

7.0 BIODIVERSITY

Introduction

7.1 This chapter of the ES assesses the likely significant effects of the Development on the environment in respect of ecology. It presents a Preliminary Ecological Appraisal following methods detailed in the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland'ⁱ and 'Guidelines for Ecological Report Writing'ⁱⁱ.

7.2 The chapter includes recommendations for further actions where applicable in order to satisfy current wildlife legislation and to achieve the Applicant's objectives. In particular, designated sites, habitats and species are identified; baseline ecological conditions are described; potential impacts on ecological features are predicted and assessed (including those due to direct loss of habitat, and those likely to arise in connection with each stage of the project from Site-clearance). Proposed mitigation and compensation measures are outlined; and residual effects after mitigation are then assessed. Survey reports from the works ongoing on the Site are as follows and within Appendices 7.1-7.7.

- Appendix 7.1 - P.1172.19 Ecological Impact Assessment, 2022
- Appendix 7.2 - P.1172.19 Badger Letter Report, 2023
- Appendix 7.3 - P.1172.19 Badger Mitigation Strategy, 2023
- Appendix 7.4 - P.1172.19 Bat Nocturnal Surveys and Static Detector Deployment, 2022
- Appendix 7.5 - P.1172.19 Brown Hare Survey Report, 2022
- Appendix 7.6 - P.1172.19 Invasive Species Method Statement, 2023
- Appendix 7.7 - P.1172.19 Water Vole Letter Report, 2022
- Appendix 7.8 – Habitats Regulations Assessment, 2023

Policy Context

National Planning Policy

National Planning Policy Framework

7.3 The National Planning Policy Framework (NPPF) 2021ⁱⁱⁱ has been published to provide further planning guidance. Wildlife, biodiversity and ecological networks are referred to in Section 15 'Conserving and enhancing the natural environment', with particular reference to paragraphs 174, 180 and 185. The NPPF states that the planning system should contribute to and enhance the natural and local environment by: "*recognising the wider benefits of ecosystem services,*

minimising impacts on biodiversity and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures". Further guidance is provided within Government Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System.

Local Planning Policy

- 7.4 The Site lies within the Rochdale Borough Council (RBC) administrative area and is subject to the Rochdale Core Strategy (Adopted October 2016 and updated February 2017)^{iv}. The policies of relevance are G7 within the Core Strategy and have been taken into account when preparing the ecology reports.

Policy G7 - *Increasing the value of biodiversity and geodiversity, will ensure that sites and features of biodiversity and geodiversity importance are given full and appropriate recognition and protection. Opportunities for enhancing biodiversity and geodiversity, creating new sites and features of interest and improving opportunities for public enjoyment will be supported. No development should result in a net loss of biodiversity or geodiversity interest in the borough and overall development in the borough should result in a net gain.*

Relevant Legislation

European Legislation

- 7.5 The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:
- 7.6 Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);^v
- It seeks to conserve all wild birds in the EU by setting out rules for their protection, conservation, management and control.
 - It covers birds, their eggs, nests and habitats.
 - It codifies legislation originally adopted in 1979 (Directive 79/409/EEC)^{vi}.
- 7.7 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)^{vii}.
- The directive aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura

2000 ecological network of protected areas, safeguarded against potentially damaging developments.

UK Legislation

- 7.8 The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (The Habitats Regulations).^{viii} This provides for the designation and protection of 'European Sites' (Special Protected Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites, including proposed or potential European Sites) and the protection of 'European Protected Species'.
- 7.9 The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended) (W&C Act)^{ix}. This Act is supplemented, inter alia, by provision in the Countryside and Rights of Way (CROW) Act 2000, and the Natural Environment and Rural Communities Act 2006 (NERC Act)^x.
- 7.10 Additional species and habitat specific UK legislation includes the Protection of Badgers Act 1992^{xi} and the Hedgerow Regulations 1997^{xii}.

Assessment Methodology

Ecological Impact Assessment

- 7.11 The approach to Ecological Impact Assessment (EcIA) taken in this chapter accords with guidance set out in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland Version 1.1. (CIEEM 2019)^{xiii}.
- 7.12 A Preliminary Ecological Appraisal (Appendix 7.1) has been carried out at the Site on the 22nd, 29th and 30th May 2019. The assessment comprised a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to assess the potential for protected species to use the Site. The assessment provides baseline data as to current site conditions and where appropriate allows recommendations to be made in respect of further potential work in order to satisfy current wildlife legislation. An updated Preliminary Ecological Appraisal was carried out on 17th March 2022. The full methodology is shown below in Table 7.1. Following the Preliminary Ecological Appraisal of the Site species specific surveys are ongoing and are detailed in Table 7.1 below and Appendix 7.1.

Table 7.1: Ecological field surveys undertaken within the Site.

Survey type	Survey area	Year (s)
Ecological Appraisal and Phase 1 Habitat Survey The Preliminary Ecological Appraisal (PEA) involved the collection and review of data from a desk study and field survey along with assessment of the value of the habitats following CIEEM guidelines. <u>Desk Study</u> A review of the designated sites and habitats within 2km of the Site was undertaken in May 2019 and March 2021 using the Multi-Agency Geographic Information for the Countryside (MAGIC)^{xiv} and the Natural England websites. A review of UK and Local priority species and habitats known to occur within 2km of the Site has been undertaken in May 2019 and March 2021 using the Joint Nature Conservation Committee (JNCC) website, MAGIC and local records from Greater Manchester Ecology Unit (GMEU). <u>Field survey</u> A walkover survey of the Site was conducted in May 2019 and updated in March 2021 when the habitat types and features of ecological interest were identified and mapped in compliance with the Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit (JNCC, 2010). The survey methods involved the recording and mapping of all habitat types and ecological features present on-site, including the identification of the main species present and examination of the potential for any protected species. Habitats were mapped and target notes made for any interesting features. The surveys particularly focused on the following species and habitat features: • Mammals (badgers, bats); • Birds; • Amphibians and reptiles; • Invertebrates; • Hedgerows and boundaries; • Invasive plant species; and • Plant communities and trees. Preliminary Ecological Appraisal for Bats Habitats on-site were assessed for their suitability for bats to use them for roosting, commuting and foraging both on the Site and surrounding area. Commuting and foraging habitat suitability was categorised low to high. Preliminary Roost Assessment – Trees. All trees were inspected for Potential Roost Features (PRFs). Features searched for included: Natural or woodpecker holes, cracks/splits in major limbs, loose bark, hollows/cavities, dense epicormic	The Site	May 2019 & March 2022

