THE ENVIRONMENT PARTNERSHIP

MATHERS FOUNDRY

MANCHESTER

ECOLOGICAL ASSESSMENT

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com
www.tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

Document Title	Ecological Assessment
Prepared for	Canmoor Developments Ltd
Prepared by	TEP - Warrington
Document Ref	8035.01.001

Author	Ruth Woolston
Date	February 2021
Checked	Lizi Pimlott
Approved	Andrew Nyul

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
2.0	04/11/20	LP	PB	Updated site proposals	Superseded
3.0	12/02/21	AWE	PB	Updates to red line boundary	Current

CONTENTS PAGE

Executive Summary 1
1.0 Introduction 3
2.0 Methods 5
3.0 Results 9
4.0 Impact Assessment 23
5.0 Recommendations 28
6.0 References 31

FIGURES PAGE

Figure 1: Site location plan 4
Figure 2: Modified neutral grassland at TN1 12
Figure 3: Modified neutral grassland at TN4 12
Figure 4: Modified neutral grassland, south west of site 12
Figure 5: Modified neutral grassland, east of site 12
Figure 6: Hardstanding surrounding buildings within centre of site. 13
Figure 7: Hardstanding in south west of site. 13
Figure 8: Immature pioneering alder carr in the east of the site 14
Figure 9: Dense scrub to south west of site (TN3) 15
Figure 10: Dense bramble scrub along the north-west boundary of the site 15
Figure 11: Ornamental hedgerow (TN2) 16
Figure 12: Building 1 20
Figure 13: Building 2 exterior 20
Figure 14: Building 2 interior 20
Figure 15: Building 3 exterior 20
Figure 16: Building 3 roof 20
Figure 17: Building 4 exterior 20
Figure 18: Building 4 interior 21
Figure 19: Building 5 21
Figure 20: Building 6 21
Figure 21: Building 7 21
Figure 22: Biodiversity net gain summary 25

APPENDICES

APPENDIX A: Desk Study

APPENDIX B: Target Note Report

APPENDIX C: Defra 2.0 Metric (separate file)

DRAWINGS

Phase 1 Habitat Survey- G8035.01.001A

Proposed Site Plan - SK048 Rev A

Planting Plan - 20-93-05 Rev B

Executive Summary

1. TEP was commissioned, in July 2020 by Canmoor Developments Ltd, to carry out an Ecological Assessment of the site known as Mathers Foundry in Manchester. This assessment is required to inform proposals for construction of warehousing and associated parking and infrastructure.

2. This Ecological Assessment was updated in February 2021 following a revision to the red line boundary, which now incorporates two additional parcels of land to the west and south-east (refer to drawing SK048 Rev A) .

3. The site comprises modified neutral grassland, buildings, hardstanding, dense and scattered scrub, scattered trees and an ornamental hedgerow. These habitats will be lost under the proposals, resulting in a 6.04 unit (42.69%) biodiversity net loss. The client is currently exploring options for achieving 10% biodiversity net gain through the provision of a financial contribution to a third party landowner for biodiversity offsetting.

4. Best practice tree protection measures are recommended for any retained trees and hedgerows within or adjacent to the site.

5. Best practice pollution prevention measures are recommended to minimise impacts to Rochdale Canal Stott's Lane – Ducie Street Basin Site of Biological Importance (SBI) which lies 10m from the site. No impacts to any other designated wildlife sites are anticipated as a result of their proposals, due to their distance from the site, beyond urban development.

6. There are no implications for the site proposals with regard to amphibians, badgers, invertebrates, otters or water voles as these species are considered unlikely to be present on the site.

7. No bat roosts have been identified on the site. Trees with Low bat roost suitability to be felled or pruned and the building with Moderate bat roost suitability to be demolished will be undertaken with the implementation of Reasonable Avoidance Measures (RAMs) under the supervision of a licensed bat consultant. The proposals will incorporate bat boxes on new buildings or retained trees to mitigate for these losses and enhance roosting opportunities at the site. Sensitive lighting design will be implemented to minimise light spill to Rochdale Canal.

8. The existing buildings on site were first inspected by TEP on 14th January 2020 and updated on 7th August 2020. Building 1 was categorised as having moderate potential to support roosting bats. Two nocturnal surveys were undertaken in August and September 2020, no roosting bats were identified. All other buildings on site were categorised as having negligible potential. Buildings with negligible potential have now been demolished.

9. The loss of dense scrub on the site could result in disturbance to nesting birds and hedgehogs. Pre-commencement checks for these species are recommended prior to site clearance. Gaps under boundary features should be created to enable hedgehogs to move freely through the site. Bird boxes should be installed on the site to mitigate for the short term loss of nesting habitats on the site and to enhance nesting opportunities at the site.

10. A Reasonable Avoidance Measures Method Statement (RAMMS) should be implemented to minimise impacts to reptiles during site clearance.

11. A number of biodiversity enhancement opportunities are detailed in Chapter 5 of this report.

1.0 Introduction

1.1 TEP was commissioned, in July 2020 by Canmoor Developments Ltd, to carry out an Ecological Assessment of the site known as Mathers Foundry in Manchester (hereafter referred to as "the site"). The ecological assessment was updated in February 2021 following a revision of the red line boundary, incorporating two additional parcels of land to the west and south-east.

1.2 This assessment is required to inform proposals for the redevelopment of the site including the demolition of existing buildings and the construction of warehousing and associated parking, infrastructure and landscaping (Hale Architects Drawing SK048 Rev A).

1.3 This report has the following objectives:

- To describe the existing vegetation and give an overview of the habitats present on the site;
- To identify whether there are any features of conservation value such as legally protected species or habitats and species of principal importance listed under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006;
- To identify any further survey requirements;
- To identify scheme design options to mitigate ecological impacts and achieve biodiversity net gain;
- To identify biodiversity enhancement opportunities.

Biodiversity Net Gain

1.4 Paragraph 170(d) of the revised NPPF states that "Planning polices and decisions should contribute to and enhance the natural and local environment by… minimising impacts on and providing net gains for biodiversity…" The Government 25-year Environment Plan states that government will "embed environmental net gain principle for development".

1.5 In July 2019, the government issued revised planning practice guidance (NPPG) with details on how planners can implement "net environmental gain" requirements when assessing development proposals, including new advice on protecting wildlife.

1.6 Revised guidance recently published by the government says that net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. Net gain is an umbrella term for both biodiversity net gain and wider environmental net gain. It states: "Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity".

1.7 In terms of measuring net gain, the guidance states that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. It goes on to state that "tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net gain outcome is expected to be achieved".

1.8 This report details the ecological surveys undertaken to establish a baseline position, and what the anticipated impacts are. In order to inform the biodiversity net gain assessment the Defra 2.0 metric has been used.

Site Context

1.9 The site is approximately 10.2 ha in size and is located to the north east of Grimshaw Lane in Manchester. Ten Acres Lane borders the north east site boundary and Rochdale Canal is present to the north west. Urban development, associated with Manchester city centre, surrounds the site. The central grid reference for the site is SD 87076 00049. A site location plan is shown in Figure 1 below.

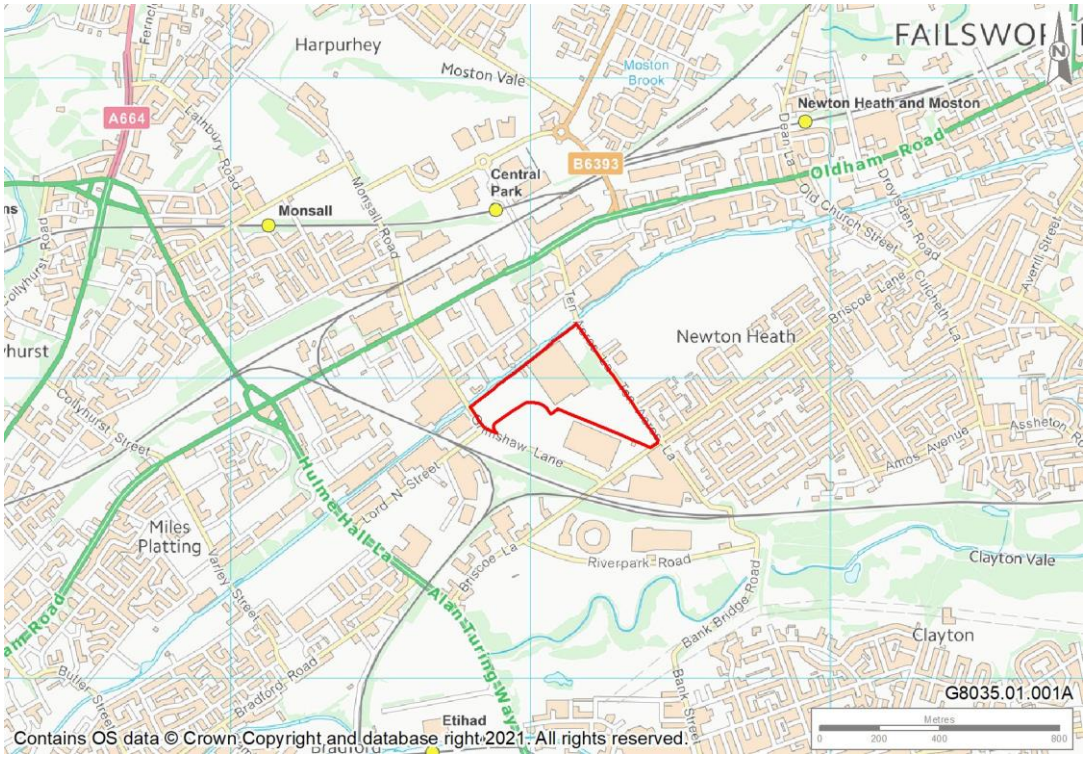


Figure 1: Site location plan

2.0 Methods

Ecology Study

2.1 Information regarding historic species records and protected sites was requested/gathered from the sources listed in Table 1. This collated data gives a useful indication of the distribution and abundance of ecological receptors at a given locale. An absence of records does not indicate the absence of protected species from the search area. Our survey work has sought to identify the potential for any protected species to be present.

Table 1: Sources of ecological information

Source of Information	Nature of Information
Magic Map	Maps showing internationally designated sites to 10km, nationally designated sites to 5km and habitats of value to biodiversity within and adjacent to the site
Greater Manchester Ecology Unit (GMEU)	Protected species records and locally designated sites within 1km
Manchester City Council	Land allocations and relevant policies
ArcMap10	Ordnance & Aerial survey mapping

Habitats and Flora

Phase 1 Habitat Survey

2.2 An initial A Phase 1 habitat survey was carried out by Senior Ecologist Lizi Pimlott (ACIEEM, FISC Level 3) on 14th January 2020 and updated on 6th August 2020. Following a revision of the site boundary, a update to the Phase 1 habitat survey was undertaken by Consultant Ecologist Annabel Walker-Evans on 20th January 2021, covering two additional parcels of land to the west and south east.

2.3 The surveys were carried out in accordance with the Phase 1 habitat assessment methods (JNCC 2010) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2017). The method records the habitat types present within and immediately surrounding the site, based on the JNCC descriptions. Plant species were identified in accordance with Stace (2010) and recorded as target notes using the DAFOR scale.

Limitations

2.4 The optimal survey window for habitat surveys is April to early-October, when most plant species are visible. The Phase 1 habitat survey of the additional areas in the west and south-east of site were undertaken outside of the optimal survey period. Due to the dominant habitats present in these areas, hardstanding and modified neutral grassland, completing this survey outside of the optimal survey period is unlikely to significantly impact results. Historic records and previous survey data will be used to inform the survey.

Habitat Condition Assessment

2.5 The Phase 1 habitat survey results were used to evaluate the condition of each habitat; a required variable to input into the BIA calculator. Criteria set out within the Defra 2.0 Technical Supplement were used to calculate the condition of the existing habitats, with discretion used where the habitat potentially provided additional ecological functions not included within the conditions.

Fauna

2.6 The survey included an extended assessment of the habitats present for their potential to support species of conservation concern, particularly statutorily protected species or species listed under S41. Any signs indicating the presence of these species were recorded.

Bats

2.7 A Preliminary Roost Assessment (PRA) of the buildings and trees on the site was undertaken by Licensed Bat Ecologist Lizi Pimlott (Natural England Class 2 licence registration no. 2016-22843-CLS-CLS) on 14th January 2020 and updated on 7th August 2020. An inspection of additional trees within the extended site boundary to the west and south east was undertaken on 20th January 2021 by Annabel Walker-Evans. These assessments were undertaken in accordance with the Bat Conservation Trust (BCT) Good Practice Guidelines (Collins, 2016).

2.8 A ground-level inspection was undertaken to assess the potential of the trees to support roosting bats. Binoculars were used to search for any field signs of bats or features with suitability for roosting bats. A high-powered torch and an endoscope were used to inspect any potential roost features that were accessible with the use of step ladders during the survey.

2.9 An internal and external inspection of the buildings was undertaken to identify any field signs of bats or features with suitability for roosting bats. Binoculars and a high-powered torch were used to search for any field signs of bats or features with suitability for roosting bats.

2.10 In addition, the habitats within and surrounding the survey area were assessed for their potential to support foraging and commuting bats.

2.11 Following the PRA buildings, trees and habitats were categorised based on the criteria listed within Table 2 below.

Table 2: Evaluation criteria for the potential suitability of trees and habitats for bats (taken from Table 4.1 of the BCT guidance)

Suitability	Roosting habitats	Commuting/foraging habitats
Negligible	No potential roost features are present that are likely to be used by bats.	No features present that are likely to be used by commuting or foraging bats. A general lack of linear features and low habitat, structural or floristic diversity.

Suitability	Roosting habitats	Commuting/foraging habitats
Low	A structure or tree with one or more potential roost features that could be used by individual bats opportunistically, but which do not offer sufficient space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.	Habitat that could be used by small numbers of commuting bats (e.g. a gappy hedgerow or an un-vegetated stream) or foraging bats (e.g. a lone tree or small patch of scrub) but which is isolated from the surrounding countryside.
Moderate	A structure or tree with one or more potential roost features that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but which is unlikely to support a roost of high conservation status (maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for commuting (e.g. lines of trees or scrub or linked back gardens), or foraging bats (e.g. trees, scrub, water, grassland).
High	A structure or tree possessing one or more potential roost features that are suitable for use by larger numbers of bats and roosts of high conservation status on a regular basis and potentially for longer periods of time, due to their size, shelter, protection, conditions and surrounding habitat.	Continuous high quality habitat that is strongly connected with the wider landscape that is likely to be used regularly by commuting bats (e.g. river valley, vegetated stream, woodland edge, hedgerow with trees) or foraging bats (e.g. broad-leaved woodland, grazed parkland, tree-lined watercourses or ponds).

Limitations

2.12 There are no strict seasonal constraints for PRA. It is recognised that field signs will not be fresh during winter hibernation, and may decompose or be washed away by inclement weather. Visibility of trees could be restricted by the presence of foliage and vegetation during the summer months. As the initial inspection was undertaken over the winter when foliage was reduced, no such constraints applied.

2.13 Internal access was not possible into Building 5 as it is an electricity substation. However a full external inspection, including the identification of any potential access points, was made and this was considered to be sufficient to assess its potential for usage by roosting bats.

2.14 Internal access was not possible into Building 1 as it was locked at the time of the surveys. However a full external inspection, including the identification of any potential access points, was made and this, along with the nocturnal surveys, was considered to be sufficient to assess its potential for usage by roosting bats.

Nocturnal Roost Surveys of Building

2.15 Two nocturnal roost surveys were undertaken of Building 1 with Moderate roost suitability, in line with the 2016 BCT Guidance. One dusk emergence survey and one dawn re-entry survey were completed and these were undertaken two weeks apart. Dusk surveys commence 15 minutes prior to sunset and continue until 90 minutes after sunset. Dawn surveys commence 90 minutes prior to sunrise and continue until 15 minutes after sunrise.

2.16 The surveys were completed by a team of two surveyors. Surveyors used heterodyne and frequency division bat detectors to aid the survey. Sonogram analysis was undertaken using Analook software.

2.17 Details of the nocturnal surveys are provided in Table 3 below.

Table 3: Details of nocturnal roost surveys of Building 1

Date	Sunrise/ Sunset	Moon Phase	Start Time	Start Weather	End Time	End Weather
12/08/2020	20:42	Waning crescent	20:27	25C, no rain, light breeze, overcast	22:12	24C, no rain, light breeze, overcast
17/09/202	06:48	Waning crescent	05:18	12C, no rain or wind, overcast	07:03	12C, no rain or wind, overcast

3.0 Results

Ecology Study

Planning Context

3.1 A summary of the results of the ecology desk based assessment is set out below. Further details, including maps, are provided in Appendix A.

Relevant Local Planning Policies and Guidance

3.2 Neither the site nor the adjacent land are allocated for biodiversity or nature conservation purposes under Manchester's Local Development Framework Core Strategy Development Plan (adopted 11th July 2012).

3.3 **Planning policy EN9**: Green Infrastructure from the Core Strategy Development Plan states that new development will be expected to maintain and enhance existing green infrastructure in terms of its quantity, quality and multiple function, which includes biodiversity.

3.4 **Planning policy EN15:** Biodiversity and Geological Conservation from the Core Strategy Development Plan states that the Council will seek to maintain or enhance sites of biodiversity value throughout the City and that particular consideration will be given to protected species and the conservation of trees and woodland.

3.5 **Planning policy GM-G2:** Green Infrastructure Network of the draft Greater Manchester Spatial Framework (GMSF) states that the network of green infrastructure that stretches throughout Greater Manchester will be designed, managed, protected and enhanced so as to enhance biodiversity by expanding, improving and connecting habitats.

3.6 **Planning policy GM-G7:** Trees and Woodland of the draft GMSF states that Greater Manchester's authorities will encourage habitat diversity through conserving and managing existing woodland and trees that are of value and by securing a diversification of broadleaved species in order to increase biodiversity.

3.7 **Planning policy GM-10:** A Net Enhancement of Biodiversity and Geodiversity of the GMSF states that a net enhancement in biodiversity resources will be sought by enhancing habitats through management, improving connectivity between habitats and encouraging the use of native species in landscaping schemes.

Designated Wildlife Sites

3.8 There is one internationally designated wildlife site within 10km of the site. Rochdale Canal Special Area of Conservation (SAC) lies 2km east of the site and is designated for the presence of floating water-plantain *Luronium natans*, a protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8).

3.9 There are two nationally designated wildlife sites within 5km of the site. Rochdale Canal Site of Special Scientific Interest (SSSI) overlaps with the SAC and is designated for the same reason, as well as the presence of several pondweed species *Potamogeton sp*. Hollinwood Branch Canal SSSI lies 3.8km south east and is designated for its aquatic habitats and plant communities.

3.10 The site lies within the Impact Risk Zone (IRZ) for Rochdale Canal SSSI. The proposed development does not trigger a requirement for consultation with Natural England regarding potential impacts on the SSSI.

3.11 There are six statutory locally designated wildlife sites within 5km of the site. These are:

- Clayton Vale Local Nature Reserve (LNR) - 740m south and designated for its river valley habitats;
- Boggart Hole Clough LNR - 2.1km north and designated for its woodland habitats;
- Hollinwood Branch Canal LNR - 3.8km south east and designated for its aquatic habitats and plants;
- Blackley Forest LNR - 4.1km north west and designated for its woodland, grassland and aquatic habitats;
- Alkrington Woods LNR - 4.3km north and designated for its woodland, grassland and aquatic habitats; and
- The Cliff/Kersal Dale LNR - 4.5km north east and designated for its woodland, grassland and aquatic habitats and associated wildlife.

3.12 There are two non-statutory locally designated wildlife sites within 1km of the site. Rochdale Canal Stott's Lane – Ducie Street Basin Site of Biological Importance (SBI) is located 10m to the north of the site. This SBI is designated for its regionally important aquatic habitat and species, including internationally important populations of floating water plantain (WCA8).

3.13 Bank Bridge Meadow SBI is located 670m south and is designated for its river valley grassland habitats.

Notable Habitats

3.14 An area of identified open mosaic habitat on previously developed land (a habitat of principal importance under Section 41 (S41) of the Natural Environment and Rural Communities Act 2006) is present in the east of the site and approximately 15 m to the north-east of the site. Rochdale Canal lies 10m to the north. In addition, a stand of deciduous woodland priority habitat is located approximately 90m southwest of the site boundary.

