced if possible and protected with Heras fencing. Retention and enhancement will also reduce the

		need for offsite compensation measures to offset biodiversity losses on site. However, in order to facilitate development of the site, some open mosaic habitat would need to be lost. Some of these losses may be compensated for in the site design, e.g. through creation of brown roofs with translocated seedbanks from the existing open mosaic habitats. However, there is still likely to be a residual loss and therefore off site opportunities to provide increased or enhanced areas of open mosaic habitats will need to be explored, which may require early consultation with the Local Planning Authority ecologist.
Grassland	Loss and degradation during construction and operational phase.	Wildflower grasslands or wildflower bulb planting, will be incorporated into the landscape proposals.
Invasive species	Spread of cotoneaster species on and off site.	Works will be undertaken to a precautionary invasive species method statement.
Biodiversity (general)	Loss of biodiversity as a result of development of the site.	Retention of woodland and trees and as much OMHPDL as possible. Habitat losses are to be balanced on site through habitat enhancement and creation if possible, or if not possible then off-site opportunities will need to be explored so that the development provides a net gain in biodiversity. A BNG Assessment is submitted separately.
<i>Species</i>		
Bats	Increased lighting affecting foraging/commuting areas potentially used by bats (and other nocturnal wildlife)	Light levels around foraging/commuting areas, particularly the retained woodland, will be low level, below 2m in height, and low lux (below 1 lux 5m from the light source). Warm-light LEDs with very low UV will be used, with cowl designed to accurately target which areas are lit.
	Loss of bat foraging/commuting habitat of up to site value	Landscape planting is to include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain the food resource for bats and wildlife generally.
Common amphibians (excluding GCN)	Harm/disturbance to common amphibians, including common toad	Works will be undertaken to a precautionary amphibian method statement.
Birds	Harm/disturbance to nesting birds if vegetation clearance is carried out during the bird breeding season	A pre-commencement check for nesting birds will be undertaken by a suitably experienced ornithologist if tree, scrub or shrub clearance is undertaken between March and August inclusive.
	Loss of bird foraging opportunities of up to local value	If incorporated into the site design, landscape planting is to include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain the food resource for birds and wildlife generally.

	Loss of bird nesting opportunities of up to local value	Installation of two general purpose bird nest boxes, installed on retained trees. Bird boxes are usually to be sited a minimum of 3-4m high, ideally on a north through to east aspect.
Badger	Potential for badger setts to be created within 30m of working area and harm/disturbance to badger	A checking survey will be undertaken within 3 months prior to works commencing to confirm badger setts remain absent. Works will be undertaken to a precautionary badger method statement. Dense scrub scheduled for removal will be sensitively cut back using brush cutters, with operatives taking care to search for any possible mammal holes as the vegetation is cut back. If suspected badger sett entrances are found, works are to temporarily cease in the vicinity of the suspected sett and the project ecologist is to be contacted for advice.
Hedgehog	Harm/disturbance to hedgehog	Works will be undertaken to a precautionary hedgehog method statement including a hand search of suitable refugia prior to removal.
	Creation of barriers to hedgehog movement	Close boarded fences will be avoided, or gaps 13cm x 13cm will be provided in fences between landscaped areas to allow hedgehogs to forage and commute across the site.
Wildlife (general)	Entrapment of wildlife during construction if trenches are left open overnight	Any excavations left open overnight will have a means of escape for wildlife that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°.

E.2 RESIDUAL & CUMULATIVE IMPACTS

Provided that the measures detailed in the above table are implemented, no significant residual adverse impacts are envisaged.

E.3 MONITORING

Depending on the proposed habitat compensation and enhancement measures and BNG Assessment conclusions, a BMMP may be required to ensure that the site (or offsetting site if needed) is managed to maximise the benefit to wildlife in the operational phase of the development. This may be secured by a suitably worded planning condition if required.