Survey type	Survey area	Year (s)
growth, bird and bat boxes. All ponds within the Site and 500m of the Site were identified from available mapping in 2019 and 2022 and assessed for their suitability to support great crested newts (GCN) using the Where access was granted, Habitat Suitability Indexes (HSI) based on the methods set out by Oldham et al., (2000)^{xv} and presence/absence surveys were undertaken on all ponds based on published guidance (English Nature, 2001). Ponds were excluded if there were significant barriers for great crested newt dispersal between these ponds and the Site. The ponds within the Site were monitored throughout the further visits for further species surveys in 2022 and the ponds were subject to no further works as they will wither be retained or provide unsuitable habitats for GCN. See Appendix 7.1.		
<u>Badger walkover survey</u> The Site was searched for setts and badger field signs including foraging areas, latrines and tracks. Attention was paid to the presence of the following field signs: • Setts: single holes or a series of holes likely to be interconnected underground; • Latrines: badgers usually deposit faeces in excavated pits; • Paths and footprints; • Scratching posts: at the base of trees; • Snuffle holes: areas where badgers have searched for insects; • Day nest: bundles of vegetation where badgers may sleep above ground; and • Traces of hair. See Appendix 7.1	The Site and surrounding land use (up to 30m from the Site boundary, where access allowed)	The Site and all accessible areas within 30m of the Site boundary was walked and searched in November 2022.
<u>Water vole survey</u> The watercourses within the Site were assessed for use by otters and water voles following methods outlined in <i>Chanin P (2003). Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough</i> and Strachan, R., Moorhouse, T., Gelling, M. (2011). <i>Water Vole Conservation Handbook</i>, 3rd Edition. Wildlife Conservation Research Unit: Abingdon. Signs of otter use including prints, spraints, couches or holts were searched for from the banks of the watercourses. Signs of water vole use, including latrines, footprints, feeding remains, runs and burrows were searched for along the banks. See Appendix 7.1, 7.7.	The Site	October 2022
<u>Brown hare survey</u> The survey method followed the Northwest Brown Hare Project (NWBHP) and the Lancashire Wildlife Trust (LWT) survey methodology. Brown hare surveys follow a transect around a 1km square, however the survey route was partially adapted to accommodate	The Site	A transect route was walked around the Site monthly in November & December 2021 and January & February 2022

Survey type	Survey area	Year (s)
fencing and hedgerow. Surveyors re-joined route at the next nearest point. To cover the Site, two 1km transects were followed around the Site. See Appendix 7.5.		
<u>Bat activity surveys</u> Bat activity surveys were undertaken following the guidelines set out by the Bat Conservation Trust (Collins 3rd Edition 2016) ^{xvi} and Interim Guidance Note, May 2022. The report was prepared following methods detailed in the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018) and 'Guidelines for Ecological Report Writing' (2017). See Appendix 7.4.	The Site	Bat activity surveys were undertaken within the Site over two transects once a month between April and October 2022. Three static detectors were also deployed once per month for a minimum of 5 nights between April and October 2022.
<u>Bat emergence surveys</u> A bat emergence survey was undertaken following the guidelines set out by the Bat Conservation Trust (Collins 3rd Edition 2016) and Interim Guidance Note, May 2022. The report was prepared following methods detailed in the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018) and 'Guidelines for Ecological Report Writing' (2017). See Appendix 7.4.	The Site	July 2022

7.13 The Zone of Influence (ZoI) of a proposed development is defined by the EcIA Guidelines as:

"the area(s) over which ecological features may be affected by the biophysical changes caused by the proposed project and associated activities".

7.14 The ZoI for the Site has been based on a combination of best guidance practice and professional judgement. Overall, a 2km area surrounding the Site has been considered for all species during the initial assessment stages with best practice guidance used for the species-specific surveys. For example, when surveying for water vole all construction works within 5m will be considered based on the water vole conservation handbook 3rd edition 2011 methodology.

7.15 The ZoI is the area around the Site that may be affected by the proposed changes within the Site. Impacts could include the removal or alteration of habitat, increased human presence on or around the Site, or the introduction of artificial lighting within the Site:

- Scoping to select the ecological features (habitats, species, ecosystems and their functions/processes) that are likely to fall within the predicted ZoIs and be affected by the construction activities – both negatively and positively;

- Refinement of the Development to incorporate mitigation for negative effects, and enhancements in order to deliver net gains;
- Assessment of the significance of residual effects and identification of any policy drivers for additional mitigation or compensation in the event of residual significant negative effects; and
- Advice on conformance with policy.

Consultation

EIA Scoping

- 7.16 Consultation for the Development was undertaken with Rochdale Borough Council (RBC) through a formal EIA scoping exercise (refer to Chapter 2: EIA Methodology). An EIA Scoping Report (Appendix 2.1) was issued to RBC on 31st October 2022 with RBC issuing a Scoping Opinion (Appendix 2.2) on 15th February 2023. Within the Scoping Opinion, Natural England advises that there is currently not enough information to determine whether the likelihood of significant effects on the Rochdale Canal (SSSI, SAC) can be ruled out. Due to the proximity of the proposals, there is potential for impacts on the interest features of the above designated sites. The proposals will therefore require an assessment of all potential direct and indirect impacts as a result of the construction works and operation of the Development. A HRA report will be produced to assess any indirect and direct impacts to the water course.
- 7.17 Greater Manchester Ecological Unit (GMEU) has also been consulted on the pre-application. They confirm that 10% biodiversity net gain is very likely to be mandatory by the time the Development comes forward and the Biodiversity Net Gain Defra Metric will be completed for the Site to ensure the 10% gain can be demonstrated on-site or through off site contributions (either financially or via a receptor).
- 7.18 Due to the terrestrial habitats on the Site, GMEU also required further information on the following:
- Information on how species such as brown hare and badger will be safeguarded (and any other important populations of mammals) including potential translocation as well as off-site mitigation;
 - Off-site mitigation for farmland birds, if required;
 - If Great Crested Newts are present, whether District Level Licencing will be utilised or traditional trapping and translocation; and
 - Any other species mitigation that may be identified.