Notable Flora and Fauna

3.15 A number of species spread over a 1km search radius were identified through the data from GMEU. Species include those listed under any of the following:

- European Protected Species (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under WCA8;
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Protection of Badgers Act 1992 (PBA);

- Species of principal importance under S41;
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

3.16 These records are detailed in the relevant species sections below.

Habitats and Flora

Phase 1 Habitat Survey

3.17 Results of the Phase 1 habitat survey are provided below and displayed on the Phase 1 Habitat Map within the Drawings Appendix (G8035.01.002A). A detailed Target Note Report is included in Appendix B.

3.18 Habitats present within the site are listed below and descriptions of these habitats are also given:

- Modified neutral grassland[1];
- Hardstanding;
- Buildings;
- Dense and scattered scrub;
- Scattered trees; and
- Ornamental hedgerow.

Modified Neutral Grassland

3.19 Expanses of modified neutral grassland are present in the north, south east and west of the site, derived from amenity grassland which has become unmanaged. A smaller patch of grassland is also colonising in the south of the site. The swards are ununiformed, extending to approximately 30cm in height in places.

3.20 The grassland at TN1 (Figure 2) iis species-poor and comprises dominant meadow grass species *Poa sp*, with abundant red clover *Trifolium pratense* and frequent rosebay willowherb *Chamaenerion angustifolium* and ragwort *Senecio jacobaea* amongst other scarcer species.

3.21 The grassland at TN4 (Figure 3) is more diverse with the inclusion of black medick *Medicago lupulina*, horsetail *Equisetum arvense* and ribwort plantain *Plantago lanceolata* and frequent broad-leaved dock *Rumex obtusifolia*, Yorkshire fog *Holcus lanatus*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major* and tall melilot *Melilotus altissimus*, amongst others.

[1] The neutral grassland categories detailed within the Phase 1 Habitat Survey Handbook are concentrated on grassland associated with rural situations (pastures and meadows), as such it was agreed with JNCC in 2005 (P. Gateley, pers. comm.) that neutral grassland habitats that don't easily fit within these categories, usually within urban or industrial areas, can be referred to as modified neutral grassland –

'Modified neutral grassland is not derived from agricultural grassland and the terms semi-improved and improved do not apply. Some modified neutral grassland may be species-rich but many swards are dense, coarse and species-poor. Modified neutral grassland naturally regenerates on disturbed ground and is unmanaged. It most commonly occurs in urban areas and on post-industrial land'.

3.22 In the west of the site, adjacent to the Rochdale Canal, the grassland is dominated by perennial ryegrass *Lolium perenne* with occasional cock's foot *Dactylis glomerata* (TN8) (Figure 4). Occasional nettle *Urtica dioica*, dandelion *Taraxacum sp*., and rush species *Juncus sp*. were also noted.

3.23 In the south-east of the site there is a large expanse of grassland with scattered scrub (TN6) (Figure 5). Perennial ryegrass is dominant, with frequent cock's-foot and occasional broad-leaved dock Rumex obtusifolius.

Figure 2: Modified neutral grassland at TN1

Figure 3: Modified neutral grassland at TN4

Figure 4: Modified neutral grassland, south west of site

Figure 5: Modified neutral grassland, east of site

Hardstanding

3.24 Large expanses of hardstanding are present around the buildings, including the access road into the site. Some of these areas have become colonised by ephemeral vegetation which has a similar species composition to the species-poor modified grassland areas (Figure 6). Hardstanding is also present in the south west of site, to the north of the modified neutral grassland field (Figure 7).

Figure 6: Hardstanding surrounding buildings within centre of site.

Figure 7: Hardstanding in south west of site.

Buildings

3.25 There are seven buildings on the site. Building 1 is a former staff office. Buildings 2 to 4 and 6 are former warehouses which have fallen into significant disrepair. Building 5 is an electricity substation. Building 7 is an outbuilding used for storage of machinery. A description and photographs of each building are provided in the PRA results below.

3.26 It was incidentally noted during the Phase 1 habitat survey in January 2021 that all buildings on site, with the exception of Building 1, had been demolished.

Dense and Scattered Scrub

3.27 An area of immature pioneering alder *Alnus glutinosa* carr (TN5, Figure 8) is present in the east corner of the site, surrounded by security fencing. Other species include young silver birch *Betula pendula*, wych elm *Ulmus glabra*, hawthorn *Crataegus monogyna* and dog rose *Rosa canina* with an understorey of bramble *Rubus fruticosa*.

3.28 To the east of the alder carr is an area of dense bramble scrub (TN6), with occasional hawthorn and silver birch.

Figure 8: Immature pioneering alder carr in the east of the site

3.29 Patches of dense scrub (TN3, Figure 9) are present in the west of the site, around the areas of hardstanding and modified neutral grassland. Species include rowan *Sorbus aucuparia*, Norway maple *Acer platanoides*, silver birch, buddleia *Buddleja davidii*, willow species *Salix sp* and cherry species *Prunus sp*.

3.30 A strip of dense bramble scrub is present along the north-western boundary of the site, adjacent to the area of modified neutral grassland (TN8) (Figure 10).

3.31 Scattered scrub is present in the modified neutral grassland on the site. Along the north east site boundary young dogwood *Cornus sanguinea* and bramble are prolific. Scattered buddleia, hawthorn and silver birch scrub is also present within the area of modified neutral grassland in the south-east of the site (TN6).

Figure 9: Dense scrub to south west of site (TN3)

Figure 10: Dense bramble scrub along the north-west boundary of the site

Scattered Trees

3.32 Numerous mature scattered trees are present through the modified neutral grassland at TN4. These include poplar species *Populus sp*, aspen *Populus tremula*, field maple *Acer campestre*, silver birch, hawthorn, cherry and copper maple *Acer platanoides schwedleri*.

3.33 Several mature alders are present along the edge of the species-poor modified neutral grassland in the south of the site (TN8).

Ornamental Hedgerow

3.34 An outgrown ornamental hedgerow is present between the grassland and hardstanding in the south west corner of the site (TN2, Figure 11). This is predominantly garden privet *Ligustrum ovalifolium* with occasional sycamore *Acer pseudoplatanus*.

Figure 11: Ornamental hedgerow (TN2)

Habitat Condition Assessment

3.35 Table 4 details the condition assessment for the existing habitats on the site. The Defra 2.0 metric refers to UKHab classification for condition assessment, however the metric includes a technical supplement for conversion from JNCC Phase 1 habitat classification[2] to categorise habitat types. Table 3 includes the UKHab habitat types for use within the DEFRA 2.0 metric and the Phase 1 habitat equivalent, with justification provided in the comments section, where appropriate.

[2] IAN CROSHER A , SUSANNAH GOLD B , MAX HEAVER D , MATT HEYDON A , LAUREN MOORE D , STEPHEN PANKS A , SARAH SCOTT C , DAVE STONE A & NICK WHITE A . 2019. The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: technical supplement (Beta version, July 2019). Natural England

Table 4: Habitat condition assessment for Mathers Foundry

Defra 2.0 Habitat Type (UKHab)	Phase 1 Habitat Type	Condition assessment used	Associated condition	Comments
Urban - developed land/sealed surface	Buildings/ Hardstanding	N/A	N/A	Technical Supplement states that condition assessment is not required for this habitat type and that it should be allocated 0 for condition.
Grassland - other neutral grassland	Modified neutral grassland	Grassland	Poor	Fails four of the condition criteria (1, 2, 3, 5) and is classified as amenity grassland with similar species to description for agriculture grassland. Therefore classified as Poor condition.
Heathland and shrub - mixed scrub	Dense and scattered scrub	Scrub	Poor	Fails on four of the five criteria (1, 3, 5 and 6) and contains predominantly single age scrub. Therefore classified as Poor condition.
Sparsley vegetated land - ruderal/ ephemeral	Ephemeral/ short perennial	Sparsley vegetated land	Poor	Does not fall under any of the seven criteria and as such assessed as being ruderal habitat with low biodiversity value. Therefore classified as Poor condition.
Urban - vacant/derelict land/bare ground	Bare ground	Urban	Poor	Fails three of the four condition criteria (2, 3, 4) and bare ground assessed to have been created from trampling by vehicles. Therefore classified as poor condition.
Native hedgerow	Ornamental hedgerow	Hedgerows	Poor	Non-native hedgerow. Therefore classified as poor condition.

Invasive and Protected Plant Species

3.36 No records of invasive or protected plant species were returned within 1km of the site in the desk study.

3.37 Scattered montbretia *Crocosmia* × *crocosmiiflora* plants (listed under Schedule 9 of the Wildlife and Countryside Act) is present within the modified neutral grassland at TN5. Japanese knotweed *Fallopia japonica* was also recorded in the dense scrub in the east corner of the site. No protected plant species were identified within the site.

Connectivity with the Wider Landscape

3.38 The site is isolated by surrounding urban development. The only habitat corridor is provided by Rochdale Canal 10m to the north west of the site. The roads have street lighting, kerbs and are very busy which could form a dispersal barrier to wildlife. Gardens within the residential developments could form habitat corridors but may restrict the movement of terrestrial wildlife because of boundary fences.

Fauna

3.39 The potential for the site to support legally protected species and notable species has been assessed using the results of the desk study and observations made during the site survey of habitats within and immediately surrounding the site. A summary of desk study information is included within Appendix A. Desk study records have only been considered below if they are recent (from the last 10 years) and/or if they relate to species that may be supported by habitats at a site level. Habitats present within the site are suitable for the following species; further consideration is given below to the likelihood for these species to be present within the site:

- Amphibians
- Badger
- Bats
- Birds
- Hedgehog
- Invertebrates
- Otter & Water Vole
- Reptiles

3.40 The site does not provide suitable habitat for other protected or notable species and other species, beyond those listed above and these will not be considered further in this assessment.

Amphibians

3.41 No records of amphibians were returned within 1km of the site in the desk study.

3.42 A review of aerial and OS imagery did not identify any bodies of standing water within 500m of the site. Rochdale Canal has concrete-reinforced banks and poses a barrier to dispersal for amphibians. The grassland, woodland and scrub on the site provide some foraging and sheltering opportunities for amphibians but, without the presence of breeding habitats nearby, these species are unlikely to be present.

Badger

3.43 Records of badgers *Meles meles* (PBA), including setts, were returned within 1km of the site in the desk study. These records are confidential and specific locations have not been included in this assessment.

3.44 No evidence of badger was identified during the site surveys. The woodland and grassland could provide foraging and sett excavation opportunities for this species but the intact security fencing along the site boundaries suggest that badgers are unlikely to be able to access the site. Furthermore the heavily urbanised location of the site is likely to deter badgers from the area.

Bats

3.45 The following bat records have been returned within 1km of the site in the desk study:

- Pipistrelle species *Pipistrellus sp* (roost) (EPS, WCA5, LBAP);
- Common pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5, LBAP);
- Soprano pipistrelle *Pipistrellus pygmaeus* (EPS, WCA5, S41, LBAP); and
- Daubenton's bat *Myotis daubentonii* (EPS, WCA5, LBAP).

3.46 The PRA of the seven buildings on the site is provided in Table 4 below. Photographs are provided in Figures 12 to 21.

Table 5: Results of PRA of buildings

Building Ref	Description	Bat Roost Classification
1	A small square red brick building used as an office or for welfare facilities previously. Four sided pitched tile roof. Plastic guttering, wooden doors and windows and bargeboard at eaves. Tiles raised on hips and some slipped/raised tiles on all four roof pitches. No other potential roost features noted. Interior of building well-lit as windows on all sides. Loft hatch noted but no internal access possible so roof void couldn't be inspected.	Moderate
2	A corrugated metal warehouse with open shutter door on south west elevation. Corrugated plastic skylights in roof. Attached to B3. Interior cold and draughty.	Negligible
3	Dilapidated warehouse with brick and concrete breeze block walls. Single skin walls. Likely constructed in 1880s. Much of the northern part of the building is missing the roof and the steel frame is exposed. Internally in these areas the building is flooded, well lit, cold and draughty. The paint on the walls was peeling and there are large holes where windows and door frames have been ripped out. Some crevices in the walls were noted but as they are single skin it is not anticipated that they extend inwards very far. There are a number of stairwells and office rooms with wood or plasterboard walls and false ceilings. Where the corrugated metal roof is intact there are remnant areas of wooden sarking below the skylights. Internal strip of building is underway.	Negligible
4	As for B3 but roof and walls more intact. Dark internally and less draughty but no potential roost features identified which bats could use.	Negligible

Building Ref	Description	Bat Roost Classification
5	A red brick electricity substation with flat bitumen covered roof. Good condition with no access points or potential roost features.	Negligible
6	As for building 3. Roof falling in.	Negligible
7	A corrugated metal structure with brick wall on south west elevation. No potential roost features.	Negligible

3.47 No bat roosts were identified in Building 1 during the nocturnal roost surveys and bat activity was scarce. Only occasional common pipistrelle passes were recorded and these were detected more than an hour after sunset/before sunrise. Furthermore the surveyors noted that the security team utilise bright lighting which spills across the site.

Figure 12: Building 1

Figure 13: Building 2 exterior

Figure 14: Building 2 interior

Figure 15: Building 3 exterior

Figure 16: Building 3 roof

Figure 17: Building 4 exterior

Figure 18: Building 4 interior

Figure 19: Building 5

Figure 20: Building 6

Figure 21: Building 7

3.48 A row of seven mature poplar trees are present along the north east site boundary. These have a number of pruning cuts and trunk cavities between 1-2m high. On closer inspection these features were found to be sub-optimal for bats due to being exposed to the elements or being too shallow and accessible by predators. Therefore these seven trees were classified as Low roost suitability.

3.49 The remaining trees on the site, including the row of mature poplars along the edge of the modified neutral grassland in the west of the site, have negligible suitability for roosting bats due to an absence of potential roost features.

3.50 The woodland, grassland and scattered trees on the site provides foraging opportunities for bats but these are small in area with limited habitat connectivity (with the exception of Rochdale Canal to the north west) and subject to light spill from surrounding urban development. The site is therefore classified as having Low suitability for foraging and commuting bats.

Birds

3.51 The following bird species have been recorded within 1km of the site:

- Bullfinch *Pyrrhula pyrrhula* (S41, LBAP, BAm);
- Dunnock *Prunella modularis* (S41, BAm);
- Herring gull *Larus argentatus* (S41, BRd);
- House sparrow *Passer domesticus* (S41, BRd);
- Lapwing *Vanellus vanellus* (S41, BRd);
- Lesser redpoll *Acanthis cabaret* (S41, BRd);
- Linnet *Carduelis cannabina* (S41, BRd);
- Little ringed plover *Charadrius dubius* (WCA1);
- Peregrine *Falco peregrinus* (WCA1);
- Reed bunting *Emberiza schoeniclus* (S41, BAm);
- Skylark *Alauda arvensis* (S41, BRd);
- Song thrush *Turdus philomelos* (S41, BRd); and

- Starling *Sturnus vulgaris* (S41, BRd).

3.52 The site is unsuitable for wintering flocks of birds due to its urban nature and its capacity to support extensive breeding bird populations is also limited by nearby traffic and human disturbance. The woodland, trees and dense scrub on the site will support the more common nesting bird species and provide opportunities for foraging.

3.53 Given the dilapidated nature of the buildings on the site, and the missing roofs and lack of potential nesting features, it is not anticipated that these buildings would support breeding birds. Feral pigeons may use the site for roosting.

Hedgehog

3.54 No records of hedgehog *Erinaceus europaeus* were returned within 1km of the site in the desk study.

3.55 The dense scrub, woodland and modified neutral grassland on the site could provide opportunities for hedgehogs to shelter and forage. A dead hedgehog was found in the grassland at TN5.

Invertebrates

3.56 Records of cinnabar moth *Tyria jacobaea* (S41) were returned within 1km of the site in the desk study.

3.57 Several butterfly species were observed on the site during the survey. The grassland at TN5 contains a variety of flowering plants which could provide foraging resources for invertebrates. However the habitats on the site generally have low structural diversity and given the urban nature of the habitats and the poor habitat connectivity with higher quality areas the site is considered to be unsuitable for large or significant invertebrate communities.

Otter and Water Vole

3.58 No records of otter *Lutra lutra* or water vole *Arvicola amphibius* have been returned within 1km of the site in the desk study.

3.59 Otter and water vole are riparian species which are typically associated with watercourses. No water courses or areas of open water are present within the site or the wider area. No suitable terrestrial habitat exists within the site and it is highly unlikely that these species are present.

Reptiles

3.60 Records of slow worm been returned within 1km of the site in the desk study, including on land to the north of Ten Acres Lane.

3.61 The dense scrub, modified neutral grassland and hardstanding in the site could provide limited opportunities for reptiles to shelter, forage and bask. Slow worm could use the Rochdale Canal corridor to disperse towards the site. However it is considered unlikely that this would occur given the more extensive suitable habitat present to the north of Ten Acres Lane. Furthermore Ten Acres Lane is likely to act as a deterrent for reptile dispersal due to traffic disturbance and the presence of high kerbs.

4.0 Impact Assessment

4.1 This section concludes the potential impacts on ecological receptors from the proposed warehouse development at Mathers Foundry in Manchester.

Planning Context

4.2 The proposals result in a loss in biodiversity value (detailed below), including the loss of grassland and woodland, and therefore there are implications for the proposals with regard to planning polices EN9, EN15, GM-G2, GM-G7 and GM-10.

Designated Sites

4.3 No impacts are anticipated on any international or nationally designated wildlife sites due to their distance from the site (the closest being Rochdale Canal SAC and SSSI at 2km away), located beyond intervening urban development. Whilst the site lies within the IRZ for Rochdale Canal SSSI the proposals do not trigger the requirement for consultation between the Local Authority and Natural England.

4.4 The closest locally designated wildlife site is Rochdale Canal Stott's Lane – Ducie Street Basin SBI, which is located 10m to the north of the site. Construction on the site could result in run-off which could enter the SBI and cause pollution. Therefore there are implications for the proposals in relation to Rochdale Canal Stott's Lane - Ducie Street Basin SBI.

4.5 The remaining locally designated wildlife sites are located over 600m from the site, beyond urban development, and therefore are considered to be of sufficient distance that no impacts are anticipated.

Habitats & Flora

4.6 An area of open mosaic habitat on previously developed land (OMHPDL) has been highlighted to the east of the site.

4.7 Open mosaic habitats contain vegetation with similarities to early pioneer communities, however OMHPDL can sustain for long periods of time without management[3].

4.8 Species composition recorded on site do not correspond to the qualifying species often associated with OMHPDL, and given the likelihood for the vegetation on site to be naturally succeeded to scrub and plant species of nutrient rich soil conditions, it is considered highly unlikely that the habitat within the site qualifies as open mosaic habitat. Therefore no implications with regard to priority habitats are anticipated from the proposals.

[3] JNCC (2010). UK Biodiversity Action Plan Priority Habitat Descriptions: Open Mosaic Habitats on Previously Developed Land. Available online at: http://jncc.defra.gov.uk/page-5706

4.9 None of the habitats within the site or adjoining the site fall under Manchester Habitat Action Plans (HAPs). Several habitats are important at a site level for their ecological value and are covered in the following sections.

Scrub (Dense and Scattered)

4.10 Although not of great species diversity, scrub, both dense and scattered is valuable for a number of fauna species including foraging and commuting bats and breeding birds. The loss of scattered scrub on site is negligible. Although an area of dense scrub adjacent to the Rochdale Canal in the north of the site will be retained, all other large areas of dense scrub will be lost to the proposed development and cannot be replaced.

4.11 Recommendations are given in Section 5 to mitigate for the loss. Any works within scrub habitat may need to consider protected and priority species prior to works. Please refer to the relevant species highlighted in Section 5.

Scattered Trees

4.12 Scattered trees are important features within the landscape and are of high ecological value especially for breeding birds. No features were found within the trees for roosting bats however these trees are valuable for foraging and commuting bats. Multiple trees on site will be lost to the proposed development. These trees should be replaced, at minimum, on like for like basis in size and age and where possible of native origin.

4.13 Tree root protection measures need to be considered for retained trees to avoid damage. Specific recommendations and mitigation measures are given in Section 5.

4.14 Any works near trees may need to consider protected and priority species prior to works. Please refer to relevant species highlighted in Section 5.

Grassland

4.15 This grassland does not contain a noteworthy plant diversity, however, due to the structure and management they can help to sustain populations of invertebrates, which in turn help to sustain foraging birds and bats.

4.16 Although part of the modified neutral grassland identified at TN6 will be retained, the grasslands within the survey areas at TN3, TN4 and TN8 will be lost to the proposed development. Consideration should be given for the loss of the grassland and working methods should be adopted using best practice measures for any remaining grassland habitat.

