

Lubrizol Ltd
Preliminary Ecological Appraisal



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Executive Summary

Habitat Works Limited (Habitat Works) was commissioned in December 2024 by Lubrizol Ltd. to undertake a Preliminary Ecological Appraisal (PEA) for approximately 500 m² area of land at Lubrizol Works, Huddersfield, West Yorkshire (central Ordnance Survey National Grid Reference (OS NGR SE 16376 18361), hereafter referred to as 'the Site' and as displayed in Figure 1.

The Site boundary is detailed within the Martin Walsh Architectural drawing '*Proposed Site Plan*' (Dwg No. LULR - 0005 - P3 dated October 2024). The PEA was required to inform proposals for the removal of an area of '*Grassland – Modified grassland*' to facilitate the extension of the existing concrete yard.

The habitats present on the Site are common and widespread in the local landscape, it is anticipated that the loss of habitat at the Site is of importance to nature conservation at no greater than the site level. A Biodiversity Net Gain Assessment (BNGA) has been commissioned to formally assess the impacts the proposals have on habitats on the Site. This will identify opportunities to increase the habitat value on the Site post-development and recommend measures necessary to achieve a 10% gain in-line with government policy.

The following is recommended with regards to protected or notable species:

- Works will follow Best Practice Measures (BPM) should be followed with regards to amphibians, badgers, hedgehogs and otters;
- A minimum of two integrated bat boxes could be installed within the new plots enhance the Site for roosting bats;
- A minimum of two integrated bird nesting boxes could be installed within the new plots as an enhancement for nature conservation;

1. Introduction

1.1 Background

- 1.1.1 Habitat Works Limited (Habitat Works) was commissioned in December 2024 by Lubrizol Ltd to undertake a Preliminary Ecological Appraisal (PEA) for approximately 500 m² area of land at Lubrizol Works, Huddersfield, West Yorkshire (central Ordnance Survey National Grid Reference (OS NGR) SE 16376 18361), hereafter referred to as 'the Site' and as displayed in Figure 1.
- 1.1.2 The Site boundary is detailed within the Martin Walsh Architectural drawing '*Proposed Site Plan*' (Dwg No. LULR - 0005 – P3, dated October 2024). The PEA was required to inform proposals for the removal of modified grassland and the subsequent extension of the existing concrete yard.
- 1.1.3 This report details the findings of a PEA, comprising a data consultation and UK Habitat Classification survey undertaken in December 2024. Methodologies employed during the surveys are described along with the survey findings, evaluation, assessment and recommendations for any further survey work and/or mitigation/enhancement as required.
- 1.1.4 Recommendations are made regarding impacts of the proposed development through habitat losses/potential gains on the Site post-development and the retention and protection of key ecological features. The provision of species-specific enhancements is outlined where appropriate.

2. Methodology

2.1 Data Consultation

- 2.1.1 Data consultation was undertaken by Habitat Works with the local records centre; West Yorkshire Ecology Service (WYES) and West Yorkshire Bat Group (WYBG) in December 2024 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).
- 2.1.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website (<http://www.magic.defra.gov.uk>) was consulted for information on statutory and non-statutory designated sites of conservation interest, and for the presence of European Protected Species (EPS) mitigation licences for great crested newt *Triturus cristatus* (GCN) and bats within 2 km of the Site. MAGIC was also used to search for information relating to GCN Class Survey Licence Returns and Great Crested Newt Pond Surveys 2017- 2019 within 500 m of the Site.
- 2.1.3 The Kirklees Biodiversity Action Plan (KBAP) was also consulted for habitats and species afforded particular interest within the local area.
- 2.1.4 Information returned from MAGIC, WYES, WYBG and the KBAP with relevant assessments will be incorporated into the report as appropriate. All records will be reviewed, however particular interest will be placed on records within the past 10 years, with records prior to these considered historic.

2.2 Ecological Walkover Survey

- 2.2.1 An ecological walkover survey was undertaken 6th December by Senior Ecologist Joe Travis BSc (Hons) MSc ACIEEM and Graduate Ecologist Ellie Collier BSc (Hons) following best practice guidelines (UK Habitat Classification System (UKHab) (UKHab Working Group (UKHCWG) 2018)). This survey method aims to define habitats and vegetation types present and provide 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.
- 2.2.2 The UKHab survey covered land within the Site (as illustrated by the red line site boundary in Figure 1).
- 2.2.3 Habitats and vegetation types present inside the Site were recorded onto a field map and notable, rare or scarce plant species, including other features of ecological interest, were highlighted using Target Notes (TN). The current management of habitats and associated features were noted and assigned UKHab secondary codes where relevant.
- 2.2.4 Evidence of protected species or species of nature conservation importance were recorded where present at the time of survey. Habitats or species present that are listed under Section 41 of the NERC Act 2006 or the KBAP were also noted.
- 2.2.5 Survey findings are detailed in Section 3 and annotated on Figure 1, Target Notes are provided in Appendix 1 and Site photographs are provided in Appendix 2.