- 7.19 Within the EIA Scoping Opinion, GMEU confirmed that the range of survey required for the Site has been met in the recommendations of the Preliminary Ecological Appraisal (Appendix 7.1) and that they had no further additions to the scope of the ecological assessment. They did however request further assessment of the Rochdale Canal (SSSI, SAC). A Habitats Regulations Assessment (HRA) has been produced to assess the direct and indirect impacts to the water body have been undertaken (Appendix 7.8).
- 7.20 The scoping opinion also confirmed that a full assessment of direct and indirect effects of the proposed development should be considered for the Rochdale Canal (SPA, SSSI) and Hopwood Woodlands, Local Nature Reserve (LNR), located approximately 500m west of the Site to inform the appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects. The Scoping Opinion concluded that the consideration of likely significant effects should include any functionally linked land outside the designated site. These areas may provide important habitat for mobile species populations that are interest features of the SSSI, for example birds and bats. This can also include areas which have a critical function to a habitat feature within a site, for example by being linked hydrologically or geomorphologically.

Significance Criteria

- 7.21 In line with the overall approach to assessment set out within this ES, the significance of effects is determined via the three-stage process of: ascribing value to a receptor; determining the magnitude of impact; and evaluating the significance of effects. Application of this general methodology with specific reference to the CIEEM methodology for ecological assessment is set out below.
- 7.22 An ecologically significant effect is defined as an effect on the integrity of a defined designated site or ecosystem and / or the conservation status of habitats or species within a given geographical area. Where possible, the magnitude of the impact is also quantified. However, professional judgement is often required to define the magnitude using the criteria defined below.

Table 7.2: Definitions of Impact Magnitude

Magnitude	Description
High (Major or Substantial)	A permanent or long-term impact on the integrity of a site or conservation status of a habitat, species, assemblage / community, population or group.
Medium (Moderate)	A long-term but reversible impact on the integrity of a site or conservation status of a habitat, species assemblage / community, population or group.
Low (Minor)	A short-term but reversible impact on the integrity of a site or conservation status or a habitat, species assemblage / community, population or group that is within the range of variation normally experienced between years.

Magnitude	Description
Negligible (No Effect)	No perceptible change or a short-term but reversible impact on the integrity of a site or conservation status of a habitat, species, assemblage / community, population or group that is within the normal range of annual variation.

- 7.23 The importance of a feature that will be significantly affected is then used to identify the geographical scale at which the impact is significant, in accordance with the overall approach set out above. This value relates directly to the consequences, in terms of legislation, policy and / or development control at the appropriate level. So, a significant negative effect on a feature's importance at one level would be likely to trigger related planning policies and, if permissible, generate the need for development control mechanisms, such as planning conditions or legal obligations, whilst a similar effect on a feature of lower value might not lead to a significant effect.
- 7.24 If an effect is found not to be significant at the level at which the resource or feature has been valued, it may be significant at a more local level. Both beneficial and adverse effects are considered.
- 7.25 Significant effects on features of ecological importance will be mitigated (or compensated for) in accordance with guidance derived from policies applied at the scale relevant to the value of the feature or resource. The scale is derived from the interaction of the feature sensitivity and magnitude of impact.
- 7.26 It is recommended by CIEEM that the concept of conservation status is used to determine whether an effect is likely to be ecologically significant. For species, conservation status is determined by the sum of influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within a given geographical area. Conservation status may be evaluated for a defined study area at a defined level of ecological value. The extent of the area used in the assessment will relate to the geographical level at which the feature is considered important. The value of ecological feature has been defined with reference to the geographical level at which it matters. The frames of reference used for this assessment, and based on CIEEM guidance, are:
- International (generally this is within a European context, reflecting the general availability of good data to allow cross-comparison);
 - National (Great Britain, but considering the potential for certain ecological features to be more notable (of higher value) in an England context relative to Great Britain as a whole);
 - Regional (North West England);
 - County (Greater Manchester);

- District (Rochdale);
- Local (has value at the Site level); and
- Negligible (has a very low value at the Site level but is not considered to merit retention or mitigation).

7.27 The CIEEM EcIA Guidelines, which are the industry standard and best practice guidelines for ecological impact assessment, state that:

"Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general (...) in broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)."

7.28 On the basis of the above, and within this assessment, ecological effects are described as either:

- Direct and / or indirect;
- Permanent or temporary; and
- Adverse or beneficial.

7.29 Where mitigation measures have been incorporated into the design of the Development and are committed to by the Applicant, for example, as shown on the Parameter Plans for approval (Figures 3.1-3.3), these have been considered as embedded mitigation and taken account of as such within the assessment of effects.

7.30 An ecologically significant effect is defined as an effect (beneficial or adverse) on the integrity of a defined designated site or ecosystem and/or the conservation status of habitats or species within a given geographical area.

7.31 The assessment also considers the likely success of the mitigation. Where necessary, further actionable mitigation measures have been identified. The significance of the effects upon ecological receptors has been assessed both before and after consideration of further mitigation measures. The latter represents the assessment of the residual effects of the Site.

7.32 The Preliminary Ecological Appraisal and updated Site visit involved the collection and review of data from a desk study and field survey along with assessment of the value of the habitats following CIEEM guidelines. Habitats and species on the Site were evaluated following the

'Guidelines for Ecological Impact Assessment in the UK and Ireland' 2018. A geographical frame of reference is assigned to each habitat and species, with International Value being most important, then National, Regional, County, District, Local and lastly, within the immediate Zone of Influence (ZoI) of the Development only.

Limitations and Assumptions

- 7.33 There were no significant limitations to assembling the baseline data, especially given that data were collected in 2019 with an update walkover undertaken in and 2022. There were no significant limitations to the assessment given the quality of the baseline data; hence mitigation solutions are considered feasible and deliverable for all features where significant effects are either confirmed or anticipated.

Baseline Conditions

- 7.34 The baseline habitats have been obtained from ecological surveys carried out by Ascerta between 2019 and 2022 (Appendix 7.1). The Site is approximately 89 ha and comprises semi improved & improved wet grassland, hardstanding, buildings semi-natural broadleaved woodland, scattered trees, introduced shrubs, waterbodies, watercourses, hedgerows of varying species richness, scrub and tall ruderal vegetation of mixed species diversity. The majority of the Site comprises semi-improved agriculture fields that are grazed by stock and managed for silage crops, due to the current use and agricultural management regime. There are no Tree Preservation Order (TPO) trees within the Site and the hedgerows present are used for field demarcation and stock control. No further surveys for fauna were deemed necessary during the provisional walkover surveys of the Site. There are no TPO'd trees within the Site and the hedgerows present are used for field demarcation and stock control.
- 7.35 Designated and protected sites, along with biological records, are described and reviewed from existing information and are shown in full within Appendix 7.1 and are also summarised below.

