HABITAT WORKS

Lubrizol Warehouse
Ecology Report

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Summary

Habitat Works have been commissioned to undertake the ecological works associated with development proposals to erect a single skin warehouse structure to put existing storage under cover at the Lubrizol works, Leeds Rd Huddersfield.

Works undertaken comprised Preliminary Ecological Appraisal to establish the ecological status of the site and inform the client of any potential ecological constraints associated with the site and its proposed development, and an Ecological Impact Assessment of the proposed development.

PEA was undertaken based on field survey supplemented by data consultation. The data search and site survey revealed limited potential ecological interest with the site being very small in size comprising species poor semi-improved grassland.

The habitats within the footprint of works are of limited intrinsic value to nature conservation and not considered a constraint to development.

Due to the limited habitat and species interest recorded on site, the PEA considered no further ecological survey was necessary to assess the impacts of this development. The development is not expected to result in significant adverse impacts to ecology.

To ensure best practice it is recommended that a CEMP is produced prior to development in line with BS42020:2013. It is recommended that a Landscape and Environment Management Plan be produced for the ongoing management of habitats on site to ensure that the scheme delivers biodiversity net gain.

Introduction

Habitat Works Ltd have been commissioned by Lubrizol Ltd to undertake a Preliminary Ecological Appraisal (PEA) of a proposed warehouse development at Lubrizol works, Huddersfield.

This report has been prepared by Nick Birkinshaw (ACIEEM) a professional ecologist with over 25 years' experience providing ecological advice and a member of CIEEM since the mid 1990's.

The report has been produced in line with CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, CIEEM and with reference to BSI British Standards Publication BS 42020:2013 Biodiversity - Code of practice for planning and development.

A PEAR is typically used to identify any likely ecological constraints on a site and determine the need for any additional surveys. The report is then used to inform an Ecological Impact Assessment (EcIA).

To achieve these three key elements are considered:

1. Desk study
2. Field survey
3. Appraisal

The desk study considers a standard search area of 2km so that an appraisal can be made of the connectivity of the site to habitats and species present in the wider environment and of any potential effects of development to these receptors.

Due to the nature of habitats on site the PEA results are considered sufficient to assess the potential ecological impact of the scheme. The methods and results from the PEA have been used to form the Ecological Baseline which are then subject to Assessment and Mitigation as appropriate.

Project Description

The proposed development comprises the construction of a new warehouse facility to put undercover and extend an existing storage yard.

The site is located on Lubrizol premises, Leeds Rd, Huddersfield, figure 1, approximate grid reference SE 19433 24824. The surrounding land use is largely industrial with associated roads and infrastructure. The river Colne runs immediately to the south the site.

