Cadam Construction Ltd.

Land at Aldham Industrial Estate, Mitchells Road, Wombwell

Preliminary Ecological Appraisal (PEA)

Report Reference Number: FE249/PEA01

January 2023

Futures Ecology Ltd
Carrwood Park, Swillington Common Farm, Selby Rd, Leeds LS15 4LG

Company Number: 12125083

This report is the property of Futures Ecology Limited and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without the written consent of Futures Ecology Limited.

This report may not be relied upon by any other party without the express written agreement of Futures Ecology Limited. The use of this report by unauthorised third parties is at their own risk and Futures Ecology Limited accepts no duty of care to any such third party.

Futures Ecology Limited assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others. Any recommendation, opinion or finding stated in this report is based on conditions as they existed at the time that Futures Ecology Limited undertook the work. Nothing in this report constitutes legal opinion.

REV	Issue Status	Author or Reviewer	Name & Qualifications	Position	Date
-	Draft 1	Author	M. Baker MSc, BSc (Hons), ACIEEM	Ecologist	24.01.2023
		Reviewer	K. Haymes BSc (Hons) ACIEEM	Senior Ecologist	24.01.2023

CONTENTS

1.0 EXECUTIVE SUMMARY 2

2.0 INTRODUCTION 2

3.0 METHODOLOGY 3

4.0 RESULTS 9

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS 17

6.0 BIODIVERSITY ENHANCEMENTS 22

TABLES

Table 1: Bat Roost Potential Classification Trees

Table 2: Statutory & Non-Statutory Designated Sites

Table 3: Waterbodies within 500m

APPENDICES

Appendix A: Botanical Species List

FIGURES

Figure 1: Phase 1 Habitat Plan

Figure 2: Waterbody Location Plan

1.0 EXECUTIVE SUMMARY

1.1 The Site is c.0.15ha in extent and located in the Aldham Industrial Estate, off Mitchell's Road in Wombwell, Barnsley. The Site comprises amenity grassland with seven early mature to mature broadleaved trees. A short section of non-native hedgerow and line of hazel trees is located along the south-eastern Site boundary. The Site is bordered to the south-west by the A633. To north lies industrial units, and a row of terraced housing was present to the south-east.

1.2 Dearne Valley Wetlands SSSI is located 580m west of the Site boundary. Given the lack of similar habitats within the application Site, no impacts are anticipated on the important features for which the SSSI is designated. Furthermore, given the extent of the development and the intervening distance which includes urban areas, no construction phase impacts, such as dust, noise and/or pollution are expected. An increase in recreational pressure once the development is complete is likely to be imperceptible / nugatory due to the commercial nature of the development.

1.3 Consultation with MAGIC[1] site check confirms that the application Site lies within the Impact Risk Zone (IRZ) for one or more designated sites. If the development meets any of the criteria listed, further consultation with Natural England would be required.

1.4 The early mature to mature broadleaved trees within the Site have inherent value for invertebrates, nesting birds and/or roosting bats. All trees are to be removed to facilitate the development.

1.5 Best practice working methods will be required during the construction phase to ensure no impacts occur to retained boundary habitats (hedgerow/line of scrub). These measures should be conditioned through a Construction Environmental Management Plan (CEMP).

1.6 Artificial light can deter some more sensitive species and can impact upon favoured foraging and commuting routes. Lighting should be designed to prevent post development impacts from new development lighting. The retained hedgerow and scrub, as well as new planting and ecological enhancements should not be directly illuminated. The lighting scheme should be designed in accordance with guidelines from BCT (2018)[2]. It should be designed and positioned to reduce spill and be downwardly directional, of 1 lux or less LED lamps and ideally set on motion sensors on short timers.

1.7 Precautionary working methods are recommended for site clearance operations with regards to nesting birds.

1.8 Several ecological enhancements which could be incorporated into the design proposal have been recommended within Section 6, including the provision of bat and bird boxes.

2.0 INTRODUCTION

2.1 The following report has been prepared by Futures Ecology Ltd. on behalf of Cadam Construction Ltd. It provides the results of an extended Phase 1 habitat survey and

[1] https://magic.defra.gov.uk/magicmap.aspx
[2] Bat Conservation Trust (2018) Guidance Note 08/18. Bats and artificial lighting in the UK. Bats and the Built Environment Series. Institution of Lighting Professionals.

preliminary protected species survey at Land at Aldham Industrial Estate, Mitchells Road (grid reference: SE 39061 04106).

2.2 The Phase 1 habitat survey and preliminary protected species surveys were undertaken on 13th January 2023.

2.3 The key objectives of the Preliminary Ecological Appraisal Report (PEAR) are to:

- gain an understanding of the baseline ecology of the site and immediate surrounding area.
- determine whether the site supports or has the potential to support protected species.
- identify any likely ecological constraints and mitigation measures likely to be required.
- identify the opportunities offered by the potential project to deliver ecological enhancement.

SITE LOCATION AND CONTEXT

2.4 The Site is c.0.15ha in extent and located in the Aldham Industrial Estate, off Mitchell's Road in Wombwell, Barnsley. The Site comprises amenity grassland with seven early mature to mature broadleaved trees.

2.5 The Site is bordered to the south-west by the A633. To north lies industrial units, and a row of terraced housing was present to the south-east.

2.6 An Arboricultural Report for the Site was produced in November 2022 (AWA Tree Consultants).

DEVELOPMENT PROPOSALS

2.7 Three commercial units are proposed with associated access, parking, landscaping and facilities (Drawing no.: MR-01 - Kudos Architecture, October 2022).