Hedgerow

4.17 The hedgerow at TN2 will be removed under current proposals. On completion of works re-stocking with native stock of local provenance is advised. Any works near to hedgerows should be carried out with adequate provision for root protection.

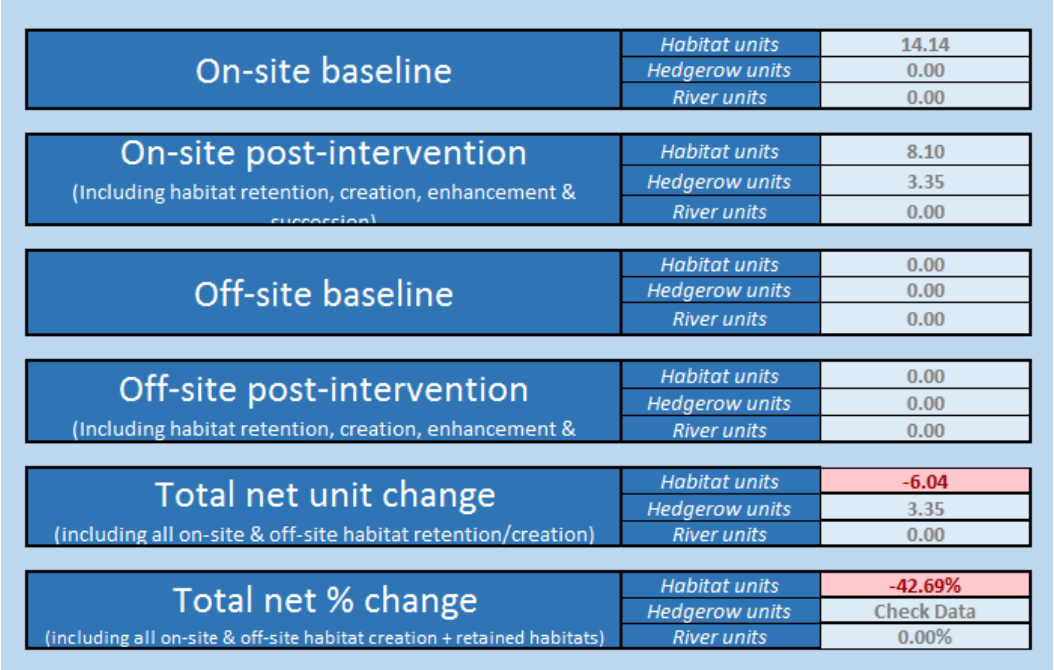
4.18 Works in or affecting hedgerows may need to consider protected and priority species prior to works. Please refer to the relevant species section prior to works.

Biodiversity Assessment (BNG)

4.19 With the forthcoming Environment Bill, a minimum of 10% biodiversity net gain will be required for most development sites. This assessment is therefore based on a 10% net gain target.

4.20 The existing habitat areas for the site have been calculated using GIS and have been based upon the Phase 1 habitat survey plan (TEP Ref: 8035.01.002A). The proposed habitat areas have been based upon the Planting Plan (Bea Landscape Design Ltd Ref: 20-93-05 Rev B).

4.21 A detailed breakdown of the calculations are included in Appendix C. In summary, The site proposals result in a loss of 6.04 habitat units (42.69% net loss) but a net gain of 3.35 hedgerow units (Figure 22).



On-site baseline	Habitat units	14.14
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	8.10
	Hedgerow units	3.35
	River units	0.00
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement &	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-6.04
	Hedgerow units	3.35
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-42.69%
	Hedgerow units	Check Data
	River units	0.00%

Figure 22: Biodiversity net gain summary

4.22 Existing scattered trees are measured individually rather than in area (ha) and therefore this assessment has been based on habitats present under the trees, for example grassland and scrub.

4.23 Proposed tree specimens have not been incorporated into the assessment.

Invasive and Protected Plant Species

4.24 There are no implications for protected species on the site. Montbretia and Japanese knotweed, Schedule 9 invasive plant species, are present in the site. It is an offence to cause the spread of these species in the wild. Therefore there are implications with regard to invasive species and the proposals.

Fauna

Amphibians

4.25 There are no breeding habitats for amphibians within influencing distance or with habitat connectivity to the site. The nature of the habitats on the site as well as poor habitat connectivity reduces the suitability of the site for amphibians for shelter and foraging. No amphibian records were returned in the ecology desk based assessment and therefore it is not anticipated that great crested newts *Triturus cristatus* or significant amphibian populations would be present on the site. Therefore there are no implications with regard to amphibians and the proposed development.

Badger

4.26 No records of badger or evidence of this species was identified during the survey and no suitable habitats for sett excavation or foraging are present on or within 30m of the site. The nature of the habitats on the site as well as high levels of disturbance and poor habitat connectivity is likely to deter badgers and it is not anticipated that this species would be present. Furthermore the security fencing around the site boundary is likely to prevent badgers from entering the site. Therefore there are no implications with regard to badgers and the proposed development.

Bats

4.27 All bat species and their roosts are legally protected in the UK. All bats are listed as European protected species of animals in Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the Habitats Directive. There is also protection for bats and roosts in England and Wales under the Wildlife & Countryside Act 1981 (as amended).

4.28 One building with Moderate roost suitability will be lost under the proposals. No bat roosts were present in this building during the surveys undertaken. Seven trees with Low roost suitability will be subject to pruning or felling as a result of the proposals. This is unlikely to significantly impact local bat populations but does have implications for roosting bats, if present. Bats are dynamic and therefore could move into the site during the intervening period between the surveys and the commencement of construction.

4.29 Foraging habitats on the site include the areas of woodland, scrub, grassland and scattered trees. The canal adjacent to the site could provide a commuting corridor. These areas are subject to light spill from nearby roads and buildings and therefore have limited suitability for foraging bats. Recommendations are included in Chapter 5 regarding sensitive lighting design to minimise further increases in light spill on the canal.

Birds

4.30 All wild birds and their nests and eggs are protected under the Wildlife and Countryside Act 1981, as amended.

4.31 The site is considered to be unsuitable for wintering wildfowl and significant breeding bird populations.

4.32 The loss of nesting habitats including woodland, scrub and scattered trees reduces nesting opportunities for local bird populations although, due to the small extent of these areas, this is not considered to be significant. Vegetation clearance could result in the disturbance or destruction of active bird nests, if undertaken during the core nesting season (March to August). Therefore there are implications for nesting birds and the proposed development.

Hedgehog

4.33 Hedgehogs have been confirmed to use the site. This species is listed under NERC S41 and conservation of this species should be considered in development proposals. The creation of boundary features may restrict the movement of hedgehogs through the site. Furthermore vegetation clearance could result in the disturbance or killing of hedgehogs, if present on the site. Therefore there are implications for hedgehogs and the proposed development.

Invertebrates

4.34 The habitats on the site are considered unlikely to support large or significant invertebrate communities. With this in mind, and only a small number of invertebrate records returned in the ecology desk based assessment it is not anticipated that there will be any implications with regard to invertebrates and the proposed development.

Otter and Water Vole

4.35 The site does not provide suitable habitat for otter or water vole. The canal adjacent to the site could be suitable for foraging otter but otter are unlikely to be able to access the site due to the security fencing around the perimeter. Therefore there are no implications with regard to otter and water vole and the site proposals.

Reptiles

4.36 All reptile species are given limited protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These include adder, grass snake, common lizard and slow worm. Under the Wildlife and Countryside Act 1981 (as amended), reptiles are protected against:

- intentional or reckless killing and injury;
- trade – i.e. sale, barter, exchange, transport for sale, or advertise for sale or to buy.

4.37 The dense scrub, modified neutral grassland and hardstanding in the site could provide opportunities for reptiles to shelter, forage and bask. Slow worm could use the Rochdale Canal corridor to disperse towards the site. However it is considered unlikely that this would occur given the more extensive suitable habitat present to the north of Ten Acres Lane. However if reptiles were present in the site the clearance of vegetation could result in killing or injury to these species. Therefore there are implications with regard to reptiles and the site proposals.

5.0 Recommendations

5.1 This section provides recommendations to avoid or, where this is not possible, mitigate for any adverse impact on wildlife in relation to the development of the site. Opportunities for appropriate enhancement are also set out.

5.2 It is anticipated that, if the following recommendations are implemented, this should be sufficient to meet the requirements of planning policies EN9, EN15, GM-G2, GM-G7, GM-10 and the Environmental Protection SPD.

Habitats and Flora

5.3 Best practice pollution and siltation prevention measures should be implemented to avoid impacts to Rochdale Canal and Rochdale Canal Stott's Lane - Ducie Street Basin SBI.

5.4 Any trees and hedgerows to be retained will be suitably protected in accordance with BS5837:2012, to ensure no damage to the canopy or root zone during site clearance and construction works. If trees are to be lost they should be replaced, at minimum, on like for like basis in size and age and where possible of native origin. If hedgerow removal is necessary, on completion of works re-stocking with native stock of local provenance is advised.

5.5 An invasive species management plan should be produced for the removal and disposal of montbretia and Japanese knotweed from the site.

<u>Biodiversity Net Gain (BNG)</u>

5.6 The installation of bat and bird boxes, and the incorporation of the enhancement measures suggested below, would contribute towards the 10% biodiversity net gain target.

5.7 Consideration should be given to enhancement of the retained area of modified neutral grassland in the south-east of the site through wildflower seeding. Enhancement of the area of dense scrub adjacent to Rochdale Canal in the west of the site could also be undertaken to improve the biodiversity value of the site.

5.8 Although there are some opportunities for habitat creation and for enhancement of retained habitats, given the limited area available for onsite mitigation, it is anticipated the majority of required compensation will be provided at an offsite location, otherwise known as biodiversity offsetting.

5.9 Biodiversity offsetting is where conservation activities deliver biodiversity benefits in compensation for biodiversity loss, in a measurable way. It has the potential to deliver effective, widespread biodiversity gain for the natural environment in a way which is easy to use for developers.

5.10 The client is seeking to achieve 10% biodiversity net gain by providing a financial contribution to a third party landowner for the biodiversity offsetting. TEP has consulted with David Dutton at Greater Manchester Ecology Unit (GMEU) who confirmed that the Parks Departments within Greater Manchester Combined Authority may have sites suitable for biodiversity offsetting. Consultation should be held with Manchester City Council and GMEU to agree a suitable site and the financial contribution required.

Fauna

Bats

5.11 An inspection of the potential roost features on Building 1 with Moderate bat roost suitability should be undertaken by a licensed bat consultant immediately prior to demolition. The licensed bat consultant may also recommend the implementation of Reasonable Avoidance Measures (RAMs) if the need arises. If a bat roost is identified in the building then demolition cannot be undertaken until further bat surveys have been completed to inform a Natural England bat mitigation licence.

5.12 An inspection of the affected trees with Low bat roost suitability should be undertaken by a licensed bat consultant immediately prior to felling. The licensed bat consultant may also recommend the implementation of soft felling techniques if the need arises. If a bat roost is identified in the trees then tree felling cannot be undertaken until further bat surveys have been completed to inform a Natural England bat mitigation licence.

5.13 The installation of bat boxes will mitigate for the loss of roosting habitat and enhance roosting opportunities at the site. Bat boxes should be installed on new buildings or retained trees, at least two metres high and south or west facing and away from obstruction or light spill.

5.14 A sensitive lighting design should be implemented for the scheme to avoid indirect impacts of lighting on nocturnal and crepuscular species during construction and post-construction. This will apply to Rochdale Canal and to areas of landscaping. There are four key lighting design principles which could be applied to minimise light spill:

- Use of unnecessary lighting will be avoided;
- Spatial spread of lighting – the horizontal and vertical spread of artificial light will be minimised, and take into account both primary and reflected light sources. Directional lighting can be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these;
- Timing and duration of lighting – timers and bespoke dimming regimes may be used to ensure that luminaires are reduced at times of predicted low use. These can be set to change with the seasons and therefore reflect the shifting time of dusk and dawn throughout the year. Motion sensors provide further control to ensure that areas are illuminated only when required;
- Intensity and colour of lighting – light intensity will be as low as possible whilst meeting the objectives of the intended function. The colour of lighting will need to take into account the sensitivity of the ecological receptors on

site. Light sources selected should emit zero ultra-violet light wherever possible. Interim guidance from the Bat Conservation Trust (2014) recommends that white and blue spectrum light should be avoided or, where white lights are required, these should be of warm/neutral colour and have a peak wavelength above 550 nanometers. Narrow spectrum light sources should be used (to lower the range of species affected by lighting).

Birds

5.15 Clearance of the scrub and trees should be carried out outside of the nesting bird season (March - August inclusive). If it is not possible to complete works outside of the nesting bird season, a nesting bird check must be carried out by a suitably qualified ecologist no more than 24 hours prior to the works commencing, to establish that no active bird nests will be disturbed or destroyed. If active nests are found a protective buffer should be retained around the nest until the chicks have fledged. The length of time and size of buffer is species-specific.

5.16 The installation of bird boxes will mitigate for the short term loss of nesting habitat and will enhance nesting opportunities on the site. Bird boxes should be installed on retained trees, at least two metres high and north or east facing and away from obstruction or light spill.

Hedgehogs

5.17 A check of the woodland and scrub should be undertaken prior to site clearance to ensure no hedgehogs are present. This should be undertaken by a qualified ecologist no more than 24 hours prior to works commencing.

5.18 Gaps under fences and boundary features should be retained to enable hedgehogs to move freely through the site. The gaps should be 13cm tall and should include signage to ensure the holes are not obstructed.

Reptiles

5.19 A Reasonable Avoidance Measures Method Statement (RAMMS) should be implemented to minimise impacts to reptiles during site clearance and construction. This should include a pre-commencement search of the site for reptiles and staged vegetation clearance.

Biodiversity Enhancement Opportunities

Creation of Habitat Piles

5.20 Cleared brash and vegetation from the site could be retained to form habitat piles. These could be used by a variety of species including amphibians, invertebrates and hedgehogs. Habitat piles should be situated away from disturbance.

Installation of Insect Boxes

5.21 The installation of insect boxes would enhance opportunities for these species within the site. Insect boxes should be installed in areas of landscaping.

6.0 References

BCT (2014b). Artificial Lighting and Wildlife – Interim Guidance: Recommendations to help minimise the impact of artificial lighting. BCT, London.

British Standards Institution (2012). BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. BSI, London.

British Standards Institution (2012). BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. BSI, London.

British Trust for Ornithology (BTO), Edited by Robert J. Fuller (2012). Birds and Habitat - Relationships in Changing Landscapes. Cambridge University Press. Norfolk.

Chartered Institute of Ecology and Environmental Management (CIEEM) (2016). Guidelines for Preliminary Ecological Appraisal. CIEEM, Winchester.

CIRIA (2015). Environmental good practice on site (fourth edition) (C741) Charles, P., Edwards, P (eds). CIRIA, London.

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

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

Department for Environment, Food and Rural Affairs (2011). A strategy for England's wildlife and ecosystem services. DEFRA, London.

Department for Communities and Local Government (DCLG) (2019). The National Planning Policy Framework. DCLG, London.

English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.

HMSO (Her Majesty's Stationary Office) (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000). HMSO, Norwich.

HMSO (1992). The Badgers Act.

HMSO (2006). Natural Environment and Rural Communities Act. HMSO, Norwich.

Joint Nature Conservation Committee (JNCC) (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.

Natural England, 2015. Otters: surveys and mitigation for development projects. https://www.gov.uk/guidance/otters-protection-surveys-and-licences.

Office of the Deputy Prime Minister (ODPM) (2005). Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System.

Roper, T.J. (2010). Badger. Harper Collins.

APPENDIX A: Desk Study

THE ENVIRONMENT PARTNERSHIP

MATHERS FOUNDRY

MANCHESTER

ECOLOGY DESK STUDY

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com
www.tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

Document Title	Ecology Desk Study
Prepared for	Canmoor Developments Ltd
Prepared by	TEP - Warrington
Document Ref	8035.01.001

Author	Ruth Woolston
Date	February 2021
Checked	Lizi Pimlott
Approved	Andrew Nyul

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
1.0	October 2020	RW	LP/AN	Original issue	Superseded
2.0	February 2021	CC	PB	Updates to red line boundary	Current

CONTENTS PAGE

1.0 Introduction 4
2.0 Method 5
3.0 Legislation and Planning Policy 7
4.0 Site Designations 12
5.0 Habitats 25
6.0 Species 26

TABLES PAGE

Table 1: Sources of Ecological Information 5
Table 2: Details of Internationally Designated Wildlife Sites within 10km of the Site 12
Table 3: Details of Nationally Designated Wildlife Sites within 5km of the Site 14
Table 4: Likely Impacts of Development Proposals on Rochdale Cana SSSI. 17
Table 5: Details of Statutory Locally Designated Wildlife Sites within 5km of the Site 19
Table 6: Details of Non-statutory Locally Designated Wildlife Sites within 1km of the Site .. 23
Table 7: Notable Species Records within 1km of the Site 26

FIGURES PAGE

Figure 1: Site Location Plan 4
Figure 2: Internationally Designated Wildlife Sites within 10km of the Site 13
Figure 3: Nationally Designated Wildlife Sites within 5km of the Site 16
Figure 4: SSSI IRZ within the Site 18
Figure 5: Statutory Locally Designated Wildlife Sites within 5km of the Site 22
Figure 6: Non-statutory Locally Designated Wildlife Sites within 1km of the Site 24
Figure 7: Notable Habitats within and adjacent to the site 25

APPENDICES

APPENDIX A: Citations for Statutory Designated Wildlife Sites of International Importance
APPENDIX B: Citations for Statutory Designated Wildlife Sites of National Importance
APPENDIX C: Species Records within 1km of the Site

1.0 Introduction

1.1 The Environment Partnership (TEP) were commissioned, by Canmoor Developments Ltd in July 2020, to complete an ecology desk based assessment of land known as Mathers Foundry in Manchester (hereafter referred to as 'the site'). This assessment is required to inform the proposed redevelopment of the site into warehousing and associated car parking, infrastructure and landscaping.

1.2 The central grid reference of the site is SD 87076 00049 and the location of the site is shown in Figure 1 below.

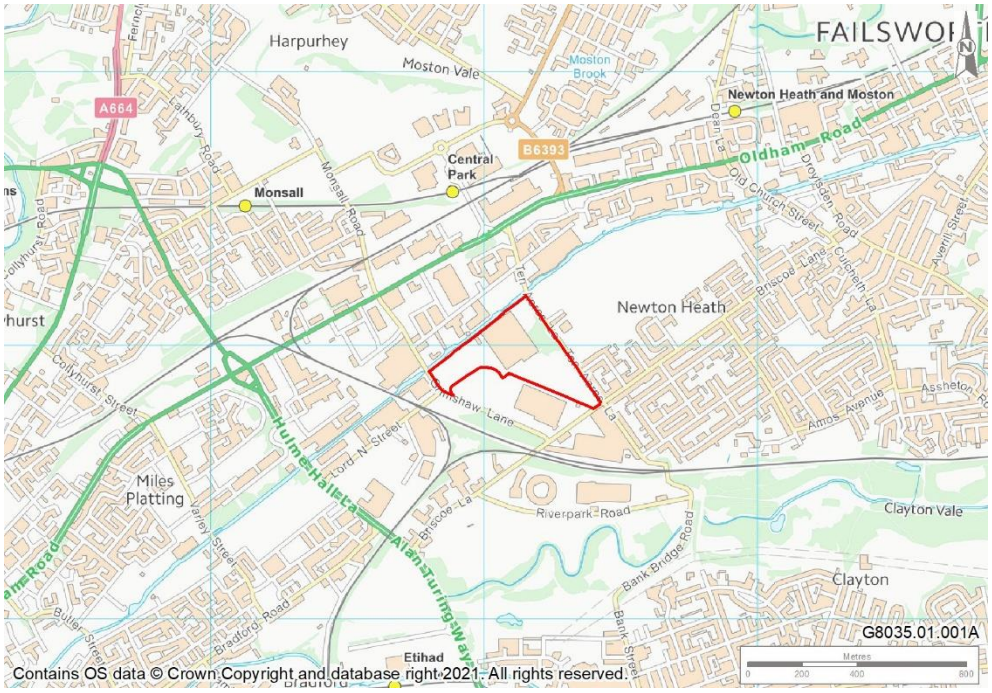


Figure 1: Site Location Plan

2.0 Method

2.1 Information regarding historic species records and protected sites was requested/gathered from the sources listed in Table 1. This collated data gives a useful indication of the distribution and abundance of ecological receptors at a given locale. An absence of records does not indicate the absence of protected species from the search area.

