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Tom Stott
Great Places Housing Group
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Manchester
M21 7QP

ERAP (Consultant Ecologists) Ltd ref: 2023-190

1st August 2023

Dear Tom,

RE: Letter Detailing a Revised Assessment of Impacts and Updated Conclusion Based on the Current Proposals at Land off Downley Drive, Ancoats M4 7JY

This letter provides an update to our report *2021-064 Downley Drive, Ancoats, Manchester M4 7JY: Ecological Survey and Assessment* (ERAP (Consultant Ecologists) Ltd, July 2021)[1], to reflect the revised proposed development at the site. The revised proposals are presented at *Downley Drive: Proposed Design Changes 10.07.23* (Buttress Architects Ltd, 2023) and a description of the revised proposals has been provided to ERAP (Consultant Ecologists) Ltd and is presented below:

'Existing Site

The site is bounded by the Rochdale Canal to the north-east, green space to the north-west, Kingham Drive to the south-east and houses to the south-west which are being delivered under planning application number 130390/FO/2021.

The site formally comprised of grassland with a limited number of trees. An unadopted path cut through the site from St Vincent Street to the north, to Downley Drive to the south. The site has since been cleared as part of the application mentioned above.

Proposal

The proposed scheme is a design development of the approved apartment block in planning application number 130390/FO/2021. Due to the location of an unchartered United Utilities (UU) manhole, a redesign has been required to provide free access to it. Through discussions with UU, it was established that no oversailing or cantilevers would be accepted over the manhole and free space to the sky would be required. As such, approximately 87sqm of the proposed building's footprint has been removed to the south-west corner. Due to the loss of four 2B4P apartments on the upper floors, an additional floor providing a further 11 apartments is proposed. This results in a net gain of 7 apartments, totalling 52 overall.

A dedicated cycle store is provided at ground floor and is accessible both from the outside and the secure entrance lobby. A 1:1 ratio of apartment to cycle storage is proposed through the use of two-tier bike racks, giving a total of 52 cycle parking spaces.

The design principles and architectural language will remain largely the same, with the main changes being the overall height and articulation of the south south-west corner.'

It is considered that updated ecological surveys of the site are not required in this instance, and the baseline habitats at the site are reasonably likely to remain as previously described in the 2021 ecology report. It is also considered in this instance that updated surveys for protected or notable species are not required at the site, and the site's suitability for use by wildlife is likely to remain as previously described in the 2021 ecology report. The measures outlined in the 2021 ecology report for the protection of wildlife will remain suitable for the proposed development.

[1]Hereafter the '2021 ecology report.

Due to the increased height of the proposed development the client has provided an updated transient shadow assessment to inform this updated assessment of the site. It is considered that the assessment of shadow created by the previous proposals and as presented in the 2021 ecology remains relevant to the assessment, however. The assessment presented in the 2021 report is presented below for ease of reference:

'From the above, the following points can be made:

a. *The proposals will create additional shading to the section of Rochdale Canal Stott's Lane to Ducie Street Basin SBI;*
b. *The shading will have the potential to impact upon any aquatic vegetation present at the canal (if present); and*
c. *This section of the canal is already shaded from the west by existing development.*

No floating or emergent plant species were noted at the canal; only submerged plant species were detected.

The aquatic plant surveys did not detect the presence of Floating-water Plantain within the section of canal which may be affected by shading (or at the areas either side). No plant species associated with the designation of the canal as an SBI were detected within the section of canal surveyed.

The distribution of plant species within the canal remained largely homogenous throughout with Nuttall's Waterweed and a Stonewort species evident across the whole surveyed area. The presence of Tapegrass, a non-native species located at an area where the water temperature was noticeably higher than the surrounding areas, was the only additional species detected.

The plant species distribution remains similar at areas where shading is already present; it is therefore considered unlikely that any additional shading as a consequence of the proposed development will impact upon the submerged aquatic plants associated with the canal.'

The assessment presented above indicates that the increase to shading over the canal as a consequence of the proposed development will not impact significantly on aquatic plants within the canal, and the assessment provided in the 2021 ecology report remains accurate for the site.

It is considered that the evaluation, recommendations and conclusions presented in the 2021 ecology report remain appropriate for the proposed development at the site.

I trust this is acceptable; please let me know if you require any further assistance.

Kind regards,

Brian Robinson B.Sc. (Hons) MCIEEM
Senior Ecologist

Downley Drive, Ancoats, Manchester, M4 7JY

ECOLOGICAL SURVEY AND ASSESSMENT

May 2021

[ERAP (Consultant Ecologists) Ltd ref: 2021-064]

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Document Control

Survey Type:	**Surveyors[1]**	**Survey Date(s)**
Phase 1 Habitat survey	Brian Robinson B.Sc. (Hons) MCIEEM and Luke Atherton B.Sc. (Hons) M.Sc.	24th March 2021
Reporting	**Personnel**	**Date**
Author	Brian Robinson B.Sc. (Hons) MCIEEM Senior Ecologist	29th March 2021
Signature(s)		
Checked	Catie Haworth B.Sc. (Hons) M.Sc. Graduate Ecologist	31st March 2021
Revised and issued	Brian Robinson B.Sc. (Hons) MCIEEM Senior Ecologist	20th April 2021
Report issued to	Great Places Housing Association	
Version Number	1	

[1] Licence reference numbers
Bats
Brian Robinson Natural England Class Survey Licence (bats, Level 2) Registration Number 2015-13161-CLS-CLS
Wild plants
Victoria Burrows, Natural England WML-A31 Taking Wild Plants Licence Number 2020-50615-SCI-SCI

SUMMARY

i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of land off Downley Drive, Ancoats, Manchester. The assessment was requested in connection with proposals for residential development, comprising housing and apartments.

ii. This report presents the results of a desktop study, data search and extended Phase 1 Habitat Survey carried out in March 2021. A further survey of aquatic vegetation at the ideal timeframe (i.e. late June to September) is required at the 60 metres long section of the Rochdale Canal Stott's Lane to Ducie Street Basin SBI (located adjacent to the site's north-western boundary) to determine any effects to aquatic plants (including Floating Water-plantain (*Luronium natans*)) as a consequence of the proposals. Otherwise, the scope of survey undertaken is appropriate to identify potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.

iii. The approximately 0.69 hectare site is located within an urban area of Manchester City Centre and supports fenced area at its south-western end which supports compacted stone with colonising ruderal herbs, coarse unmanaged grassland and boundary shrubs (this area has previously been used as a site compound circa 2016) and an area of amenity grassland, scattered parkland trees and hard standing footpaths at its north-eastern end. The site lies adjacent to Rochdale Canal Stott's Lane to Ducie Street Basin SBI at its north-western end.

iv. Appropriate measures to prevent pollution incidents to the Rochdale Canal Stott's Lane to Ducie Street Basin SBI during the construction phase of the proposed development, and measures to ensure the proposals do not create negative effects in terms of the suitability of the canal for foraging bats, are presented at **Section 5.3**. Further surveys are required to determine whether shading as a consequence of the proposals will impact upon aquatic plant species associated with the canal. Otherwise the proposals will have no adverse effect on statutory or non-statutory designated sites for nature conservation.

v. The site contains only common and widespread plant species. None of the habitats within the site are of significant interest in terms of their plant species composition. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present. No Priority Habitats are present.

vi. In terms of each habitat's importance in a geographical context, the unmanaged grassland and scattered parkland trees are considered to be of 'site' importance as they support habitats of value to nesting birds and foraging birds and bats. The amenity grassland, hard standing and colonising ruderal herbs are assessed to be of 'negligible' importance. The 60 metres long section of the Rochdale Canal Stott's Lane to Ducie Street Basin SBI located adjacent to the site's north-western boundary is considered to be Local Authority importance, and will act as a wildlife link for the wider area.

vii. No invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were detected within the site.

viii. Habitats within and adjacent to the site, notably the section of Rochdale Canal located adjacent to the site's north-western boundary, are suitable for foraging and commuting bats. Recommendations for providing features for roosting bats as part of the proposed development are presented at **Section 5.4**. The trees and shrubs provide suitable foraging and nesting habitat for birds; consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 5.5** of this report. Measures to ensure habitat connectivity for wildlife are presented at **Section 5.6**. Otherwise the presence of protected and notable species is reasonably discounted.

ix. The recommendations in **Section 5.0** outline all the mandatory measures and additional actions to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.

x. The proposals will secure an opportunity to implement beneficial measures such as habitat creation that will safeguard habitats for wildlife such as birds and bats, in accordance with the principles of the NPPF.

xi. It is concluded that the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. Development at the site will provide an opportunity to secure ecological enhancement for wildlife associated with residential development.