E.4 ADDITIONAL ENHANCEMENT RECOMMENDATIONS

The development must seek opportunities to ecologically enhance the site and it is a planning requirement to provide a net gain in biodiversity as part of the development. The following enhancements are recommended, in addition to any gains detailed within the separately submitted BNG Assessment:

- Landscape planting is to be designed to enhance structural diversity and will include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain food resources for wildlife in general.

- Installation of two open fronted bird nest boxes and two bat boxes on retained trees. Bird boxes are usually to be sited a minimum of 3-4m high, ideally on a north through to east aspect. Bat boxes are to be sited at a minimum of 4m high, ideally on a southerly aspect.
- Creation of hedgehog /amphibian hibernacula or habitat piles.

F. CONCLUSIONS

The development will result in the loss of OMHPDL. Recommendations include retaining OMHPDL where possible or compensating through BNG offsetting (potentially off-site or through the council). Provided that the recommendations in this report are implemented, it is anticipated that proposals may proceed with no significant adverse effect on other notable species and/or habitats. Ecological enhancement opportunities include landscaping focused on biodiversity, hedgehog /amphibian hibernacula and bat and bird nest box provision, contributing to local and national conservation targets.

APPENDICES

APPENDIX 1 – COPYRIGHT, CONFIDENTIALITY & LIABILITY

Copyright to all written or recorded work howsoever held on whatever medium is vested in E3 Ecology Ltd. On settlement of all agreed fees, written work produced specifically for the named clients is thereafter regarded as joint copyright between the named client and E3 Ecology Ltd for the specific purposes for which the report was produced. No attempts should be made to reproduce any element of this report for commercial or other purposes, without explicit written permission from E3 Ecology Ltd.

Subject to the clause below, the consultant agrees to keep all the information obtained from the client confidential where the client so specifies in writing, except where such information is known to the consultant already or exists already in the public domain until (i) the information enters the public domain; (ii) the consultant is given the same information by a third party; (iii) the consultant is released from its confidentiality requirement by the client; or (iv) 3 years have elapsed since the formation of the contract.

The consultant may disclose in whole or in part any information or knowledge obtained from the client to a third party where required by law, court order or any governmental or regulatory authority. If the consultant becomes aware or has a reasonable belief that the client or any director, officer, agent, employee or subcontractor of the client has breached or is likely to breach any legislation, regulation, court order, or term or condition of any licence permit or consent ('licences'), the consultant shall be entitled to bring all relevant details, as the consultant sees fit, to the attention of the relevant authority, including the police or the statutory nature conservation body. The consultant shall also be entitled to request the relevant authority to remove the name of any officer, director or employee of the consultant from any licence on which they appear.

This report has been prepared by E3 Ecology Ltd and contains opinions and information produced with all reasonable skill, care and diligence within the terms of the Contract with the client. Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that E3 Ecology Ltd performed the work. No explicit warranty is made in relation to the content of this report. E3 Ecology Ltd assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others.

This report has been prepared for the exclusive use of the commissioning party and, unless otherwise agreed by E3 Ecology Ltd or the commissioning party, no other party may use, make use of or rely on the contents of the report. No liability is accepted by E3 Ecology Ltd for any use of this report, other than for the purposes for which it was originally prepared and provided.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

The contents and layout of this report are subject to copyright owned by E3 Ecology Ltd save to the extent that copyright has been legally assigned to us by another. It may not be copied or used without our prior written agreement for any purpose other than the purpose indicated in this report.

APPENDIX 2 - PLANNING POLICY AND LEGISLATIVE CONTEXT

NATIONAL PLANNING POLICY

The table below details the key paragraphs from the National Planning Policy Framework (NPPF)⁸ relating to the natural environment:

TABLE 7: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT	
Statement	Paragraph
Planning policies and decisions should contribute to and enhance the natural and local environment by: 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); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; 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; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate	174
Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework ⁹ ; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.	175
Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads ¹⁰ . The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.	176
When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development¹¹ other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of: a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy; b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated	177
Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 176), planning policies and decisions should be consistent with the	178

⁸ National Planning Policy Framework (July 2021), Department for Communities and Local Government,

⁹ Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.