Table 1: Sources of Ecological Information

Source of Information	Nature of Information
Magic Map	Statutory designated wildlife sites of international importance within 10km Statutory designated wildlife sites of national importance within 5km Statutory designated wildlife sites of local importance within 5km Natural England licences within 1km of the site Habitats of value to biodiversity within and adjacent to the site Great crested newt survey pond records 2017 - 2019 within 1km of the site
Greater Manchester Ecology Unit (GMEU)	Protected species records within 1km Non-statutory designated wildlife sites of local importance within 1km
Manchester City Council	Land allocations and relevant policies
ArcMap10	Ordnance & Aerial survey mapping

2.2 Statutory designated wildlife sites of international importance may include:

- Ramsar sites;
- Special Areas of Conservation (SAC); and
- Special Protection Areas (SPA).

2.3 Statutory designated wildlife sites of national importance may include:

- Site of Special Scientific Interest (SSSI);
- National Nature Reserve (NNR);
- Marine Nature Reserve (MNR); and
- Area of Outstanding National Beauty (AONB).

2.4 Statutory designated wildlife sites of local importance refers to Local Nature Reserves (LNR).

2.5 Non-statutory designated wildlife sites of local importance may include:

- Local Wildlife Site (LWS);
- Site of Biological Importance (SBI); and
- Biological Heritage Site (BHS).

2.6 Habitats of value may include those listed under any of the following:

- Ancient woodland;
- Main rivers[1];
- Habitats of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (S41); and
- Local Biodiversity Action Plan Habitats (LBAP).

2.7 Protected species records may include those listed under any of the following:

- European Protected Species (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (S41);
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

[1] Main rivers are statutory watercourses designated by the Environment Agency (in England). 'Main rivers' are usually larger streams and rivers, but some of them are small watercourses of significance. Works within 8m of main rivers are generally prohibited or require permission as there could be flood risk implications.

3.0 Legislation and Planning Policy

3.1 This section details legislation and planning policy which may have relevance to the site. Only legislation and policy relevant to biodiversity are included.

International Planning Policy

Conservation of Habitats and Species Regulations 2017

Protected Species

3.2 European Protected Species (EPS) and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (and as amended), which makes it illegal to:

- Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs;
- Deliberately disturb such an animal; and
- Damage or destroy a breeding site or resting place of such an animal.

3.3 European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely:

- The development is for reasons of overriding public interest;
- There is no satisfactory alternative; and
- The favourable conservation status of the species concerned will be maintained and/or enhanced.

3.4 Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a duty to 'have regard to the requirements of the EC Habitats Directive' i.e. LPA's must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.

Protected Sites

3.5 The Regulations also deal with the assessment of potential impacts on sites of European nature conservation importance, in this case, the Manchester Mosses SAC. Requirements are set out within Regulations 63 and 64 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect a European site. The steps and tests set out within Regulations 63 and 64 are commonly referred to as the 'Habitats Regulations Assessment' process.

3.6 All plans and projects (including planning applications) which are not directly connected with, or necessary for, the conservation management of a habitat site, require consideration of whether the plan or project is likely to have significant effects on that site. This consideration should take into account the potential effects both of the plan/project itself and in combination with other plans or projects. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured.

National Planning Policy

National Planning Policy Framework 2019

3.7 The National Planning Policy Framework (NPPF19) sets out the Government's planning policies for England and how these are expected to be applied at a local level in development plans and how developers should address them. The Framework places great emphasis on plans and developments contributing to sustainable development.

3.8 The NPPF19 states:

3.9 When determining planning applications, local planning authorities should apply the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless are wholly exceptional reasons and a suitable compensation strategy exists; and;
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity;
- The following should be given the same protection as habitats sites:
- a) potential Special Protection Areas and possible Special Areas of Conservation;
- b) listed or proposed Ramsar sites; and

- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Wildlife and Countryside Act 1981

3.10 Animal species listed under Schedule 5 of the Wildlife and Countryside Act 1981 (and as amended) receive full protection which makes it illegal (subject to certain exceptions) to:

- Intentionally kill, injure or take any such animal;
- Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and
- Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.

3.11 Some species receive partial protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which provide protection against intentional killing or injury of any such animal.

3.12 All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to exceptions) to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

3.13 Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (and as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to:

- Intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.

3.14 Plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 (and as amended) are protected from unauthorised intentional picking, uprooting and destruction.

Natural Environment and Rural Communities (NERC) Act 2006

3.15 Section 40 of the NERC Act places a duty to conserve biodiversity on public authorities in England. It requires local authorities and government departments to have regard to the purposes of conserving biodiversity in a manner that is consistent with the exercise of their normal functions such as policy and decision-making. 'Conserving biodiversity' may include enhancing, restoring or protecting a population or a habitat.

3.16 Section 41 requires the Secretary of State to publish and maintain lists of species and types of habitats which are regarded by Natural England to be of "principal importance" for the purposes of conserving biodiversity in England. These 56 priority habitats and 943 species are drawn from earlier lists of United Kingdom Biodiversity Action Plan Priority Species and Habitats. The Section 41 lists are needed by decision-makers in local and regional authorities when carrying out their duties under Section 40 of the Act.

Protection of Badgers Act 1992

3.17 The Protection of Badgers Act 1992 makes it an offence to kill, injure or take a badger from the wild. It is also an offence to disturb, damage or interfere with a sett unless a licence is obtained from a statutory authority.

Local Planning Policy

Manchester's Local Development Framework Core Strategy Development Plan (adopted 11th July 2012)

3.18 The Manchester Local Plan guides development within Manchester. It was previously known the Local Development Framework.

3.19 The interactive policies map for the Local Plan Core Strategy can be viewed by following the link: https://mcrcouncil.maps.arcgis.com/apps/webappviewer/index.html?id=565a33eaba904b2dabf4c3dd8685db80

3.20 The site is not allocated for biodiversity purposes under the Core Strategy; however the Rochdale Canal, adjacent to the north west site boundary, is designated as Rochdale Canal – Stotts Lane to Ducie Street Basin SBI. More information on this SBI is provided later in this document.

3.21 The Core Strategy document can be viewed by following the link: https://www.manchester.gov.uk/downloads/download/4964/core_strategy_development_plan

3.22 The following policies relate to biodiversity and nature conservation:

- Policy EN9 Green infrastructure
- Policy EN15 Biodiversity and Geological Conservation

Greater Manchester Spatial Framework Revised Draft (January 2019)

3.23 The Greater Manchester Spatial Framework Draft 2019 (GMSF) sets out how Greater Manchester should develop up until 2037 and identifies the amount of new development that will come forward across Manchester, plus the 9 other districts within the scheme/ The plan will supports the delivery of key infrastructure, such as transport and utilities, protect the important environmental assets across the city region, allocate sites for employment and housing outside of the existing urban area and define a new green belt boundary for Greater Manchester.

3.24 The GMSF draft document can be viewed by following the link: https://www.greatermanchester-ca.gov.uk/what-we-do/housing/greater-manchester-spatial-framework/gmsf-full-plan/

3.25 The following policies relate to biodiversity and nature conservation:

- GM-G2 Green Infrastructure Network
- GM-G7 Tree and Woodland
- GM-G10 A Net Enhancement of Biodiversity and Geodiversity

Local Biodiversity Action Plans (LBAP)

3.26 The LBAP document for Greater Manchester can be viewed by following the link: http://www.wildaboutmanchester.info/www/images/stories/pdfs/mbs.pdf

3.27 The following habitats are identified within LBAPs for Greater Manchester:

- Acid grassland;
- Ancient and/or species-rich hedgerows;
- Wet woodlands;
- Lowland broadleaved woodland;
- Lowland heathland;
- Lowland meadows;
- Unimproved neutral grassland;
- Marshy grassland;
- Managed greenspace;
- Rivers;
- Canals; and
- Ponds and lodges.

3.28 The following species are identified within LBAPs for Greater Manchester:

- Great crested newt;
- Water vole;
- Brown hare;
- Pipistrelle bat;
- Skylark;
- Linnet;
- Reed bunting;
- Spotted flycatcher;
- Tree sparrow;
- Grey partridge;
- Bullfinch;
- Song thrush;
- Floating water plantain;
- Grass-wrack pondweed; and
- Manchester poplar.

4.0 Site Designations

Statutory Designated Wildlife Sites of International Importance

4.1 There is one internationally designated wildlife site within 10km of the site (Figure 2). These are detailed in Table 2 below. Citations are provided in Appendix A.

Table 2: Details of Internationally Designated Wildlife Sites within 10km of the Site

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Rochdale Canal	SAC	2km east	Rochdale Canal supports a significant population of the Annex 2 plant species floating water-plantain *Luronium natans*.

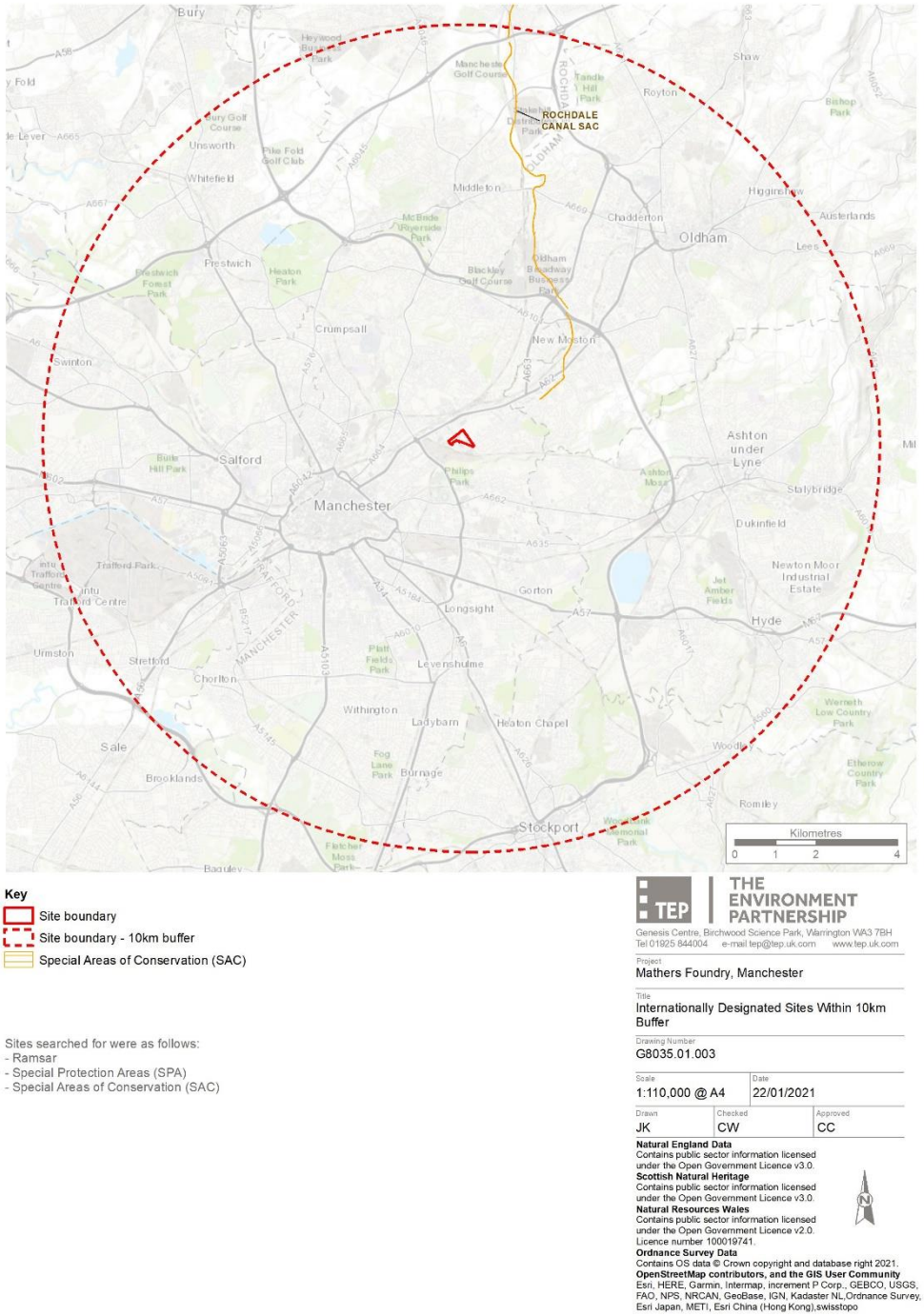


Figure 2: Internationally Designated Wildlife Sites within 10km of the Site

Statutory Designated Wildlife Sites of National Importance

4.2 There are two nationally designated wildlife sites within 5km of the site (Figure 3). These are detailed in Table 3 below. Citations are provided in Appendix B.

Table 3: Details of Nationally Designated Wildlife Sites within 5km of the Site

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Rochdale Canal	SSSI	2km east	The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce SAC species floating water-plantain. The site also supports a diverse assemblage of aquatic flora, notably its assemblage of pondweeds, the nine species of which found in the canal represent a balanced community which reflects the quality of water.

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Hollinwood Branch Canal	SSSI	3.8km south east	The canal is the best example of a mesotrophic standing water system in Greater Manchester and Merseyside. The main habitats are open water, swamp and tall fen. Damp unimproved neutral grassland occurs on the eastern bank and unimproved neutral grassland, scattered trees and shrubs and a hedge to the west. As a consequence of the high water quality and profile of the canal, the open water plant communities are exceptionally diverse and contain several regionally and nationally rare species.

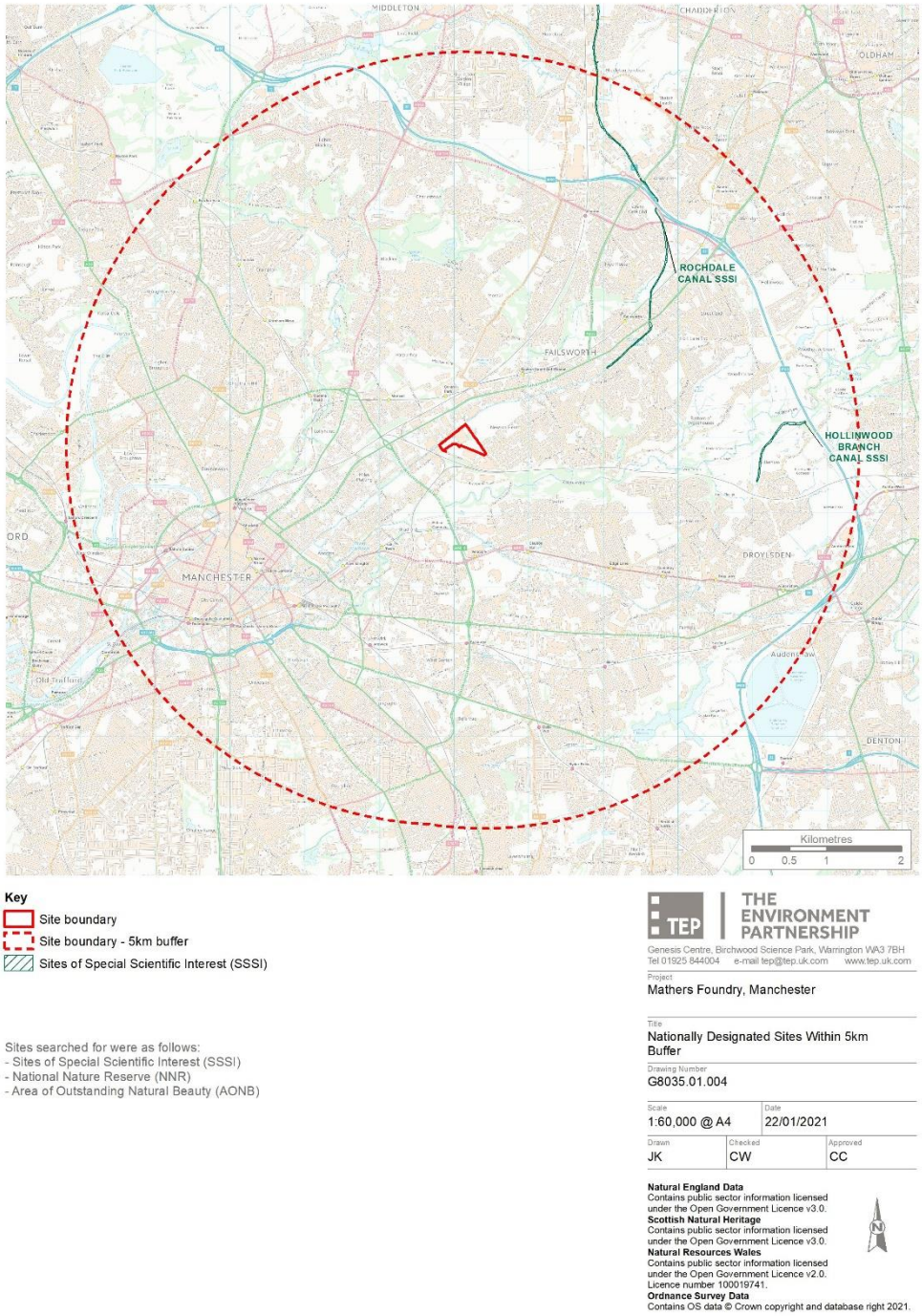


Figure 3: Nationally Designated Wildlife Sites within 5km of the Site

4.3 The site falls within the Impact Risk Zone (IRZ) for Rochdale Canal SSSI. This is shown in Figure 4.

4.4 Warehousing developments are not listed as a risk category with regard to this SSSI. The Local Authority is not required to consult with Natural England with regard to potential impacts on the SSSI as a result of the proposals. Table 4 provides information on the likely impacts of development proposals on the SSSI.

Table 4: Likely Impacts of Development Proposals on Rochdale Cana SSSI.

Planning Proposal Categories	LPA Should Consult Natural England on Likely Risks from the Following:
All planning applications	N/A
Infrastructure	Airports, helipads and other aviation proposals.
Wind and solar energy	N/A
Minerals, oil and gas	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural non-residential	N/A
Residential	N/A
Rural residential	N/A
Air pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t).
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	N/A
Composting	N/A
Discharges	N/A
Water supply	N/A

Figure 4: SSSI IRZ within the Site

Statutory Designated Wildlife Sites of Local Importance

4.5 There are six statutory locally designated wildlife sites within 5km of the site (Figure 5). These are detailed in Table 5 below.

Table 5: Details of Statutory Locally Designated Wildlife Sites within 5km of the Site

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Clayton Vale	LNR	740m south	The site was reclaimed from land fill by Manchester City Council in the early 1980's and forms a valley with the river Medlock running along its base.
Boggart Hole Clough	LNR	2.1km north	The site is the largest woodland clough in Manchester and part is ancient woodland.

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Hollinwood Branch Canal	LNR	3.8km south east	The canal is the best example of a mesotrophic standing water system in Greater Manchester and Merseyside. The main habitats are open water, swamp and tall fen. Damp unimproved neutral grassland occurs on the eastern bank and unimproved neutral grassland, scattered trees and shrubs and a hedge to the west. As a consequence of the high water quality and profile of the canal, the open water plant communities are exceptionally diverse and contain several regionally and nationally rare species.

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Blackley Forest	LNR	4.1km north west	The forest makes up most of the reserve along with grassland. The River Irk flows through the park and is a main feature. There are a variety of plants and animals to see. Habitats include broadleaved and plantation woodland, grassland, lake, marsh and a river.
Alkrington Woods	LNR	4.3km north	Habitats include woodland, grassland, marsh, standing water and amenity areas.
The Cliff/Kersal Dale	LNR	4.5km north east	The site is also known as Kersal Dale. Habitats include woodland, open water, marsh and semi-natural grassland. The site supports a variety of wildlife including woodpeckers and kingfishers which can be regularly spotted along the river.