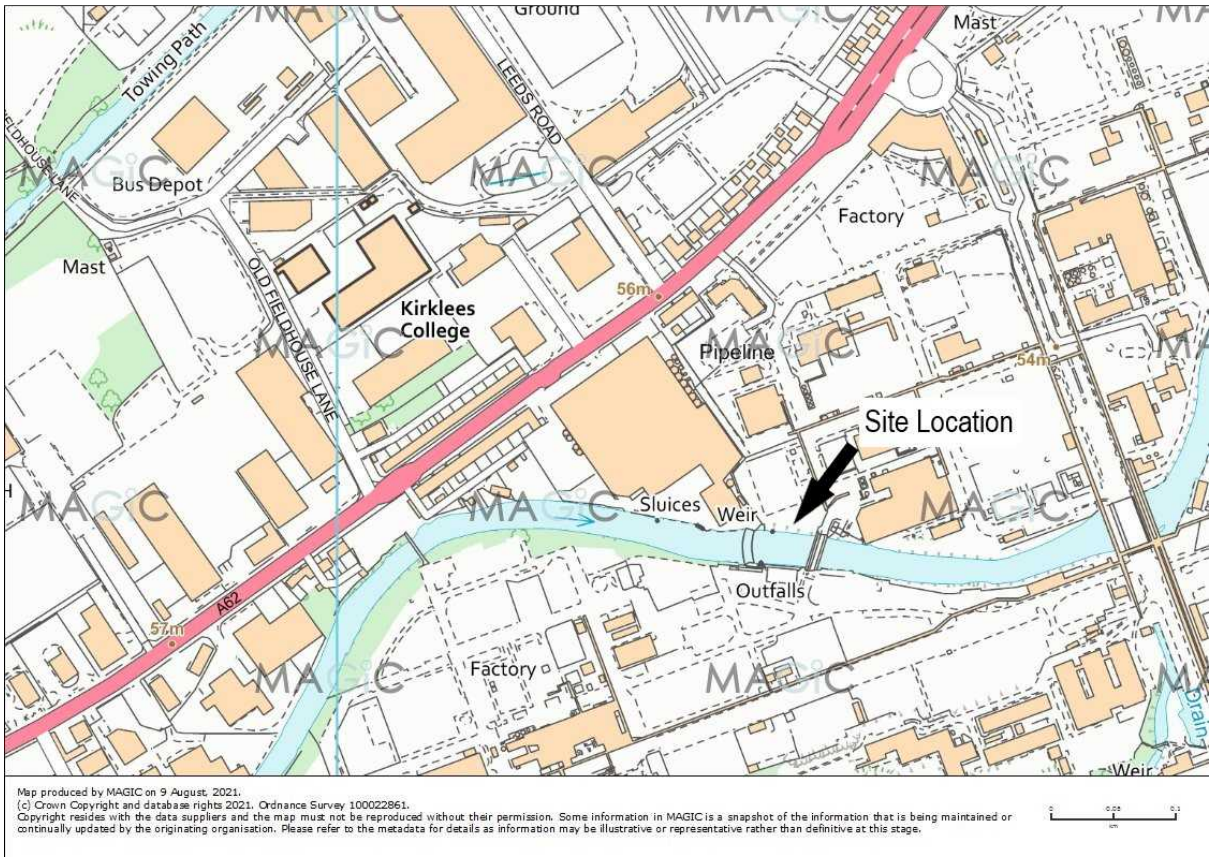

Figure 1. Site location

Methods

Data Search

Data consultation was undertaken by Habitat Works Ltd with West Yorkshire Ecological Services (WYES) as part of the ecological appraisal process, to determine whether any ecological features of note had previously been recorded within 2 km of the site. Data requested included:

- records of protected species;
- records of national or local Biodiversity Action Plan (BAP) species;
- details of any statutory sites of ecological interest e.g. Sites of Special Scientific Interest (SSSI), Special Protection Area (SPA) etc., and
- details of any non-statutory sites of ecological interest e.g. Local Wildlife Site (LWS).

The MAGIC website (www.magic.gov.uk) was also consulted for information on statutory and non-statutory designated wildlife sites and for any other pertinent records

Information returned from MAGIC and WYES with relevant assessments will be incorporated into the report as appropriate.

Extended Phase 1 survey

An ecological walkover survey was undertaken 30th June 2021 by experienced Habitat Work Ltd Ecologist Nick Birkinshaw using extended Phase 1 habitat survey methodology (JNCC, 2007). The habitats and vegetation types present were recorded, together with an indication of their relative abundance. This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all species occurring across the site.

Plant species recorded were classified according to the subjective method of DAFOR abundance ratings. The standardised terms are as follows:

- D Dominant
- A Abundant
- F Frequent
- O Occasional
- R Rare

Notable, rare or scarce plant species were highlighted if present. Evidence of protected species or species of nature conservation importance was recorded where present at the time of survey. The information is presented using target notes (TN), locations of which are shown in Appendix 3 where applicable.

Invasive Non-Native Species (INNS) listed on Schedule 9 of the Wildlife and Countryside Act (1981) (as amended) were recorded as seen.

Protected and Key Species Survey

All signs of protected species or groups encountered during the survey visit were recorded. This included observations of tracks or other signs of species such as badger, which may be visible at the time of survey. The structure and quality of the habitats present were assessed for their suitability to support animal groups, paying particular attention to detecting signs of occupation by, or suitability for, protected species. In addition, a note was made of any animals or flora of conservation interest not protected by UK or European legislation.