Designated Sites

- 7.36 Two statutory sites were identified within a 2km radius of the Site (with distance and direction from the Site and included below).
- 7.37 Hopwood Woods Local Nature Reserve (LNR) (located approximately 380m south-west of the Site).

- 7.38 Rochdale Canal Sites of Special Scientific Interest (SSSI); and Special Areas of Conservation (SAC) (located approximately 500m west of the Site). Due to the proximity of the Rochdale Canal (SSSI, SAC) to the Site and as required by Regulation 63 of the Habitats Regulations, a report to inform the Habitats Regulations Assessment (HRA) to assess the direct and indirect impacts to the water body has been undertaken (Appendix 7.8). The report to inform the HRA has assessed if important features of the canal will be impacted during the construction phase of the Development and future operations, as the canal is designated for Floating water-plantain, *Luronium natans*. The HRA report assesses the potential impacts and the likely significant effects (LSE), Appropriate Assessments through recreation, habitat fragmentation/loss, air quality, water quality (including nutrient loading) and urbanisation effects.

Non-Designated Sites

- 7.39 Six non-statutory sites were identified within 1km of the Site (with distance and direction from the Site included below):
- Lords Wood Site of Biological Importance (SBI) (located approximately 380m south-west of the Site);
 - Hopwood Clough SBI (located approximately 870m south-west of the Site);
 - Rochdale Canal SBI (Scowcroft to Warland, west) running north / south to the west of the Site, with the nearest point located approximately 135m from the Site boundary);
 - A627m by Tandle Hill SBI (located approximately 40m south east and 645m north of the Site);
 - Gerrard Wood SBI (located approximately 235m south east of the Site); and
 - Tandle Hill Country Park SBI (located approximately 700m east of the Site).

- 7.40 Of the designated sites listed above Hopwood Woods LNR, Rochdale Canal SSSI and SAC, Lords Wood SBI, Rochdale Canal SBI, SSSI, SAC (Scowcroft to Warland, west), A627m by Tandle Hill SBI and Gerrard Wood SBI are considered to be located within the ZoI of the Site due to their proximity and/or sensitivity to particular impact pathways.

Badger

- 7.41 Records for badger are present within 2km of the Site and during the phase one habitat surveys evidence of badger were recorded within the Site. Badger surveys have been undertaken in April and May 2022 and November 2022 (Appendix 7.2). The identified outlier setts are likely only in very occasional use by badger, however badger foraging and

commuting activity recorded throughout the Site. Badgers In nature conservation terms, badgers are not a species of concern, being widespread and relatively common in England. They therefore fall below the threshold for detailed impact assessment and are considered to be of **Local** importance for the Site, however badgers are legally protected under the Protection of Badgers Act 1992 and further survey works will be required for badger once planning permission has been granted for the Site.

Bat Assemblage

- 7.42 The data search returned records of 13 roosts and 21 records of bat activity within 1km of the Site. Records returned included common pipistrelle, pipistrelle sp., Daubenton's bat, Noctule bat, soprano pipistrelle and bat sp. The closest record was for a pipistrelle sp. roost located approximately 48m west of the Site.
- 7.43 Bat activity surveys were carried out in 2022 across the Site (Appendix 7.3). The bat activity was concentrated to the eastern and northern Site boundaries with regulatory activity to the western sector of the Site from predominantly common and soprano pipistrelle bats.
- 7.44 A nocturnal bat emergence survey was carried out at the existing garden centre building to the west of the Site on 27th July 2022. The survey confirmed that bats were not using the building as a roost at the time of the visit and a moderate level of bat activity was recorded, with the majority of activity occurring north of the building. All bats recorded by surveyors during the emergence survey were common pipistrelle and noctule. No other species of bat was recorded. The bat assemblage supported by the ZoI of the Site is also considered to be of **Local** importance.

Great Crested Newts

- 7.45 Records of Great Crested Newt (GCN) were returned approximately 900m south-east of the Site beyond the M6. No records of GCN presence were returned by Greater Manchester Ecology Unit (GMEU). Where any ponds need to be removed to accommodate proposals that fall under the Natural England Led District Level Licensing (DLL) scheme for GCN. Further works will be required in relation to GCN once the final propels are known for the Site to assess if there is a presence or absence of the species within the Site. GCN are supported by the ZOI for the Site with both aquatic and terrestrial habitats and are considered to be of **Local** importance. During the walkover surveys of the Site, the water bodies were assessed for their suitability to support GCN (Appendix 7.1).

Water vole

- 7.46 Records of water vole and water vole signs were returned within a location of the Rochdale canal, approximately 200m south-west of the Site. In October 2022, water vole footprints were identified within the water course to the east of the Site. Water vole are considered to be of **Local** importance and updated surveys will be required immediately prior to the start of works (Appendix 7.4).

Brown hare

- 7.47 Two records for brown hare were returned within the Site and an additional two records were returned east of the Site within 1km. Brown hare surveys were carried out in November 2021, December 2021, January 2022 and February 2022 and a small population of brown hare were found to be present on-site. Results, Reasonable Avoidance Measures (RAMs) and appropriate mitigation are detailed appendix 7.5. Brown hare were also noted throughout the Site during the bat activity surveys in 2022. Brown hare are considered to be of **Local** importance and consideration for brown hare will be required within the final proposals to ensure mitigation for the species is included within the final layout (Appendix 7.5).

Breeding birds

- 7.48 Twenty records of Section 41 bird species were returned within the Site boundary. These species included bullfinch, cuckoo, curlew, dunnoek, herring gull, house sparrow, lapwing, linnet, redpoll, reed bunting, skylark, song thrush and starling (Appendix 7.1). No further surveys for breeding birds have been undertaken on the Site, lapwing were noted and common bird species were noted using the Site during the walkover survey in 2019 and during the visits throughout 2022 (Appendix 7.1). Ongoing survey work for breeding and ground nesting birds are being undertaken throughout 2023, the bird assemblage within the Site is currently considered to be of **Local** importance, this may however be amended following the completion of the surveys.

Small mammals

- 7.49 Three records of hedgehog were returned within 1km of the Site with the closest record located approximately 235m north-east of the Site. Multiple sightings of rabbits were noted throughout 2022 within the Site (Appendix 7.1). Small mammals are considered to be of **Local** importance for the Site and no further surveys for small mammals have been undertaken in the Site, it is recommended that Reasonable Avoidance methods are undertaken for species

such as hedgehog and site supervision works maybe required for works within the areas that have rabbit burrows present.