2.2.6 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

2.3 Protected and Key Species

2.3.1 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit <http://www.legislation.gov.uk>.

Amphibians

2.3.2 The Site was assessed for its potential to support amphibians, including a detailed GCN assessment. A desk-based search for ponds within 500 m of the Site, which are not separated by a significant barrier to amphibian dispersal, was made using 1:10,000 OS mapping. Habitats within the Site were assessed for their suitability to support amphibians during their terrestrial and aquatic stages where applicable.

Badgers

- 2.3.3 Signs of badger *Meles meles* activity were sought within the Site and within 30m of the Site boundary, where possible.
- 2.3.4 The survey followed standard methodology detailed in 'Surveying Badgers' (Harris *et al.*, 1989) and the approach as described in 'The history, distribution, status and habitat requirements of the badger in Britain' (JNCC, 1990).
- 2.3.5 The survey focused on areas with topography and/or vegetation typically utilised for sett building, in addition to key habitats typically favoured for foraging such as woodland, hedgerows, ditches and banks.
- 2.3.6 The survey involved identifying any badger field signs including setts, latrine/dung pits, foraging marks, feeding signs (e.g. snuffle holes), footprints, badger hairs and worn pathways, specifically along linear features and boundaries in the Site.
- 2.3.7 In the event of identifying badger sett(s), these were examined with key details recorded, including the number of entrances and their status (e.g. active, partially used, and disused). Where present setts identified were categorised using nationally recognised sett classification (main sett, annexe sett, subsidiary sett, outlier sett) where possible (Harris *et al.*, 1989).

Bats

- 2.3.8 Trees and structures within and immediately adjacent the Site were subject to a ground-based assessment for their suitability to support roosting bats during the survey.
- 2.3.9 An individual structure may have several features of potential interest to roosting bats associated with it and it is not always possible to confirm usage of a feature by bats due to their transient nature. Consequently, it is customary when undertaking such surveys to assign each feature to a defined category of roosting potential as follows: negligible, low, moderate, high or confirmed (Collins, 2023).

2.3.10 Similar to structures, an individual tree may have several features of potential interest to roosting bats associated with it and it is not always possible to confirm usage of a feature by bats during a single daytime visit, given their highly transient natures. Consequently, it is customary when undertaking such surveys to assign each feature to a defined category of None, Further Assessment Required (FAR), Potential Roosting Feature – Individual (PRF – I) and Potential Roosting Feature – Multiple (PRF – M) (Collins, 2023).

2.3.11 The Site was also assessed for its suitability for foraging and commuting bats in accordance with good practice guidelines (Collins, 2023).

Birds

2.3.12 In 2021, a re-assessment of Birds of Conservation Concern (BoCC) was published by Stanbury et al. (2021), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern. “Red” is the highest conservation priority, with species needing urgent action through to “Green”, indicating that the species are relatively unthreatened.

2.3.13 Data consultation data was filtered for WCA 1981 (as amended) Schedule 1 bird species and those species protected under Annex 1 of the EU Directive on the Conservation of Wild Birds, also known as the Birds Directive. Priority species (NERC Act 2006, LBAP) were likewise highlighted and the UK Red List for birds, also known as the BoCC as described above, was also referred to.

2.3.14 During the Site survey any species of birds encountered were recorded. Habitats were assessed for their potential value to nesting, wintering and foraging birds.

Invertebrates

2.3.15 The habitats present on the Site were assessed for their suitability to support invertebrates and incidental observations of invertebrates at and adjacent to the Site were noted.

Reptiles

2.3.16 The habitats present on Site were assessed for their suitability to support reptiles, particularly with reference to their connectivity with other areas of suitable habitat within the wider landscape.

Riparian Mammals and White-clawed Crayfish

2.3.17 A desk-based search for watercourses on or within 30 m of the Site, which are not separated by a significant barrier to dispersal, was undertaken using OS 1:10,000 mapping.

2.3.18 Where access was possible, watercourses were subsequently assessed for their suitability to support otter *Lutra lutra*, water vole *Arvicola amphibius* and white-clawed crayfish *Austropotamobius pallipes*.

Other Key and Notable Species

2.3.19 Whilst on Site habitats were assessed for their potential to support any other nationally, locally scarce or notable species, with particular reference to LBAP species.

2.4 Invasive Species

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

2.5 Assumptions and Limitations

2.5.1 A UKHab survey is intended to provide a rapid assessment of habitats present within a site and is not intended to replace detailed vegetation or targeted protected species surveys, where deemed necessary.

2.5.2 Due to the survey being undertaken outside of the optimal survey period, sufficient information to characterise the habitats present in order to assess their likely contribution to the biodiversity interest of the area is usually not possible for all habitats. However, due to the nature of the habitats present, it is considered that this is a valid and fair representation of the habitats present.