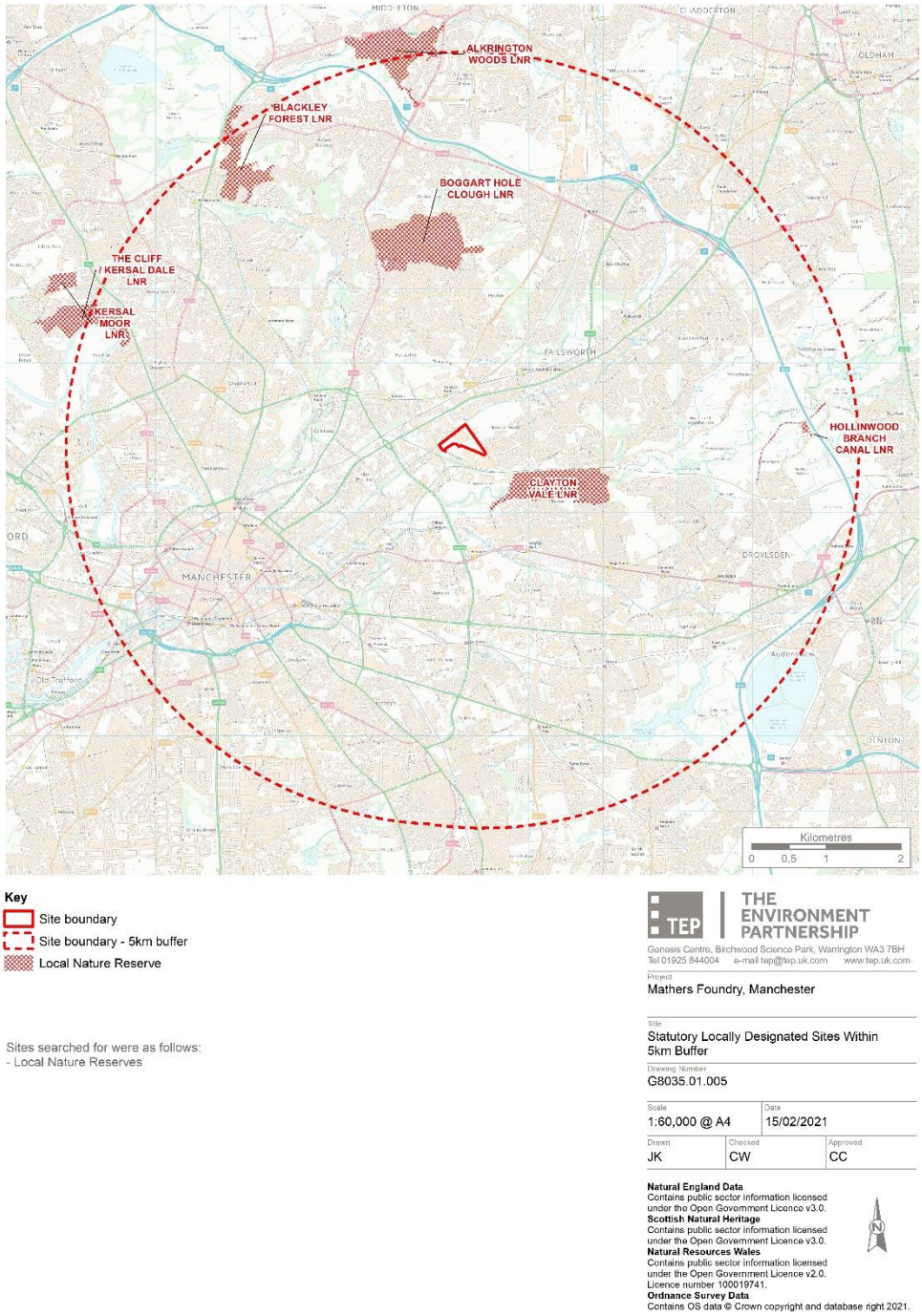


Figure 5: Statutory Locally Designated Wildlife Sites within 5km of the Site

Non-statutory Designated Wildlife Sites of Local Importance

4.6 There are two non-statutory locally designated wildlife sites within 1km of the site (Figure 6). These are detailed in Table 6 below.

Table 6: Details of Non-statutory Locally Designated Wildlife Sites within 1km of the Site

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Rochdale Canal – Stotts Lane to Ducie Street Basin	SBI	10m north	Regionally important aquatic habitats and floating water-plantain
Bank Bridge Meadow	SBI	670m south	Lies in the valley of the River Medlock and provides a wild grassland habitat for a range of species

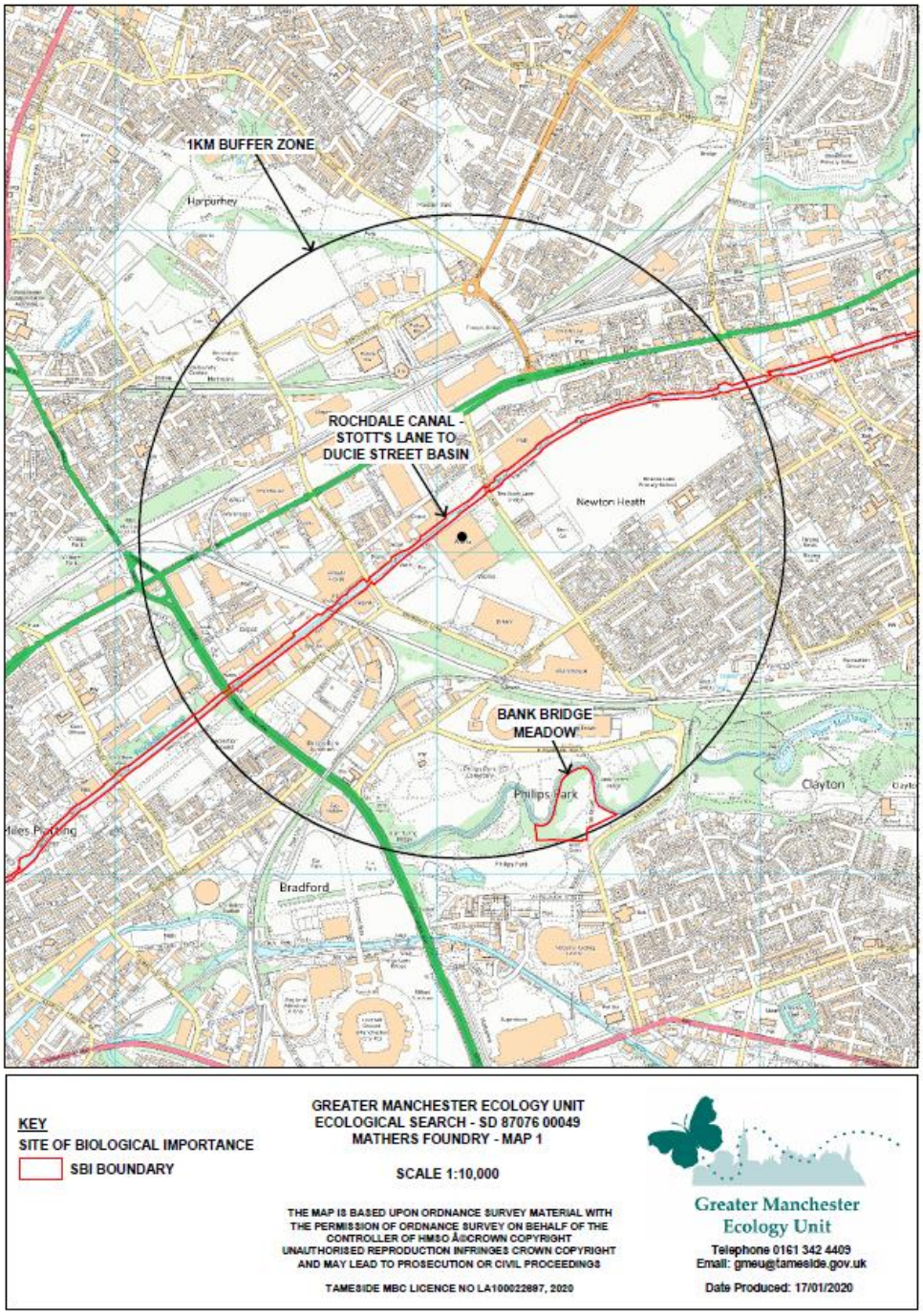


Figure 6: Non-statutory Locally Designated Wildlife Sites within 1km of the Site

5.0 Habitats

5.1 An area of identified open mosaic habitat on previously land is present in the east of the site and approximately 15m to the northeast of the site (Figure 7). A stand of deciduous woodland priority habitat is located approximately 90m southwest of the site boundary. Rochdale Canal is within 10m of the northern site boundary.

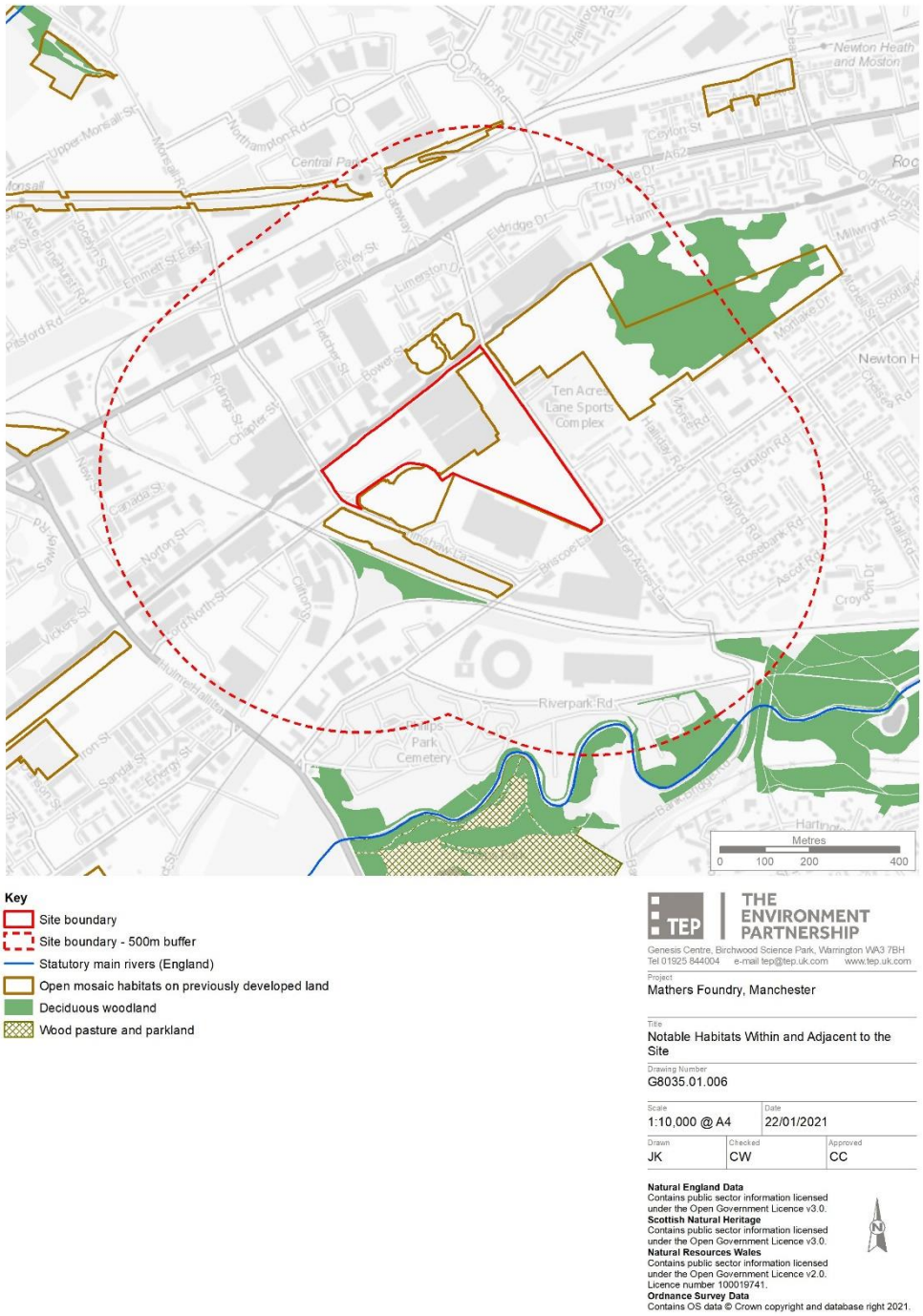


Figure 7: Notable Habitats within and adjacent to the site

6.0 Species

6.1 The species records, returned from GMLRC for within 1km of the site, are shown in Table 7. Full species records are provided in Appendix C.

6.2 A review of Magic Maps did not return any class licence returns or pond survey data for great crested newts between 2017 and 2019 within 1km of the site.

Table 7: Notable Species Records within 1km of the Site

Name of Species	Legislation	Closest Record to Site
Birds		
Little Ringed Plover	WCA1	Within 1km (records are confidential)
Peregrine	WCA1	Within 1km (records are confidential)
Bullfinch	S41, LBAP, BAm	150m north east
Dunnock	S41, BAm	Within 1km (only a six digit grid reference provided)
Herring Gull	S41, BRd	Within 1km (only a six digit grid reference provided)
House Sparrow	S41, BRd	Within 1km (only a six digit grid reference provided)
Lapwing	S41, BRd	Within 1km (only a six digit grid reference provided)
Lesser Redpoll	S41, BRd	Within 1km (only a six digit grid reference provided)
Linnet	S41, LBAP, BRd	Within 1km (only a six digit grid reference provided)
Reed Bunting	S41, LBAP, BAm	Within 1km (only a six digit grid reference provided)

Name of Species	Legislation	Closest Record to Site
Skylark	S41. LBAP, BRd	Within 1km (only a six digit grid reference provided)
Song Thrush	S41, LBAP, BRd	310m south east
Starling	S41, BRd	Within 1km (only a six digit grid reference provided)
Invertebrates		
Cinnabar moth	S41	Within 1km (only a four digit grid reference provided)
Mammals		
Pipistrelle species (roost)	EPS, WCA5, LBAP	160m south east
Common pipistrelle	EPS, WCA5, LBAP	150m north east
Daubenton's bat	EPS, WCA5	800m south east
Soprano pipistrelle	EPS, WCA5, S41, LBAP	150m north east
Badger	PBA	Within 1km (records are confidential)
Reptiles		
Slow worm	WCA5, S41	230m to the north east beyond Ten Acres Lane

Natural England Mitigation Licences

6.3 No Natural England mitigation licences have been identified within 1km of the site.

APPENDIX A: Citations for Statutory Designated Wildlife Sites of International Importance

NATURA 2000 – STANDARD DATA FORM

Special Areas of Conservation under the EC Habitats Directive (includes candidate SACs, Sites of Community Importance and designated SACs).

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for this site has been generated from the Natura 2000 Database submitted to the European Commission on the following date:

22/12/2015

The information provided here, follows the officially agreed site information format for Natura 2000 sites, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

The Standard Data Forms are generated automatically for all of the UK's Natura 2000 sites using the European Environment Agency's Natura 2000 software. The structure and format of these forms is exactly as produced by the EEA's Natura 2000 software (except for the addition of this coversheet and the end notes). The content matches exactly the data submitted to the European Commission.

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

Further technical documentation may be found here
http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

As part of the December 2015 submission, several sections of the UK's previously published Standard Data Forms have been updated. For details of the approach taken by the UK in this submission please refer to the following document:
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

More general information on Special Areas of Conservation (SACs) in the United Kingdom is available from the SAC home page on the JNCC website. This webpage also provides links to Standard Data Forms for all SACs in the UK.

Date form generated by the Joint Nature Conservation Committee
25 January 2016.

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK0030266**

SITENAME **Rochdale Canal**

TABLE OF CONTENTS

- 1. SITE IDENTIFICATION
- 2. SITE LOCATION
- 3. ECOLOGICAL INFORMATION
- 4. SITE DESCRIPTION
- 5. SITE PROTECTION STATUS AND RELATION WITH CORINE BIOTOPES
- 6. SITE MANAGEMENT

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
B	UK0030266

1.3 Site name

Rochdale Canal

1.4 First Compilation date	1.5 Update date
2001-05	2015-12

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee

Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY

Email:

Date site proposed as SCI:	2001-05
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2005-04
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

Back to top

2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
-2.161111111	53.53055556

2.2 Area [ha]:

24.86

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKD3	Greater Manchester

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
P	1831	Luronium natans			p				P	DD	C	A	A	A

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N06	90.0
N23	10.0
Total Habitat Cover	100

Other Site Characteristics

2 Terrestrial: Geomorphology and landscape: lowland

4.2 Quality and importance

Luronium natans for which this is considered to be one of the best areas in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	H04		B
H	J02		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/3212324
http://publications.naturalengland.org.uk/category/6490068894089216

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural England

Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

☐	Yes
☐	No, but in preparation
☒	No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE NATURA 2000 STANDARD DATA FORMS

The codes in the table below are also explained in the official European Union guidelines for the Standard Data Form. The relevant page is shown in the table below.

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	Designated Special Protection Area	53
B	SAC (includes candidates Special Areas of Conservation, Sites of Community Importance and designated SAC)	53
C	SAC area the same as SPA. Note in the UK Natura 2000 submission this is only used for Gibraltar	53

3.1 Habitat representativity

CODE	DESCRIPTION	PAGE NO
A	Excellent	57
B	Good	57
C	Significant	57
D	Non-significant presence	57

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha□ rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	15%-100%	58
B	2%-15%	58
C	< 2%	58

3.1 Conservation status habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global grade habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	15%-100%	62
B	2%-15%	62
C	< 2%	62
D	Non-significant population	62

3.2 Conservation status species (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' Or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Assemblages types

CODE	DESCRIPTION	PAGE NO
WATR	Non breeding waterfowl assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code
BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK02	Marine Nature Reserve	67
UK04	Site of Special Scientific Interest (UK)	67

APPENDIX B: Citations for Statutory Designated Wildlife Sites of National Importance

File ref: SJ 99/5

County:	Greater Manchester	**Site Name:**	**Hollinwood Branch Canal**
District:	Tameside		
Status:	Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981.		
Local Planning Authority:	Tameside Metropolitan Borough Council		
National Grid Reference:	SJ 910993 – SJ 920004	**Area:**	3.3 (ha) 8.2 (ac)
Ordnance Survey Sheet 1:50 000	109	**1:10 000**	SJ 99 NW, SD 90 SW
Date Notified (Under 1949 Act):	**–**	**Date of Last Revision:**	–
Date Notified (Under 1981 Act):	1986	**Date of Last Revision:**	**–**

Other Information:

1. The site is managed as part of the Medlock Valley Daisy Nook Country Park.

2. It is a Cheshire Conservation Trust nature reserve.

3. This is a new site.

Description and Reasons for Notification:

The Hollinwood branch of the Ashton Canal lies ca. 2 km north east of Droylsden. In the south it begins and Lumb Mill and runs northwards towards Daisy Nook, along the crest of the steep Medlock Valley. It is bordered uphill to the east by pastureland, from which it receives run-off water. The canal lies on glacial boulder clays overlying Carboniferous Westphalian Coal Measures. The water level is controlled by a series of weirs.

The canal is the best example of a mesotrophic standing water system in Greater Manchester and Merseyside. The main habitats are open water, swamp and tall fen. Damp unimproved neutral grassland occurs on the eastern bank and unimproved neutral grassland, scattered trees and shrubs and a hedge to the west.

As a consequence of the high water quality and profile of the canal, the open water plant communities are exceptionally diverse and contain several regionally and nationally rare species. Broad-leaved pondweed is a constant and dominant species throughout but is often co-dominant with any of water-soldier *Stratiotes aloides*, frogbit *Hydrocharis morsus-ranae*, arrowhead *Sagittaria sagittifolia*, rigid hornwort *Ceratophyllum demersum*, Canadian waterweed and water-starwort spp. Other commonly occurring species include floating water-plantain *Luronium natans*, unbranched bur-reed

Sparganium emersum, the alga *Nitella flexilis*, the moss *Fontinalis antipyretica* and a number of pondweeds including the red, grass-wrack, long-stalked and hairlike pondweeds *Potamogeton alpinus*, *P. compressus*, *P. praelongus* and *P. trichoides*.

The margins of the canal support a wide range of mixed tall fen communities comprising reed sweet-grass *Glyceria maxima*, bulrush, water forget-me-not, branched bur-reed, great willow herb, gipsywort and water plantain *Alisma plantago-aquatica*. Reed sweet-grass develops to form particularly dense stands in the northern section of the canal.

The canal banks comprise a damp neutral grassland containing principally tufted hair-grass *Deschampsia cespitosa*, common bent, reed canary-grass and false oat-grass.

UNITARY AUTHORITY: Oldham, Rochdale **SITE NAME:** Rochdale Canal

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 as amended.

Local Planning Authority: Oldham Metropolitan Borough Council, Rochdale Metropolitan Borough Council

National Grid Reference: SD 937161 & SD 891009 **Area:** 25.55 hectares

Ordnance Survey Sheet 1:50,000: 109 **1:10,000:** SD 91 NW; SW; SD 81 SE; SD 80 NE; SE;

Date Notified (under 1981 Act): 16 August 2000

Reasons for Notification

The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce SAC species floating water-plantain *Luronium natans.*

The site also supports a diverse assemblage of aquatic flora, notably its assemblage of pondweeds, *Potamogeton* spp; the nine species of which found in the canal represent a balanced community which reflects the quality of water.