3.0 METHODOLOGY

PERSONEL

3.1 The initial extended Phase 1 Survey and protected species survey assessment was conducted by M. Baker BSc (Hons), MSc, ACIEEM. M. Baker has over 4 years' experience in ecological consultancy, including habitat surveys and site assessments for protected species. M. Baker is appropriately qualified for the surveys based on the CIEEM competencies for species surveys and is registered to use a GCN licence (2020-49701-CLS-CLS).

DESK STUDY

3.2 Prior to the field survey, aerial photographs and mapping tools were reviewed using online mapping resources at a minimum scale of 1:25,000; Google Maps[3]; and the Multi

[3] www.google.com/maps

Agency Geographic Information for the Countryside (MAGIC)[4] to assess the landscape context of the survey area and surrounding areas.

3.3 The MAGIC website was used to obtain information about:

- Statutory designated sites of international, national and local importance
- Impact Risk Zones (IRZs) for Sites of Special Scientific Interest (SSSIs), Special Protection Areas
- (SPAs), Special Areas of Conservation (SACs) and Ramsar sites;
- Approved European Protected Species Mitigation (EPSM) licences, and
- Natural England Environmental DNA surveys and Habitat Suitability Assessments of Ponds for great crested newt in support of District Level mitigation Licensing.

3.4 To support the field survey and compile baseline information of relevance to the site, ecological information was sought from third party organisations:

- Barnsley Biological Records Centre (BBRC, data requests operated by Sheffield BRC); and
- Natural England's Open Dataset[5].

3.5 Relevant data requested included records of protected or notable species and sites designated for nature conservation interest.

3.6 The search area for designated sites and protected species is determined by the likely Zone of Influence[6] and the likely significant affect. The search areas for the various levels of site designation and for protected / notable species is detailed below:

- Sites of international statutory designation such as Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Sites are searched for within a 10km radius around the application site.
- Sites of national or regional importance with a statutory designation of Site of Special Scientific Importance (SSSI) or National Nature Reserve (NNR) within 2km.
- Sites of local importance with statutory designation of Local Nature Reserve (LNR), or non-statutory designation of Site of Importance for Nature Conservation (SINC) or the equivalent Local Wildlife Site (LWS) within 1km; and
- Records of notable / protected species (i.e. including Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and local Biodiversity Action Plan (LBAP) species within 1km and bats within 2km.
- EPSM licences relating to bats and GCN within 2km.

FIELD SURVEY – HABITATS

[4] www.magic.defra.gov.uk

[5] https://data.gov.uk/dataset/8643f1b9-b419-4ee8-8e9c-18200e0edc31/great-crested-newt-edna-habitat-suitability-index-pond-surveys-for-district-level-licensing-2017-2018-2019

[6] The Zone of Influence (ZOI) is defined by CIEEM as being the "area over which ecological features may be affected by biophysical changes as a result of a proposed project and associated activities" CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Marine.

Extended Phase 1 Survey

3.7 The survey was undertaken on 13th January 2023 during weather conditions that were overcast. Survey methodology followed guidance from Joint Nature Conservation Committee (JNCC) 2016[7] comprising a walkover of the survey area mapping (using JNCC standard habitat codes) and broadly describing and classifying the principal habitat types and identifying the dominant plant species present within each habitat type, noting any features of interest. Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.

3.8 Habitats were also assessed for their potential to support protected or notable species including any incidental sightings of birds recorded during the walkover. Where potentially suitable habitats were observed during the scope of this assessment, detailed protected species surveys were undertaken using methodology detailed below.

3.9 The distribution and extent of any invasive species listed on Schedule 9, Section 14 of the Wildlife and Countryside Act 1981 (*as amended)* were also noted during the survey.

FIELD SURVEY – FAUNA

Badger *Meles meles*

3.10 A badger survey was undertaken on the 13th January 2023, within the application site and 30m beyond the boundary where possible and undertaken by an ecologist with over 4 years' experience of undertaking field surveys. The survey followed standard methodology as outlined by Natural England (2015)[8] and Harris *et al* (1989)[9], Creswell *et al.* (1990)[10]. Field signs searched for include: setts, earth mounds, bedding material, mammal paths, latrines, snuffle holes, prints, hairs, scratching posts etc.. The identification of some signs on their own does not necessarily provide conclusive evidence of the presence of badgers.

Bats

Roost Habitat – Trees

Ground Based Tree Assessment

3.11 All trees present within the Site, and immediately adjacent, were assessed for their potential to support roosting bats using statutory guidance (Natural England, 2019)[11] and

[7] JNCC (2016) Handbook for Phase1 Habitat Survey – a technique for environmental audit. ISBN 0 86139 636 7
[8] Natural England (2015) Badger Surveys and Mitigation accessed May 2021 https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects#survey-methods (accessed December 2019)
[9] Harris, S., Creswell, P., & Jefferies, D. (1989). *Surveying Badgers.* The Mammal Society.
[10] Cresswell, P., Harris, S., & Jeffries, D.J. (1990) *The history, distribution, status, and habitat requirements of the badger in Britain.* Nature Conservancy Council.
[11] Bats: surveys and mitigation for development projects: https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects (accessed 12/11/2019)

best practice survey methodology (Collins, 2016[12] and Mitchell-Jones, A.J. and McLeish, A.P. (eds), 2004)[13]. The survey was undertaken on the 13th January 2023.

3.12 The trees were inspected from the ground using close focussing binoculars, a high-powered torch, and an endoscope where appropriate. Potential Roosting Features (PRF) for bats such, holes / cavities, loose bark, cracks / splits, occluded bark, and gaps behind ivy stems (please note that this list is not exhaustive) were sought (Based on P16, *British Standard 8596:2015*[14]). Other factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value of the PRF. Signs indicating possible use by bats were also recorded such as bat droppings, odour, scratches, staining and audible sounds.