3. Findings and Evaluation

3.1 Site Description

- 3.1.1 The Site is located on Lubrizol premises, Leeds Road in the northeast of Huddersfield, West Yorkshire and comprises approximately 500 m² of modified grassland. The Factory premises itself includes multiple buildings, ranging from large steel warehouses to brick-built constructions but mostly consists of concrete and tarmac ground used for storage and transport. The location of these buildings are provided within Figure 1.
- 3.1.2 The surrounding land use is a combination of industrial land with associated roads and infrastructure and greenspace. The greenspace bounding the Site is made up of woodland, grazed pastures, and amenity grassland however linear features such as hedgerows and lines of trees are also present. Additionally, due to the suburban nature of the wider area, there is a significant amount of vegetated garden which could contain features such as small ponds and a variety of vegetation. The River Colne runs immediately to the south the Site and is bordered by trees for the most part.

3.2 Designated Sites

- 3.2.1 No designated sites were identified using MAGIC within 2 km of the Site.
- 3.2.2 West Yorkshire Ecology Service (WYES) returned one statutory designated site and three non-statutory designated sites for locations within 2 km of the Site, including a site which is designated as a Local Nature Reserve (LNR) and a Local Wildlife Sites (LWS), in addition to two further LWSs.
- 3.2.3 Table 1 below details the designated Sites within 2 km of the Site, with Figure 2 displaying their locations.

Table 1 - Designated Sites within 2 km of the Site

Designated Site	Description from Citation	Approx. Distance & Direction from Site
Statutory		
Dalton Bank Local Nature Reserve (LNR)	A mix of conifer plantation and native woodlands of approximately 20.7 hectares. The grassland communities form an important part of the site and are of considerable ecological value.	600 m east
Non-Statutory		
Dalton Bank Local Wildlife Site (LWS)	A mix of conifer plantation and native woodlands of approximately 20.7 hectares. The grassland communities form an important part of the site and are of considerable ecological value.	600 m east
Sir John Ramsden Canal LWS	Standing open water Value for appreciation of nature	1.3 km southeast
Round Wood (LWS)	Round Wood, Tandem, is an ancient woodland site of approximately 4.85 hectares surrounded by houses and gardens. Round Wood Beck runs along the eastern boundary, with fences along boundaries with gardens. The woodland is hummocky in places, and mostly slopes steeply downwards from the central area. There are well used footpaths throughout the woodland. Native bluebell cover.	2 km south

- 3.2.4 The designated sites are considered to be of importance to nature conservation at between the local and county level.
- 3.2.5 Given the distance from the Site to the designated sites, in conjunction with the fact that the proposals are confined to the Site boundary, it is not considered that any of the designated sites will be impacted by the proposals, and as such, designated sites will not be discussed further within this report.

3.3 Habitats

- 3.3.1 Habitats recorded on the Site, their distribution and composition are discussed in order of dominance below. Habitat locations are annotated on Figure 1. Site photographs are displayed in Appendix 2.

G4 Modified grassland (Secondary Code (SC): 106)

- 3.3.2 The Site comprised an area of short sward modified grassland. The grassland is regularly mown (SC: 106) and is species poor. Species recorded within the grassland were included perennial ryegrass *Lolium perenne* (A), Yorkshire fog *Holcus lanatus* (F), and red clover *Trifolium pratense* (O), while undesirable species such as common ragwort *Jacobaea vulgaris* and buddleia were also present.
- 3.3.3 Modified grassland is not a NERC Act 2006 Section 41 priority habitat nor is it listed within the KBAP. The habitat was considered to be of no greater than site level importance to nature conservation.

3.4 Species

Amphibians

- 3.4.1 WYES provided no records of amphibians for locations within 2 km of the Site.
- 3.4.2 No GCN EPS licence or GCN Class Survey Licence Returns were identified within 2 km of the Site
- 3.4.3 The Site location is not eligible for inclusion in the Natural England GCN District Level Licensing (DLL) scheme.
- 3.4.4 Three waterbodies are present within 500 m of the Site from a search of OS Maps. However, none are within 250 m of the Site.
- 3.4.5 No ponds or other water features were identified on the Site or in any of the industrial or residential gardens located immediately adjacent/neighbouring the Site. However, it should be noted that unidentified ponds/water features may exist in nearby gardens within the wider area (within 250m of the Site). In general, such water features are usually relatively small and are more likely to be used by common amphibians i.e. smooth newt, and/or palmate newt and/or common frog (albeit GCN and common toad may use them in certain circumstances; for example, if there is a larger waterbody close by that supports either of these species).
- 3.4.6 The terrestrial habitats on the Site are of limited suitability for GCN and common amphibians, with short sward grassland offering little sheltering or foraging potential. There is a rubble pile present in the eastern section of the grassland (TN1) which may offer some limited sheltering opportunities, however given the immediate surrounding land use around the Site, it is considered extremely unlikely that amphibians will utilise this sheltering opportunity.
- 3.4.7 Given the limited suitability of terrestrial habitats present on the Site, and the absence of good aquatic habitats present on site or within 500 m of the Site and absence of records within 2 km of the Site provided by WYES, it is considered that GCN are likely absent from the Site and will not be discussed further within this report.