1.0 INTRODUCTION

1.1 Background and Rationale

1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Great Places Housing Association to carry out an ecological assessment of land off Downley Drive, Ancoats, Manchester M4 7JY (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the 0.69 hectare site is SJ 85371 98748. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (Source image: ESRI World Imagery).

1.1.2 The assessment was requested in connection with a planning application for residential development.

1.2 Scope of Works

1.2.1 The scope of ecological works undertaken in March 2021 comprised:

a. A desktop study and data search for known ecological information at the site and the local area;

b. An Extended Phase 1 Habitat Survey and assessment;

c. Assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria, as presented in *A Nature Conservation Review* (Ratcliffe, 1977);

d. Survey and assessment of all habitats for relevant statutorily protected species[1] and other wildlife including badger (*Meles meles*), barn owl (*Tyto alba*), water vole (*Arvicola amphibius*), otter (*Lutra lutra)*, bird species and reptiles;

e. A licensed daylight bat survey of the trees;

f. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and

g. The identification of any further surveys or precautionary actions that may be required prior to the commencement of any development activities.

2.0 METHOD OF SURVEY

2.1 Desktop Study and Data Search

2.1.1 The following sources of information and ecological records were consulted:

a. MAGiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites;

b. *Environment Agency Main River Map* (Environment Agency, 2021);

c. Greater Manchester Local Record Centre (GMLRC); and

d. Greater Manchester Biodiversity Action Plan (BAP).

[1] In accordance with *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact on the Planning System* (Ministry of Housing, Communities & Local Government, 2005) developers should not be required to undertake surveys for protected species unless there is reasonable likelihood of the species being present and affected by the development. In this instance (for example) there are no ponds within 500 metres of the site; there has therefore been no requirement to consider great crested newt (*Triturus cristatus*) as part of this assessment.

2.2 Vegetation and Habitats

2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Brian Robinson B.Sc. (Hons) MCIEEM and Luke Atherton B.Sc. (Hons) M.Sc. on 24th March 2021. The weather was dry and sunny with a light air (Beaufort scale 1) and an air temperature of 12°C.

2.2.2 A habitat and vegetation map was prepared for the site and the immediate surrounding area at a scale of 1:1000 (refer to **Figure 2**). The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010) with minor adjustments to illustrate and examine the habitats with greater precision.

2.2.3 On site habitat mapping was assisted via use of GPS technology and QField on-site mapping software, using *Downley Drive – Existing Site – Location Plan 8801-BA-00-00-DR-A-(01) 003-2* (Great Places Housing Group, 2020) and ESRI World Imagery as base plans.

2.2.4 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare, this being a widely used and accepted system employed by ecological surveyors. The terms L = Locally and V = Very were additionally used to describe the plant species distributions with greater precision.

2.2.5 Stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is a reliable framework for nature conservation and land-use planning.

2.2.6 Habitats within the site were assessed in accordance with the UK Habitats Classification / UKHAB (Group, et al., 2020). The UKHAB has been designed to function at two scales: fine scale (25m^2 or 5 metres length) and large scale (400m^2 or 20m^2 length). It has been considered for the purposes of this survey that the fine scale of 25m^2 is appropriate for the classification of habitats.

2.2.7 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. Plant nomenclature follows *New Flora of the British Isles 3rd Edition* (Stace, 2010).

2.2.8 A search for aquatic and emergent vegetation along the length of the Rochdale Canal adjacent to the site was conducted. The method followed comprised walking the canal bank (including the length adjacent to the site and extending at least 10 metres at each end) on both sides of the canal to search for any emergent / aquatic vegetation at the water surface, and searching for submerged aquatic vegetation using a pond net dipped to the base of the canal at 5 metre intervals along the length of the surveyed canal bank.

2.2.9 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), including Japanese Knotweed (*Fallopia japonica*), Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*).

2.3 Animal Life

Badger

2.3.1 The survey area for badger covered the site (as annotated on **Figures 1** and **2**) and extended to accessible land within a radius of 50 metres from the site boundary. Private gardens / land were excluded from the survey.

2.3.2 The survey was conducted in accordance with guidance presented within *Badgers and Development* (Natural England, 2007) and *Badgers: surveys and mitigation for development projects* (Natural England, 2015).

2.3.3 The following signs of badger activity were searched for:

a. Sett entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a 'D' on its side;

b. Large spoil heaps outside sett entrances;

c. Bedding outside sett entrances;

d. Badger footprints;

e. Badger paths;

f. Latrines;

g. Badger hairs on fences or bushes;

h. Scratching posts; and

i. Signs of digging for food.

2.3.4 Habitats within and surrounding the site were assessed in terms of their suitability for use by foraging and sheltering badger in accordance with their known habitat preferences as detailed in current guidance and *Badger* (Roper, 2010).

Bat Species

Daylight Survey

Trees

2.3.5 A preliminary assessment of the trees within the site was conducted to assess their suitability for use by roosting bats, and to inform whether further surveys or precautionary measures were required.

2.3.6 Trees were assessed from the ground using binoculars and a high-powered torch. Each tree was searched for the presence of the following features:

Woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed platey bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached Ivy (Hedera helix) with stem diameters in excess of 50mm and bat, bird or dormouse (Muscardinus avellanarius) boxes.

2.3.7 Terms used to describe any features present follow (where possible) those outlined and described in *Bat Tree Habitat Key, 2nd Edition* (Andrews, H (ed), 2013) and *Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-care and Ecology Professionals* (BTHK, 2018).

Habitat Assessment for Commuting / Foraging Bats

2.3.8 Habitats within and adjacent to the site were assessed for their value and suitability for commuting and foraging bats in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn),* (Collins, J. (ed), 2016). Reference has been made to the categories and descriptions / examples, presented at **Table 2.1**, below.

Table 2.1: Consideration of Suitability of Foraging and Commuting Habitat for Bats

Suitability	Commuting Habitat	Foraging Habitat
Negligible	Negligible habitat features on site likely to be used by commuting bats.	Negligible habitat features on site likely to be used by foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat.	Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree or patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.	Habitat that is linked to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape and is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. Habitats close to and connected to known roosts.	High-quality habitat that is well-connected to the wider landscape and is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Habitats close to and connected to known roosts.

Bird Species

2.3.9 Bird species observed and heard during the survey were recorded.

2.3.10 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.

Reptile Species

2.3.11 The site and its surroundings were assessed in terms of their suitability for use by reptile species using the important characteristics for reptiles outlined in the draft document '*Reptile Mitigation Guidelines*' (Natural England, 2011), and the *Reptile Habitat Management Handbook* (Edgar, et al., 2010). These habitat characteristics are outlined in **Table 2.2**, below.

Table 2.2: Important Habitat Characteristics for Reptiles

1. Location (in relation to species range)	7. Connectivity to nearby good quality habitat
2. Vegetation Structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

Water Vole and Otter

2.3.12 A section of the Rochdale Canal is located adjacent to the north-western site boundary (refer to **Figures 1** and **2**).

2.3.13 The canal was assessed in accordance with the following methodology to determine any field signs of water vole and otter and its suitability for water vole and otter. 50 metres up and downstream of the site was also surveyed. At total of 160 metres of watercourse was surveyed in total.

2.3.14 The survey methodology detailed in *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series) Eds. Fiona Mathews and Paul Chanin* (Dean, et al., 2016), was applied and the watercourse and associated banks were searched for burrows, latrines, feeding remains, runs, feeding lawns, nests and footprints.

2.3.15 The otter survey was undertaken in accordance with the habitat requirements and preferences detailed in *Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series 10* (Chanin, 2003) and searches were made for signs of otter in accordance with *Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10* (Chanin, 2003) and current Natural England guidance (Natural England, 2014).

2.3.16 The canal was searched for dung (spraints), tracks (footprints), feeding remains, otter slides (into water), holts (underground dens) and couches (above ground sites where otters rest during the day).

Other Wildlife

2.3.17 Evidence of other wildlife (including Priority Species) observed whilst on site (but for which specific surveys were not made) was recorded and has been included in this report where it is considered of relevance to the planning application.

2.4 Survey and Reporting Limitations

2.4.1 The survey was completed when many plant species are not in full growth. The surveyors are experienced in identifying plant species from their vegetative characteristics however, and a reliable assessment of the habitats present was possible.

2.4.2 The time of year was not favourable for the detection and identification of aquatic plants, however, the examination of the canal for aquatic and emergent vegetation was for additional information purposes only and this is not considered to be a limitation to the objectives of this report.

2.4.3 All measurements within this report are approximate only, and have been either measured (using QField) or estimated whilst on site or calculated using mapping software (QGIS) or internet-based mapping services such as MAGiC and Google Earth.