3.13 An assessment was made on the level of bat roosting potential offered by the trees, based on the presence of the features detailed above. Table 1 below broadly classifies the potential categories and discusses the relevance of such features, where present. The British Standard Document[14] groups trees with moderate and high potential, within Table 1 below these have been separated.

Table 1: Bat Roost Potential Classification Trees - Based on Table 4.1 and Table 7.3 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

Classification / Suitability	Description of Roosting Habitat within trees	Likely Further Survey Work
Negligible	Negligible or no habitat features likely to be used by roosting bats.	None.
Low	A structure with one or more potential roost sites or features (PRF) that could be used opportunistically by small numbers or individual bats. These features do not provide enough space, shelter, suitable conditions and or surrounding suitable habitat to be used on a more regular basis or by larger numbers of bats. The feature is unlikely to be suitable for hibernation or maternity roosts. Examples on include (but are not limited to); loose/lifted bark, shallow splits exposed to elements, upward facing holes, small gaps beneath a soffit board.	**Trees** No further survey required but a precautionary working method statement may be appropriate. Further nocturnal surveys may be required should there be a significant lapse in time between the initial surveys and proposed works.
Moderate	A structure with one or more potential roost sites or features that could be used by bats due their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (in	At least two nocturnal presence / absence required to give confidence in a negative result. One dusk emergence and a separate dawn re-entry survey during the appropriate period.

[12] Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).* The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1
[13] Mitchell-Jones, A.J. and McLeish, A.P. (eds) (2004) *Bat Workers' Manual (3rd edn*). JNCC, Peterborough.
[14] British Standard (2015) BS 8596:2015 *Surveying for bats in trees and woodland – Guide*, October 2015.

Classification / Suitability	Description of Roosting Habitat within trees	Likely Further Survey Work
	respect to roost type only and not species conservation status).	Should a roost be confirmed further roost characterisation surveys be required. Surveys should be evenly spread throughout the season with a minimum of at least 2 weeks apart. **Trees** An aerial assessment by roped access bat workers and / or nocturnal surveys (as above). Following an aerial assessment, a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required. After completion of survey work and presence of roost discounted a precautionary working method statement may still be appropriate.
High	A structure with one or more potential roost sites that are obviously suitable for use by large numbers or bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	At least three nocturnal presence / absence surveys required to give confidence in a negative result. At least one dusk emergence and a separate dawn re-entry survey. The third survey could be either a dusk or dawn nocturnal survey. **Trees** An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys (as above). Following an aerial assessment, a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required. After completion of surveys work and presence of roost discounted a precautionary working method statement may still be appropriate.
Confirmed Roost	Evidence of roosting bats in the form of live or dead bats, droppings, urine staining, mammalian fur oil staining etc.	At least three nocturnal surveys to ascertain the status of the roost during appropriate survey period. At least one dusk emergence and a separate dawn re-entry survey. The third survey could be either a dusk or dawn nocturnal survey.

Classification / Suitability	Description of Roosting Habitat within trees	Likely Further Survey Work
		Trees An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys (as above). A Natural England licence application will be required if the roost site will be affected by the proposed works. A precautionary good practice method statement may still be required if the roost is unaffected directly by the proposed works.

Foraging / Commuting Habitat

3.14 The potential for the site and immediate surrounds to support foraging and commuting bats was also assessed, with particular regard being given to the presence of continuous treelines providing good connectivity in the landscape, and the presence of varied habitat such as scrub, woodland, grassland and open water in the vicinity.

Great Crested Newt (GCN) *Triturus cristatus*

Aquatic habitat

3.15 OS mapping and online aerial imagery were analysed for the presence of on and off-site water bodies within 500m of the application site in accordance with Natural England guidance[15].

Terrestrial habitat

3.16 An assessment of the suitability of the terrestrial habitats within the site to support GCN was completed within the subject site. Suitable terrestrial habitat includes shelter habitat such as scrub and rank vegetation and habitat that could provide suitable hibernation sites such as rubble piles, tussock grassland and compost heaps.

Reptiles

3.17 An assessment of the suitability of the habitats present to support common reptile species was completed at the time of the habitat survey. This involved a review of habitats and habitat structure suitable for the shelter of reptiles such as areas of scrub and woodpiles, grassland with well developed, varied structure; and also, the appropriate juxtaposition of areas suitable for basking shelter and forage/hunting. This assessment

[15] Natural England: Standing Advice Sheet: Great Crested Newts Paragraph 4: 4.1

was based on the methodology detailed in the Herpetofauna Workers Manual (Gent and Gibson, 1998)[16], and Froglife Advice Sheet 10 – Reptile Survey (Froglife 1999)[17].

Other

3.18 Any sightings, evidence of or suitable habitats for other protected fauna, local Biodiversity Action Plan (BAP) species or otherwise notable species was recorded during the survey.

Survey Limitations

3.19 The extended Phase 1 Survey was undertaken in January 2023, which falls outside the optimal survey period (April to September). Due to the nature of the Site this was deemed to be sufficient to assess the habitats present.