3.4.8 The presence of common amphibian species cannot be ruled out from the Site. Overall, the Site habitats are of no greater than site level value for common amphibians in their terrestrial stage. This is based on the availability of similar and higher quality habitat (including potentially more suitable aquatic habitat) in the wider area.

Badger

3.4.9 Due to the persecution of badgers, the exact locations of badger records within 2 km of the Site was not provided by WYES. WYES has however confirmed that there are no records of badger setts for locations within 200 m of the Site, with the closest sett being 570 m from the Site, however the direction was not provided. The Site is considered to be located in an 'area of increased probability of badger activity' by WYES.

3.4.10 No evidence of badger was recorded throughout the survey and the Site offers limited sett building potential, such as denser areas of vegetation. The Site habitats are also flat, and heavily disturbed by the industrial land use surrounding the Site itself, further reducing the likelihood of badger establishing a sett on the Site.

3.4.11 The Site also lacks significant suitable foraging/commuting habitat comprising mainly of developed land, sealed surface and modified grassland. The River Colne to the south of the Site will create a barrier to dispersal for badgers travelling southwards, and as such, badgers may occasionally cross the Site as part of their wider territories when attempting to commute southwards. However, given the lack of suitable sett building and foraging habitat present, in conjunction with the disturbance that would be caused by the activities of the industrial estate surrounding the Site, it is considered that any local badgers would not be reliant on the habitats on the Site.

3.4.12 Given the lack of field signs from walkover survey and the limited suitable habitats present on the Site, it is considered that the Site is of conservation value to badger at no greater than the site level.

Bats

3.4.13 WYES returned a total of 92 records relating to bats for locations within 2 km of the Site, 19 of which relate to roosting bats. Of these roost records four are recent, 15 are historic, with the records pertaining to common pipistrelle *Pipistrellus pipistrellus* and unidentified bats. The closest recent record to the Site relates to an unidentified bat roost located approximately 1100 m southeast of the Site in 2020. The closest confirmed roost is of common pipistrelle located approximately 1700 m west of the Site.

3.4.14 The remaining 73 records relate to bats in flight or grounded bats. These records include brown long-eared bat *Plecotus auritus*, common pipistrelle, Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctule* and soprano pipistrelle *Pipistrellus pygmaeus* in addition to unidentified *Pipistrellus Sp.*, unidentified *Myotis Sp.*, and unidentified bats. The closest historical record to the Site pertains to a Leisler's bat (field observation) approximately 900 m south of the Site in 2011.

3.4.15 WYBG returned no recent roost records for locations within 2 km of the Site. Of the historical records they returned 13 were records of roosts, the closest of which was approximately 540 m southwest of the Site. This historical record related to an unidentified bat roost recorded in 2005.

3.4.16 Of the remaining 12 WYBG records relate to roosts, five pertain to roosts confirmed, including common pipistrelle, unidentified pipistrelle *Pipistrellus Sp* and unidentified bat species. The remaining records returned pertained to three possible roosts, two maternity roost, two possible in building roosts and one hibernacula roost, including *Pipistrellus Sp.* and unidentified bats. There are seven non-roost records, five

of which were recent, the closest of which was 840 m north of the Site and relates to a field record of an unidentified bat species recorded in 2010.

- 3.4.17 A single EPS licence relating to bats was identified using MAGIC within 2 km of the Site and relates to the destruction of common pipistrelle breeding site and resting place. The record is located approximately 1500 m southeast of the Site and was active between 09/05/2013 and 31/05/2013 (EPSM2012-4870).
- 3.4.18 The Site contains no suitability to support roosting bats, and as such, roosting bats are considered absent from the Site.
- 3.4.19 The Site offers limited potential for foraging and commuting bats, due to the limited scale of the habitats present on the Site. The wider local landscape has habitats of superior quality for commuting and roosting bats, such as woodland edges, grasslands and the River Colne.
- 3.4.20 Overall, the Site is considered to be of negligible suitability for commuting and foraging bats (Collins, 2023), and the habitats on the Site are considered to be of no more than site level importance for foraging and commuting bats.

Birds

- 3.4.21 WYES returned a total 21 records comprising 11 bird species for locations within 2 km of the Site. Species returned included a single Schedule 1 bird species, as listed within the Wildlife and Countryside Act 1981 (as amended) (WCA 1981), two Red, eight Amber and a single Green listed BoCC species. Bird species recorded within 2 km of the Site are summarised in Appendix 3.
- 3.4.22 The Site offers extremely limited opportunities for nesting birds, with no mature trees or scrub present on the Site. Removal of some small saplings are proposed; however these trees are not of a size and age which would typically supporting nesting birds. It is not considered that the Site is suitable for ground nesting birds given the small size of the Site, in combination with the levels of disturbance that would be caused by the surrounding industrial land use.
- 3.4.23 There are mature trees present adjacent to the southern boundary of the Site on the banks of the River Colne. There is potential for nesting birds to establish nests within these trees. The development has the potential to cause some levels of disturbance to potential nests in these trees, without directly impacting the nests themselves.
- 3.4.24 Overall, due to its small size and industrial nature, the Site is of importance to breeding birds at no greater than the site level.