¹⁰ English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters.

¹¹ For the purposes of paragraphs 177 and 178, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

TABLE 7: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT	
Statement	Paragraph
special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.	
To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity¹²; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation¹³; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.	179
When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶³ and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.	180
The following should be given the same protection as habitats sites: a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites¹⁴; and c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.	181
The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.	182

Section 40 of the Natural Environment and Rural Communities Act 2006, places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

Planning Practice Guidance¹⁵ states:

¹² Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

¹³ Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

¹⁴ Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

¹⁵ Planning Practice Guidance: Natural Environment (www.planningguidance.communities.gov) Updated July 2019

- Planning authorities need to consider the potential impacts of development on protected and priority species, and the scope to avoid or mitigate any impacts when considering site allocations or planning applications. (para. 016)
- Information on biodiversity and geodiversity impacts and opportunities needs to inform all stages of development (including site selection and design, pre-application consultation and the application itself). An ecological survey will be necessary in advance of a planning application if the type and location of development could have a significant impact on biodiversity and existing information is lacking or inadequate. (para. 018)
- Even where an Environmental Impact Assessment is not needed, it might still be appropriate to undertake an ecological survey, for example, where protected species may be present or where biodiverse habitats may be lost. (para. 018)
- As with other supporting information, local planning authorities should require ecological surveys only where clearly justified. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity. (para. 018)
- The National Planning Policy Framework encourages net gains for biodiversity to be sought through planning policies and decisions. Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. Biodiversity net gain can be achieved on-site, off-site or through a combination of on-site and off-site measures. (para. 022)

PROTECTED SPECIES LEGISLATION

The table below details the relevant legislation for the protected species covered within the scope of the survey.

TABLE 8: SUMMARISED SPECIES LEGISLATION		
Species	Relevant Legislation	Level of Protection
Bats (All species)	• Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as protected species under The Conservation of Habitats and Species Regulations 2017 (as amended) • Bats are also protected by the Wild Mammals (Protection) Act 1996	The WCA (1981) and The Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to: • Intentionally kill, injure, or take any species of bat • Intentionally or recklessly disturb bats • Intentionally or recklessly damage destroy or obstruct access to bat roosts
Otter	• Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as protected species under The Conservation of Habitats and Species Regulations 2017 (as amended) • Otters are also protected by the Wild Mammals (Protection) Act 1996	The WCA (1981) and The Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to: • intentionally kill, injure, or take otters • intentionally or recklessly disturb otters • intentionally or recklessly damage destroy or obstruct access to otter holts or any place used by the animal for shelter or protection
Great Crested Newt	• Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as protected species under The Conservation of Habitats and Species Regulations 2017 (as amended)	The WCA (1981) and The Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to: • intentionally kill, injure, or take great crested newts • intentionally or recklessly disturb great crested newts • intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection

TABLE 8: SUMMARISED SPECIES LEGISLATION

Species	Relevant Legislation	Level of Protection
Red Squirrel	- Full protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended - Red squirrels are also protected by the Wild Mammals (Protection) Act 1996	The WCA (1981) makes it an offence to: - intentionally kill, injure, or take red squirrels - intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection or disturb red squirrels whilst they are using such a place.
Birds	Protection under the Wildlife and Countryside Act (1981) as amended with the exception of some species listed in Schedule 2 of the Act	The WCA (1981) makes it an offence to (with exceptions for certain species): - Intentionally kill, injure or take any wild bird - Intentionally take, damage or destroy nests in use or being built (including ground nesting birds) - Intentionally take, damage or destroy eggs - Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst they are at their nests
White-clawed Crayfish	Partially protected by the Wildlife and Countryside Act (1981)	The WCA (1981) makes it an offence to: - Take a white-clawed crayfish from its habitat - Sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead white clawed crayfish
Badger	- Protection of Badgers Act 1992 - Badgers are also protected by the Wild Mammals (Protection) Act 1996	The Protection of Badgers Act (1992) makes it an offence to intentionally or recklessly: - Damage a badger sett or any part of it - Destroy a badger sett - Obstruct access to, or any entrance of a badger sett - Disturb a badger whilst it is occupying a badger sett
Water Vole	- Full protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended - Water voles are also protected by the Wild Mammals (Protection) Act 1996	The WCA (1981) makes it an offence to: - intentionally kill, injure, or take water voles - intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection or disturb water voles whilst they are using such a place
Common reptiles (Slow-worm, Adder, Grass Snake, Common Lizard)	Partially protected by the Wildlife and Countryside Act	The WCA (1981) makes it an offence to: - intentionally kill or injure these animals - sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead animals or part of these animals
<i>Under the Countryside and Rights of Way Act 2000 (CROW Act) the offence in section 9(4) of the Wildlife and Countryside Act 1981 of damaging a place of shelter or disturbing those species given full protection under the act is extended to cover reckless damage or disturbance.</i>		

INVASIVE SPECIES LEGISLATION

The table below details the legislation in relation to invasive species and lists those invasive species most likely to be found in this region.

TABLE 9: SUMMARISED INVASIVE SPECIES LEGISLATION

Relevant Legislation	Description of Offence	Species (Covered by the Legislation and most likely to be found in this Region)
Listed on Part II of Schedule 9 of the Wildlife and Countryside Act (1981 as amended)	Section 14 of the WCA (1981) states: if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence.	Himalayan balsam Cotoneaster Montbretia Japanese knotweed Giant hogweed Rhododendron Pirri-pirri bur New Zealand pygmyweed Giant rhubarb Japanese rose

PROTECTED SITE LEGISLATION

CONTEXT IN REGARD TO THE UK'S EXIT FROM THE EUROPEAN UNION

As of 1st January 2021, the UK is no longer bound by the Birds Directive and Habitats Directive. However, the Conservation of Habitats and Species Regulations still applies, which formerly acted to transpose the Birds Directive and the Habitats Directive into English and Welsh law. These are still referred to below for contextual purposes, as designated site citations and conservation objectives may not have been updated following the changes to applicable legislation and may still refer to the Directives.

STATUTORILY DESIGNATED SITES

Ramsar Site

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention recognises wetlands as important ecosystems and includes a range of wetland types from marsh to both fresh and salt water habitats. The wetlands can also include additional areas adjacent to the main water-bodies such as river banks or coastal areas where appropriate.

Special Protection Area (SPA)

SPAs are classified by the UK Government under the EC Birds Directive and comprise areas which are important for both rare and migratory birds.

Special Areas of Conservation (SAC)

SACs are designated under the EC Habitats Directive and are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 unless they are offshore.

Sites of Special Scientific Interest (SSSI)

SSSIs are designated as sites which are examples of important flora, fauna, or geological or physiographical features. They are notified under the Wildlife and Countryside Act 1981 with improved provisions introduced by the Countryside and Rights of Way Act 2000.

National Nature Reserve (NNR)

NNRs are designated by Natural England under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 and support important ecosystems which are managed for conservation. They may also provide important opportunities for recreation and scientific study.

Country Parks

Country Parks are statutorily designated and managed by local authorities in England and Wales under the Countryside Act 1968. They do not necessarily have any nature conservation importance, but provide opportunities for recreation and leisure near urban areas.

Local Nature Reserves (LNR)

LNRs are designated under the National Parks and Access to the Countryside Act 1949 by local authorities in consultation with Natural England. They are managed for nature conservation and used as a recreational and educational resource.