4.0 RESULTS

DESK STUDY

Statutory Designated Sites

4.1 No internationally designated sites occur within 10km of the Site.

4.2 Two nationally designated sites occur within 2km of the Site, see Table 2 below for further details.

4.3 No regionally designated sites occur within 2km of the Site.

4.4 No locally designated sites occur within the Site boundary 1km of the Site boundary.

4.5 Consultation with MAGIC[18] site check confirms that the application Site lies within the Impact Risk Zone (IRZ) for one or more designated sites. The categories that would require consultation with Natural England due to their potential impact are:

- *Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.*
- *Wind turbines.*
- *Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.*
- *Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.*
- *Residential development of 100 units or more.*

[16] Gent, A.H., & Gibson, S.D., *eds* 1998. *Herpetofauna Workers' Manual*. Peterborough, joint Nature Conservation Committee.
[17] Froglife 1999. *Froglife Advice Sheet 10: Reptile Survey*. Froglife, London
[18] https://magic.defra.gov.uk/magicmap.aspx

- *Any residential development of 50 or more houses outside existing settlements/urban areas.*
- *Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).*
- *General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.*
- *Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.*
- *Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.*
- *Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.*
- *Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply.*

Table 2: Statutory Designated Sites

Site Name	Designation	Proximity to site (approximate)	Description
Stairfoot Brickworks	SSSI	1.1km NW	Designated for its geology, and therefore not considered further in this report.
Dearne Valley Wetlands	SSSI	590m W	Dearne Valley Wetlands SSSI is of special interest for the following nationally important features: • Breeding gadwall *Mareca strepera*, shoveler *Spatula clypeata*, garganey *Spatula querquedula*, pochard *Aythya ferina*, bittern *Botaurus stellaris*, black-headed gull *Chroicocephalus ridibundus* and willow *tit Poecile montanus klienschmidti*. • Non-breeding gadwall and shoveler. • Diverse assemblages of breeding birds of Lowland damp grasslands, Lowland scrub and a mixed assemblage of Lowland open waters and their margins and Lowland fen.

Non-Statutory Designated Sites

4.6 Awaiting desk study results from Barnsley Biological Records Centre (BBRC, data requests operated by Sheffield BRC) at the time of writing, any pertinent findings will be included in an addendum report.

Habitats of Principal Importance (HPI)

4.7 Several areas of deciduous woodland HPI are located within 1km of the Site boundary, the nearest of which is 100m to the north-east. Other HPI habitats present within 1km of the Site boundary include Traditional Orchard and an area with No Main Habitat.

Protected / Notable Species Records

4.8 Awaiting desk study results from Barnsley Biological Records Centre (BBRC, data requests operated by Sheffield BRC) at the time of writing, any pertinent findings will be included in an addendum report.

4.9 A search of the MAGIC online resource revealed there was a single European Protected Species Licences (EPSL) relating to bats within 2km of the Site boundary:

- 1.6km NW (2016-26581-EPS-MIT, soprano pipistrelle, 25/11/2016 – 22/11/2021)

4.10 There are no EPSL's relating to GCN located within 1km of the Site.

4.11 There were no records of GCN surveys from Natural England's Open Dataset[19] within 1km of the Site boundary.

4.12 Four waterbodies were present within 500m of the Site boundary (Figure 2):

- River Dove – 300m N
- Disused canal – 85m E
- D1 – 300m SE
- D2 – 360m E

HABITATS

4.13 The habitats recorded during the Phase 1 survey include:

- Amenity grassland;
- Ephemeral/short perennial;
- Hedgerow and scattered scrub; and
- Broadleaved trees.

4.14 The location of the habitats recorded are presented on Figure 1 and described below. The botanical species recorded in association with each habitat are listed in Appendix A.

[19] https://data.gov.uk/dataset/8643f1b9-b419-4ee8-8e9c-18200e0edc31/great-crested-newt-edna-habitat-suitability-index-pond-surveys-for-district-level-licensing-2017-2018-2019

Amenity grassland

4.15 The Site comprised an area of short-mown amenity grassland. Species present included dominant perennial rye-grass *Lolium perenne* with occasional to locally frequent common mouse-ear *Cerastium fontanum*, creeping buttercup *Ranunculus repens* and moss. Common daisy *Bellis perennis* was occasional to locally abundant, alongside occasional ribwort plantain *Plantago lanceolata*, white clover *Trifolium repens* and Yorkshire-fog *Holcus lanatus*. Bramble *Rubus fruticosus* agg., cleavers *Galium aparine* and creeping cinquefoil *Potentilla reptans* were rare.



Photograph 1: Amenity grassland on-site, viewed from the north-west.

Ephemeral/short perennial

4.16 A small area of ephemeral short-perennial vegetation was present on loose substrate in the north-western corner of the Site. Species diversity was limited to willowherb *Epilobium* sp. and groundsel *Senecio vulgaris*.

Hedgerow and scattered scrub

4.17 A line of hazel (G9) and young hazel (T10) were present along the south-eastern Site boundary.

4.18 A short section of ornamental Cypress *Cupressus* hedgerow (G9) was present adjacent to the line of hazel along the south-eastern Site boundary.



Photograph 2: The ornamental length of hedgerow along the north-eastern Site boundary, viewed from the north-west.



Photograph 3: The row of hazel along the north-eastern Site boundary, viewed from the south-west.

Broadleaved trees

4.19 Seven semi-mature to mature broadleaved trees were present on-site (T1 – T7). Species present included silver maple *Acer saccharinum*, Swedish whitebeam *Scandosorbus intermedia*, lime *Tilia* sp., rowan *Sorbus aucuparia*, and whitebeam *Sorbus aria*.



Photograph 4: The broadleaved trees present on-site.

FAUNA

Badger

4.20 Suitable habitat for badger within the development area was limited and the local area subject to human disturbance. As such, the site was not considered suitable for creation of setts and limited in terms of foraging value for this species. No signs of badger activity (e.g. digging, latrines or badger hair) were found during the extended Phase 1 survey within the Site.