2.5 Evaluation Methods

2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described in *A Nature Conservation Review* (Ratcliffe, 1977) and *Guidelines for the Selection of Biological SSSIs* (Bainbridge, et al., 2013). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.

2.5.2 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities* (NERC) *Act 2006*. Where suitable, the ecological value of the habitats present have been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018).

2.5.3 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, 2019) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species Regulations 2017*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.

2.5.4 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and/or species listed by the Greater Manchester Biodiversity Action Plans has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study and Data Search

Statutory Designated Sites for Nature Conservation and SSSI Impact Risk Zones

3.1.1 The site and immediate surrounds have no statutory designation for nature conservation.

3.1.2 The site lies 4.2 kilometres to the south-west of the Rochdale Canal Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI), 5.66 kilometres to the west of the Hollinwood Branch Canal SSSI and 8.1 kilometres to the west of the Huddersfield Narrow Canal SSSI. The Rochdale Canal SAC and SSSI is designated for its extensive colonies of the nationally scarce SAC species Floating Water-plantain (*Luronium natans*). Hollinwood Branch Canal SSSI is considered the best example of a mesotrophic standing water system in Greater Manchester and Merseyside. The Huddersfield Narrow Canal SSSI is the best example of a flowing eutrophic water system in Greater Manchester.

3.1.3 The site lies within the SSSI Impact Risk Zones for the above sites. The SSSI Impact Risk Zone requires the Local Planning Authority to consult with Natural England on likely risks from the following development categories (Ordnance Survey, 2021):

a. Airports, helipads and other aviation proposals;

b. Any industrial / agricultural development that could cause air pollution (including industrial processes, livestock and poultry units with a floorspace greater than 500m², slurry lagoons greater than 750m² and manure stores greater than 3500 tonnes).

c. General combustion processes greater than 50 megawatts energy input, including energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis / gasification, anaerobic digestion, sewage treatment works, and other incineration / combustion.

3.1.4 The proposals do not meet the criteria which would require the local planning authority to consult with Natural England on likely risks to the statutory sites as a result of the development.

Non-statutory Designated Sites for Nature Conservation

3.1.5 Refer to **Figures 1** and **2**. The north-western end of the site lies within the Rochdale Canal Stott's Lane to Ducie Street Basin Site of Biological Importance (SBI); the remainder of the site hold no designation for nature conservation.

3.1.6 Two further SBIs are located within 2 kilometres of the site; the SBIs are summarised below:

Table 3.1: Non-statutory Sites within 2 kilometres of the Site

Site of Biological Importance	Distance and Direction from Site (OS grid reference)	Reasons for Designation
Rochdale Canal Stott's Lane to Ducie Street Basin	Adjacent to the northern site boundary (SD 8886007 to SJ 846981)	Canal habitat (Greater Manchester Priority Habitat) Supports important populations of Floating Water-Plantain (*Luronium natans*) and for its assemblage of pondweed species (*Potamogeton* spp.)
Ashton Canal (West)	300 metres to the south (SJ 8554 9842 at its closest point)	Canal habitat (Greater Manchester Priority Habitat)
Bank Bridge Meadow	1.9 kilometres to the east (SJ 8740 9921)	Woodland and grassland habitat

Main River Map

3.1.7 The section of the Rochdale Canal which lies adjacent to the site does not form part of a Main River in accordance with the Main River Map (Environment Agency, 2021).

Priority Habitats Inventory

3.1.8 The Priority Habitats Inventory[2] was checked via MAGiC map. No Priority Habitats are listed for the site or the immediate surrounding area.

Protected and Notable Species

3.1.9 GMLRC hold no records of protected and notable species for the site.

3.1.10 Records of protected and notable species for a 2 kilometre radius of the site are summarised at **Table 3.2** below.

Table 3.2: Records of Protected Species Within a 2 Kilometre Radius of the Site

Taxon Group	Species Name and Designations[1] and Notes
Flowering plants	Floating Water-plantain (*Luronium natans*): EPS, WCAs8 & PS. 2 records, the closest of which is 500 metres to the south-east of the site and associated with the Ashton Canal (West) SBI.
	Priority Species Grass-wrack Pondweed (*Potamogeton compressus*) and Yellow Bird's-nest (*Monotropa hypopitys*)
Birds	Black redstart (*Phoenicurus ochruros*): WCAs1. 29 records, the closest of which is located 400 metres to the south-west of the site.
	Hobby (*Falco subbuteo*): WCAs1. 1 record located 1.7 kilometres to the west of the site.
	Kingfisher (*Alcedo atthis*): WCAs1. 13 records, the closest of which is located 1 kilometre to the north-east of the site.
	Little ringed plover (*Charadrius dubius*): WCAs1. 4 records, the closest of which is located 200 metres to the south of the site.
	Peregrine (*Falco peregrinus*): WCAs1. 26 records, the closest of which is 200 metres to the south of the site.
	Priority Species Bullfinch (*Pyrrhula pyrrhula*), cuckoo (*Cuculus canorus*), dunnock (*Prunella modularis*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), lesser redpoll (*Carduelis cabaret*), linnet (*Carduelis cannabina*), song thrush (*Turdus philomelos*), spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*) and yellow wagtail (*Motacilla flava*).
	Grey heron (*Ardea cinerea*) heronry: A nesting site for herons; all active nests and breeding birds are protected under the Wildlife and Countryside Act 1981 (as amended). 1 record located 1.5 kilometres south-west.
Insects (moths)	**Priority Species** Unidentified moth
Terrestrial mammals	Badger (*Meles meles*): PBA92. 7 records of setts and five records of other signs. The closest record is over 1 kilometre from the site.
	Bat species (*Chiroptera* sp.): EPS, WCAs5 & GMBAP. 2 records of activity, the closest of which is 1.5 kilometres to the south-west of the site.
	Common pipistrelle (*Pipistrellus pipistrellus*): EPS, WCAs5 & GMBAP. 14 records of roosts and 60 records of activity, the closest of which is 100 metres to the west.
	Daubenton's bat (*Myotis daubentonii*): EPS, WCAs5 & GMBAP. 1 record of activity located 1.8 kilometres to the west of the site.
	European otter (*Lutra lutra*): EPS, PS & WCAs5. 1 record located 2 kilometres to the west of the site.
	Hedgehog (*Erinaceus europaeus*): PS. 1 record located 1.8 kilometres to the south-west of the site.

[2] A spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance.

Taxon Group	Species Name and Designations[1] and Notes
	Myotis species (*Myotis* sp.): EPS, WCAs5 & GMBAP. 1 record of a roost located 1 kilometre to the south-west of the site.
	Pipistrelle species (*Pipistrellus* sp.): EPS, WCAs5 & GMBAP. 4 records of roosts and 12 records of activity, the closest of which is located 250 metres to the south-east of the site.
	Soprano pipistrelle (*Pipistrellus pygmaeus*): EPS, PS, WCAs5 & GMBAP. 1 record of a roost and 3 records of activity, the closest of which is located 750 metres to the west of the site.
[1]Key to Designation Codes: EPS = European Protected Species under the *Conservation of Habitats and Species Regulations 2017.* WCAs1 = Species receives full protection under Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended). WCAs5 = Species receives full protection under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended). WCAs8 = Species receives full protection under Schedule 8 of the *Wildlife and Countryside Act 1981* (as amended). PBA92 = Protection of Badger Act 1992 PS = Priority Species listed under Section 41 of the NERC Act 2006 GMBAP = Species listed on the Greater Manchester Biodiversity Action Plan	

3.1.11 The presence of these protected and notable species within the wider area has been taken into account throughout this report.

3.2 Vegetation and Habitats

General Description

3.2.1 The approximately 0.69 hectare site is located within an urban area of Manchester City Centre and supports fenced area at its south-western end which supports compacted stone with colonising ruderal herbs, coarse unmanaged grassland and boundary shrubs (this area has previously been used as a site compound circa 2016) and an area of amenity grassland, scattered parkland trees and hard standing footpaths at its north-eastern end.

3.2.2 The north-western site boundary is defined by a hard standing footpath, beyond which lies a block of flats (at the boundary's western end) and the Rochdale Canal and an area of amenity grassland (at the boundary's eastern end). The south-eastern site boundary is defined by garden fencing and hard standing associated with Kingham Drive and Downley Drive. The south-western site boundary is defined by Woodward Place.

3.2.3 A Phase 1 Habitat Survey map is appended at **Figure 2**, and can be referred to for all habitat descriptions. Photographs are appended at **Section 8.2**.