Invertebrates

- 3.4.25 WYES returned a total of eight records comprising two insect species within 2 km of the Site, none of the records were from the last 10 years. The closest historical recording was from 2004 of a Small Heath *Coenonympha pamphilus* butterfly recorded at approximately 850 m from the Site.
- 3.4.26 The habitats on the Site are unlikely to have offered opportunities for invertebrates, therefore they are not considered to offer the variety in species, structural diversity and habitat interfaces that would be necessary to support diverse communities of terrestrial invertebrates. The variety of plant species and structures present are sub-optimal overall and unlikely to support notable species or large invertebrate populations but may contribute to foraging opportunities for common species.
- 3.4.27 Given the limited suitable habitat present on the Site, and the presence of more suitable habitat at a larger scale in the wider area, the Site is of importance to invertebrate species at no greater than the site level.

Reptiles

- 3.4.28 WYES returned no records of reptiles for locations within 2 km of the Site.
- 3.4.29 Overall habitats on the Site currently offer limited suitability for sheltering reptiles, confined to a small rubble pile in the east of the Site (TN1). The Site, and much of the land use immediately surrounding the Site, is industrial, with disturbance caused by the human activities associated with the activity at Lubrizol Ltd and roads adjacent the Site likely to further reduce the suitability of the Site for reptiles.
- 3.4.30 Given the absence of recent records, the extremely limited suitability and extent of habitats on the Site, and the overall land use of the surrounding area to the land being limited for reptiles, it is considered that reptiles are likely absent from the Site and are not a constraint to the development proposals. As such, reptiles will not be discussed further within this report.

Riparian Mammals and White-clawed Crayfish

- 3.4.31 WYES returned a three records of European otter *Lutra lutra*, recorded in 2019 and 2006, the closest being a field record approximately 430 m from the Site on the River Colne in 2006. The more recent records were as a result of camera trapping on Round Wood Beck approximately 1800 m from Site and just north of Round Wood ancient woodland, one of the non-statutory designated sites.
- 3.4.32 There were no records of a European water vole *Arvicola amphibius* or white-clawed crayfish *Austroptamobius pallipes* for locations within 2 km of the Site.
- 3.4.33 No evidence of these species was recorded during the PEA; however, the Site is positioned next to the River Colne which has the potential to support these species, in particular otter which has been noted to be present in the River Colne. However, survey of the river found no evidence of otter activity and the bankside habitat was considered to offer little potential area for laying up and resting.

Other Notable and Key Species

Hedgehog

- 3.4.34 WYES returned a single record of a European hedgehog *Erinaceus europaeus* for locations within 2 km of the Site. This recent record was from 2014 and located approximately 1.7 km north of the Site.
- 3.4.35 The Site offered limited suitability for hedgehog, with some foraging or commuting opportunities present in the edge of the grassland adjacent to the surrounding tree line that may be part of a wider foraging resource. Hedgehogs are highly mobile species, but it is unlikely that they would commute across the Site due to a lack of suitable neighbouring habitats.
- 3.4.36 Based on the relatively limited value of habitats on Site together with the lack of availability of more suitable habitat associated in the wider area, Site habitats are considered unlikely to be of more than site level importance to hedgehogs.

3.5 Invasive Species

- 3.5.1 WYES returned 56 records of invasive plants for locations within 2 km of the Site. The records relate to 16 records of Himalayan balsam *Impatiens glandulifera*, a single record for Giant Hogweed *Heracleum mantegazzianum*, 29 records of Japanese knotweed *Fallopia japonica*, a single record of rhododendron *Rhododendron ponticum* and nine records of Water Fern *Azolla filiculoides*. The closest record pertains to Japanese Knotweed last recorded in 2015, 600 m south of the Site.
- 3.5.2 WYES returned five records for signal crayfish *Pacifastacus leniusculus*, for locations within 2km of the Site.

All records were from 2008. The closest to Site being approximately 1500 m northeast.

- 3.5.3 WYES returned two records for American Mink *Neovison vison*, for locations within 2km of the Site. Both are historical records the most recent being 2009 at approximately 700 m south of Site.
- 3.5.4 No Schedule 9 listed plant species were observed within the Site during the survey, and as such will not be considered further within this report.

4. Impact Assessment, Mitigation and Enhancements

4.1 Proposals

- 4.1.1 Proposals for the Site comprise the removal of vegetated habitats on the Site to allow the extension of an existing concrete yard, detailed within the Martin Walsh Architectural drawing 'Proposed Site Plan' (Dwg No. LULR - 0005 - P3, dated October 2024).
- 4.1.2 The proposals will result in the loss of modified grassland on Site which will be replaced with a concrete yard.