NON-STATUTORILY DESIGNATED SITES

Non-Governmental Organisation Property

These are sites of biodiversity importance which are managed as reserves by a range of NGOs. Examples include sites owned by the RSPB, the Woodland Trust and the Wildlife Trusts.

Local Wildlife Site (LWS)

These are sites defined within the local plans under the Town and Country Planning system and are material considerations of any planning application determination. They are designated by the local authority although criteria for designation can vary between authorities.

PRIORITY SPECIES

Although not afforded any legal protection, national priority species (species of principal importance, as listed in Section 41 of the NERC Act (2006)), and local and regional priority species, as detailed within the relevant biodiversity action plans, are material considerations in the planning process and as such have been assessed accordingly within this report.

The tables below detail the species/species groups and habitats listed as priorities within the biodiversity action plans of the main Local Planning Authorities' within the north-east of England.

TABLE 10: BIODIVERSITY ACTION PLANS					
Northumberland Biodiversity Action Plan					
Species			Habitats		
Barn Owl	Bats	Black Grouse	Blanket Bog	Built Environment	Brownfield Land
Coastal Birds	Common Seal	Dingy Skipper	Calaminarian Grassland	Coastal heathland	Fen, Marsh & Swamp
Dormouse	Farmland Birds	Freshwater Fish	Gardens & Allotments	Heather Moorland	Lowland Heathland
Freshwater Pearl Mussel	Garden Birds	Great Crested Newt	Lowland Meadows & Pastures	Maritime Cliffs & Slopes	Native Woodland
Grey Seal	Hedgehog	Otter	Ponds, Lakes & Reservoirs	Recreational & Amenity Space	Reedbed
Red Squirrel	River Jelly Lichen	Upland Waders	Rivers & Streams	Rocky Shore, Reefs & Islands	Saline Lagoons
Violet Crystalwort	Water Rock-bristle	Water Vole	Saltmarsh & Mudflat	Sand Dunes	Transport Corridors
White-Clawed Crayfish			Trees & Hedgerows	Upland Hay Meadows	Whin Grassland
Durham Biodiversity Action Plan					
Species			Habitats		
Barn Owl	Coastal Birds	Farmland Birds	Native Hedgerows	Veteran Trees, Parkland and Wood Pasture	Woodland and Scrub
Nightjar	Spotted Flycatcher	Upland Birds	Ponds, Lakes & Reservoirs	Lowland Fen	Rivers & Streams
Urban and Garden Wildlife	Freshwater Fish	Grass Snake	Blanket Bog and Upland Wet Heath	Calaminarian Grassland	Upland Calcareous Grassland