Bats

4.21 A single European Protected Species Licence relating to bats was located 1.6km north-west of the Site boundary.

Roost Habitat – Trees

4.22 Seven semi-mature to mature trees (T1 – T7) were present on-site.

4.23 The majority of the trees were in good condition and thought to provide no to negligible bat roosting potential.

4.24 Tree T4 had two small cavities (c. 10x5cm) present between 1-2m high on the south-eastern aspect. However, on inspection these contained numerous slugs and did not extend into the trunk. As such, T4 also provided negligible bat roosting potential.



Photograph 4: South-eastern aspect of tree T4.



Photograph 4: Small cavity on the south-eastern aspect of tree T4.

Foraging / Commuting Habitat

4.25 The amenity grassland within the Site provides sub-optimal habitat for foraging and commuting bats given its lack of diversity and limited size. The remaining habitats present on-site (trees, scrub and hedgerows) are of poor diversity, include ornamental non-native species, and are fairly isolated within the urban context of the wider environment. As such the habitats are unlikely to provide a significant resource for foraging / commuting bats in the local area.

Great Crested Newts (GCN)

4.26 There are no EPSL's relating to GCN located within 1km of the Site.

Aquatic habitat

4.27 No waterbodies were present within the Site boundary.

4.28 Four waterbodies were found within 500m of the Site boundary, details of which are provided in Table 3 below, with their locations shown on Figure 2.

Table 3: Waterbodies within 500m

Pond Ref.	Locality	Straight Line Distance / Direction. Distance via Optimal Connective Habitat in (m)	OS Grid Reference / Photograph	Connectivity to Application Site
River Dove	River within woodland corridor to the north of the Site.	Straight line distance: 300m N Connective distance: N/A	SE390044	The River Dove is flowing and does not provide suitable breeding habitat for GCN. This is also a barrier to dispersal for GCN. **No Likely Potential Constraint**
Disused canal	Length of disused canal within industrial estate.	Straight line distance: 85m E Connective distance: 85m	SE392040 	The disused canal contained standing water on the 13th January 2023. It is possible that if GCN were present in the disused canal, they could commute to Site. However, the habitats on-site offer little foraging or shelter opportunity for GCN, which might otherwise encourage GCN dispersal onto Site. Furthermore, there are more optimal terrestrial habitats for GCN surrounding the disused canal. As such, it is unlikely that if GCN were present in this waterbody they would commute to Site during their terrestrial phase. **No Likely Potential Constraint**

Pond Ref.	Locality	Straight Line Distance / Direction. Distance via Optimal Connective Habitat in (m)	OS Grid Reference / Photograph	Connectivity to Application Site
D1	Drainage ditch at the edge of a wooded area	Straight line distance: 300m SE Connective distance: 390m	SE394039	The connective distance to the Site is over 250m, which is thought to be the maximum routine migratory distance for GCN[20]. Additionally, the habitats on-site offer little foraging or shelter opportunity for GCN which might otherwise encourage GCN dispersal onto Site. Furthermore, there are more optimal terrestrial habitats for GCN surrounding D1. As such, it is unlikely that if GCN were present in this waterbody they would commute to Site during their terrestrial phase. **No Likely Potential Constraint**
D2	Drainage ditch at the edge of a wooded area	Straight line distance: 360m E Connective distance: 563m	SE395040 	The waterbody was flowing on the 13th January 2023. As such it is not thought to provide suitable breeding habitat for GCN. **No Likely Potential Constraint**

Terrestrial habitat

4.29 The Site largely provides sub-optimal foraging/commuting habitat (amenity grassland) for GCN. A small amount of leaf litter was present which could provide shelter, but this was limited.

[20] Kovar, R., Brabec, M., Vita, R. and Bocek, R. (2009) Spring migration distances of some central European amphibian species. Amphibia-Reptilia, 30: 367-378 and http://publications.naturalengland.org.uk/publication/134002

Reptiles

4.30 Given the limited size and sub-optimal habitats on-site (amenity grassland and trees), reptile species are unlikely to be present.

Birds

4.31 The trees on-site and boundary hedgerow/scrub could provide suitable nesting and foraging habitat for a range of urban fringe bird species.

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

DESIGNATED SITES

Statutory Designated Sites

5.1 Sites such as SPA and SAC are afforded protection under the Conservation of Habitats and Species Regulation 2017 (as amended). This legislation transposes European Council Directives 92/43/EEC (EC Habitats Directive) Directive 2009/145/EC (Wild Birds Directive) into domestic law. The purpose of this legislation is to provide protection for natural habitats, wild flora and fauna of international importance.

5.2 Statutory designated sites are also protected under the National Planning Policy Framework (2021)[21], which states that planning permission should be refused if significant harm cannot be avoided as a result of the proposals (Paragraphs 180, 181 and 182).

5.3 Two nationally designated sites occur within 2km of the Site. Stairfoot Brickworks SSSI is designated for its geological features and therefore not considered in this report.

5.4 Dearne Valley Wetlands SSSI is located 580m west of the Site boundary and is designated for its diverse breeding bird assemblage of lowland damp grasslands, lowland scrub and a mixed assemblage of lowland open waters and their margins and lowland fen. Given the lack of similar habitats within the application Site, no impacts are anticipated on the important features for which the SSSI is designated. Furthermore, given the extent of the development and the intervening distance, which includes urban areas, no construction phase impacts, such as dust, noise and/or pollution are expected. An increase in recreational pressure once the development is complete is considered to be imperceptible / nugatory due to the commercial nature of the development.