Unmanaged Grassland and Ruderal Herbs Colonising Hard Standing with Fenced Compound

3.2.4 Refer to **Photo 1**. The coarse unmanaged grassland is characterised by frequent and locally abundant Common Couch (*Elytrigia repens*) and False Oat-grass (*Arrhenatherum elatius*), occasional and locally frequent Creeping Buttercup (*Ranunculus repens*), Mosses, Red Fescue (*Festuca rubra*), Yorkshire-fog (*Holcus lanatus*) and Cock's-foot (*Dactylis glomerata*), occasional and very locally frequent Hard Rush (*Juncus inflexus*) and Colt's-foot (*Tussilago farfara*) and occasional Perennial Rye-grass (*Lolium perenne*), Bramble (*Rubus fruticosus* agg.), Broad-leaved Dock (*Rumex obtusifolius*), Bush Vetch (*Vicia sepium*), Common Ragwort (*Senecio jacobaea*), Common Vetch (*Vicia sativa*), Dandelion (*Taraxacum officinale* agg.), Great Willowherb (*Epilobium hirsutum*) and Ribwort Plantain (*Plantago lanceolata*). A plant species list is appended at **Table 8.1**.

3.2.5 The unmanaged grassland is characteristic of an *MG1 False Oat-grass* grassland (Rodwell, 1992), and is described in the UKHAB as g3c5 Arrhenatherum (Oat-grass) neutral grassland with the following secondary codes: 10 scattered scrub, 14 scattered rushes, 16 tall herb, 161 Tall or tussocky sward and 76 Recent Management (i.e. within 3 years).

3.2.6 Refer to **Photo 2**. The ruderal herbs colonising the compacted stone hard standing within the former compound area are characterised by occasional and locally frequent Creeping Bent (*Agrostis stolonifera*), Annual Meadow-grass (*Poa annua*) and Yorkshire-fog, occasional and very locally frequent Butterfly-bush

(*Buddleja davidii*), occasional Black Medick (*Medicago lupulina*), Broad-leaved Dock, Colt's-foot, Dandelion, Dove's-foot Crane's-bill (*Geranium molle*) and White Clover (*Trifolium repens*) and locally frequent mosses. A plant species list is appended at **Table 8.2**.

3.2.7 The habitat is not typical of any NVC community, and is described by the UKHAB as u1c artificial unvegetated; unsealed surface with the following secondary codes: 17 ruderal/ephemeral and 76 Recent Management (i.e. within 3 years).

Amenity Grassland and Scattered Parkland Trees and Hard Standing Footpaths

3.2.8 Refer to **Photos 3** to **5**. The amenity grassland is characterised by constant and abundant Perennial Rye-grass (*Lolium perenne*), constant and frequent Yorkshire-fog, occasional and locally abundant Red Fescue, occasional Annual Meadow-grass, Broad-leaved Dock, Cock's-foot, Common Ragwort, Creeping Buttercup, Creeping Thistle (*Cirsium arvense*), Dandelion and Reed Canary-grass (*Phalaris arundinacea*).

3.2.9 The woody species comprise locally frequent Beech (*Fagus sylvatica*), very locally frequent Ash (*Fraxinus excelsior*) and Silver Birch (*Betula pendula*) and rare Hawthorn (*Crataegus monogyna*), Lawson's Cypress (*Chamaecyparis lawsoniana*) and Elder (*Sambucus nigra*).

3.2.10 The amenity grassland is characteristic of an *MG7 Perennial Rye-grass* ley grassland (Rodwell, 1992) of the NVC, and is described by the UKHAB habitat as g4 Modified grassland with the following secondary codes: 11 scattered trees, 75 Active Management, 66 Frequently mown, 154 Open grown trees and 86 Accessible natural greenspace.

3.2.11 A plant species list is appended at **Table 8.3**.

3.2.12 No vegetation is associated with the asphalt footpaths within this area.

Rochdale Canal

3.2.13 Refer to **Photo 6**. The section of the Rochdale Canal which is located adjacent to the site comprises a 9 metres wide body of standing water with banks set at 90° and comprising mortared stone, with an area of amenity grassland beyond the northern bank and an asphalt hard standing to the south.

3.2.14 No aquatic or emergent plant species were detected along the length of canal adjacent to the site or within 50 metres in either direction of the site.

3.2.15 Vegetation colonising gaps in the canal bank walls are characterised by occasional and very locally frequent Great Willowherb (*Epilobium hirsutum*) and Red Fescue, occasional Dandelion and Ribwort Plantain and very locally frequent Butterfly-bush, Cock's-foot, Creeping Bent and Yorkshire-fog. The vegetation is not typical of any NVC community. A plant species list is appended at **Table 8.4**.

3.2.16 The canal is described by the UKHAB habitat as r1e canals with the following secondary codes: 39 Freshwater - man-made, 75 Active Management and 86 Accessible natural greenspace.

Invasive Plant Species

3.2.17 No invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were detected within the site.

3.3 Animal Life

Badger

3.3.1 No badger or signs of badger were detected within the site or within the accessible 50 metres around the site. The presence of badger is reasonably discounted.

Bat Species

Trees

3.3.2 No trees support any features suitable for use by roosting bats.

3.3.3 The presence of roosting bats is reasonably discounted at the site.

Habitat Assessment for Commuting and Foraging Bats

3.3.4 The trees and shrubs along the site margins are suitable for use by foraging bats, particularly pipistrelle species.

3.3.5 The amenity grassland within the site is unlikely to provide an abundance or diversity of invertebrate prey, and is therefore considered to be of low suitability for use by foraging bats.

3.3.6 The habitats present may be suitable for and contribute to the wider foraging area of low numbers of common species of edge-feeding foraging bats, such as common pipistrelle (*Pipistrellus pipistrellus*), and also low numbers of species known to forage over open habitats and over wide areas, such as noctule (*Nyctalus noctula*).

3.3.7 The Rochdale Canal provides high quality habitat for both foraging and commuting bats. This is considered further at **Section 4.4** below.

Bird Species

3.3.8 Birds detected in the site in March 2021 are listed in **Table 3.3**, below.

Table 3.3: Bird species Detected on 24th March 2021

Scientific Name	Common Name	BOCC Status[1]	Priority Species?
Chroicocephalus ridibundus	Black-headed gull	Amber	
Columba palumbus	Wood pigeon	Green	
Erithacus rubecula	Robin	Green	
Gallinula chloropus	Moorhen	Green	
Parus caeruleus	Blue tit	Green	
Passer domesticus	House sparrow	Red	Yes
Pica pica	Magpie	Green	
Turdus merula	Blackbird (3)	Green	
[1]BOCC: Birds of Conservation Concern (Eaton, et al., 2015)			

3.3.9 The trees and shrubs are all suitable for use by nesting passerine (i.e. perching) species, including those detected within the site during the survey. This is considered further at **Section 4.4**, below.

Reptiles

3.3.10 The regularly disturbed and managed habitats within the site provide poor quality habitat for sheltering, basking and hibernating reptiles. The site supports an even topography and there are no piles of garden waste or other suitable debris for use by sheltering or hibernating reptiles. The species-poor habitats within the site are reasonably unlikely to support a large populations or a variety of invertebrate prey.

3.3.11 The site is not adjacent or linked to any areas of favourable habitat for reptile species, and there are no records of reptile for the site or the wider area. The presence of reptiles within the site is reasonably discounted.

Water Vole and Otter

3.3.12 The banks of the Rochdale Canal are lined by stone flags along the edge of the canal adjacent to the site and in both directions from the site for over 50 metres. No aquatic or emergent vegetation is present along the canal.

3.3.13 The banks of the canal do not support suitable plant species for foraging water vole. The habitats within and adjacent to the site are unsuitable for water vole. The presence of water vole is reasonably discounted.

3.3.14 No sign of otter was detected along the section of canal surveyed,. The presence of otter is reasonably discounted.

Other Wildlife

3.3.15 The site does not support suitable habitat for sheltering hedgehog (*Erinaceus europaeus*), however habitats are suitable for foraging hedgehog and habitats suitable for use by sheltering hedgehog are present in the wider area. This is considered further at **Section 4.4** below.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

4.1.1 In accordance with *Downley Drive: Site Plan Proposed 8801-BA-00-00-DR-A-(04) 001-11* (Buttress, 2021), hereafter the 'proposals plan', the proposals will develop the site to housing and apartments, with associated access and gardens.

4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on the designated sites for nature conservation present in the wider area. The ecological value of the habitats within the site is evaluated at **Section 4.3**, and protected and notable species are considered at **Section 4.4**.

4.2 Designated Sites for Nature Conservation

4.2.1 It is considered that the site is sufficiently small and distant from the statutory designated sites present in the wider area that effects as a consequence of the proposed development are reasonably unlikely. The site is hydrologically connected to the Rochdale Canal SSSI and SAC; measures to ensure pollution incidents during the construction phase of the proposed development do not impact upon the adjacent section of the Rochdale Canal (as recommended at **Section 5.3** below) will additionally protect the SSSI and SAC during construction works.