General Description

This partially restored section of the Rochdale Canal extends approximately 20 km from Littleborough to Failsworth, passing through urban and industrialised parts of Rochdale and Oldham and the intervening areas of agricultural land (mostly pasture).

Water supplied to the Rochdale Canal in part arises from the Pennines. This water is acidic and relatively low in nutrients, while water from other sources is mostly high in nutrients. The aquatic flora of the canal is thus indicative of a mesotrophic water quality (i.e. is moderately nutrient-rich) although there is evidence of some local enrichment.

One species strongly associated with mesotrophic conditions is floating water-plantain *Luronium natans*. The flora of the canal is very diverse, partly because mesotrophic water (which has a pH between 5.5 and 6.5, rarely up to 7) supports a continuum of species within a wide pH range. Thus there are species which tolerate acid to moderately acid water (pH 4.5-pH 6.0) and a different group of species tolerant of moderately acid to alkaline conditions (pH 6.0 to pH 9.0).

Two species found in the canal which occur in acidic waters are alternate-leaved water milfoil *Myriophyllum alterniflorum* and bottle sedge *Carex rostrata*.

The pondweeds *Potamogeton* spp. are indicative of a wide range of nutrient conditions and pH tolerance. However some are only found in moderately acid to moderately alkaline conditions. These are red pondweed *Potamogeton alpinus*, various-leaved pondweed *Potamogeton gramineus* and blunt-leaved pondweed *Potamogeton obtusifolius*. Others are more generalist species, tolerant of a wide trophic or pH range. These are small pondweed *Potamogeton berchtoldii*, perfoliate pondweed *Potamogeton perfoliatus*, broad-leaved pondweed *Potamogeton natans* and curled pondweed *Potamogeton crispus*.

The canal contains significant stands in the Greater Manchester area of the emergent species water violet *Hottonia palustris*. Other emergent vegetation is dominated by extensive beds of reed sweet-grass *Glyceria maxima* with occasional stands of common reedmace *Typha latifolia.* Arrowhead *Sagittaria sagittifolia,* water-plantain *Alisma plantago-aquatica* and branched bur-reed *Sparganium erectum,* also occur frequently. Other marginal plants include yellow flag *Iris pseudacorus*, gipsywort *Lycopus europaeus*, cuckooflower *Cardamine pratensis*, water mint *Mentha aquatica*, marsh bedstraw *Galium palustre*, marsh woundwort *Stachys palustris*, and water forget-me-not *Myosotis scorpioides.* The bank-stones are sometimes colonised by ferns, notably lady fern *Athyrium filix-femina* and the locally uncommon royal fern *Osmunda regalis.* Found submerged on stones is the locally uncommon freshwater sponge *Spongilla lacustris*.

Canals, because of the history of boat movements, often contain species well outside their normal geographic range. The nationally scarce water soldier *Stratiotes aloides* and fringed water-lily *Nymphoides peltata* are naturally confined to East Anglia. Their presence in the Rochdale Canal is almost certainly due to barge traffic moving species from one part of the country to another. However the Rochdale Canal is also noted for its extensive populations of the nationally rare American pondweed *Potamogeton epihydrus*. This was probably introduced from North America in the 1850's when the mills used imported as well as local fibres.

There is a rich but generally common-place invertebrate assemblage in excess of 112 species; 13 of these species are of local importance. Two species are nationally scarce, a water beetle *Agabus uliginosus* (Notable B) and the Pea Mussel *Pisidium pulchellum*. This latter species is not known in any other Greater Manchester canal. Predatory macro-invertebrates such as caddis fly larvae, adult and larval water beetles, dragonfly and damselfly larvae and certain water bugs amongst a predominantly herbivore-detritivore community is indicative of a healthy structured ecosystem. Twelve species of coarse fish predate on these invertebrate species.

The canal also provides habitat for a number of waterside bird species. Coot, moorhen and mallard breed along the length of the canal, whilst grey wagtail also breeds in smaller numbers and kingfisher regularly use the canal for feeding.

Other information

- Floating water-plantain is protected under Schedule 8 of the Wildlife and Countryside Act 1981. It is also protected under the European Communities Directive 92/43/EEC, on the Conservation of Natural Habitats and of Wild Fauna and Flora - the Habitats Directive and is a priority species under the UK Biodiversity Action Plan.

- Kingfisher is protected under Schedule 1 of the Wildlife and Countryside Act 1981.

APPENDIX C: Species Records within 1km of the Site

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
BAT ROOSTS					
Pipistrelle sp	SJ874999	Newton Heath, Manchester	04/08/2003	Mixed Roost	Concerns about bats accessing loft area. Concerns alleviated.
BAT OTHER SIGNS					
Common Pipistrelle	SD8700	Newton Heath, Rochdale Canal	22/08/2013		
Common Pipistrelle	SD8726100262	Jacksons Brickworks	14/04/2010	1 Foraging	1 foraging
Common Pipistrelle	SD8739400382	Jacksons Brickworks	12/06/2010	1 Foraging	1 foraging & communting
Common Pipistrelle	SD8758600167	Jacksons Brickworks	09/06/2011	1 Foraging	1 foraging
Common Pipistrelle	SD8774500481	Jacksons Works	09/06/2010	2 Foraging	2 foraging
Common Pipistrelle	SD8781800454	Jacksons Brickworks	09/06/2010	1 Foraging	1 foraging
Daubenton's Bat	SJ878995	Clayton, Manchester	05/06/2007	10	Flying around the fishing pond. Clayton Vale Local Nature Reserve, M11
Daubenton's Bat	SJ878995	Clayton, Manchester	06/09/2006	2	Flying around the fishing pond. Clayton Vale Local Nature Reserve, M11
Daubenton's Bat	SJ878995	Clayton, Manchester	13/09/2005	4	Flying around the fishing pond. Clayton Vale Local Nature Reserve, M11
Pipistrelle sp	SD864004	Miles Platting	30/08/2005	1 Casualty (not road); Long term captive	100 Sanderson Street, LTC
Pipistrelle sp	SD8658300669	Road Survey	24/09/2008	Aural bat detector	Road Survey Bat Contact. Start Temp 12 C dropping to 11 C. Patchy Cloud, calm and dry.

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester LOCAL Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Pipistrelle sp	SD872001	Newton Heath, Manchester	18/08/2005	1 Casualty (not road)	Tenacres Lane, euthanased
Pipistrelle sp	SD8726100262	Manchester	14/04/2010	1 Foraging	1 foraging
Pipistrelle sp	SD8739400382	Rochdale Canal, Stott's Lane - Ducie Street Basin SBI, Manchester	12/06/2010	1 Foraging	1 foraging & communting
Pipistrelle sp	SD874002	Newton Heath	27/07/2010	6 Foraging	Rochdale Canal Bat Walk
Pipistrelle sp	SD874009	Moston	11/08/2007	1 Adult Female Casualty (not road)	Kirkby Avenue Moston Manchester. Missing membrane on R wing, only 1 eye, damage on R forearm LTS 11/08/07. Injured bat ref FP07/49
Pipistrelle sp	SD8758600167	Manchester	09/06/2011	1 Foraging	1 foraging
Pipistrelle sp	SD8774500481	Rochdale Canal, Stott's Lane - Ducie Street Basin SBI, Manchester	09/06/2010	2 Foraging	2 foraging
Pipistrelle sp	SD8781800454	Manchester	09/06/2010	1 Foraging	1 foraging
Pipistrelle sp	SD8788100131	Newton Heath	23/08/2014	1 Adult Male Casualty (not road); Released	Injured bat reference DA14/01. Problem Found with cat, no apparent injury. Found location Briscoe LaneM40 2TB Outcome released .
Pipistrelle sp	SJ86839946	Manchester	30/08/2012	10 Foraging	feeding across cemetery, centred on river
Pipistrelle sp	SJ878995	Clayton, Manchester	05/06/2007	2	Flying around the fishing pond. Clayton Vale Local Nature Reserve, M11
Pipistrelle sp	SJ878995	Clayton, Manchester	06/09/2006	2	Flying around the fishing pond. Clayton Vale Local Nature Reserve, M11
Pipistrelle sp	SJ878995	Clayton, Manchester	13/09/2005	6	Flying around the fishing pond. Clayton Vale Local Nature Reserve, M11

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Soprano Pipistrelle	SD8700	Newton Heath, Rochdale Canal	22/08/2013		
Soprano Pipistrelle	SD8700	Rochdale Canal, Newton Heath	24/07/2013		
Soprano Pipistrelle	SD879000	Newton Heath, Manchester	25/07/2002	1 Adult Casualty (not road)	injured bat at Kennington Ave. - euthanased
Soprano Pipistrelle	SJ86839946	Manchester	30/08/2012	2 Foraging	feeding across cemetery, centred on river
OTHER PROTECTED SPECIES					
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	25/04/2014	1	
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	23/04/2014	2	
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	22/04/2014	3	
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	17/04/2014	2	
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	10/04/2014	1	
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	09/04/2014	2	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Little Ringed Plover	SD869007	North Manchester Bus. Park Newton Heath	08/04/2014	2	
Little Ringed Plover	SD869007	North Manchester Business Park Newton Heath	07/04/2014	1	
Little Ringed Plover	SD869007	Newton Heath	04/04/2014	2	
Little Ringed Plover	SD870007	Central Park Manchester	21/03/2014	1	
Little Ringed Plover	SD871007	Central Park Pools	18/03/2014	1 Adult	Also single birds seen on 20 March and 30 April.
Peregrine	SJ867992	Bradford Gas Works	01/10/2013	1	Probable male perched on gasometer
Slow-worm	SD87430023	Jacksons Brickworks	20/04/2011	1 Adult Female	female adult
Slow-worm	SD87430023	Jacksons Brickworks	20/04/2011	5 Juvenile; 6 Female	
Slow-worm	SD87430023	Jacksons Brickworks	09/06/2010	6 Females; 5 Juveniles	6 females & 5 juveniles
Slow-worm	SD87570014	Jacksons Brickworks	10/06/2010	Adult Female	female adult & sloughed skin
SECTION 41 SPECIES					
Bullfinch	SD870005	Newton Heath (warehouses on A62)	14/04/2009	2 Adult; P - Pair in suitable nesting habitat	
Bullfinch	SD8749200335	Jacksons Brickworks	12/05/2010	Present - Field Record	surveys on 12th May and 9th June
Bullfinch	SD8749200335	Jacksons Brickworks	18/02/2010	2 - Field Record	
Bullfinch	SD8749200335	Jacksons Brickworks	02/02/2010	3 - Field Record	
Bullfinch	SD8749200335	Jacksons Brickworks	15/12/2009	4 - Field Record	
Bullfinch	SJ867992	Bradford Gas Works	02/02/2013	1 Adult; Resident - Field Record	
Bullfinch	SJ8799	BBS Clayton Vale	27/05/2012	2 - Breeding Bird Survey (BBS)	Visit L BTO region MANC

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Cinnabar	SD8700	Miles Platting and Newton Heath	19/06/2013	Present - Field Record	
Cinnabar	SD8700	Rochdale Canal, 10 Acres La/ Poplar St	03/08/2012	Present - field record	Caterpillars on ragwort
Cinnabar	SJ8699	Grimshaw Ln	06/08/2012	Present - Field Record	
Dunnock	SD869007	North Manchester Business Park Newton Heath	13/04/2009	4 S - Singing male - Field Record	Between: 09:40-10:20.
Herring Gull	SD869007	North Manchester Business Park Newton Heath	07/04/2014	1 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	27/05/2014	4 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	23/05/2014	2 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	21/05/2014	8 FL - recently Fledged young	6 young
House Sparrow	SD869007	North Manchester Business Park Newton Heath	14/05/2014	5 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	13/05/2014	1 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	15/04/2014	2 - Field Record	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
House Sparrow	SD869007	North Manchester Business Park Newton Heath	11/04/2014	1 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	10/04/2014	4 - Field Record	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	08/04/2014	4 B - nest Building	
House Sparrow	SD869007	North Manchester Business Park Newton Heath	13/04/2009	20 T - permanent Territory	Between: 09:40-10:20.
House Sparrow	SD8700	Newton Heath	28/02/2014	1 - Field Record	
House Sparrow	SJ8799	BBS Clayton Vale	27/05/2012	6 - Breeding Bird Survey (BBS)	Visit L BTO region MANC
House Sparrow	SJ8799	BBS Clayton Vale	22/04/2012	14 - Breeding Bird Survey (BBS)	Visit E BTO region MANC
Lapwing	SD869007	North Manchester Business Park Newton Heath	12/06/2014	6 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	10/06/2014	5 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	07/06/2014	6 - Field Record	inc 4 juv
Lapwing	SD869007	North Manchester Business Park Newton Heath	06/06/2014	6 FL - recently Fledged young	4 juv

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Lapwing	SD869007	North Manchester Business Park Newton Heath	27/05/2014	6 FL - recently Fledged young	4 chicks
Lapwing	SD869007	North Manchester Business Park Newton Heath	23/05/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	21/05/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	14/05/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	13/05/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	09/05/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	01/05/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	28/04/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	25/04/2014	2 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	23/04/2014	2 - Field Record	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Lapwing	SD869007	North Manchester Business Park Newton Heath	22/04/2014	1 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	15/04/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	14/04/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	11/04/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	10/04/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	09/04/2014	2 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	08/04/2014	2 ON - adults entering or leaving nest	
Lapwing	SD869007	North Manchester Business Park Newton Heath	07/04/2014	2 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	04/04/2014	4 - Field Record	
Lapwing	SD869007	North Manchester Business Park Newton Heath	13/04/2009	12 ON - adults entering or leaving nest	Between: 09:40-10:20.

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Lapwing	SD870005	Newton Heath (warehouses on A62)	11/12/2014	50 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	19/08/2013	33 - Field Record	roosting on roof
Lapwing	SD870005	Newton Heath warehouses on A62	01/09/2010	25 Adult - Field Record	roof
Lapwing	SD870005	Newton Heath (warehouses on A62)	15/10/2009	60 Adult - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	07/07/2009	20 Adult - Field Record	on roof
Lapwing	SD870005	Newton Heath (warehouses on A62)	19/05/2009	2 Adult; D - courtship and Display	1-2 displaying in last month, one on ground in from of Silk mill
Lapwing	SD870005	Newton Heath (warehouses on A62)	17/04/2009	2 Adult; D - courtship and Display	displaying on the roof
Lapwing	SD870005	Newton Heath (warehouses on A62)	14/04/2009	1 Adult; T - permanent Territory	
Lapwing	SD870005	Newton Heath (warehouses on A62)	31/01/2009	60 Adult - Field Record	Carpet World
Lapwing	SD870005	Newton Heath (warehouses on A62)	17/01/2009	50 Adult - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	08/01/2009	12 Adult - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	06/01/2009	8 Adult - Field Record	Carpet World
Lapwing	SD870005	Newton Heath (warehouses on A62)	22/12/2008	62 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	20/12/2008	20 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	19/12/2008	30 - Field Record	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Lapwing	SD870005	Newton Heath (warehouses on A62)	17/12/2008	50 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	21/11/2008	60 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	19/11/2008	20 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	17/11/2008	10 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	11/11/2008	50 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	06/11/2008	40 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	16/10/2008	40 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	20/09/2008	20 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	10/09/2008	35 - Field Record	roof at SD865002
Lapwing	SD870005	Newton Heath (warehouses on A62)	18/08/2008	20 - Field Record	and 11th, 15th 16th Aug
Lapwing	SD870005	Newton Heath (warehouses on A62)	29/07/2008	20 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	14/07/2008	6 - Field Record	roof is SD886009. 8 on 24th
Lapwing	SD870005	Newton Heath (warehouses on A62)	04/07/2008	6 - Field Record	on roof 12 there 5th, 4 on 6th July
Lapwing	SD870005	Newton Heath (warehouses on A62)	17/06/2008	1 T - permanent Territory	
Lapwing	SD870005	Newton Heath (warehouses on A62)	26/04/2008	2 H - observed in suitable nesting Habitat	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Lapwing	SD870005	Newton Heath (warehouses on A62)	08/02/2008	14 - Field Record	Carpet World
Lapwing	SD870005	Newton Heath (warehouses on A62)	07/02/2008	9 - Field Record	Carpet world
Lapwing	SD870005	Newton Heath (warehouses on A62)	29/01/2008	18 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	17/01/2008	20 - Field Record	
Lapwing	SD870005	Newton Heath (warehouses on A62)	12/01/2008	6 - Field Record	Carpet World
Lapwing	SD870007	Central Park Manchester	08/04/2015	3 - Field Record	
Lapwing	SD870007	Central Park Manchester	02/04/2015	4 ON - adults entering or leaving nest	2 pair
Lapwing	SD870007	Central Park Manchester	31/03/2015	1 - Field Record	
Lapwing	SD870007	Central Park Manchester	24/03/2015	1 - Field Record	
Lapwing	SD870007	Central Park Manchester	20/03/2015	3 - Field Record	
Lapwing	SD870007	Central Park Manchester	13/03/2015	2 - Field Record	
Lapwing	SD870007	Central Park Manchester	16/06/2014	5 FL - recently Fledged young	4 juveniles
Lapwing	SD870007	Central Park Manchester	31/03/2014	1 Adult - Field Record	
Lapwing	SD870007	Central Park Manchester	27/03/2014	2 - Field Record	
Lapwing	SD870007	Central Park Manchester	25/03/2014	1 - Field Record	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Lapwing	SD870007	Central Park Manchester	21/03/2014	1 - Field Record	
Lapwing	SD870007	Central Park Manchester	16/11/2013	2 Roosting - Field Record	2 birds roosting amongst Gulls
Lapwing	SD870007	Central Park Manchester	10/11/2013	70 Adult - Field Record	On ground
Lapwing	SD870007	Central Park Manchester	16/06/2013	2 Adult; FL - recently Fledged young	Pair with at least 1 almost fully sized young. See also record for 7/4.
Lapwing	SD870007	Central Park Manchester	07/04/2013	2 Adult; P - Pair in suitable nesting habitat	SD872007
Lapwing	SD870007	Central Park Manchester	13/04/2009	Present Adult; T - permanent Territory	
Lapwing	SD870007	Central Park Manchester	12/04/2009	Present Adult; T - permanent Territory	
Lapwing	SD870007	Central Park Manchester	18/03/2009	19 Adult; T - permanent Territory	
Lapwing	SD870008	Manchester	02/06/2014	2 Adult; 4 FL - recently Fledged young	2 adults feeding 4 chicks
Lapwing	SD871007	Newton Heath, cenrtral pools	21/04/2014	2 D - courtship and Display - Field Record	displaying
Lapwing	SD871007	Central Park Pools	20/03/2014	3 Adult - Field Record	
Lapwing	SJ873996	Briscoe Lane	07/11/2009	450 Adult - Field Record	flying about - off a roof?
Lesser Redpoll	SJ872990	Philips Park Bradford	25/11/2010	1 - Field Record	
Linnet	SD870007	Central Park Manchester	13/04/2009	2 Adult; T - permanent Territory	
Linnet	SD870007	Central Park Manchester	12/04/2009	1 Adult; S - Singing male - Field Record	
Reed Bunting	SD870007	Central Park Manchester	12/04/2009	1 Adult; S - Singing male - Field Record	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Skylark	SD870007	Central Park Manchester	13/04/2009	1 Adult; T - permanent Territory	
Skylark	SD870007	Central Park Manchester	12/04/2009	1 Adult; S - Singing male - Field Record	
Song Thrush	SJ8720399598	Park Station, Manchester	18/07/2016	1 Adult; N - visiting probable Nest site	Nesting in dense brambles.
Song Thrush	SJ8799	BBS Clayton Vale	27/05/2012	2 - Breeding Bird Survey (BBS)	Visit L BTO region MANC
Song Thrush	SJ8799	BBS Clayton Vale	22/04/2012	2 - Breeding Bird Survey (BBS)	Visit E BTO region MANC
Starling	SD869007	North Manchester Business Park Newton Heath	10/06/2014	25 - Field Record	
Starling	SD869007	North Manchester Business Park Newton Heath	06/06/2014	35 FL - recently Fledged young	several young in flock
Starling	SD869007	North Manchester Business Park Newton Heath	23/05/2014	2 - Field Record	
Starling	SD869007	North Manchester Business Park Newton Heath	13/05/2014	4 - Field Record	
Starling	SD869007	North Manchester Business Park Newton Heath	28/04/2014	2 - Field Record	
Starling	SD869007	North Manchester Business Park Newton Heath	22/04/2014	4 - Field Record	