4.2 Habitats

- 4.2.1 Given that the habitats present on the Site are common and widespread in the local landscape, it is anticipated that the loss of habitat at the Site is of importance to nature conservation at no greater than the site level.
- 4.2.2 A Biodiversity Net Gain Assessment (BNGA) has been commissioned to formally assess the impacts the proposals have on habitats on the Site. This will be provided as a standalone report and will identify opportunities to increase the habitat value on the Site post-development and recommend measures necessary to achieve a 10% gain in-line with government policy.
- 4.2.3 The Site is located adjacent the River Colne. Although the river is not subject to the proposals, there is the risk that the river could be subject to indirect impacts associated with the development. As such, general principles of pollution prevention should be adhered to as detailed within the Guidance for Pollution Prevention (GPP) documents produced by Natural Resources Wales (NRW), Northern Ireland Environment Agency (NIEA) and Scottish Environment Protection Agency (SEPA). These include:
- GPP5 – works and maintenance in or near water (NRW, NIEA and SEPA, 2018);
 - GPP21 – pollution incident response planning (NRW, NIEA and SEPA, 2017); and,
 - GPP22 – dealing with spills (NRW, NIEA and SEPA, 2018).
- 4.2.4 Pollution Prevention Guidelines 1 (NRW, NIEA and SEPA, 2013), is now withdrawn but provides a general overview for good practice environmental measures in construction and where followed will assist with protection of the River Colne:
- Materials shall not be stored within 10 m of any running water or ditch habitat; and,
 - Details of the Environment Agency should be stored in the Site office during construction works so that swift contact can be made should any pollution incident occur which may impact watercourses.

4.3 Protected Species

Amphibians

- 4.3.1 GCN are protected under the WCA 1981 (as amended) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 and are a European Protected Species ("EPS").
- 4.3.2 Common amphibians are protected under the WCA 1981 (as amended) against sale, barter or exchange of captive animals.

- 4.3.3 As the presence of common amphibians on the Site cannot be ruled out, it is recommended that Best Practice Measures (BPM) are implemented during the proposed development works. Any debris and rubble piles present (TN1) should be dismantled by hand or using hand tools to minimise the potential for harm to common amphibians should they be sheltering within such features. If common amphibians i.e. smooth newt or palmate newt, common frog or common toad are encountered on Site during the works they should be allowed to move away of their own volition. If in immediate danger of injury, they should be carefully moved in gloved hands to an area of safe shelter away from the footprint of works.
- 4.3.4 In the extremely unlikely event of discovering a GCN on the Site during works, works should cease immediately, and an ecologist should be contacted for further advice.

Badger

- 4.3.5 Badgers and their setts are protected under the Protection of Badgers Act 1992. It is an offence under the act to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct a currently active badger sett, or to disturb animals within the sett.
- 4.3.6 Badgers are not considered to be resident on the Site, however they are highly mobile species and have the potential to disperse on to areas of the Site and into working areas. As such it is recommended that, BPM be implemented throughout the works to protect badgers, should they subsequently pass through these areas of the Site. The BPM should include:
- Any excavations deeper than 1 m required during the works should be covered overnight. Shallow excavations less than 1 m should have a roughened scaffold board or equivalent placed in them overnight to allow any animals which may become trapped to exit. Trenches will also be inspected each morning to ensure that no animals have become trapped overnight;
 - Food/litter will not be left on Site;
 - If in the unlikely event that badgers are encountered during works, then works will cease temporarily and the animal allowed to move away off its own volition. The ecologist will be contacted for advice; and,
 - If badgers are suspected to be associated with the Site once construction has commenced, including a suspected badger sett found on or within 30 m of the Site during the works by a contractor, works should cease and an appropriately experienced ecologist should be contacted for advice before continuing.
- 4.3.7 Additionally, any lighting implemented during the construction stage and upon completion of the development should be directed away from retained vegetated habitats, particularly off-site treelines to allow badgers to continue to use such habitats for foraging and commuting where present locally.

Bats

- 4.3.8 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Under regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).
- 4.3.9 All UK bats are also included on Schedule 5 of the WCA 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

4.3.10 Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared bat, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule and soprano pipistrelle bats are included as priority species under Section 41 of the NERC Act 2006. Pipistrelle bats are also listed on the KBAP.

Roosting Bats

4.3.11 Given the absence of suitable roosting opportunities present on the Site, it is considered that roosting bats are absent from the Site.

4.3.12 Although not compulsory, a potential enhancement for nature conservation would be to add a tree mounted bat boxes to the mature trees present along the River Colne. These boxes should be suitable for crevice dwelling bat species such as the Schwegler 2F Bat Box (General Purpose). The bat boxes should be placed at a minimum height of 4 m facing southern aspects to maximise chances of occupation.