4.2.2 The site is adjacent to a 60 metres long section of the Rochdale Canal Stott's Lane to Ducie Street Basin SBI. This section of the canal supports existing canal side footpaths and open ground with amenity grassland and public open space. It is not considered that the proposals will create additional recreational pressures on the SBI as a consequence of the development.

4.2.3 Potential effects to the SBI during the construction and operational phases of the proposed development are considered below:

a. Increased shading of the canal as a consequence of the proposed buildings (thereby reducing the suitability of the canal for aquatic plant species); and

b. Pollution incidents during the construction phase of the development.

4.2.4 An assessment of the potential shading of the canal as a consequence of development has been provided by Gray Scanlan Hill with both the existing levels of shading and proposed levels of shading shown between 07:00 and 18:00 on the example dates 21st March, 21st June, 21st September and 1st December.

4.2.5 These data are summarised at **Table 4.1** below. The section of canal concerned is the 60 metres long section located to the north-western site boundary and approximately 20 metres either side of this section. The percentage shade given is approximate only.

Table 4.1: Summary of Modelled Data for Shading of the Rochdale Canal Showing Baseline Values and Values as a Consequence of the Proposed Development

Time	Level of Shading by Date			
	21st March	**21st June**	**21st September**	**21st December**
04:00	Sun not risen	*Canal 10% in shade by existing development* Canal not shaded by proposed development	Sun not risen	Sun not risen
05:00	Sun not risen	*Canal 90% in shade by existing development* Canal not shaded by proposed development	Sun not risen	Sun not risen
06:00	Sun not risen	*Canal not shaded by existing development* Canal 30% in shade by proposed development	Sun not risen	Sun not risen
07:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 50% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development	Sun not risen
08:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 60% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development	Sun not risen
09:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 70% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development
10:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 60% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development
11:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* *Canal not shaded by existing development* Canal 50% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development
12:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 30% in shade by proposed development	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 90% in shade by proposed development

Time	Level of Shading by Date			
	21st March	**21st June**	**21st September**	**21st December**
13:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 10% in shade by proposed development	*Canal not shaded by existing development* Canal 95% in shade by proposed development	*Canal not shaded by existing development* Canal 90% in shade by proposed development
14:00	*Canal not shaded by existing development* Canal 100% in shade by proposed development	*Canal not shaded by existing development* Canal 5% in shade by proposed development	*Canal not shaded by existing development* Canal 70% in shade by proposed development	*Canal not shaded by existing development* Canal 90% in shade by proposed development
15:00	*Canal not shaded by existing development* Canal 50% in shade by proposed development	*Canal not shaded by existing development* Canal not shaded by proposed	*Canal not shaded by existing development* Canal 30% in shade by proposed development	*Canal 30% shaded by existing development* Canal 70% in shade by proposed development
16:00	*Canal 50% in shade by existing development* Canal not shaded by proposed development	*Canal not shaded by existing development* Canal not shaded by proposed development	*Canal 80% in shade by existing development* Canal not shaded by proposed development	Night
17:00	*Canal not shaded by existing development* Canal not shaded by proposed development	*Canal not shaded by existing development* Canal not shaded by proposed development	*Canal not shaded by existing development* Canal not shaded by proposed development	Night
18:00	Night	Canal not in shade	Night	Night
19:00	Night	*Canal 20% shaded from the north from existing development* Canal not shaded by proposed	Night	Night
20:00	Night	Night	Night	Night

4.2.6 From the above, the following points can be made:

a. The proposals will create additional shading to the section of Rochdale Canal Stott's Lane to Ducie Street Basin SBI;

b. The shading will have the potential to impact upon any aquatic vegetation present at the canal (if present); and

c. This section of the canal is already shaded from the west by existing development.

4.2.7 No aquatic plants were detected by the surveys completed in March 2021, although it is recognised that this is early in the season and any basal rosettes of Floating Water-plantain may not have been evident due to the turbidity of the canal.

4.2.8 It is therefore considered that further surveys are required to determine the presence or absence of aquatic plants at the effected section of canal in order that any impacts as a consequence of the additional shading of the canal due to the proposed development can be determined.

4.2.9 Recommendations for additional surveys are presented at **Section 5.2**.

4.2.10 Measures to ensure that pollution incidents are avoided during the construction phase of the development are presented at **Section 5.3**. It is considered that, provided appropriate, standard and best practice measures are undertaken during the construction phase of the proposed development impacts as a consequence of pollution to the canal can be avoided.

4.2.11 Otherwise it is considered that the site is sufficiently distant and small from all designated sites for nature conservation that the proposed development will have no impact upon them.

4.3 Vegetation and Habitats

4.3.1 The site contains only common and widespread plant species. None of the habitats within the site are of significant interest in terms of their plant species composition. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present. No Priority Habitats are present.

4.3.2 In terms of each habitat's importance in a geographical context[3], the unmanaged grassland and scattered parkland trees are considered to be of 'site' importance as they support habitats of value to nesting birds and foraging birds and bats. The amenity grassland, hard standing and colonising ruderal herbs are assessed to be of 'negligible' importance.

4.3.3 The 60 metres long section of the Rochdale Canal Stott's Lane to Ducie Street Basin SBI located adjacent to the site's north-western boundary is considered to be of Local Authority importance, and will act as a wildlife link for the wider area. Recommendations to protect the canal from any pollution incidents during the construction phase of the proposed development are presented at **Section 5.3**. Recommendations to ensure that a suitable lighting regime is installed at the site which does not impact upon the Canal's value as a wildlife link are also presented at **Section 5.3**.

4.4 Protected Species and Other Wildlife

4.4.1 Habitats within and adjacent to the site, notably the section of Rochdale Canal located adjacent to the site's north-western boundary, are suitable for foraging and commuting bats. Recommendations to enhance habitats for roosting bats at the site are presented at **Section 5.4**.

4.4.2 The trees, shrubs and buildings provide favourable foraging and nesting habitat for the species of birds detected within the site and the wider area via the records search (including house sparrow, a Priority Species). Consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 5.5** of this report.

4.4.3 Measures to ensure habitat connectivity for wildlife (including hedgehog, a Priority Species) are presented at **Section 5.6**.

4.4.4 Otherwise the presence of protected and notable species is reasonably discounted.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

5.1.1 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.

5.1.2 The recommendations address the potential impacts identified in **Section 4.0** and are appropriate and proportionate.

[3] In relation to its geographic context, using the terms presented at Section 4.7 of *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018), i.e. International and European, National, Regional, Local Authority-wide area, River Basin District, Estuarine system/Coastal cell or Local. The term 'site' value is additionally used to highlight ecological features considered to be of importance in the context of the wider site habitats, but which of negligible value on the context of the local area.

5.1.3 In accordance with Chapter 15, paragraph 175 point 'd' of the NPPF, when determining planning applications, local planning authorities should encourage opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity.

5.1.4 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified.

5.1.5 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as a residential development.

5.2 Further Survey

5.2.1 Additional surveys will be completed at the section of the Rochdale Canal which lies adjacent to the site (and at least 20 metres either side) for aquatic and emergent plant species to determine any impacts to aquatic or emergent plants as a consequence of increased shading at the canal due to the proposed development.

5.2.2 Surveys will be undertaken at a favourable time of year for permanent water bodies (between late June and mid-September) using a double-sided rake or grapnel at regular intervals and in accordance with *Monitoring the Floating Water-plantain Luronium natans, Conserving Natura 2000 Rivers: Monitoring Series No. 9* (Willby, et al., 2003).

'Towpath-based walking surveys have been widely used for describing the abundance and distribution of aquatic vegetation in canals. Although mapping or assessment of abundance by eye has been used, this approach alone consistently under-samples the submerged vegetation in even the clearest waters and is of little use in turbid waters. It must therefore always be complemented by the regular use of a grapnel or rake. The narrow width of the channel and the angle of the observer mean that available habitat can be sampled quickly and flexibly with this combined method, and it is consequently the preferred approach for baseline surveys.'

5.3 Protection of Existing Habitats

Protection of Rochdale Canal

5.3.1 In the absence of updated guidance, the following Pollution Prevention Guidelines (PPG) will be adhered to at any works near the canal:

a. PPG1: Basic good environmental practices (Environment Agency, 2013);

b. PPG5: Works in, near or over watercourses (Environment Agency, 2014);

c. PPG6: Construction and demolition sites (Environment Agency, 2012); and

d. PPG7: Operating refuelling sites (Environment Agency, 2011).