Limitations

Due to the small nature of the site thorough coverage was possible and provided sufficient information to characterise the habitats present in order to assess their likely contribution to the biodiversity interest of the area. This along with consultation responses received as part of the planning process has been used in considering likely risks to biodiversity interests and assessing any potentially damaging activities.

Method of Assessment

The value and sensitivity of ecological features present on site were determined based on the 'Guidelines on Ecological Impact Assessment' (CIEEM, 2016).

Individual ecological receptors are assigned levels of importance for nature conservation, the highest level being international, then decreasing in order of importance from national, regional, county, local and lastly site level.

Policy and Legislation

This appraisal has been undertaken with consideration of relevant national and local policies and legislation

Policy

Kirklees Local Plan

Policy LP30 Biodiversity and Geodiversity

Biodiversity and Development

Development proposals will be required to:-

(i) result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;

(ii) minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;

(iii) safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;

(iv) establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and

(iv) incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied. The NPPF creates a presumption in favour of granting planning permission for sustainable developments, unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies within the framework as a whole or if specifically restricted within the NPPF.

Section 11 of the NPPF deals with Conserving and enhancing the natural environment.

Paragraph 9 states that "*Pursuing sustainable development involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in people's quality of life, including (but not limited to)….*

- moving *from a net loss of bio-diversity to achieving net gains for nature…*".

Paragraph 109 states that "*The planning system should contribute to and enhance the natural* and *local environment by*:

- protecting *and enhancing valued landscapes, geological conservation interests and soils;*
- recognising *the wider benefits of ecosystem services;*
- *minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;…"*

Paragraph 113 states that "*Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks*".

Legislation

EC Directive 79/409 on the Conservation of Wild Birds (The Birds Directive) 1979

The Birds Directive aims to protect all bird species and their habitats within the member states. In particular, it requires special protection for a range of species (listed in Annex I of the Directive) and requires member states to establish SPAs for the protection of internationally important bird habitats. The Birds Directive is implemented in the UK by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Species and Habitats Regulations 2010 (as amended).

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora (The Habitats Directive) 1992

The EU Habitats Directive aims to provide protection for a range of natural and semi-natural habitats and species. Its Annexes identify a number of priority habitats and species requiring special protection. Member states are required to identify sites within their territory for designation as SACs for the protection of these habitats and species. The Habitats Directive is implemented in the UK by Conservation of Habitats and Species Regulations 2010 (as amended)

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 allows for the designation of National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs), to protect areas containing habitats and species of national or international importance. All SPAs and SACs identified under the EC Directives are also SSSIs.

The 1981 Act also provides for the protection of certain species. These include a number of specially protected birds (listed in Schedule 1). Other animals are listed in Schedule 5 and a number of plant species under Schedule 8.

The Conservation of Species and Habitats 2017

The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) provide domestic implementation of the EU Habitats Directive 1992. Under the Regulations, species listed in Annex II of the Directive are given strict protection in the UK as European protected species and it is an offence intentionally or recklessly to disturb or to harm a European protected species.

Projects which are likely to affect European protected species are subject to particular assessment criteria under the Habitats Directive and the Habitats Regulations. A mechanism for implementing a derogation of the species protection measures of the Directive – by a system of licensing – is incorporated into the Regulations. Under Part 5 of the Regulations a licence may be granted for a project affecting a European protected species for specific purposes.

Natural England is the licensing authority for derogation licenses. A derogation licence may only be granted, provided:

- that there is no satisfactory alternative, and
- the action authorised will not be detrimental to the maintenance of the population of a European protected species at a favourable conservation status in its natural range.

All public authorities are required to have regard to the provisions of the Habitats Directive in the exercise of their functions under Regulation 9 of the Habitats Regulations. Guidance on the application of the Habitats Regulations is set out in the Joint ODPM and Department for the Environment, Food and Rural Affairs (DEFRA) circular 06/2005 & 01/2005.

Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Protection of Badgers Act 1992

Under the Protection of Badgers Act 1992 all badgers and their setts are protected from disturbance. The Act also includes provisions to allow NE to grant licences permitting interference with a badger sett in the course of development. Such a licence will normally incorporate conditions to ensure that undue disturbance and suffering to badgers is avoided in the course of the development works.

Hedgerow Regulations 1997

Under the Hedgerow Regulations 1997, provision is made for the notification of "*important*" hedgerows. To qualify for notification, hedgerows must fulfil a range of criteria relating to their historical, landscape or wildlife character. In accordance with the Regulations, the intention to remove any hedgerow should be notified to the LPA via a hedgerow removal notice. The planning authority may issue a Hedgerow Retention Notice to prevent the loss of an "*important*" hedgerow. Where permission is granted to remove an "*important*" hedgerow, the LPA may impose conditions to mitigate the loss.

Baseline Conditions

Sites

Data consultation did not return any records of internationally or nationally designated wildlife sites within the search area, however, 3 Local Wildlife Sites fall within the search area:

- Dalton Bank Local Wildlife Site.
- Round Wood, Tandem Local Wildlife Site.
- Sir John Ramsden Canal Local Wildlife Site.

The development area is located outside the Kirklees Wildlife Habitat Network; however, the river Colne is part of this network and is located approximately 15 m to the south of the site.

Habitats

An extended Phase 1 Habitat Survey of the site was undertaken on 30th June 2021 and the weather was bright and clear with occasional cloud.

The footprint of works comprises a single habitat type, semi-improved grassland, that has formed over areas of previously disturbed ground (plate 1). The grassland is mown through the summer but at the time of survey was grown out. The grass extends beyond the footprint of the proposed development to the west of the existing storage yard (Figure 2).

Plate 1. Grassland on former disturbed ground.

Grass species recorded included abundant cocksfoot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*) meadow grass (*Poa* spp.) with rarely occurring crested dogstail (*Cynosurus cristatus*) interspersed with forbes including occasional common mouse ear (*Cerastium fontanum*), black medic (*Medicago lupulina*), red clover (*Trifolium pratense*), hogweed (*Heracleum sphondylium*), broadleaf plantain (*Plantago major*) and dandelion (*Taraxacum officinale* agg.) and rarely occurring broadleaf dock (*Rumex obtusifolius*), buddleia (*Buddleja davidii*) and bramble (*Rubus fruticosus* agg.)

Immediately adjacent but outwith the boundary of the proposed development was a band of woodland trees both self-set along the river corridor and planted individuals along the grassland edge. Naturally occurring species associated with the river corridor included Sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*) and willow (*Salix* spp.) with planted species comprising individual rowan (*Sorbus aucuparia*) and wych elm (*Ulmus glabra*).

Immediately adjacent but outwith the boundary of the proposed development is the river Colne corridor. For context and completeness bankside vegetation was recorded along the river corridor and comprised locally abundant reed canary grass (*Phalaris arundinacea*) and water mint (Mentha aquatica) with occasional nettle (*Urtica dioica*), hairy willowherb (Epilobium hirsutum) and the introduced non-native species (INNS) Himalayan balsam (*Impatiens glandulifera*).

modified grassland

Species

The data consultation returned records within 2km of the proposed development site. In considering which records have potential to be of relevance to the site a judgement has to be made on a number of factors including the conservation status of the species, the age of the records, the distance from

the site and the potential zone of influence of the development activities on each potential receptor either directly or on the habitats it requires.

The species/taxa considered further in this report following review of the data consultation information are:

- Amphibians
- Badger
- Birds
- Bats
- Otter
- Fish

Amphibians

No records for amphibians were returned within 500m of the site with the closest record of common toad (*Bufo bufo*) over 1.6 km away. A search of the DEFRA Magic maps web site (www.magic.defra.gov.uk.) did not reveal any ponds or water bodies suitable for breeding great crested newt or other amphibians within 500 m of the development.

Badger

There are no records of badger within the 500 m consultation area however badger can forage widely over large territories and the site is within a zone considered to be of increased probability of badger activity so as a precautionary measure a check for signs of badger activity was undertaken during the field visit an no signs of badger were record during site survey.