TABLE 10: BIODIVERSITY ACTION PLANS					
Great Crested Newt	Reptiles	Chalk Carpet Moth	Upland Dry heath and Acid Grassland	Upland Haymeadows	Upland Screes and Rock Habitats
Cistus Forrester	Dark Green Fritillary	Dingy Skipper	Brownfield Sites	Built Structures	Coastal Habitats
Glow Worm	Grayling	Green Hairstreak	Lowland Heath	Lowland Meadows & Pasture	Magnesian Limestone Grassland
Least Minor Moth	Mud Snail	Northern Brown Argus	Transport Corridors	Waxcap Grassland	
Northern Dart	Round Mouthed Whorl Snail	Small Pearl-bordered Fritillary			
White Clawed Crayfish	White-letter Hairstreak	Badger			
Bats	Brown Hare	Dormouse			
Harvest Mouse	Hedgehog	Otter			
Pine Marten	Polecat	Red Squirrel			
Water Vole	Water Shrew	Black Poplar			
Juniper	Pale Bristle-Moss	Yellow Marsh Saxifrage			
Newcastle and North Tyneside Biodiversity Action Plan					
Habitats			Species		
Brownfield Land	Transport Corridors	Open Water & Wetland	Amphibians	Dingy Skipper	Otter
Rivers and Watercourses	Managed Urban Greenspace	Native Woodland	Urban Birds	Water Vole	Red Squirrel
Lowland Grassland	Scrub, Shrub & Hedgerow	Buildings and Structures	Hedgehog	Slow Worm	Bumblebee
Estuary & Coastal			Brown hare	Farmland Birds	Bats
Tees Valley Biodiversity Action Plan					
Species				Habitats	
Barn Owl	Ringed Plover	Grey Partridge	Tree Sparrow	Traditional Orchards	Semi-natural Broadleaved Lowland Woodland
Little Tern	Corn Bunting	Shelduck	Wagtail Yellow	Reedbeds	Rivers & Streams
Bittern	Swift	Purple Milk-vetch	Water Violet	Arable field Margins	Roadside Verges
Globeflower	Pepper saxifrage	Tufted Sedge	Knotted hedge-parsley	Lowland Meadows	Sand Dunes
Yellow Star of Bethlehem	Burnt Orchid	Green Winged Orchid	Strawberry Clover	School Grounds	Maritime Cliffs and Slopes
Flat Sedge	Small Leaved Lime	Black Poplar	Lyme Grass	Grazing Marsh	Hedgerows
Scarlet Wax Cap	White-letter Hairstreak	Grayling	Dingy Skipper	Gardens and Allotments	Saline Lagoons
Blomer's Rivulet	Crescent Striped	Forester	Large Red-Belted Clearwing	Marsh and Saltmarsh	Ponds, Lakes & Reservoirs
Fen Wainscot	Shore Wainscot	Eccentric Grass Snail	Moss Chrysalis Snail	Parks and Recreation Grounds	Lowland Heath
Moss Chrysalis Snail	Bats (except common pipistrelle)	Brown Hare	Harvest Mouse	Brownfields	Churchyards and Cemeteries
Harbour Seal	Water Vole	Common Lizard	Slow Worm		
Great Crested Newt	Bullhead	Salmon	Brown Trout		
European Eel	Brook Lamprey	Sea Lamprey	River Lamprey		
Cumbria Biodiversity Action Plan					
Species			Habitats		

TABLE 10: BIODIVERSITY ACTION PLANS

Red Wood Ant	Wall Mason Bee	a ground beetle <i>Dyschirius angustatus</i>	Rivers	Lakes, Ponds and Tarns	Hedgerows
a ground beetle <i>Bembidion testaceum</i>	Oxbow Diving Beetle	Barn Owl	Traditional Orchards	Wood-Pasture & Parkland	Semi-natural Woodland
Song Thrush	Pearl Bordered Fritillary	High Brown Fritillary	Lowland Dry Acid Grassland	Calcareous Grassland	Hay Meadows and Pastures
Marsh Fritillary	Netted Carpet	Least Minor	Coastal and Floodplain Grazing Marsh	Heathland	Fen, Marsh and Swamp
a caddisfly <i>Glossosoma intermedium</i>	Freshwater Crayfish	Variable Damselfly	Bogs	Montane Habitats	Rock habitats
White-faced Dragonfly	Atlantic Salmon	Schelly	Calaminarian Grasslands	Previously developed land	Coastal Habitats above High Water
Vendace	Southern silver Stiletto-fly	Northern Silver Stiletto-fly	Coastal Intertidal Habitats	Coastal Saline lagoons	Coastal Subtidal Habitats
River Jelly Lichen	a lichen <i>Lobaria amplissima</i>	Pink Waxcap			
Medicinal Leech	Whiskered Bat	Brandt's Bat			
Natterer's Bat	Daubenton's Bat	Noctule			
Common Pipistrelle	Soprano Pipistrelle	Brown Long-eared Bat			
Red Squirrel	Water Vole	Hazel Dormouse			
Sandbowl Snail	a whorl snail <i>Vertigo geyeri</i>	Slender Green Feather-moss			
Great Crested Newt	Natterjack Toad	Pillwort			
Juniper	Northern Hawksbeard	Small White Orchid			