5.3.2 Mitigation measures will be discussed and agreed with the Environment Agency and the Canal and Rivers Trust.

Protection of Trees and Shrubs

5.3.3 During the construction phase, temporary protective demarcation fencing will be used to protect any trees or shrubs to be retained by the proposals. The fencing must extend outside the canopy of the retained trees and must remain in position until all areas have been developed to ensure protection is provided throughout the construction phase.

5.3.4 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

Lighting

5.3.5 Paragraph 180, bullet point 'c' in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

Construction Phase

5.3.6 Any lighting to be used at the site during construction should be directional and screened where possible, this specification should be included within a Construction Environment Management Plan (CEMP), or similar.

Development Lighting Design

5.3.7 The lighting scheme to be implemented at the developed site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the Rochdale Canal, areas of ecological enhancement and any landscape planting, as lighting overspill may deter use by wildlife such as foraging bats.

5.3.8 The lighting scheme will be designed with reference to current guidance, namely:

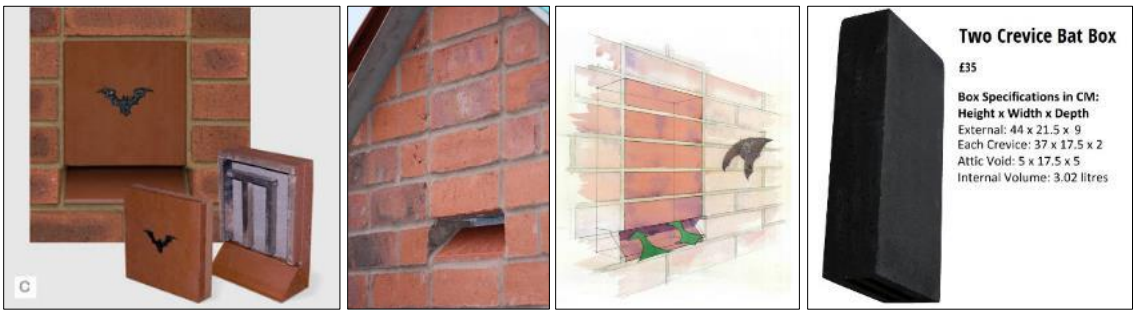
a. *Guidance Note 8: Bats and Artificial Lighting in the UK* (Institution of Lighting Professionals & Bat Conservation Trust, 2018); and

b. *Bats and lighting: Overview of current evidence and mitigation guidance* (Stone, 2014).

5.4 Bats

5.4.1 It is recommended that the development considers incorporating the installation of bat access panels at the new buildings; bat boxes may also provide a suitable option for enhancement at the site.

5.4.2 The bat access panels / boxes should be sited at least four metres above ground level, ideally facing or close to areas of landscape planting or existing linear features. The access panels / boxes should not be positioned over windows or doorways where bat droppings may become a nuisance. Once the development layout has been finalised, an ecologist should advise on the appropriate quantity and positions for the bat access panels / boxes. Suitable bat access panels and boxes are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and are presented at **Insert 1**, below:



Insert 1: Examples of integrated bat access panels and an externally mounted box[4]

[4] Left to right: IBstock Enclosed Bat Box 'c' (left); Habibat Bat Access Panels (centre left and centre right) and Greenwood's Ecohabitat's two crevice bat box (right). Products with a brick face are illustrated, however the Habibat bat access panels can be supplied unfaced to enable the additional of matching material.

5.5 Birds

Protection

5.5.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is advised that any works such as vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive (Natural England, 2015).

5.5.2 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

Enhancing Habitats for Nesting Birds

House Sparrow

5.5.3 House sparrows are associated with suburban areas. Monitoring suggests a severe decline in the UK house sparrow population, estimated as halving in rural areas, and dropping by 60% in towns and cities since the mid-1970's (RSPB, 2018).

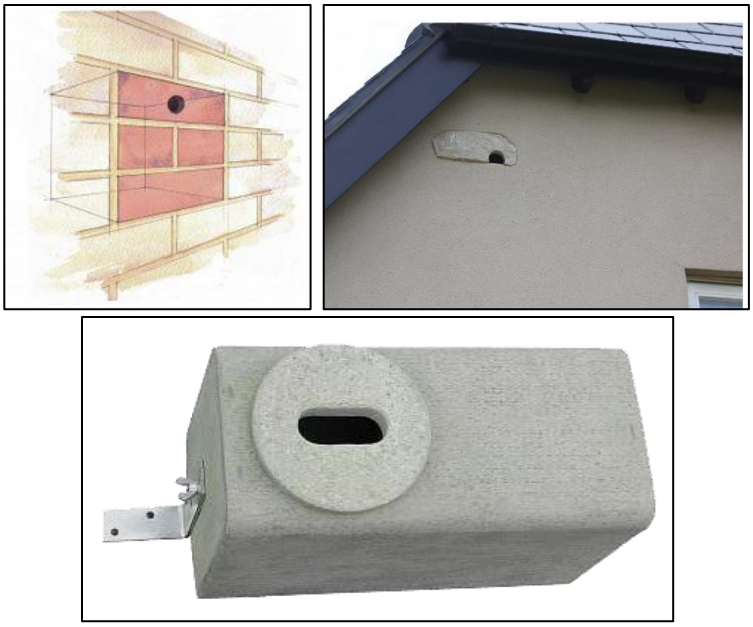
5.5.4 The installation of 2 house sparrow terrace nest boxes is recommended at the proposed new housing. The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. An example of a suitable house sparrow bird box is given below at **Insert 2**:

Insert 2: Schwegler 1SP House Sparrow Nesting Terrace

5.5.5 Such bird boxes are available from the NHBS (www.nhbs.com) or Wild Care (www.wildcare.co.uk). ERAP (Consultant Ecologists) Ltd will advise on the siting of bird boxes.

Swift

5.5.6 The installation of 2 swift nest boxes is recommended at the proposed new housing. The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. An example of a suitable house sparrow bird box is given below at **Insert 3**:



Insert 3: Schwegler 1SP and Integral Swift Boxes

5.5.7 Such bird boxes are available from the NHBS (www.nhbs.com) or Wild Care (www.wildcare.co.uk). ERAP (Consultant Ecologists) Ltd will advise on the siting of bird boxes.

5.6 Landscape Planting

5.6.1 It is recommended that the landscape planting within the residential site is composed from native species and species known to be of value for the attraction of wildlife.

5.6.2 It is recommended that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting. Suitable species are presented at **Table 5.1**, below.

Table 5.1: Suitable Native Species for Tree and Shrub Planting

Scientific Name	Common Name	Scientific Name	Common Name
Acer campestre	Field Maple	*Prunus spinosa*	Blackthorn
Corylus avellana	Hazel	*Rosa arvensis*	Field Rose
Crataegus monogyna	Hawthorn	*Rosa canina*	Dog-rose
Ilex aquifolium	Holly	*Sambucus nigra*	Elder
Malus sylvestris	Crab Apple	*Sorbus aucuparia*	Rowan
Prunus avium	Wild Cherry	*Ulmus glabra*	Wych Elm
Prunus padus	Bird Cherry	*Viburnum opulus*	Guelder Rose

5.6.3 The understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding bumblebees and butterflies. Where possible the use of native species should be maximised but where necessary non-native species known to be attractive to invertebrates should be used.

5.6.4 Planting schemes that include flowering species such as *Viburnum, Ceanothus, Hebe*, *Lavandula*, *Lonicera, Potentilla, Rosmarinus* and *Vinca* can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.

5.6.5 For further plants suitable for the attraction of pollinators please refer to the *Perfect for Pollinators Plant List* (Royal Horticultural Society, 2012). It is recommended that the selection of plant species at the site ensures that a variety of flowering species are available throughout the year.

6.0 CONCLUSION

6.1 Further surveys are required at the ideal survey period for aquatic plant species at the section of the Rochdale Canal adjacent to the north-western site boundary. It is recommended that this survey is made the subject of a suitably worded planning condition. Otherwise this ecological assessment has demonstrated that a residential development at the site is feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework.

6.2 It is possible to implement reasonable actions for the protection and long-term conservation of fauna such as nesting birds and commuting/foraging bats associated with the site.

6.3 Measures to conserve habitat connectivity through the site are entirely feasible.

6.4 Development at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with residential areas such as breeding birds and roosting bats.

7.0 REFERENCES

Andrews, H (ed), 2013. *Bat Tree Habitat Key, 3rd Edition.* Bridgewater: AEcol Ltd.

Bainbridge, I. et al., 2013. *Guidelines for the Selection of Biological SSSIs.* Peterborough: Joint Nature Conservancy Council.

British Hedgehog Preservation Society / PTES, 2019. *Hedgehogs and Development,* Ludlow: British Hedgehog Preservation Society / PTES.