Greater Manchester Ecology Unit

ECOLOGICAL SEARCH
MATHERS FOUNDRY
SD 87076 00049

greater manchester Local Record Centre

Species	Grid_Ref	Site	Date	Abundance	Comment
Starling	SD869007	North Manchester Business Park Newton Heath	10/04/2014	4 - Field Record	
Starling	SD869007	North Manchester Business Park Newton Heath	13/04/2009	10 S - Singing male - Field Record	Between: 09:40-10:20.
Starling	SD870007	Central Park Manchester	27/03/2014	7 - Field Record	
Starling	SD870007	Central Park Manchester	25/03/2014	3 - Field Record	
Starling	SD87790049	Miles Platting and Newton Heath, on telephone wires by canal	09/07/2012	2 Adult - Field Record	
Starling	SJ867992	Bradford Gas Works	16/11/2013	10 Adult - Field Record	
Starling	SJ8799	BBS Clayton Vale	27/05/2012	11 - Breeding Bird Survey (BBS)	Visit L BTO region MANC
Starling	SJ8799	BBS Clayton Vale	22/04/2012	17 - Breeding Bird Survey (BBS)	Visit E BTO region MANC
Yellow Bird's-nest	SJ874992	Bank Bridge Meadow	01/06/2006	-	

Commmon Name	Latin Name	Grid_Ref	Site	Date	Abundance	Legislation
Pipistrelle sp	*Pipistrellus sp*	SJ874999	Newton Heath, Manchester	04/08/2003	Mixed Roost	HSD4;WCA5/ 9.4b;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	SD8700	Newton Heath, Rochdale	22/08/2013		HSD4;WCA5/ 9.4b;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	SD8726100262	Jacksons Brickworks	14/04/2010	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	SD8739400382	Jacksons Brickworks	12/06/2010	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	SD8758600167	Jacksons Brickworks	09/06/2011	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	SD8774500481	Jacksons Works	09/06/2010	2 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	SD8781800454	Jacksons Brickworks	09/06/2010	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Daubenton's Bat	*Myotis daubentonii*	SJ878995	Clayton, Manchester	05/06/2007	10	HSD4;WCA5/ 9.4b;CMS_A2
Daubenton's Bat	*Myotis daubentonii*	SJ878995	Clayton, Manchester	06/09/2006	2	HSD4;WCA5/ 9.4b;CMS_A2
Daubenton's Bat	*Myotis daubentonii*	SJ878995	Clayton, Manchester	13/09/2005	4	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD864004	Miles Platting	30/08/2005	1 Casualty (not road); Long term	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8658300669	Road Survey	24/09/2008	Aural bat detector	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD872001	Newton Heath, Manchester	18/08/2005	1 Casualty (not road)	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8726100262	Manchester	14/04/2010	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8739400382	Rochdale Canal, Stott's Lane - Ducie Street Basin SBI	12/06/2010	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD874002	Newton Heath	27/07/2010	6 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD874009	Moston	11/08/2007	1 Adult Female Casualty (not	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8758600167	Manchester	09/06/2011	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8774500481	Rochdale Canal, Stott's Lane - Ducie Street Basin SBI	09/06/2010	2 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8781800454	Manchester	09/06/2010	1 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SD8788100131	Newton Heath	23/08/2014	1 Adult Male Casualty (not road);	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SJ86839946	Manchester	30/08/2012	10 Foraging	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SJ878995	Clayton, Manchester	05/06/2007	2	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SJ878995	Clayton, Manchester	06/09/2006	2	HSD4;WCA5/ 9.4b;CMS_A2
Pipistrelle sp	*Pipistrellus sp*	SJ878995	Clayton, Manchester	13/09/2005	6	HSD4;WCA5/ 9.4b;CMS_A2

Soprano Pipistrelle	*Pipistrellus pygmaeus*	SD8700	Newton Heath, Rochdale	22/08/2013		HSD4;WCA5/ 9.4b;CMS_A2
Soprano Pipistrelle	*Pipistrellus pygmaeus*	SD8700	Rochdale Canal, Newton	24/07/2013		HSD4;WCA5/ 9.4b;CMS_A2
Soprano Pipistrelle	*Pipistrellus pygmaeus*	SD879000	Newton Heath, Manchester	25/07/2002	1 Adult Casualty (not road)	HSD4;WCA5/ 9.4b;CMS_A2
Soprano Pipistrelle	*Pipistrellus pygmaeus*	SJ86839946	Manchester	30/08/2012	2 Foraging	HSD4;WCA5/ 9.4b;CMS_A2

Common Name	Latin Name	Grid_Ref	Site	Date	Abundance	Legislation
Slow-worm	*Anguis fragilis*	SD87430023	Jacksons Brickworks	20/04/2011	1 Adult Female	WCA5/9.1k/l; Sect.41;UKBAP
Slow-worm	*Anguis fragilis*	SD87430023	Jacksons Brickworks	20/04/2011	5 Juvenile; 6 Female	WCA5/9.1k/l; Sect.41;UKBA
Slow-worm	*Anguis fragilis*	SD87430023	Jacksons Brickworks	09/06/2010	6 Females; 5 Juveniles	WCA5/9.1k/l; Sect.41;UKBA
Slow-worm	*Anguis fragilis*	SD87570014	Jacksons Brickworks	10/06/2010	Adult Female	WCA5/9.1k/l; Sect.41;UKBA

Common Name	Latin Name	Grid_Ref	Site	Date	Abundance
SCHEDULE 1 SPECIES					
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	25/04/2014	1
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	23/04/2014	2
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	22/04/2014	3
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	17/04/2014	2
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	10/04/2014	1
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	09/04/2014	2
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Bus. Park Newton Heath	08/04/2014	2
Little Ringed Plover	*Charadrius dubius*	SD869007	North Manchester Business Park Newton Heath	07/04/2014	1
Little Ringed Plover	*Charadrius dubius*	SD869007	Newton Heath	04/04/2014	2
Little Ringed Plover	*Charadrius dubius*	SD870007	Central Park Manchester	21/03/2014	1
Little Ringed Plover	*Charadrius dubius*	SD871007	Central Park Pools	18/03/2014	1 Adult
Peregrine	*Charadrius dubius*	SJ867992	Bradford Gas Works	01/10/2013	1
SECTION 41 SPECIES					

Bullfinch	*Pyrrhula pyrrhula*	SD870005	Newton Heath (warehouses on A62)	14/04/2009	2 Adult; P - Pair in suitable nesting habitat
Bullfinch	*Pyrrhula pyrrhula*	SD8749200335	Jacksons Brickworks	12/05/2010	Present - Field Record
Bullfinch	*Pyrrhula pyrrhula*	SD8749200335	Jacksons Brickworks	18/02/2010	2 - Field Record
Bullfinch	*Pyrrhula pyrrhula*	SD8749200335	Jacksons Brickworks	02/02/2010	3 - Field Record
Bullfinch	*Pyrrhula pyrrhula*	SD8749200335	Jacksons Brickworks	15/12/2009	4 - Field Record
Bullfinch	*Pyrrhula pyrrhula*	SJ867992	Bradford Gas Works	02/02/2013	1 Adult; Resident - Field Record
Bullfinch	*Pyrrhula pyrrhula*	SJ8799	BBS Clayton Vale	27/05/2012	2 - Breeding Bird Survey (BBS)
Dunnock	*Prunella modularis*	SD869007	North Manchester Business Park Newton Heath	13/04/2009	4 S - Singing male - Field Record
Herring Gull	*Larus argentatus*	SD869007	North Manchester Business Park Newton Heath	07/04/2014	1 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	27/05/2014	4 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	23/05/2014	2 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	21/05/2014	8 FL - recently Fledged young
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	14/05/2014	5 - Field Record

House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	13/05/2014	1 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	15/04/2014	2 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	11/04/2014	1 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	10/04/2014	4 - Field Record
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	08/04/2014	4 B - nest Building
House Sparrow	*Passer domesticus*	SD869007	North Manchester Business Park Newton Heath	13/04/2009	20 T - permanent Territory
House Sparrow	*Passer domesticus*	SD8700	Newton Heath	28/02/2014	1 - Field Record
House Sparrow	*Passer domesticus*	SJ8799	BBS Clayton Vale	27/05/2012	6 - Breeding Bird Survey (BBS)
House Sparrow	*Passer domesticus*	SJ8799	BBS Clayton Vale	22/04/2012	14 - Breeding Bird Survey
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	12/06/2014	6 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	10/06/2014	5 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	07/06/2014	6 - Field Record

Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	06/06/2014	6 FL - recently Fledged young
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	27/05/2014	6 FL - recently Fledged young
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	23/05/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	21/05/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	14/05/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	13/05/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	09/05/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	01/05/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	28/04/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	25/04/2014	2 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	23/04/2014	2 - Field Record

Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	22/04/2014	1 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	15/04/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	14/04/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	11/04/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	10/04/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	09/04/2014	2 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	08/04/2014	2 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	07/04/2014	2 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	04/04/2014	4 - Field Record
Lapwing	*Vanellus vanellus*	SD869007	North Manchester Business Park Newton Heath	13/04/2009	12 ON - adults entering or leaving nest
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	11/12/2014	50 - Field Record

Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	19/08/2013	33 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath warehouses on A62	01/09/2010	25 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	15/10/2009	60 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	07/07/2009	20 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	19/05/2009	2 Adult; D - courtship and Display
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	17/04/2009	2 Adult; D - courtship and Display
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	14/04/2009	1 Adult; T - permanent Territory
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	31/01/2009	60 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	17/01/2009	50 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	08/01/2009	12 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	06/01/2009	8 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	22/12/2008	62 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	20/12/2008	20 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	19/12/2008	30 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	17/12/2008	50 - Field Record

Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	21/11/2008	60 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	19/11/2008	20 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	17/11/2008	10 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	11/11/2008	50 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	06/11/2008	40 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	16/10/2008	40 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	20/09/2008	20 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	10/09/2008	35 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	18/08/2008	20 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	29/07/2008	20 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	14/07/2008	6 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	04/07/2008	6 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	17/06/2008	1 T - permanent Territory
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	26/04/2008	2 H - observed in suitable nesting Habitat

Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	08/02/2008	14 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	07/02/2008	9 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	29/01/2008	18 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	17/01/2008	20 - Field Record
Lapwing	*Vanellus vanellus*	SD870005	Newton Heath (warehouses on A62)	12/01/2008	6 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	08/04/2015	3 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	02/04/2015	4 ON - adults entering or
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	31/03/2015	1 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	24/03/2015	1 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	20/03/2015	3 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	13/03/2015	2 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	16/06/2014	5 FL - recently Fledged young
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	31/03/2014	1 Adult - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	27/03/2014	2 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	25/03/2014	1 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	21/03/2014	1 - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	16/11/2013	2 Roosting - Field Record
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	10/11/2013	70 Adult - Field Record

Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	16/06/2013	2 Adult; FL - recently Fledged young
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	07/04/2013	2 Adult; P - Pair in suitable nesting habitat
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	13/04/2009	Present Adult; T - permanent Territory
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	12/04/2009	Present Adult; T - permanent Territory
Lapwing	*Vanellus vanellus*	SD870007	Central Park Manchester	18/03/2009	19 Adult; T - permanent Territory
Lapwing	*Vanellus vanellus*	SD870008	Manchester	02/06/2014	2 Adult; 4 FL - recently Fledged young
Lapwing	*Vanellus vanellus*	SD871007	Newton Heath, cenrtral pools	21/04/2014	2 D - courtship and Display - Field Record
Lapwing	*Vanellus vanellus*	SD871007	Central Park Pools	20/03/2014	3 Adult - Field Record
Lapwing	*Vanellus vanellus*	SJ873996	Briscoe Lane	07/11/2009	450 Adult - Field Record
Lesser Redpoll	*Acanthis cabaret*	SJ872990	Philips Park Bradford	25/11/2010	1 - Field Record
Linnet	*Linaria cannabina*	SD870007	Central Park Manchester	13/04/2009	2 Adult; T - permanent Territory
Linnet	*Linaria cannabina*	SD870007	Central Park Manchester	12/04/2009	1 Adult; S - Singing male - Field
Reed Bunting	*Emberiza schoeniclus*	SD870007	Central Park Manchester	12/04/2009	1 Adult; S - Singing male - Field

Skylark	*Alauda arvensis*	SD870007	Central Park Manchester	13/04/2009	1 Adult; T - permanent Territory
Skylark	*Alauda arvensis*	SD870007	Central Park Manchester	12/04/2009	1 Adult; S - Singing male - Field
Song Thrush	*Turdus philomelos*	SJ8720399598	Park Station, Manchester	18/07/2016	1 Adult; N - visiting probable Nest site
Song Thrush	*Turdus philomelos*	SJ8799	BBS Clayton Vale	27/05/2012	2 - Breeding Bird Survey (BBS)
Song Thrush	*Turdus philomelos*	SJ8799	BBS Clayton Vale	22/04/2012	2 - Breeding Bird Survey (BBS)
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	10/06/2014	25 - Field Record
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	06/06/2014	35 FL - recently Fledged young
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	23/05/2014	2 - Field Record
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	13/05/2014	4 - Field Record
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	28/04/2014	2 - Field Record
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	22/04/2014	4 - Field Record
Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	10/04/2014	4 - Field Record

Starling	*Sturnus vulgaris*	SD869007	North Manchester Business Park Newton Heath	13/04/2009	10 S - Singing male - Field Record
Starling	*Sturnus vulgaris*	SD870007	Central Park Manchester	27/03/2014	7 - Field Record
Starling	*Sturnus vulgaris*	SD870007	Central Park Manchester	25/03/2014	3 - Field Record
Starling	*Sturnus vulgaris*	SD87790049	Miles Platting and Newton Heath, on telephone wires by canal	09/07/2012	2 Adult - Field Record
Starling	*Sturnus vulgaris*	SJ867992	Bradford Gas Works	16/11/2013	10 Adult - Field Record
Starling	*Sturnus vulgaris*	SJ8799	BBS Clayton Vale	27/05/2012	11 - Breeding Bird Survey (BBS)
Starling	*Sturnus vulgaris*	SJ8799	BBS Clayton Vale	22/04/2012	17 - Breeding Bird Survey (BBS)

Common Name	Latin Name	Grid_Ref	Site	Date	Legislation
Cinnabar	Tyria jacobaeae	SD8700	Miles Platting and Newton Heath	19/06/2013	Sect. 41
Cinnabar	Tyria jacobaeae	SD8700	Rochdale Canal, 10 Acres La/ Poplar St	03/08/2012	Sect. 41
Cinnabar	Tyria jacobaeae	SJ8699	Grimshaw Ln	06/08/2012	Sect. 41

THE ENVIRONMENT PARTNERSHIP

HEAD OFFICE

Genesis Centre,
Birchwood Science Park,
Warrington
WA3 7BH

Tel: 01925 844004
E-mail: tep@tep.uk.com

MARKET HARBOROUGH

No. 1 The Chambers,
Bowden Business Village,
Market Harborough,
Leicestershire,
LE16 7SA

Tel: 01858 383120
E-mail: mh@tep.uk.com

GATESHEAD

Office 26, Gateshead
International Business
Centre,
Mulgrave Terrace,
Gateshead
NE8 1AN

Tel: 0191 605 3340
E-mail: gateshead@tep.uk.com

LONDON

8 Trinity Street,
London,
SE1 1DB

Tel: 020 3096 6050
E-mail: london@tep.uk.com

CORNWALL

4 Park Noweth,
Churchtown,
Cury,
Helston
Cornwall
TR12 7BW

Tel: 01326 240081
E-mail: cornwall@tep.uk.com

APPENDIX B: Target Note Report

Target Notes Report

Target Note 001

Modified neutral grassland comprising outgrown amenity grassland or regenerated grassland with occasional scattered scrub. Scattered mature poplar trees are present along the edge of the grassland.

Poa sp.	Meadow-grass species	D
Trifolium pratense	Red Clover	A
Agrostis capillaris	Common Bent	F
Holcus lanatus	Yorkshire-fog	F
Jacobaea vulgaris	Common Ragwort	F
Poa annua	Annual Meadow-grass	F
Rumex obtusifolius	Broad-leaved Dock	F
Chamaenerion angustifolium	Rosebay Willowherb	O
Dactylis glomerata	Cock's-foot	O
Equisetum sp.	Horsetail species	O
Plantago lanceolata	Ribwort Plantain	O
Rubus fruticosus agg.	Bramble	O

Target Note 002

Outgrown intact species-poor hedgerow dominated by garden privet adjacent to a public footpath. Approximately 3m tall and 1m wide and 40m in length.

Ligustrum ovalifolium	Garden Privet	D
Acer pseudoplatanus	Sycamore	O

Target Note 003

Dense scrub bordering the hardstanding and modified neutral grassland. Planted but with some self-seeding evident. Largely young trees including some ornamental species which were not identified to species level.

Betula pendula	Silver Birch	D
Acer platanoides	Norway Maple	O
Buddleja davidii	Buddleia	O
Prunus sp.	Cherry species	O
Salix species	Willow species	O
Sorbus aucuparia	Rowan	O

Target Note 004

Modified neutral grassland in the north east of the site comprising outgrown amenity grassland or regenerated grassland with occasional scattered scrub and trees. More species-rich that at TN2 with evidence of dumped garden waste including scattered Montbretia (WCA9) plants. A dead hedgehog was found in this area. Several mature poplar trees border Ten Acres Lane in the grassland. These have Low bat roost suitability.

Poa trivialis	Rough Meadow-grass	D
Equisetum sp.	Horsetail species	A
Medicago lupulina	Black Medick	A
Plantago lanceolata	Ribwort Plantain	A
Holcus lanatus	Yorkshire-fog	F
Melilotus altissimus	Tall Melilot	F
Plantago major	Greater Plantain	F
Ranunculus repens	Creeping Buttercup	F
Rubus fruticosus agg.	Bramble	F
Rumex obtusifolius	Broad-leaved Dock	F
Chamaenerion angustifolium	Rosebay Willowherb	O
Cirsium arvense	Creeping Thistle	O
Cirsium vulgare	Spear Thistle	O
Cornus sanguinea	Dogwood	O
Crocosmia x crocosmiiflora	Montbretia	O

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Geranium robertianum	Herb-Robert	O
Jacobaea vulgaris	Common Ragwort	O
Lapsana communis	Nipplewort	O
Lathyrus pratensis	Meadow Vetchling	O
Lolium perenne	Perennial Ryegrass	O
Oenothera sp.	Evening-primrose species	O
Populus sp.	Poplar species	O
Prunus sp.	Cherry species	O
Rumex crispus	Curled Dock	O
Trifolium repens	White Clover	O
Tussilago farfara	Colt's-foot	O
Vicia sativa	Common Vetch	O
Acer campestre	Field Maple	R
Antirrhinum majus	Snapdragon	R
Aster sp.	Michaelmas-daisy species	R
Betula pendula	Silver Birch	R
Buddleja davidii	Buddleia	R
Cerastium fontanum	Common Mouse-ear	R
Convolvulus arvensis	Field Bindweed	R
Crataegus monogyna	Hawthorn	R
Fraxinus excelsior	Ash	R
Juncus inflexus	Hard Rush	R
Melilotus albus	White Melilot	R
Persicaria maculosa	Redshank	R
Phleum pratense	Timothy	R
Populus tremula	Aspen	R
Quercus sp.	Oak species	R
Silene dioica	Red Campion	R
Solanum dulcamara	Bittersweet	R
Taraxacum officinale agg.	Dandelion	R
Trifolium pratense	Red Clover	R
Tripleurospermum inodorum	Scentless Mayweed	R
Urtica dioica	Nettle	R
Viola sp.	Violet species	R

Target Note 005

Young alder carr which has self-seeded within a fenced area in the eastern corner of the site. Access was not possible but the area was viewed from the fences.

Alnus glutinosa	Alder	D
Rubus fruticosus agg.	Bramble	A
Betula pendula	Silver Birch	O
Cornus sanguinea	Dogwood	O
Crataegus monogyna	Hawthorn	O
Prunus sp.	Cherry species	O
Ulmus glabra	Wych Elm	O
Rosa canina agg.	Dog Rose	R

Target Note 006

Large area of modified neutral grassland in the south east of site. This area is bound by fences and brick walls on all aspects, preventing human disturbance but also limiting access for wildlife. Scattered scrub is present throughout the area in the form of hawthorn, buddleia and birch regeneration. A small area of hardstanding is present in the north east corner which previously used as an access point for vehicles.