5.5 Consultation with MAGIC site check confirms that the application site lies within the Impact Risk Zone (IRZ) for one or both of the designated sites mentioned above. If the development meets any of the criteria, further consultation with Natural England would be required. The following development types that would require consultation with Natural England due to their potential impact:

[21] Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework 2021. © Crown Copyright

- *Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.*
- *Wind turbines.*
- *Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.*
- *Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.*
- *Residential development of 100 units or more.*
- *Any residential development of 50 or more houses outside existing settlements/urban areas.*
- *Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).*
- *General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.*
- *Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.*
- *Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.*
- *Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.*
- *Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply.*

Non-Statutory Designated Sites

5.6 Local sites are not protected by law but do receive consideration in both national and local planning policy. Local sites have a role in meeting overall national biodiversity targets and appropriate weight should be attached to designated sites in making planning decisions.

5.7 Awaiting desk study results from Barnsley Biological Records Centre (BBRC, data requests operated by Sheffield BRC) at the time of writing, any pertinent findings will be included in an addendum report.

5.8 Several areas of deciduous woodland HPI are located within 1km of the Site boundary, the nearest of which is 100m to the north-east. To prevent impacts to the off-site HPIs during the construction phase of the development, it is recommended that this area is protected from adverse impacts from development, via dust or pollution, through the implementation of a Construction Environmental Management Plan (CEMP).

HABITATS

5.9 Habitats receive consideration through the planning system by:

- their inclusion in specific National planning policy: such as consideration in the National Planning Policy Framework (2021)[22] for veteran trees, ancient woodland, non-statutory sites, and ecological networks.
- classification as a Habitat of Principal Importance (HPI) for the conservation of biodiversity under the Natural Environment and Rural Communities (NERC) Act 2006, from which are also derived Priority Habitats under local Biodiversity Action Plan (LBAP) and Priority Habitat for England under Biodiversity 2020[23],
- their inclusion in specific local policy.

5.10 The habitats within the Site were generally of low species diversity and had low nature conservation value (amenity grassland). Their losses would not constitute an ecological constraint to development.

5.11 The early mature to mature broadleaved trees within the Site have inherent value for invertebrates and nesting birds. All trees are to be removed to facilitate the development. To offset the loss of existing trees, the development should include replacement tree planting within the proposed landscape buffer. It is recommended that native species of local provenance are used to enhance the biodiversity value of the Site.

5.12 Best practice working methods will be required during the construction phase to ensure no impacts occur to retained boundary habitats (hedgerow/line of scrub). These measures should be conditioned through a Construction Environmental Management Plan (CEMP).

FAUNA

Badger

5.13 Badgers are relatively common and widespread in England and whilst legally protected, the emphasis of The Protection of Badgers Act 1992 is focused on protection from persecution, rather than on conservation.

5.14 Suitable habitat for badger within the development area was limited and the local area subject to human disturbance. As such, the Site was not considered suitable for creation of setts and limited in terms of foraging value for this species. No signs of badger activity (e.g. digging, latrines or badger hair) were found during the extended Phase 1 survey within the Site. Therefore, badgers are not currently a statutory constraint to the development.

Bats

5.15 All species of UK bats and their roosts are listed on the Conservation of Habitats and Species Regulations 2017 (as amended) making it illegal to deliberately disturb any such

[22] Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework 2021. © Crown Copyright
[23] Biodiversity 2020: *A strategy for England's wildlife and ecosystem services,* August 2011, Department for Environment, Food and Rural Affairs.

animal or damage / destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection. Seven bat species, including brown long-eared, noctule and soprano pipistrelle are Species of Principal Importance under the NERC Act 2006.

5.16 A single European Protected Species Licence relating to bats was located 1.6km north-west of the Site boundary.

Roost Habitat – Trees

5.17 The seven trees on-site (T1-T7) were identified as providing no to negligible roosting potential for bats and all are to be removed to facilitate the development. No further survey work is required, unless the removal of the trees does not take place within 12 months of the survey. Potential roost features can form over time (woodpecker holes, pruning wounds etc.) and therefore an updated ground assessment would be required in this case.

Foraging / Commuting Habitat

5.18 The amenity grassland within the Site provides sub-optimal habitat for foraging and commuting bats given its lack of diversity and limited size. The remaining habitats present on-site (trees, scrub and hedgerows) are of poor diversity, include ornamental non-native species, and are fairly isolated within the urban context of the wider environment. As such the habitats are unlikely to provide a significant resource for foraging / commuting bats in the local area. The hedgerows (G8 and G9) along the south-eastern boundary will be retained. As per the BCT guidelines (2016)[24], a proportionate approach must be adopted, and no further bat activity surveys are considered to be necessary.

5.19 It is recommended that any temporary construction phase lighting during the proposed works avoid light spill onto the south-eastern boundary to avoid any impacts on foraging and commuting bats.

5.20 Post development lighting should be avoided on the retained hedgerows (G8 and G9) along the existing Site boundaries as well as proposed landscaping. Where lighting is required, it should be in accordance with the BCT Guidance Note 08/18 (2018)[25].

Great Crested Newts (GCN)

5.21 GCN are afforded legal protection under the Wildlife & Countryside Act 1981 *(as amended)* and the Conservation of Habitats and Species Regulations 2017 (*as amended*). This legislation makes it illegal to: deliberately disturb a GCN, damage / destroy a breeding site or resting place of a GCN, recklessly or intentionally kill, injure or take a GCN,

[24] https://cdn.bats.org.uk/uploads/pdf/Resources/Bat_Survey_Guidelines_2016_NON_PRINTABLE.pdf?v=1542281971
[25] Institution of Lighting Professionals & BCT (2018). Guidance Note 08/18. Bats & the Built Environment Series.

recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection, disturb a GCN whilst they are occupying such a place of shelter or protection.