Foraging and Commuting Bats

4.3.13 The habitats on the Site were considered negligible for foraging/commuting bats.

4.3.14 The connectivity of the Site to the wider area through vegetated habitat is not considered to be negatively impacted due to the limited scale of the proposals, in addition to the presence of higher quality foraging and commuting habitat in the wider landscape. As such, further survey in this instance is not necessary with respect to foraging and commuting bats.

4.3.15 Bat species in the UK are known to be impacted by artificial lighting. In order to avoid impacts associated with artificial light spill on bat flight-lines or foraging habitat, mitigation measures should be implemented whereby the lighting of the proposed development (as well as any temporary lighting to be used during the construction phase) should be designed to avoid light-spill onto suitable surrounding habitats (in particular the River Colne corridor) to safeguard these as foraging and commuting resources.

Birds

4.3.16 All wild birds, their nests and eggs are protected under the WCA 1981 (as amended) while a nest is in use or occupied. The nesting bird season is typically considered to fall between March and August (inclusive). Species listed under Schedule 1 of the Act receive additional protection against disturbance whilst occupying a nest site.

4.3.17 The habitats on Site were of no more than site level importance to local bird populations given the quality of habitat recorded on the Site and the extensive availability of similar to higher quality habitat for nesting birds in the wider area.

4.3.18 Again, not compulsory, but to enhance nature conservation on Site it is recommended that a total of two integrated bird nest boxes could be incorporated into the development as compensation for the loss of nesting habitat on the Site. Schwegler Brick Box Type 25 boxes are recommended as they have been shown to achieve good uptake by a range of species and not just swifts. The bird boxes should be placed at a minimum height of 3 m (near eaves level when placed on buildings) facing different aspects to maximise chances of occupation. Full south aspects present a risk of overheating and should therefore be avoided.

Invertebrates

4.3.19 Many invertebrate species are listed under Section 41 of NERC act (2006) designating them as Species of Principal Importance in England.

4.3.20 Several species of invertebrate and their habitat are afforded full protection under Schedule 5 (Section 9)

of the WCA 1981 (as amended). Several species are also EPS. These are afforded strict protection under the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 under Schedule 2.

- 4.3.21 The loss of the grassland on the Site is not considered likely to impact any notable populations of invertebrates. Habitats on Site are considered of no more than site level importance for invertebrates and impacts from proposals are therefore likely to be insignificant to invertebrates resident in the local area.
- 4.3.22 As an enhancement for local invertebrate populations, insect towers could be created in available areas of greenspace surrounding the development Site.

Riparian Mammals

Otter

- 4.3.23 Otters within the UK are included in Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Under regulation 41 otters are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place.
- 4.3.24 Otters are also included on Schedule 5 of the WCA 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to disturb otters while they occupy a structure or place used for shelter or protection; or obstruct access to a place of shelter or protection.
- 4.3.25 Otters are not considered to be resident on the Site; however, they are highly mobile species and have the potential to disperse on to areas of the Site and into working areas. As such it is recommended that, BPM outlined above for badgers should be implemented which would offer protection for otters, should they subsequently pass through these areas of the Site. Pollution Prevention Measures outlined above will also help to prevent indirect impact to the otter's habitat within the River Colne.

Other Notable and Priority Species

Hedgehog

- 4.3.26 Hedgehog are included as a species of principal importance under Section 41 of the NERC Act 2006 and are listed on the LBAP. Whilst not afforded a high level of protection, hedgehogs have experienced significant declines in the UK population. Taking a best practice approach, avoiding harm to hedgehogs should be taken into consideration during works.
- 4.3.27 The loss of grassland habitats is not considered to significantly impact upon hedgehog of more than site level importance.
- 4.3.28 Hedgehogs are a highly mobile species and have the potential to disperse on to the Site from suitable habitats. BPM should be followed:
- Maintaining vigilance for hedgehogs at all times during the works;
 - Allow any hedgehogs to move away from the Site of their own volition. Should a hedgehog be in immediate danger, they should be picked up by gloved hand and placed in an area of suitable shelter and safety away from the proposed works;
 - If any excavations are to be left uncovered overnight, a suitable escape ramp (e.g. a long scaffolding board) should be placed within the excavation to allow a hedgehog to escape in the event an individual should fall in;

- If hedgehog is encountered between November and March or juveniles are encountered the ecologist should be contact for advice immediately as these are periods when individuals are at most risk to disturbance; and,
- Safeguards outlined for amphibians and badgers will further help to safeguard small mammals, including hedgehogs in the event that they are present during Site clearance works.