BSI, 2012. *Trees in relation to design, demolition and construction. Recommendations.* London: BSI Standards Limited.

BTHK, 2018. *Bat Roosts in Trees - A Guide to Identification and Assessment for Tree-Care and Ecology Professionals,* Exeter: Pelagic Publishing.

Buttress, 2021. *Downley Drive: Site Plan Proposed 8801-BA-00-00-DR-A-(04) 001-11 ,* Manchester: Buttress.

Chanin, P., 2003. *Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series 10.* Peterborough: English Nature.

Chanin, P., 2003. *Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10,* Peterborough: English Nature.

CIEEM, 2013. *Technical Guidance Series Competencies for Species: Bats.* Winchester: Chartered Institute of Ecology and Environmental Management.

CIEEM, 2018. *Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine,* Winchester: Chartered Institute of Ecology and Environmental Management.

Collins, J. (ed), 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).* London: The Bat Conservation Trust.

Dean, M., Strachan, R., Gow, D. & Andrews, R., 2016. *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series) Eds. Fiona Mathews and Paul Chanin,* London: The Mammal Society.

Eaton, M. A. et al., 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds,* Issue 108, pp. 708-746.

Edgar, P., Foster, P & Baker, J., 2010. *Reptile Habitat Management Handbook.* Bournemouth: Amphibian and Reptile Conservation.

Edwards, J., Knight, M. & Crosher, I. E., 2020. *National Habitat Network Maps V2,* Peterborough: Natural England.

Environment Agency, 2011. *Operating Refuelling Sites, PPG7: Prevent Pollution.* [Online]
Available at: https://www.gov.uk/government/publications/operating-refuelling-sites-ppg7-prevent-pollution

Environment Agency, 2012. *Construction and Demolition Sites, PPG6: Prevent Pollution.* [Online]
Available at: https://www.gov.uk/government/publications/construction-and-demolition-sites-ppg6-prevent-pollution

Environment Agency, 2013. *Basic Good Environmental Practices, PPG1: Prevent Pollution.* [Online]
Available at: https://www.gov.uk/government/publications/basic-good-environmental-practices-ppg1-prevent-pollution

Environment Agency, 2014. *Works in, near or over watercourses, PPG5: Prevent Pollution.* [Online]
Available at: https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-ppg5-prevent-pollution

Environment Agency, 2021. *Main River Map.* [Online]
Available at: https://www.arcgis.com/apps/webappviewer/index.html?id=17cd53dfc524433980cc333726a56386
[Accessed 29 March 2021].

Gilbert, G., Gibbons, D. W. & Evans, J., 1998. *Bird Monitoring Methods.* Exeter: Pelagic Publishing Ltd..

Great Britain, 1981. *Wildlife and Countryside Act.* London: H.M.S.O.

Great Britain, 2006. *Natural Environment and Rural Communities Act.* London: H.M.S.O.

Great Britain, 2017. *The Conservation of Habitats and Species Regulations.* London: H.M.S.O.

Great Places Housing Group, 2020. *Downley Drive – Existing Site – Location Plan 8801-BA-00-00-DR-A-(01) 003-2,* Manchester: Great Places Housing Group.

Group, U. H. C. W. et al., 2020. *UK Habitats Classification User Manual Version 1.1,* Stockport: UKHab Ltd.

Institution of Lighting Professionals & Bat Conservation Trust, 2018. *Guidance Note 8: Bats and Artificial Lighting in the UK.* [Online]
Available at: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/
[Accessed 30 March 2021].

JNCC, 1995. *The UK Biodiversity Steeting Group Report, Volume 2, Action Plans.* London: H.M.S.O.

JNCC, 2005. *Common Standards Monitoring Guidance for Canals,* Peterborough: Joint Nature Conservation Committee.

JNCC, 2010. *Handbook for Phase 1 Habitat Survey: A technique for Environmental Audit.* Peterborough: NCC.

Maddock, A (ed), 2008. *UK Biodiversity Action Plan: Priority Habitat Descriptions.* [Online]
Available at: http://jncc.defra.gov.uk/page-5718

Ministry of Housing, Communities & Local Government, 2005. *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System,* London: Office of the Deputy Prime Minister.

Ministry of Housing, Communities and Local Government, 2019. *National Planning Policy Framework.* London: H.M.S.O.

Natural England, 2007. *Badgers and Development,* Peterborough: Natural England.

Natural England, 2011. *The Reptile Mitigation Guidelines.* Peterborough: Natural England.

Natural England, 2014. *Otters: surveys and mitigation for development projects.* [Online]
Available at: https://www.gov.uk/guidance/otters-protection-surveys-and-licences
[Accessed 29 March 2021].

Natural England, 2015. *Badgers: Surveys and mitigation for development projects.* [Online]
Available at: https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects
[Accessed 29 March 2021].

Natural England, 2015. *Wild birds: surveys and mitigation for development projects.* [Online]
Available at: https://www.gov.uk/guidance/wild-birds-surveys-and-mitigation-for-development-projects
[Accessed 30 March 2021].

Ordnance Survey, 2021. *Site Check Report Centroid Grid Ref: SJ85369874.* [Online]
Available at: http://magic.defra.gov.uk/magicmap.aspx
[Accessed 23 March 2021].

Ratcliffe, D. A., 1977. *A Nature Conservation Review.* Cambridge: Cambridge University Press.

Rodwell, J. S., 1992. *British Plant Communities: Volume 3, Grasslands and Montane Communities.* Cambridge: Cambridge University Press.

Roper, T., 2010. *Badger (Collins New Naturalist Library, Book 114).* Glasgow: Harper Collins.

Royal Horticultural Society, 2012. *Perfect for Pollinators, Garden Plants.* [Online]
Available at: https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/encourage-wildlife-to-your-garden/plants-for-pollinators

RSPB, 2018. *Population Trends: The Recent Decline of House Sparrows.* [Online]
Available at: https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/house-sparrow/population-trends/
[Accessed 30 March 2021].

Stace, C. A., 2010. *New Flora of the British Isles 3rd Edition.* Cambridge: Cambridge University Press.

Stone, E. L., 2014. *Bats and Lighting: Overview of current evidence and mitigation guidance.* Bristol: University of Bristol.

Strachan, R., Moorhouse, T. & Gelling, M., 2011. *Water Vole Conservation Handbook 3rd Edition.* Oxford: The Wildlife Conservation Research Unit.

Willby, N., Eaton, J. & Clarke, S., 2003. *Monitoring the Floating Water-plantain Luronium natans, Conserving Natura 2000 Rivers: Monitoring Series No. 9,* Peterborough: English Nature.

8.0 APPENDIX: TABLES, PHOTOGRAPHS AND FIGURES

8.1 Plant Species Lists

Table 8.1: Plant Species List for Unmanaged Grassland Within Former Compound Area

Scientific Name	Common Name	DAFOR	% Cover
Woody Species			
Buddleja davidii	Butterfly-bush	VLF	<1%
Populus x canadensis	Grey Poplar	R	<1%
Rosa canina	Dog-rose	R	<1%
Salix caprea	Goat Willow	VLF	<1%
Herb Species			
	Mosses	O/LF	10%
Anthriscus sylvestris	Cow Parsley	R	<1%
Arrhenatherum elatius	False Oat-grass	F/LA	40%
Cardamine flexuosa	Wavy Bitter-cress	R	<1%
Cerastium fontanum	Common Mouse-ear	VLF	<1%
Dactylis glomerata	Cock's-foot	O/LF	15%
Elytrigia repens	Common Couch	F/LA	30%
Epilobium hirsutum	Great Willowherb	O	<1%
Equisetum arvense	Field Horsetail	VLF	<1%
Festuca rubra	Red Fescue	O/LF	10%
Galium aparine	Cleavers	VLF	<1%
Geranium molle	Dove's-foot Crane's-bill		<1%
Geranium robertianum	Herb-Robert	R	<1%
Heracleum sphondylium	Hogweed		<1%
Holcus lanatus	Yorkshire-fog	O/LF	10%
Juncus effusus	Soft-rush	O	<1%
Juncus inflexus	Hard Rush	O/VLF	1%
Lolium perenne	Perennial Rye-grass	O	5%
Plantago lanceolata	Ribwort Plantain	O	<1%
Ranunculus acris	Meadow Buttercup	R	<1%
Ranunculus repens	Creeping Buttercup	O/LF	5%
Rubus fruticosus agg.	Bramble	O	<1%
Rumex crispus	Curled Dock	R	<1%
Rumex obtusifolius	Broad-leaved Dock	O	<1%
Senecio jacobaea	Common Ragwort	O	<1%
Taraxacum officinale agg.	Dandelion	O	<1%
Trifolium pratense	Red Clover	VLF	<1%
Trifolium repens	White Clover	O	<1%
Tussilago farfara	Colt's-foot	O/VLF	<1%
Urtica dioica	Common Nettle	VLF	<1%
Vicia sativa	Common Vetch	O	<1%
Vicia sepium	Bush Vetch	O	<1%