5.22 There are no EPSL's relating to GCN located within 1km of the Site.

5.23 No waterbodies were present within the Site boundary. Four waterbodies were found within 500m of the Site boundary. The majority of the waterbodies were either considered unsuitable for GCN or had a connective distance to the Site of over 250m, which is thought to be the maximum routine migratory distance for GCN[26]. It is possible that if GCN were present in the disused canal 85m to the east of the Site, they could commute to Site. However, the habitats on-site offer little foraging or shelter opportunity for GCN which might otherwise encourage dispersal onto Site. Furthermore, there is an abundance of more optimal terrestrial habitats for GCN in close proximity the waterbody. As such, it is unlikely that if present, GCN would commute onto Site during their terrestrial phase.

5.24 Overall, due to the minimal size of the Site, poor quality of the habitats available, and lack of suitable waterbodies in close proximity, the presence of GCN is not considered to be a constraint to development on this site.

Reptiles

5.25 All common reptile species are partially protected under Sections 9(1) and 9(5) of Schedule 5 of the Wildlife and Countryside Act 1981 (*as amended*) which protects them from intentional killing/injury, possession, and transport. Common reptiles are also Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act 2006.

5.26 Given the habitats on-site (amenity grassland and trees), reptile species are unlikely to be present on-site. As such, the presence of reptiles is not considered to be a constraint to the proposed development.

Birds

5.27 All wild bird species are protected while nesting by the Wildlife and Countryside Act (1981) (as amended). This legislation protects wild birds, their nests and eggs from intentional harm, and makes it illegal to intentionally kill, injure or take any wild birds; take, damage or destroy the nest of a wild bird while the nest is in use of being build or take / destroy an egg of a wild bird.

5.28 The trees on-site and boundary hedgerow/scrub could provide suitable nesting and foraging habitat for a range of urban fringe bird species.

5.29 To comply with relevant legislation any removal of vegetation, should be timed to avoid the nesting season where possible (March to August inclusive, although dates vary depending on species and weather conditions). Where it is not feasible, affected areas should be checked for nests in advance by an experienced ecologist. Any active nests

[26] Kovar, R., Brabec, M., Vita, R. and Bocek, R. (2009) Spring migration distances of some central European amphibian species. Amphibia-Reptilia, 30: 367-378 and http://publications.naturalengland.org.uk/publication/134002

identified will be left with a minimum 5m buffer to be identified by the ecologist, until such a time all birds have fledged.

6.0 BIODIVERSITY ENHANCEMENTS

6.1 In accordance with NPPF 2021[27], The Environmental Act 2021[28], the development should incorporate features to encourage biodiversity and retain and where possible enhance existing features of nature conservation value within the site.

6.2 In addition to those highlighted in above sections, below are further additional measures for consideration:

- New landscape planting including trees and shrubs to use native species which bear fruit and nectar.
- Species rich native hedgerow planting along the Site boundaries (at least 5 native species per 30m section) would be of benefit to wildlife.
- Installation of a variety of bird and bat boxes upon new buildings.
- Any formal lawn areas should where possible be seeded with a species rich flowering lawn mix such as EL1 – Flowering Lawn Mix, Emorsgate Seeds.

[27] Ministry of Housing, Communities and Local Government (July 2021). National Planning Policy Framework. London
[28] https://www.gov.uk/government/publications/environment-bill-2020

APPENDIX A: BOTANICAL SPECIES LIST

The habitat types were mapped within the site and a representative species list for each habitat type recorded. Species lists are not exhaustive of all flora present in each habitat type.

Common Name	Scientific Name	DAFOR
Amenity grassland		
Bramble	*Rubus fruticosus* agg.	R
Cleavers	*Galium aparine*	R
Common mouse-ear	*Cerastium fontanum*	O - LF
Creeping buttercup	*Ranunculus repens*	O - LF
Creeping cinquefoil	*Potentilla reptans*	R
Daisy	*Bellis perennis*	O - LA
Dandelion	*Taraxacum officinale* agg.	O
Moss	Bryophyta	O - LF
Perennial rye-grass	*Lolium perenne*	D
Red fescue	*Festuca rubra*	O
Ribwort plantain	*Plantago lanceolata*	O
White clover	*Trifolium repens*	O
Yorkshire-fog	*Holcus lanatus*	O
Broadleaved trees		
Silver maple	*Acer saccharinum*	
Swedish whitebeam	*Scandosorbus intermedia*	
Lime	*Tilia sp.*	
Rowan	*Sorbus aucuparia*	
Whitebeam	*Sorbus aria*	

DAFOR: D=dominant, A=abundant, F=frequent, O=occasional, R=Rare, L=Locally



FUTURES ECOLOGY

Carrwood Park, Swillington Common Farm, Selby Road, Leeds, LS15 4LG
Telephone: 01133 372185

Unit 9, The Tangent Business Hub, Weighbridge Road, Shirebrook, Mansfield, Derbyshire, NG20 8RX
Telephone: 01623 749709