Future Baseline

- 7.50 The future baseline will remain similar to the current baseline due to the agricultural practices carried out within the Site. Due to the ongoing management of the Site, it is not considered that the current conditions of the Site will alter, should the Development not progress.

Likely Significant Effects

- 7.51 The construction works would lead to the loss of the majority of habitats within the main section of the Site, including semi improved and improved grassland fields, water bodies, scattered trees in hedgerows. The proposed landscape design is an inherent part of the Development and proposes to create open spaces of grasslands, scrub, scattered trees and species rich hedgerow boundary habitats, along within designated wildlife areas to the north and south of the Site.

Construction Phase

Designated and Non-Designated Sites

- 7.52 There may be some direct and indirect temporary effects to the statutory and non-statutory sites within the surrounding area, including the Rochdale Canal (SPA, SSSI) and Hopwood Woodlands (LNR) from dust, debris, pollution and hydrologically linkage from the Site due to their proximity to the Site and activities that will be carried out during the construction phase. The Preliminary Ecological Appraisal (Appendix 7.1) and Scoping Opinion (Appendix 2.1) identified these areas as key features from the desktop assessment and Site visits. Air quality changes resulting from construction activities are not expected to change outside the range of acceptable thresholds. However, dust pollution arising from construction may have a negative effect, through deposition. It is possible that in the absence of suitable mitigation, polluted surface water run-off resulting from construction activities, containing contaminants have a direct or indirect effect on the Rochdale Canal SAC & SSSI and Hopwood Woodlands LNR.
- 7.53 Construction effects on designated and non-designated sites are considered to be **minor adverse** and could be **significant** (although uncertain) at an **International level**.

- 7.54 A HRA report has been produced to assess if important features of the canal will be impacted during the construction phase of the Development and future operations (Appendix 7.8).

Hedgerows and Trees

- 7.55 There are no TPO trees within the Site, however the trees loss for species, for example roosting bats, will need to be assessed following the confirmed layout of the Site. As the Site is primarily used for agriculture any hedgerows that will be lost will also need to be assessed for their importance prior to the start of any construction activities. As the hedgerow loss was not confirmed at the time of the preliminary and updated walkover survey it was confirmed within Table 5.2 of the Preliminary Ecological Appraisal that further survey effort would be required to inform further mitigation measures (Appendix 7.1). The majority of the hedgerows lie within the main body of the Site as field boundary demarcations and for stock control. Due to their location and from the parameter plan, it is assumed at this stage that the majority of hedgerows will be lost to facilitate the main residential development of the Site. Following the confirmation of the hedgerows to be lost, further assessments will be carried out to assess if the lost sections are of importance and to inform further mitigation measures for enhancing retained hedgerows and inform the planning of new hedgerows to retain forage, refuge and connectivity for species throughout the Site and to the surrounding landscape.
- 7.56 Without additional mitigation, the loss of hedgerows is considered a **moderate adverse** and **significant** effect at a **local level**.

Bats

- 7.57 Construction activities may lead to the loss of roosting provision and commuting/foraging habitat. Potential increase in light disturbance may also occur during construction. This is considered **minor adverse** and **not significant** at the **local level**. Similarly, the impacts of insensitive Site lighting especially on boundary habitats are considered **minor adverse** and **not significant**.

Breeding birds

- 7.58 The construction of the Development may result in the loss of nesting provision and foraging habitat as well as possible killing or injuring during the construction phase. Construction effects on birds are considered **minor adverse** and **not significant** at a **local level**.

GCN and amphibians

- 7.59 On-site construction activities, such as machinery and human disturbance may potentially result in the loss of aquatic habitat for breeding and the fragmentation of terrestrial habitat, as well as possible killing or injuring. Construction effects on GCN and amphibians are considered **minor adverse** and **not significant** at a **local level**.

Badger

- 7.60 Loss of nesting and foraging provision. During construction, there is a significant risk of killing or injuring badgers by trapping them within trenches or improper storage of chemicals resulting in a **minor adverse** effect and **not significant** at a **local level**.

Water vole

- 7.61 There is the potential for the loss of suitable habitat and disturbance to areas and water courses that provide connectivity. Construction effects on water vole are considered **minor adverse** and **not significant** at a **local level**.

Brown hare/ hedgehog and other small mammals

- 7.62 The construction of the Development may result in the loss of foraging and refuge areas and fragmentation of habitats, as well as possible killing or injuring of brown hare, hedgehogs and small mammals. Construction effects on these species are considered **minor adverse** and **not significant** at a **local level**.

Operational Phase

Designated Sites

- 7.63 Throughout the operational phase there may be some effects to the statutory and non-statutory sites within the surrounding area from increased human disturbance from new residents to the area. The Development is providing up to 1,380 residential units which may result in an increase in recreational pressure on the Rochdale Canal SAC & SSSI, and Hopwood Woodlands LNR over and above the existing baseline. Accordingly, prior to mitigation, operational effects resulting from recreational changes on the Rochdale Canal SAC are considered to be **minor adverse** and long-term at an **International level** and are likely to be **significant**.

- 7.64 A HRA report has been produced to identify assess if importance features of the canal will be impacted during any operations (Appendix 7.8).

Hedgerows and Trees

- 7.65 During the operational phase, newly planted hedgerows will be establishing and approximately 4,960 linear meters of species rich native hedgerow is proposed, along with street trees that will also form linear features. Green infrastructure and a community park to the south of the Site is also indicated on the parameter plan, both of which will include ecological enhancement and the retainment of hedgerows.
- 7.66 Following the implementation of new linear planting proposals, the effect on Hedgerows is considered to be **minor beneficial** and **not significant** at a **local level**.

Species

- 7.67 Throughout the operational phase of the Development, species that use the Site are at risk from possible injury or killing. Mitigation measures for each species will ensure that the risk are minimal and where possible areas of forage and refuge will be retained. Light spill may also be detrimental to light sensitive species such as bat and all species will be subject to habitat fragmentation.

Bats

- 7.68 There is potential for commuting and foraging habitat for bat species to be impacted by inappropriate operational lighting and the fragmentation of the Site from the loss of flightlines, such as hedgerows. There will also be the loss of roosting provision through the loss of buildings and trees. This is considered a **minor adverse** effect and **not significant** at a **local level**.