Birds

Whilst the application area is limited in size it contains a number of features of potential interest to foraging and nesting birds and its connectivity to the green corridor created by the river Colne means that it is likely to be used by birds resident either on site or in the local area as part of a wider foraging resource.

In 2015 a re-assessment of birds of conservation concern was published (Birds of Conservation Concern 4) which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern. Green list species comprise breeding birds that are considered to be relatively unthreatened.

Numerous records for birds were returned within 2km of the site of which but none were from within 500 m. Whilst no formal bird survey has been undertaken as part of this study the opportunity was taken during the site visit to record bird activity on and adjacent to site. Bird species recorded are included in the table below.

Species	**Scientific name**	**Status**
Bullfinch	*Pyrrhula pyrrhula*	Amber
Willow warbler	*Phylloscopus trochilus*	Amber
Wren	*Troglodytes troglodytes*	Green
Carrion crow	*Corvus corone*	Green
Blackbird	*Turdus merula*	Green

Bats - A number of records of bat activity were returned for the 2km data consultation search area but none within 500 m with the closest roost being recorded 799m away. Bat foraging activity is strongly associated with water bodies and linear habitat corridors and the river Colne offers high potential interest to foraging bats.

Whilst the site offers some very limited foraging habitat for bats resident in the wider area no features were recorded that were considered to be of potential interest to roosting bats.

Otter

Records of otter were returned for the river Colne approximately 419m from the site. Whilst the record is from 2006 they have been recorded within 2km as recently as 2019. Although the habitats on site are considered suboptimal for otter there is potential for otter to use the river as a foraging and commuting resource from time to time as part of larger territory.

Survey of the river bank for signs of otter including spraint, footprints and resting up areas revealed no evidence of occupation by otter.

Fish

Records of sea trout were provided for the river Colne 750 m away from the site. Whist the habitats on site The migratory nature of this species means it is implicit they will pass immediately adjacent to the site on route to their spawning grounds.

INNS

Plants considered to be INNS are listed on Schedule 9 (part II) of the Wildlife and Countryside Act (1981). It is an offence in England and Wales to plant or otherwise cause to grow these species in the wild.

Records for two species are held by the records centre occurring within 1 km of the site:

Name	Scientific Name	Distance from site	Date
Japanese knotweed	*Fallopia japonica*	682 m	2015
Himalayan balsam	*Impatiens glandulifera*	672 m	2009

On the day of survey two INNS were recorded adjacent to the site but outwith the footrprint of works. These were Japanese knotweed (*Fallopia japonica*) T1 Figure 2 and Himalayan balsam associated with the river corridor.

Other protected species

Due to the limited diversity and extent of habitats present on site the development plot is considered to be unlikely to be a critical resource to any other protected species that might be resident in the wider area. However, for completeness the site was surveyed with particular focus around the boundaries to check for signs of animals entering the site but no signs of any protected species activity were recorded.

Impact Assessment, Mitigation and Enhancements

The following section sets out the assessment of ecological interest, the need for any further work and recommendations with regard to sites, habitats and species as appropriate.

Sites

Considering the scale and nature of the development all designated wildlife sites identified in the data consultation response are considered beyond the potential zone of influence. No mechanism by which the development could impact these sites has been identified.

An area of the Kirklees Wildlife Habitat Network, the river Colne, lies within 15 m of the site and whilst no direct impacts are anticipated there is potential for dust and noise disturbance from the development site. It is recommended that a Construction Environmental Management Plan (CEMP) relating to Biodiversity be produced in consultation with The Council Biodiversity Officer that details working methods to avoid construction related impacts.

BS42020:2013 details the requirements of CEMP (Biodiversity) and recommends that whilst the format may vary it should be proportionate and tailored to the specific needs of the project and the biodiversity elements should all have common structure. Typical contents would include:

- Defined roles and responsibilities in the project/construction team,
- site induction (to include biodiversity),
- timing of works,
- dust screening,
- silt interceptor fencing,
- defined working hours outwith main periods of otter and bat activity,
- biosecurity, and
- pollution prevention measures.