Key

- Site Boundary

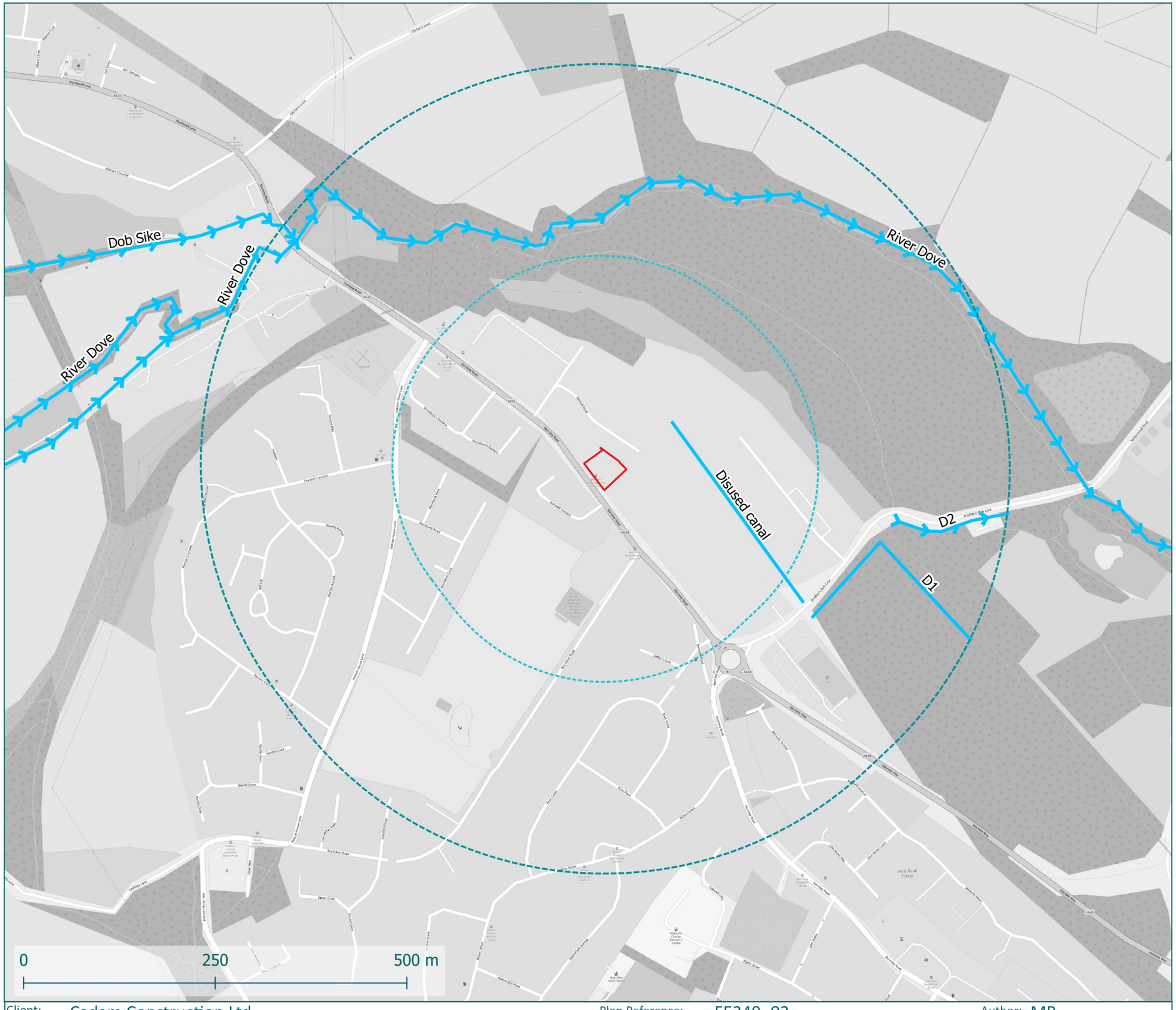
Phase 1 Habitats

- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - ephemeral/short perennial
- Hedges: Introduced shrub
- Scrub - scattered line
- Fence
- Broadleaved tree
- Scrub - scattered

Client:	Cadam Construction Ltd.	Plan Reference:	FE249_01	Author:	MB
Project:	Land at Aldham Industrial Estate, Mitchells Road	Project Reference:	FE249	Date:	24/1/2023
Title:	Figure 1 - Phase 1 Habitat Plan	Report Reference:	PEA01	Scale:	1:250

C:\Users\maya.baker\OD\OneDrive - Futures Ecology Ltd\Projects\FE249 Land at Aldham Industrial Estate, off Mitchells Road,

Copyright © Futures Ecology
No dimensions are to be scaled from this drawing. All dimensions must be checked on site. Any measurements are for indicative pusposes.
This drawing may contain: © OpenStreetMap contributor or Map data © 2019 Google



FUTURES ECOLOGY

Carrwood Park, Swillington Common Farm, Selby Road, Leeds, LS15 4LG
Telephone: 01133 372185

Unit 9, The Tangent Business Hub, Weighbridge Road, Shirebrook, Mansfield, Derbyshire, NG20 8RX
Telephone: 01623 749709

Key

- Site Boundary
- 250m Buffer
- 500m Buffer
- Waterbody (with ref.)

Client:	Cadam Construction Ltd.	Plan Reference:	FE249_02	Author:	MB
Project:	Land at Aldham Industrial Estate, Mitchells Road	Project Reference:	FE249	Date:	24/1/2023
Title:	Figure 2 - Waterbody Location Plan	Report Reference:	PEA01	Scale:	1:5,000

C:\Users\maya.baker\OD\OneDrive - Futures Ecology Ltd\Projects\FE249 Land at Aldham Industrial Estate, off Mitchells Road, Wombwell\QGIS\1 Plans\FE249 Desk

Copyright © Futures Ecology
No dimensions are to be scaled from this drawing. All dimensions must be checked on site. Any measurements are for indicative pusposes.
This drawing may contain: © OpenStreetMap contributor or Map data © 2019 Google