Breeding birds

- 7.69 The loss of grassland habitat will lead to the loss of lapwing territories. The proposed landscaped habitats being provided as part of the Development will include wildflower grasslands and provide nesting and foraging opportunities for a range of farmland bird species. Notwithstanding, a lack of management will result in degraded habitats and result in a **minor adverse** effect and **not significant** at a **local level**.

GCN and amphibians

- 7.70 **Minor adverse** and **not significant** operational effects at a **local level** are anticipated given the Development will retain waterbodies and terrestrial habitats within the Site and Site boundary features.

Badger

- 7.71 Operational effects on badger are **minor adverse** and **not significant** at a **local level**. The effects include, disturbance, loss of habitat and possible injury or killing of the species. The management of the traffic speeds within the Site will reduce mortality of foraging commuting badgers. **Minor beneficial** effects on foraging are anticipated because the extensive wildflower grasslands will provide an improved foraging resource for badger as these support higher earthworm and other prey densities. Badger surveys have been undertaken in April and May 2022 and November 2022 with potential outlier setts identified within the Site along with confirmed foraging and commuting activity (Appendix 7.2).

Water Vole

- 7.72 Loss and fragmentation of suitable habitat and disturbance to areas and water courses that provide connectivity from the Site to the wider land use will occur during the operational phase. Operational effects on water vole are considered **minor adverse** and **not significant** at a **local level**. If no mitigation is in place for the species. The retainment of water bodies within the Site will ensure as minimal impact as is possible to water vole.

Brown hare/ hedgehog and other small mammals

- 7.73 Operational impacts include increased predation by domestic pets and badgers. The creation of gardens with access through garden fences provided by hedgehog 'highways' provide important refuges for hedgehogs from badgers and hence will enhance local hedgehog populations. The net effect from the provision of accessible garden habitats is therefore considered an overall **negligible** effect at a **local level**. The retained areas to the Site boundaries will provide continued connectivity for species such as brown hare throughout the operational phase.

Mitigation Measures

Construction Phase

- 7.74 During the construction phase, habitats will be retained, where possible, to allow species to move through the Site during the works. Protective fencing will be placed around retained ponds and Development parcels, where required, to ensure no harm will come to species entering the Development parcels. Reasonable Avoidance Methods (RAMs) will also be implemented for the timing of works, and construction material will be stored to ensure minimal risk is posed to species. RAMs will be implemented for species, along with ongoing ecological monitoring and supervision. Updated species surveys will also be undertaken if deemed necessary due to the size of the Development.
- 7.75 Species specific surveys will be undertaken to assess the population of each species group within the Site, badger works are currently ongoing within the Site. Where necessary mitigation will be undertaken. Species specific surveys will be undertaken to assess the population of each species group within the Site, badger works are currently ongoing within the Site. Where necessary mitigation will be undertaken to avoid any harm.
- 7.76 Natural England will need to be consulted prior to the starts of works to apply for the District Level Licence (DLL) scheme for GCN prior to the start of works. A DLL enquiry form will in the first instance need completing and submitting to Natural England, once successful a DLL licensing application to Natural England will also be submitted.
- 7.77 Natural England will need to be consulted prior to the starts of works to apply for the DLL scheme for GCN prior to the start of works. A DLL enquiry form will in the first instance need completing and submitting to Natural England, once successful a DLL licensing application to Natural England will also be submitted.
- 7.78 A Construction Environment Management Plan (CEMP) will be secured by an appropriate planning condition and will include the following measures related to ecology features:
- Protection of retained habitats especially boundary features and trees with Heras fencing;
 - Prevention of pollution and dust on sensitive habitats including the off-site bat roost;
 - Appropriate siting and types of construction site lighting to ensure minimal disturbance to bat commuting corridors and off-site bat roost;
 - Standard mitigation measures to ensure protected species such as badgers and nests of breeding birds are not destroyed or disturbed; and
 - All habitats with the potential reptiles will be cleared using reptile sensitive habitat Clearance techniques and set out in a reptile management method statement (This will include but not be limited to the following methods: A directional two stage cut of suitable habitats during suitable weather conditions. First cut to c.15cm with the second cut to

ground level after a period of at least 24 hours).

7.79 The following additional measures are proposed to be established during the construction stage of the Development:

- There will also be the provision of bird boxes (25mm and 32mm entrance hole box, house sparrow terrace, swift box), attached to or integrated within new buildings or retained trees on-site and the provision of bat features (e.g. Vivara Pro WoodStone Bat box or similar) attached to a retained tree on-site or provision of a bat box (e.g. Vivara bat bricks or 'bird brick houses' bat boxes) integrated within new buildings. The number, type and specification of bat and bird boxes will be determined following detailed design of the Development; and
- Provision of hedgehog, amphibian and bug boxes.

Operational Phase

7.80 Where required, ongoing ecological monitoring will be undertaken. Mitigation measures will include the provision of bat and bird boxes. The ecology mitigation, long-term management and ongoing monitoring will be outlined within the Landscape Ecology Management Plan (LEMP) for the Development, to be secured through a suitably worded planning condition at a later design stage.

7.81 The LEMP will provide the basis to set out the range of mitigation and enhancement measures that will be agreed within the detailed design of the Development and will also specify how management will be ensured in perpetuity such that habitats are managed to maximise their biodiversity and recreation value. The provision of a LEMP will ensure that habitats are managed through a management plan for a minimum of 30 years.

7.82 The following additional measures are proposed to be established during the operational phase of the Development:

- Retain hedgerows and trees where possible and replace any trees to be removed from the Site at a ratio of 2:1;
- Retain and enhance habitats within the northern and southern sections of the Site and enhance existing water courses on-site to include oak, hazel, field maple, holly, hawthorn, silver birch, crab apple, rowan and bird cherry as tree species, a woodland wildflower mix and bulb planting to include English bluebell, native daffodil and snowdrop;
- Wildflower planting incorporating meadow flower mix to include meadow buttercup,

meadow fescue, sweet vernal grass, common knapweed, vetch, cranesbill and clover species;

- Hedgerow planting to improve connectivity between existing and newly created habitats to include hawthorn, honeysuckle, blackthorn, hazel and holly; and
- Suitable landscaping within the Development incorporating species that provide a food or shelter resource to wildlife such as hawthorn, lavender, rowan, hazel, field maple, crab apple, pear, bird cherry, spring bulbs and late flowering species; and
- The provision of new play spaces, a community parkland, and a hill-top park will create open space for recreational within the Development and will reduce the recreational impact on nearby designated sites.