Habitats

The habitats on site are very limited in extent and comprise approximately 0.05 ha of species poor semi-improved grassland vegetation which is common both locally and across the UK and land take of this habitats is not considered to constitute an impact to nature conservation at any more than the immediate site level.

The National Planning Policy Framework requires that a net gain in biodiversity results following any development and it is recommended that this achieved through development of a Landscape and Environment Management Plan in liaison with the Kirklees Biodiversity Officer that defines how the grounds will be managed to maintain their and enhance their biodiversity interest.

This plan should include methods to enhance the remaining grassland through plug planting, overseeding and establishing a management regime aimed at maximising the biodiversity potential of this habitat through use of a spring cut. To reduce the dominance of common grasses yellow rattle (*Rhinanthus minor*) should be included in the seed mix and/or plug plants.

This management regime would not only enhance the flowering plants but would also benefit associated invertebrate communities and by association taxa that feed on the invertebrates including birds and bats.

Other species-specific recommendation for achieving net gain are made below.

No removal of trees or scrub is anticipated to be required with respect to this development. Should any localised tree works be required, for example pruning of branches, this should be assessed by a qualified arborist prior to works commencing and outwith the bird breeding season.

The Landscape and Environment Management plan should also consider scrub and tree management options aimed at enhancing the biodiversity potential of these habitats. Options to consider include hedgerow and scrub management through laying and coppicing, additional planting to increase diversity and limb raising to allow light penetration for the benefit of field layer species.

Species

Amphibians

Data consultation returned no records of Great Crested Newt within 1km of the site. Search of Magic Maps found no suitable ponds or waterbodies within 500m of the site. No signs of amphibian were recorded on the day of survey.

The site is limited in extend and surrounded by barriers to dispersal for GCN including roads and the river that contains fish, therefore, no further survey is considered necessary. Inclusion of best site practice approaches to development of the site in the CEMP (Biodiversity) for example through raising awareness of amphibians with site staff induction as a precaution is recommended

Badger

No records of badger were returned within 500 m of the site and no signs of badger activity were recorded on the day of survey. No further survey is considered necessary with respect to this species. It is recommended that methods of best site practice set out in the CEMP include measures to cover up excavations over night or create escape ramps in the unlikely event that a badger or any other mammal fall into an open excavation.

These measures will also act to protect other terrestrial species including hedgehog and other small mammals.

Birds

A number of records were returned for the wider area but none for the site itself. No birds were recorded within the proposed footprint of works on the day of survey, largely due to the small size of the proposed site. Several birds were observed within the river corridor the majority of which were green list species considered relatively unthreatened. The amber list species bullfinch and willow warbler are both associated with woodland habitats and no direct impact to this habitat, or these species is anticipated as a result of this development.

Whilst the site may be used from time to time by birds resident in the general area, due to its small size and the relatively limited value of the habitats present, the site is not considered likely to be critical any particular bid species and land take associated with the development is not considered an impact to birds beyond the immediate site level.

There is potential for disturbance to nesting birds during site works or tree management works. Nesting birds are protected by the Wildlife and Countryside Act 1981 (as amended) and whilst disturbance to nesting birds unlikely to impact the population status of any particular species it would constitute and offence under UK law.

Its is recommended that measures be implemented through a CEMP (Biodiversity) to protect nesting birds during any vegetation management or clearance. Vegetation works should be avoided during the birds nesting season where practicable but if not possible works should be supervised by an

appropriately trained, qualified and experienced ecologist. If nesting birds are found during clearance, work in the immediate area will need to be stopped, an exclusion zone established around the nest and the area avoided until the ecologist confirms the chicks have fledge and the nest is not active.

In order to contribute to net biodiversity gain for the site and as a good practice measure it is recommended that bird boxes be installed to include 2 Schwegler 1b nest hole boxes and 1 Schwegler 2h open front box at appropriate locations within the grounds to be determined in the CEMP. Use of native species in the landscape scheme would offer further benefits to foraging birds resident in the wider area.