[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.2: Plant Species List for Ruderal Herbs Colonising Hard Standing Within Former Compound Area

Scientific Name	Common Name	DAFOR	% Cover
Woody Species			
Buddleja davidii	Butterfly-bush	O/VLF	<1%
Salix caprea	Goat Willow	VLF	<1%
Herb Species			
	Mosses	LF	<1%
Agrostis stolonifera	Creeping Bent	O/LF	1%
Carex flacca	Glaucous Sedge	R	<1%
Cerastium fontanum	Common Mouse-ear	R	<1%
Cirsium arvense	Creeping Thistle	R	<1%
Festuca rubra	Red Fescue	VLF	<1%
Geranium molle	Dove's-foot Crane's-bill	O	<1%
Holcus lanatus	Yorkshire-fog	O/LF	10%
Juncus inflexus	Hard Rush	O	<1%
Medicago lupulina	Black Medick	O	<1%
Plantago lanceolata	Ribwort Plantain	O	<1%
Poa annua	Annual Meadow-grass	O/LF	3%
Rumex obtusifolius	Broad-leaved Dock	O	<1%
Taraxacum officinale agg.	Dandelion	O	<1%
Trifolium pratense	Red Clover	R	<1%
Trifolium repens	White Clover	O	<1%
Tussilago farfara	Colt's-foot	O	<1%
Urtica dioica	Common Nettle	VLF	<1%
[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.3: Plant Species List for Amenity Grassland

Scientific Name	Common Name	DAFOR	% Cover
Woody Species			
Acer pseudoplatanus	Sycamore	R	<1%
Betula pendula	Silver Birch	VLF	<1%
Chamaecyparis lawsoniana	Lawson's Cypress	R	<1%
Crataegus monogyna	Hawthorn	R	<1%
Fagus sylvatica	Beech	LF	<1%
Fraxinus excelsior	Ash	VLF	<1%
Sambucus nigra	Elder	R	<1%
Herb Species			
Agrostis stolonifera	Creeping Bent	VLF	<1%
Arrhenatherum elatius	False Oat-grass	VLF	<1%
Cirsium arvense	Creeping Thistle	O	<1%
Dactylis glomerata	Cock's-foot	O	<1%
Festuca rubra	Red Fescue	O/LA	15%
Geranium molle	Dove's-foot Crane's-bill	R	<1%
Holcus lanatus	Yorkshire-fog	F*	20%
Lolium perenne	Perennial Rye-grass	A*	80%
Phalaris arundinacea	Reed Canary-grass	O	<1%
Plantago lanceolata	Ribwort Plantain	O	<1%
Plantago major	Greater Plantain	R	<1%
Poa annua	Annual Meadow-grass	O	<1%
Prunella vulgaris	Selfheal	R	<1%
Ranunculus repens	Creeping Buttercup	O	<1%
Rumex obtusifolius	Broad-leaved Dock	O	<1%
Senecio jacobaea	Common Ragwort	O	<1%
Taraxacum officinale agg.	Dandelion	O	<1%
Trifolium repens	White Clover	O	5%
Tussilago farfara	Colt's-foot	R	<1%
[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.4: Plant Species List for Walls and Path of the Rochdale Canal

Scientific Name	Common Name	DAFOR	% Cover
Woody Species			
Alnus glutinosa	Alder	R	<1%
Buddleja davidii	Butterfly-bush	VLF	<1%
Herb Species			
Agrostis stolonifera	Creeping Bent	VLF	<1%
Dactylis glomerata	Cock's-foot	VLF	<1%
Epilobium hirsutum	Great Willowherb	O/VLF	<1%
Festuca rubra	Red Fescue	O/VLF	<1%
Holcus lanatus	Yorkshire-fog	VLF	<1%
Plantago lanceolata	Ribwort Plantain	O	<1%
Senecio jacobaea	Common Ragwort	R	<1%
Senecio vulgaris	Groundsel	R	<1%
Taraxacum officinale agg.	Dandelion	O	<1%
Urtica dioica	Common Nettle	R	<1%
[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

8.2 Photographs

Photo 1: Coarse unmanaged grassland within former compound area

Photo 2: Ruderal herbs colonising hard standing within compound area

Photo 3: Amenity grassland

Photo 4: Amenity grassland and scattered parkland trees

Photo 5: Amenity grassland, scattered parkland trees and hard standing footpath

Photo 6: Rochdale Canal adjacent to north-western site boundary

8.3 Figures

Figure 1: Aerial Image of the Site and its Surrounding Habitats, Showing Location of Relevant Designated Sites for Nature Conservation

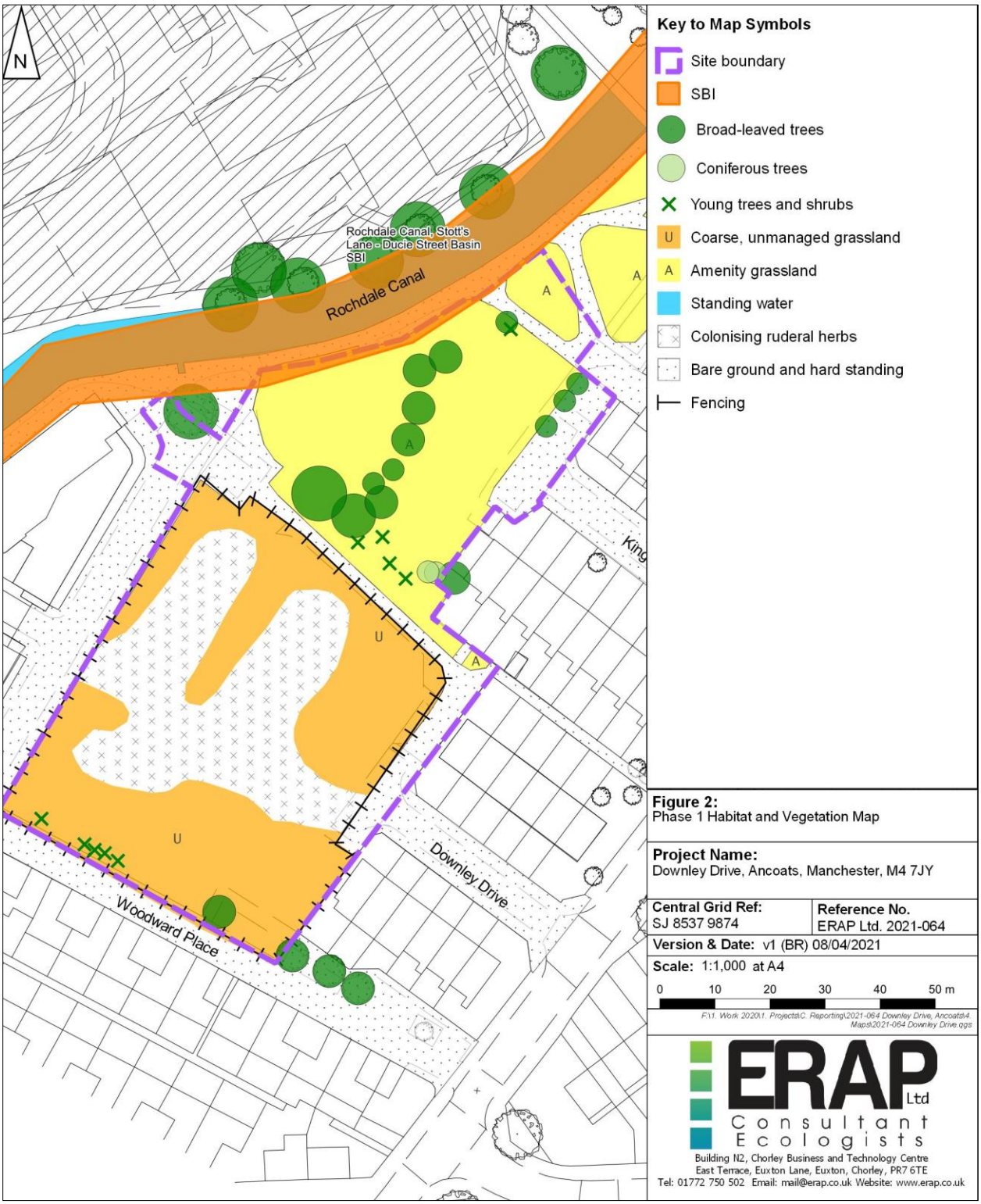



Figure 2: **Phase 1 Habitat and Vegetation Map**