Residual Effects

Construction Phase

Designated and Non-Designated Sites

- 7.83 Following the assessment contained within the HRA (Appendix 7.8) of the important features of the canal that may be impacted during the construction phase of the Development. A Construction Environmental Management Plan (CEMP) and the implementation of a suitable lighting strategy can also be implemented to ensure that there are no significant effects to local sites. The construction effects on designated and non-designated sites are considered to be **minor adverse** and **not significant** at an **International level**.

Hedgerows and Trees

- 7.84 There are no TPO trees within the Site the Site, there will be some tree loss within the Site following the confirmation of the layout. It is assumed that there will be loss of hedgerows, predominantly to the central areas of the Site. However, following the implementation of embedded mitigation measures, including the retention of hedgerows, together with further mitigation measures contained within the Construction Environmental Management Plan (CEMP), the residual effect would be **negligible** and **not significant** at a **local level**.

Bats

- 7.85 Loss of roosting provision and commuting/foraging habitat. Potential increase in light disturbance. This is considered a minor and not significant at the local level. Similarly, the impacts of insensitive Site lighting especially on boundary habitats are considered **minor adverse** and **not significant** and a suitable lighting strategy can also be implemented to ensure that there are no significant effects to light sensitive species.

Breeding birds

- 7.86 There will be some loss of nesting provision and foraging habitat and possible killing or injuring during the construction phase. However, following the implementation of embedded mitigation measures, that have been indicated on the parameter plan and the Design and Access Statement including the provision green infrastructure, a community park and areas of open space throughout the Site, together with further mitigation measures that will be contacted within the currently ongoing surveys for breeding birds the residual effect would be **minor adverse** and **not significant** at a **local level**.

GCN and amphibians

- 7.87 There will be some loss of aquatic habitat for breeding GCN and amphibians, along with the fragmentation of terrestrial habitat. The parameter plan indicates that water bodies are to be retained within the proposals and the Design and Access Statement also confirms that the existing ponds will be retained with new ponds also being proposed to provide aquatic habitat for GCN and amphibians. With the implementation of the green infrastructure, areas of open space adjacent to the water bodies and the community park effects on GCN and amphibians are considered **minor adverse** and **not significant** at a **local level**.

Badger

- 7.88 There will be some loss of commuting and foraging provision for badgers, along with loss of habitat that would be suitable for sett building for the species. Following the implementation of the mitigation measures contained with the badger mitigation strategy (Appendix 7.2), the effects on badger are considered **minor adverse** and **not significant** at a **local level**.

Water vole

- 7.89 There will be a loss of suitable habitat and disturbance to areas and water courses that provide connectivity for water overflowing. The implementation of mitigation for water vole as recommended in the Water Vole survey letter report (Appendix 7.7) and with the creation of new waterbodies on the Site and the retainment of ditches/brooks as indicated in the design and access statement effects on water vole are considered **minor adverse** and **not significant** at a **local level**.

Brown hare/ hedgehog and other small mammals

- 7.90 There will be loss of foraging and refuge areas and fragmentation of habitats, however following the implementation of the proposed landscaping indicated within the Design and Access Statement, the provision of the country park and green infrastructure shown on the parameter plan and the mitigation measures recommended in the Brown hare survey report (Appendix 7.5), the effects are considered to be **minor adverse** and **not significant** at a **local level**.

Operational Phase

Designated and non-designated Sites

- 7.91 Throughout the operational phase there may be some effects to the statutory and non-statutory sites within the surrounding area from operational traffic, increased emissions and increased human disturbance, along with the effects from hydrologically linkage changes from the Development to the surrounding areas. A HRA report has been produced to identify assess if importance features of the canal will be impacted during any operations (Appendix 7.8). The residual effects on these sites are considered to be **minor adverse** and **not significant** at an **International level**.

Hedgerows and Trees

- 7.92 During the operational phase, newly planted hedgerows will be establishing with species rich native hedgerow is proposed, along with street trees that will also form linear features. Green infrastructure and a community park to the south of the Development is also indicated on the parameter plan, both of which will include ecological enhancement and the retainment of hedgerows. Following the implementation of new linear planting proposals, the impacts on Hedgerows and shown in the Design and Access Statement, the residual effect on trees and hedgerows is considered to be **minor beneficial** and **not significant** at a **local level**.

Species

- 7.93 Throughout the operational phase of the Development, species that use the Site are at risk from possible injury or killing. Mitigation measures for each species will ensure that the risk are minimal and where possible areas of forage and refuge will be retained. Light spill may also be detrimental to light sensitive species such as bat and all species will be subject to habitat fragmentation.

Bats

- 7.94 There is potential for commuting and foraging habitat for bat species to be impacted by inappropriate operational lighting and the fragmentation of the Site from the loss of flightlines, such as hedgerows. There will also be the loss of roosting provision through the loss of buildings and trees. This is considered a **minor adverse** effect and **not significant** at a **local level**.

Breeding birds

- 7.95 There will be loss of grassland habitat from the proposed development, however proposed landscaped habitats are being provided as part of the Development as shown in the Design and Access statement that will include wildflower grasslands to provide nesting and foraging opportunities for a range of farmland bird species. Breeding bird surveys are currently ongoing and the results of these will also recommend and further mitigation for the species. Notwithstanding, a lack of management will result in degraded habitats and result in a **minor adverse** effect and **not significant** at a **local level**.

GCN and amphibians

- 7.96 **Minor adverse** and **not significant** operational effects at a **local level** are anticipated given the Development will retain existing ponds and terrestrial habitats within the Development and Site boundary features. Within the Design and Access Statement terrestrial areas adjacent to the existing and retained waterbodies will be enhanced and new waterbodies will be created throughout the Development to allow increased connectivity to aquatic habitat.

Badger

- 7.97 Operational effects on badger are **minor adverse** and **not significant** at a **local level**. The management of the traffic speeds within the Site will reduce mortality of foraging commuting badgers. The effects on foraging are anticipated to be enhanced due to the extensive wildflower grasslands within the Development that will provide an improved foraging resource for badger as these support higher earthworm and other prey densities. Badger surveys have been undertaken in April and May 2022 and November 2022 with potential outlier setts identified within the Site along with confirmed foraging and commuting activity (Appendix 7.2).