Bats

There are no features considered to be of interest to roosting bats within the footprint of works. Adjacent riverside trees were considered too young to contain features such as rot holes and lifting bark likely to be of interest to roosting bats. Roosting bats are not considered a receptor with respect to this development

Bats resident in the wider area are likely to forage widely in areas of suitable habitat as indicated by data consultation records. Whilst the odd bat may forage over site from time to time, the habitats present are extremely limited in size and unlikely to be critical to bats resident in the wider area and land take of these habitats would not constitute and impact to foraging bats beyond the immediate site level.

River corridor is likely to be an important corridor that is routinely used by foraging and commuting bats that will likely forage over the habitats on site from time to time. However, due to the small size and limited diversity of habitats on site land take associated with this scheme is not considered an impact to foraging bats outwith the zone of immediate effect.

The current Lubrizol works comprise an open brightly lit yard and associated factory and warehouse buildings that are lit during night-time. Whilst some bats are known to forage around streetlights and lit areas it is generally accepted that lower light levels are preferred by a broader range of bat species.

It is recommended that the opportunity is taken to design a lighting scheme that uses lighting methods that are sensitive to bats and direct light away from the river corridor. Options for lighting the completed building should considered methods that reduce potential disturbance to bats for example use of:

- low level columns or bollards,
- baffles or cowls to direct light spill away from the canal,
- LED light with a reduced UV and blue light and
- motion sensors with a limited time.

Similar lighting methods should be employed during the construction phase of the works and be detailed in the CEMP in addition to limiting works activity to daylight hours.

In order to contribute to net biodiversity gain for the site and as a good practice measure it is recommended that bat roosting provision be incorporated into the development through the installation of 3 Schwelgler 2F bat boxes in the riverside trees. The boxes should be at least 4m from the ground and face different aspects to provide a variety of roosting options in different prevailing weather conditions.

It is recommended that additional native planting is used to enhance existing grassland habitat to improve the foraging habitat for bats that might be resident in the wider area.

Otter

The river Colne is known to support otter and the adjacent weir pool offers a good holding area for fish, their main prey. However, survey of the river found no signs of otter activity and bankside habitat was considered to offer little potential area for laying up and resting.

While otters are shy animals, they are naturally inquisitive and there is some theoretical potential that they could enter the construction site. However, they are and largely nocturnal so it is recommended that methods of best site practice set out in the CEMP include measures to limit working hours to daylight periods and cover up excavations over night or create escape ramps in the unlikely event that an otter or any other mammal fall into an open excavation.

Fish

No direct impacts and the containment of chemicals in a warehouse will reduce the potential for accidental spills and pollution in future.

Due to the close proximity of the works to the river corridor it is recommended that measures be put in place during the construction phase of the development to avoid potential disturbance to the river corridor. These measures should include pollution prevention methods and emergency procedures in the event of a pollution incident and should be included in the proposed CEMP (Biodiversity).

INNS

Whilst no INNS were recorded within the footprint of development, they have been recorded adjacent to the site. To prevent the accidental spread it is recommended that measures are put in place in the CEMP to prevent working close to these species. Contractors should be made aware of the presence of INNS through inductions and toolbox talks.

It is recommended the Landscape and Environment Management Plan include methods for controlling INNS in the longer term.

Summary of recommendations

Due to the limited extent and nature of habitats on site no further surveys are considered required in order to evaluate the nature conservation interests of the site.

Following a best practice approach to development and as a precautionary measure it is recommended that standard environmental protection measures be put in place for the development. These protection and enhancement measures include:

- Produce proportionate CEMP to include:
    - Defined roles and responsibilities in the project/construction team,
    - site induction,
    - timing of works to avoid bird nesting season
    - dust screening,
    - defined working hours outwith periods of potential otter and bat activity
    - biosecurity, and
    - pollution prevention measures to avoid potential impacts to the river corridor species.
- Landscaping scheme to include supplementary planting of native grassland and tree species
- Production of a lighting plan that is designed to direct light away from the river corridor
- Inclusion of bird and bat nesting provision in the adjacent riverside trees

It is also recommended that enhancements to existing habitats are detailed and delivered through a Landscape and Environment management Plan in order to contribute to the net biodiversity gain of the scheme.

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Figure 2. Phase 1 habitat map