5. References

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Figure 1. UK Habitat Classification Map

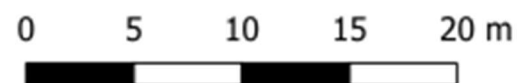


Legend

-  Site Boundary
-  g4 - Modified grassland

Secondary Codes:

106 - Regularly mown



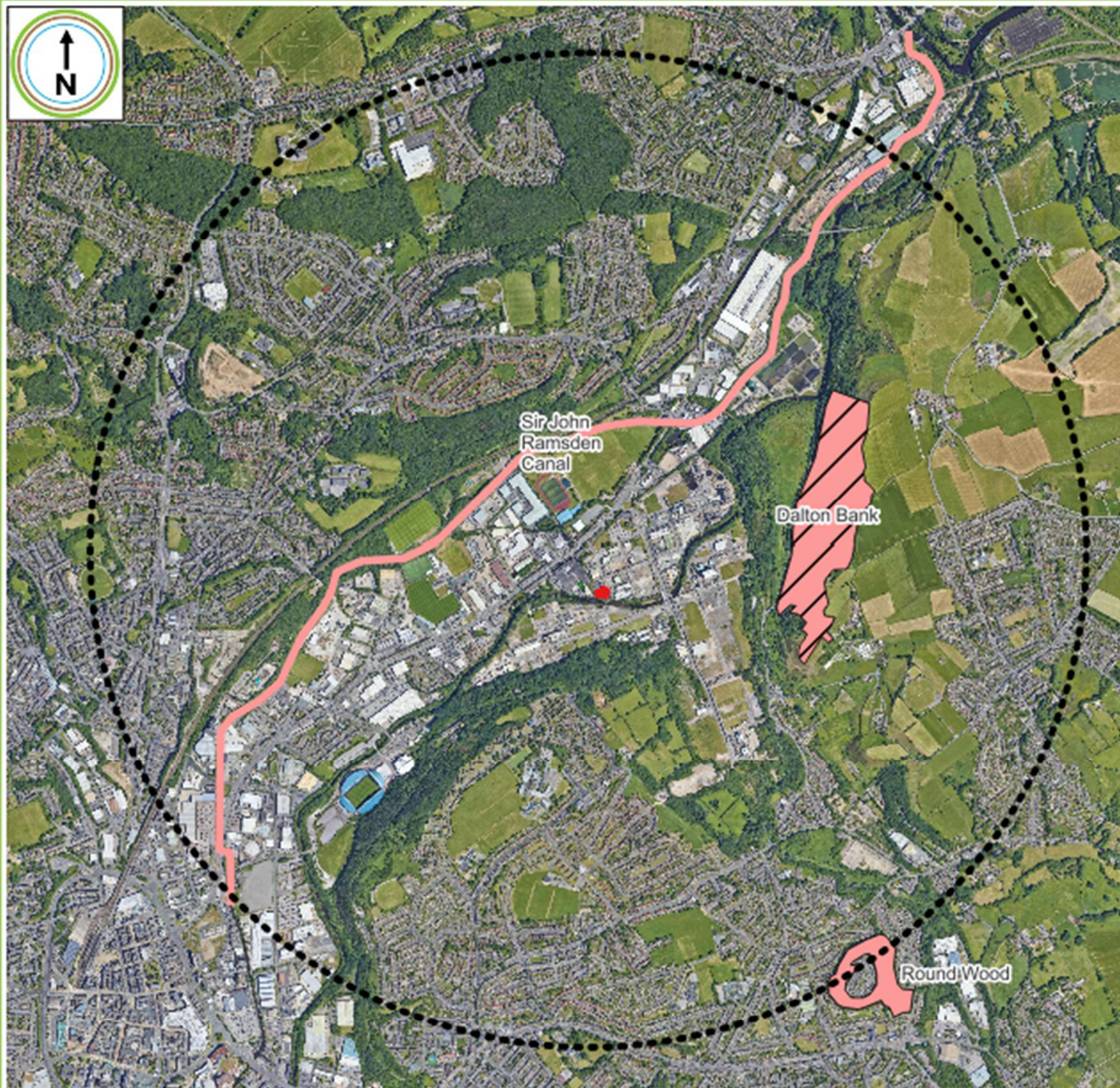
HABITAT WORKS

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Figure 1
UK Habitat Classification Map

Figure 2. Designated Sites Map



Legend

-  Site Boundary
-  2 km buffer
-  Local Wildlife Site
-  Local Nature Reserve

0 300 600 900 1,200 m



HABITAT WORKS

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Figure 2
Designated Sites Map

Appendix 1. Target Notes

TN1 – Rubble Pile

Appendix 2. Site Photographs



Photograph 1. Rubble pile (TN1)



Photograph 2. Photograph of habitats on the Site



Photograph 3. Photograph of Site from the River Colne

Appendix 3. Bird Species Records Summary

Common Name	Scientific Name	BoCC Status
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Green
House Sparrow	<i>Passer domesticus</i>	Red
Swift	<i>Apus apus</i>	Red
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber
Dipper	<i>Cinclus cinclus</i>	Amber
Grey Wagtail	<i>Motacilla cinerea</i>	Amber
Redshank	<i>Tringa totanus</i>	Amber
Whitethroat	<i>Curruca communis</i>	Amber
Willow Warbler	<i>Phylloscopus trochilus</i>	Amber
Woodpigeon	<i>Columba palumbus</i>	Amber
Wren	<i>Troglodytes troglodytes</i>	Amber