Water Vole

- 7.98 There will be a loss of suitable habitat and disturbance to areas and watercourses that provide connectivity for water overflowing. The implementation of mitigation for water vole as recommended in the Water Vole survey letter report (Appendix 7.7) and with the creation of new waterbodies on the Site and the retainment of ditches/brooks as indicated in the Design and Access Statement effects on water vole are considered **minor adverse** and **not significant** at a **local level**.

Brown hare/ hedgehog and other small mammals

- 7.99 Operational impacts include increased predation by domestic pets and badgers. The creation of gardens with access through garden fences provided by hedgehog 'highways' provide important refuges for hedgehogs from badgers and hence will enhance local hedgehog populations. The parameter plan and Design and Access statement indicated the provision of green infrastructure that will allow brown hare, hedgehog, and other small mammals. The effects on the species are considered **minor adverse** and **not significant** at a **local level**.

Cumulative Effects

Construction phase

- 7.100 Cumulative schemes within the surrounding area to the Site have the potential to cause significant effects throughout the construction phase due to potential land squeeze, loss of habitat and habitat fragmentation at a **minor adverse** and **not significant** at a **local level**. This would predominantly affect species that commute to the wider area for forage and refuge, these include badger, small mammals, birds and bats.

Operation Phase

- 7.101 There is also likely to be an increase of recreational impact to designated sites, Hopwood Woods Local Nature Reserve (LNR) and Rochdale Canal (SSSI) (SAC) (500m west) that lie within the vicinity of the identified cumulative schemes. Due to the designated sites proximity to the schemes the increase in recreational activity is likely to be **minor adverse** and **not significant** at an **International level** from daily activities such as dog walking.

Summary

- 7.102 The Preliminary Ecological Appraisal and updated Site visit involved the collection and review of data from a desk study and field survey along with assessment of the value of the habitats. Habitats and species on the Site were evaluated following the 'Guidelines for Ecological Impact Assessment in the UK and Ireland' 2018. The baseline conditions were assessed to include a wide range of habitats that are predominantly used for agriculture purposes. A desk study was also completed in conjunction with Site visits to assist with determining the baseline conditions.
- 7.103 Likely significant effects that will occur during the construction phase include loss of roosting, refuge provision and commuting/foraging habitat, along with the potential increase in light disturbance. Light disturbance will also have an effect on species during the construction phase due to the risk of light spill and disturbance to habitats. Construction activities would also have a minor, adverse, significant affect during the works.
- 7.104 Mitigation measures throughout the construction phase will include the provision of protective fencing, and the implementation of Reasonable Avoidance Measures.
- 7.105 Residual effects during construction, due to disturbance through noise and movement and considered to be temporary, minor adverse, significant only at the local level.
- 7.106 Throughout the operational phase, disturbance through noise, human disturbance and light spill may occur and impact designated and non-designated sites. This would be a minor adverse effect and non-significant effect at the International level.
- 7.107 Throughout the operational phase there would be a minor adverse effect for all species, significant only at the local level. As mitigation measures will be in place following the ongoing protected species surveys for the Site for each species and the recommended mitigation will be included within the final layout.
- 7.108 Cumulative schemes within the surrounding area to the Site have the potential to cause significant effects throughout the construction and operation phases. This would predominantly affect species that commute to the wider area for forage and refuge, these include badger, small mammals, birds and bats.
- 7.109 There is also likely to be an increase of recreational impact to designated sites, Hopwood Woods Local Nature Reserve (LNR) and Rochdale Canal Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) (500m west) that lie within the vicinity of the

identified cumulative schemes. This would be a minor adverse and not significant effect at the International level.

7.110 Table 7.3 contains a summary of the likely significant effects of the Development.

Table 7.3: Table of Significance – Biodiversity

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement Measures	Geographical Importance*							Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	
				I	UK	E	R	C	B	L		
Construction												
Loss of roosting provision and commuting/foraging habitat for bats.	Temporary	Minor Adverse	Provision of new roosting and habitat enhancement through suitable landscaping.							✓	Minor adverse and not significant at a local level	
Loss of aquatic habitat for breeding amphibians and GCN.	Temporary	Minor Adverse	Retention of water bodies on-site and creation of new water features/ bodies.							✓	Minor adverse and not significant at a local level	
Loss of nesting and foraging provision for breeding bird species.	Temporary	Minor Adverse	Provision of nest boxes.							✓	Minor adverse and not significant at a local level	
Fragmentation of habitats for all species.	Permanent	Minor Adverse	Suitable landscaping to provide continued connectivity.							✓	Minor adverse and not significant at a local level	
Possible killing or injuring of all species.	Permanent	Minor Adverse	Sensitive working practices and Reasonable Avoidance Measures to be implemented.							✓	Minor adverse and not significant at a local level	

Impact on statutory and non-statutory sites	Temporary	Minor Adverse	Sensitive working practices and Reasonable Avoidance Measures to be implemented.	✓								Minor adverse and not significant at an International Level
Effects on hedgerows and trees	Temporary	Moderate Adverse	Implementation of a CEMP and Reasonable Avoidance Methods (RAMs)								✓	Negligible and not significant at a local level

Completed Development

Light Spill for light sensitive species, including bats.	Permanent	Minor Adverse	Implementation of sensitive lighting.								✓	Minor adverse and not significant at a local level
Disturbance for all species.	Permanent	Minor Adverse	Provision of open space and retained areas with a lower level of human disturbance.								✓	Minor adverse and not significant at a local level
Habitat fragmentation for all species.	Permanent	Minor Adverse	Suitable landscaping to provide continued connectivity.								✓	Minor adverse and not significant at a local level

Impact on statutory and non-statutory sites	Permanent	Minor Adverse	A report to Inform a HRA has been submitted to RBC to inform an Appropriate Assessment	✓								Minor adverse and significant at an International level
Effects on hedgerows and trees	Permanent	Minor Beneficial	Implementation of new hedgerow planting and retention of existing hedgerows and trees								✓	Minor beneficial and not significant at a local level
Cumulative Effects												
<i>Construction</i>												
Loss of habitat and habitat fragmentation for all species.	Permanent	Minor Adverse	Suitable landscaping to provide continued connectivity.								✓	Minor adverse and not significant at a local level
<i>Completed Development</i>												

Loss of habitat and habitat fragmentation for all species. .	Permanent	Minor Adverse	Suitable landscaping to provide continued connectivity.	✓								Minor adverse and not significant at an International level
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*** Geographical Level of Importance**

I = International; UK = United Kingdom; E = England; R = Regional; C = County; B = Borough; L = Local

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