Lolium perenne	Perennial Ryegrass	D
Buddleja davidii	Buddleia	A
Crataegus monogyna	Hawthorn	A
Dactylis glomerata	Cock's-foot	F
Alnus glutinosa	Alder	O
Betula pendula	Silver Birch	O
Juncus sp.	Rush species	O
Prunus sp.	Cherry species	O

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Rubus fruticosus agg.	Bramble	O
Rumex obtusifolius	Broad-leaved Dock	O
Taraxacum officinale agg.	Dandelion	O

Target Note 007

Area of dense scrub extending from the alder carr scrub at TN5, encroaching into the modified neutral grassland. The scrub is a mix of bramble, hawthorn, birch and cherry regeneration.

Rubus fruticosus agg.	Bramble	D
Betula pendula	Silver Birch	O
Crataegus monogyna	Hawthorn	O
Prunus sp.	Cherry species	O

Target Note 008

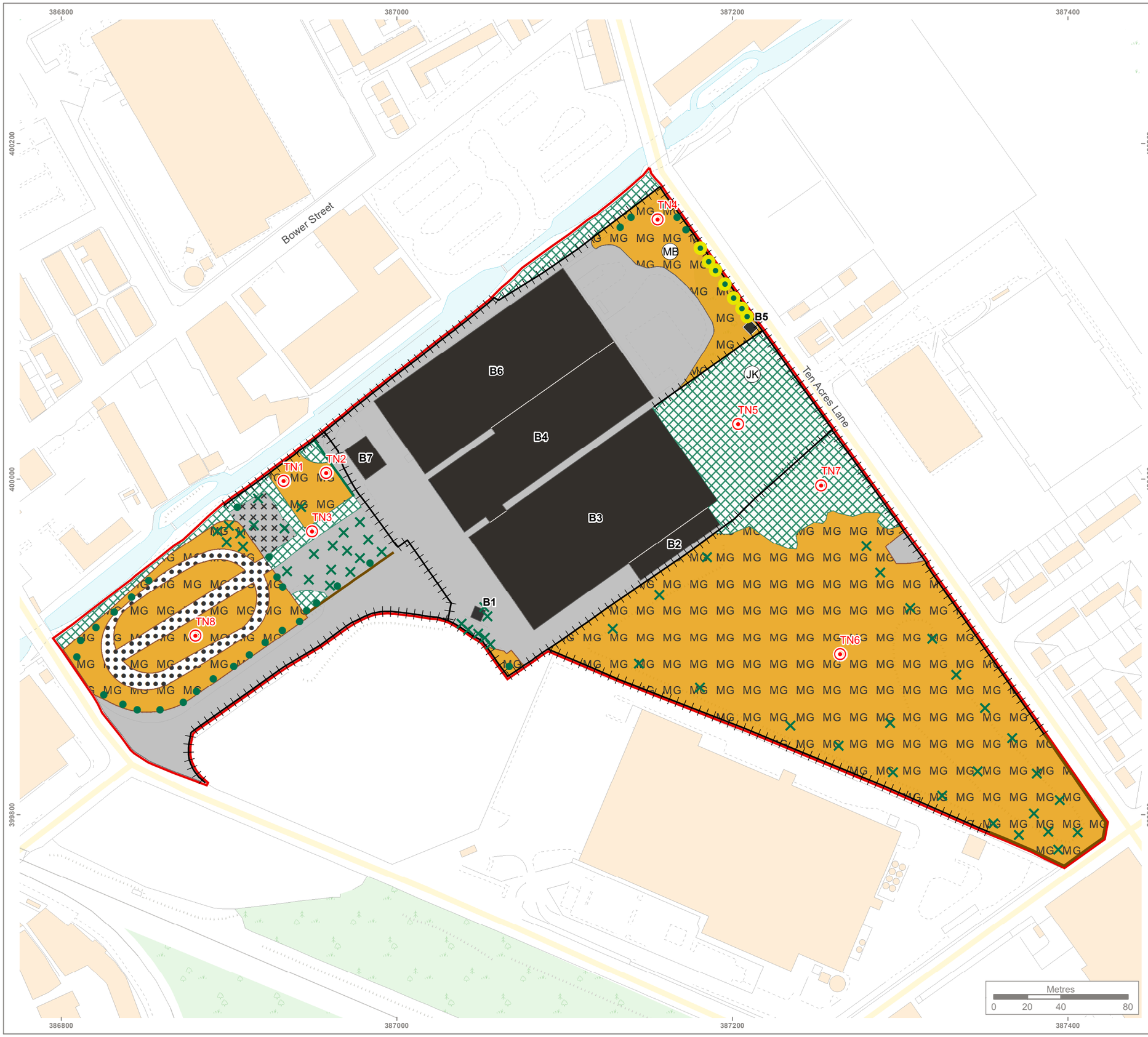
Large area of modified neutral grassland in the south west of site, adjacent to the Rochdale Canal towpath, running along the northwest boundary. To the south east, the area is bound by the entrance road to the Mathers Foundry site. Mature alders line the perimeter of the area and dense, continuous scrub bounds the northwest aspect, dominated by bramble. There is evidence of human disturbance as a bare ground track has been created within the modified neutral grassland from consistent use.

Lolium perenne	Perennial Ryegrass	D
Rubus fruticosus agg.	Bramble	D
Crataegus monogyna	Hawthorn	A
Alnus glutinosa	Alder	O
Dactylis glomerata	Cock's-foot	O
Juncus sp.	Rush species	O
Prunus sp.	Cherry species	O
Rumex obtusifolius	Broad-leaved Dock	O
Taraxacum officinale agg.	Dandelion	O
Urtica dioica	Nettle	O

APPENDIX C: Defra 2.0 Metric (separate file)

DRAWINGS

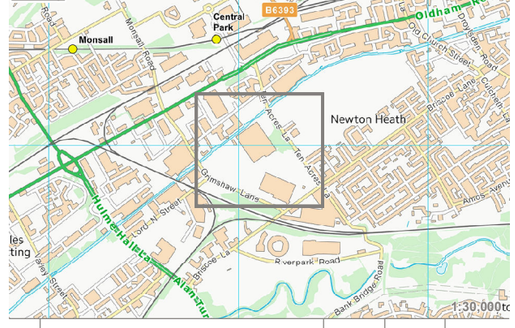
Phase 1 Habitat Survey- G8035.01.001A
Proposed Site Plan - SK048 Rev A
Planting Plan - 20-93-05 Rev B



KEY

- Site boundary
- Target note
- Japanese knotweed
- Montbretia
- Scattered scrub
- Scattered broad-leaved tree
- Broad-leaved tree with low bat potential
- Species-poor intact hedge
- Fence
- Wall
- Dense/continuous scrub
- Modified neutral grassland
- Hardstanding with ephemeral/short perennial
- Building
- Bare ground
- Hardstanding

Note:
The locations of habitats and habitat features are indicative.



Rev	Description	Drawn	Approved	Date
A	Site boundary extension and habitat updates.	CW	CC	12/02/2021

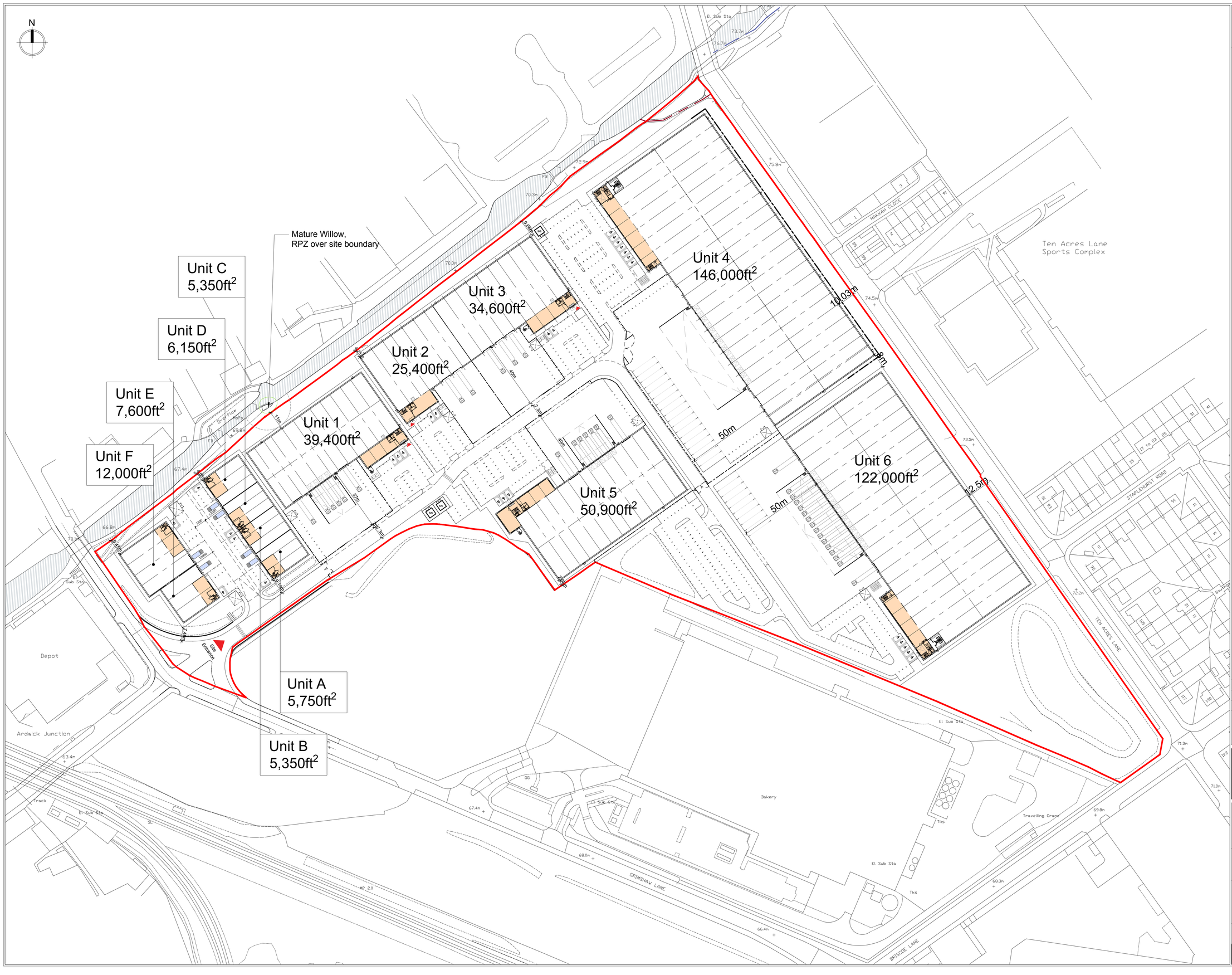
TEP THE ENVIRONMENT PARTNERSHIP
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Mathers Foundry, Manchester

Title
Phase 1 Habitat Survey

Drawing Number
G8035.01.002A

Drawn	Checked	Approved	Scale	Date
SA	MK	LP	1:2,250 @ A3	12/02/2021



Disclaimer:
Subject to survey.
The topographical information shown is based on the topographical survey by Greenhatch Group
Survey project no. *37505_T August 2020*

Notes:

Site Area Key:

Alternative Ownership Boundary
(102,408m² /25.31 acres /10.24 ha)

AREA SCHEDULE(GIA)

UNIT 1 (GIA)	**39,400ft²**
Warehouse (Incl. office Undercroft)	36,950ft²
Office (FF Only)	2,450ft²
Car parking spaces	*57*
UNIT 2 (GIA)	**25,400ft²**
Warehouse (Incl. office Undercroft)	23,600ft²
Office (FF Only)	1,800ft²
Car parking spaces	*28*
UNIT 3 (GIA)	**34,600ft²**
Warehouse (Incl. office Undercroft)	32,000ft²
Office (FF Only)	2,600ft²
Car parking spaces	*46*
UNIT 4 (GIA)	**146,000ft²**
Warehouse (Incl. office Undercroft)	133,400ft²
Office (FF)	4,800ft²
Office (SF)	4,800ft²
Car parking spaces	*118*
UNIT 5 (GIA)	**50,900ft²**
Warehouse (Incl. office Undercroft)	47,400ft²
Office (FF)	3,500ft²
Car parking spaces	*83*
UNIT 6 (GIA)	**122,000ft²**
Warehouse (Incl. office Undercroft)	114,500ft²
Office (FF Only)	3,750ft²
Office (SF Only)	3,750ft²
Car parking spaces	*110*
UNIT A (GIA)	**5,750ft²**
Warehouse (Incl. office Undercroft)	4,800ft²
Office (FF Only)	950ft²
Car parking spaces	*5*
UNIT B (GIA)	**5,350ft²**
Warehouse (Incl. office Undercroft)	4,450ft²
Office (FF Only)	900ft²
Car parking spaces	*4*
UNIT C (GIA)	**5,350ft²**
Warehouse (Incl. office Undercroft)	4,450ft²
Office (FF Only)	900ft²
Car parking spaces	*4*
UNIT D (GIA)	**6,150ft²**
Warehouse (Incl. office Undercroft)	5,100ft²
Office (FF Only)	1,050ft²
Car parking spaces	*5*
UNIT E (GIA)	**7,600ft²**
Warehouse (Incl. office Undercroft)	6,300ft²
Office (FF Only)	1,300ft²
Car parking spaces	*11*
UNIT F (GIA)	**12,000ft²**
Warehouse (Incl. office Undercroft)	10,400ft²
Office (FF Only)	1,600ft²
Car parking spaces	*7*
TOTAL AREA (GIA)	**460,500ft²**
Car parking spaces	*490*

Rev:	Notes:	Date:	Dwn:	Iss:
A	Site Populated	23.12.2020	HT	HA
-	First issue	08.12.2020	HT	HA

Suitability Code:

0 10 20 30 40 50

CANMOOR

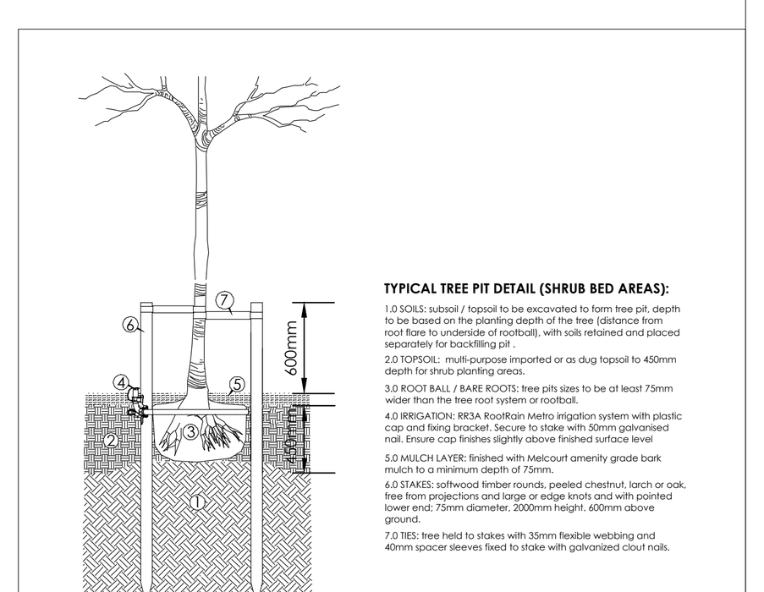
hale
ARCHITECTURE
22c Leathermarket Street, London, SE1 3HP

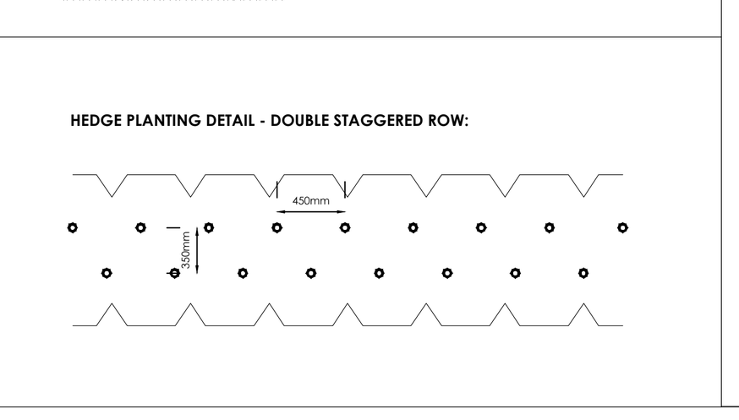
Project:
Grimshaw Lane, Manchester

Drawing Title:
Proposed Site Plan

Project No:	Scale @ A1 @ A3	Revision:
20066	1:1000 / 1:2000	A

Drawing No:
SK048





PLANNING NOTES (SOFT LANDSCAPE):

1. SOILS: Subgrade / subsoil to be prepared in accordance with BS 8601:2013 and BS 4428:1989 and scarified or ripped to 300mm depth (excluding root protection areas of retained trees refer to Tree Protection Plan 20-94-04) prior to spreading topsoil to alleviate compaction and promote drainage. Imported and as saved topsoil to be in accordance with BS 3882: 2015 'Multipurpose Grade' with minimum soil organic matter contents 1% greater than the minima value (or as approved). Imported topsoil (and 'as saved' if requested) is to be laboratory tested to BS 3882:2015 and ameliorated as required to meet the required characteristics as detailed within Table 1 of BS 3882:2015 specification. Wildflower areas to be unimproved topsoil or low fertility topsoil to BS 3882:2015. Grass areas to be a minimum depth of 150mm, Shrub beds 450mm depth and forestry / transplants 300mm depth. Any weed / grass growth to be sprayed out with appropriate herbicide at least 10 days prior to cultivation. All areas to be cultivated to a minimum depth of 150mm removing weeds and rubbish / stones greater than 20mm in size. Incorporate proprietary non peat compost to BSI PAS 100 to 50mm depth evenly worked into soil during cultivation.

N.B Proposed services (electric, water, gas etc) in landscape areas should be installed as a minimum below the required topsoil depths and clearly identified in accordance with service / utility requirements.

2. BUILDING FOUNDATION DESIGN: All tree and shrub planting proposals are to be referred to by the structural engineer during building foundation design.

3. PLANT STOCK: Unless agreed otherwise all trees and shrubs are to be of UK provenance where plants have been propagated and/or grown on for a minimum of 5 years in the UK for trees and 2 years for shrubs. All plants are to comply with the requirements of all current British Standards including BS3936 'Specifications for Nursery Stock' and BS8545 'Trees from nursery to independence in the landscape' and be supplied in accordance with the Plant Schedule. Should planting be required outside of the planting season (November - March) any bare root or rootballed stock specified is to be replaced with containerised stock to an appropriate or similar specification to the approval of the landscape architect prior to ordering.

4. EXISTING TREES: Where trees are to be retained they should be subject to a full arboricultural inspection to assess condition and safety. Retained trees shall be protected from damage by erection of 2.3m weldmesh fencing on a scaffold framework in accordance BS 5837:2012 Figure 2 refer to Tree Protection Plan 20-93-04 and the Arboricultural Method Statement 2093/EH/AMS001. These barriers shall be maintained in position and in good condition until works are complete. Fencing to be located in accordance with Table D.1 at a radius of 12 times the stem diameter (single stem trees) or based on the combined stem diameter for multistem trees (trees with more than one stem arising below 1.5m above ground level) refer to Clause 4.6. Further precautions are to be taken as detailed within BS 5837:2012 6.2.4.

5. TREE SURGERY / REMOVAL: Tree surgery and tree removal to be carried out by an Arboricultural Association approved Tree surgeon in accordance with BS 3998:2010. Arisings to be removed to a licensed tip.

6. TREE PLANTING: All trees to be in accordance with BS 3936, BS8545 and The National Plant Specification – 'Rootballed Trees' recommendations. Trees to be planted in accordance with BS 4428:1989 and double staked (14-16cm girth trees) and tied in prepared pits. Semi mature trees to be underground guyed and securely anchored using Platipus Tree System. Tree pits in open field / un-compacted ground conditions to be 1000mm x 1000mm (at least 75mm greater than that of the root system) with pit depth to be based on the planting depth of the tree (distance from root flare to underside of rootball) in accordance with BS 8545:2012. Topsoils and subsoils to be excavated and stored separately for reuse. Tree pit to be backfilled with stored subsoil and topsoil at depths to replicate the existing soil horizons. Topsoil to be mixed enriched with 40L of peat free tree planting compost. Root balls to be encircled by Root Rain Metro or similar irrigation pipe. Well water after planting. The base of trees to planted in grass areas are to be covered with 75mm amenity grade bark mulch such as Melcourt 'Amenity' Bark Mulch (or similar approved by the landscape architect) to 1.0 metre diameter and kept weed free.

In locations close to footpaths and roadways linear root barriers Greenblue Urban, ReRoot or similar are to be installed in accordance with manufacturers instructions. Where proposed tree locations conflict with services, trees are to be relocated in accordance with the appropriate utilities guidance notes subject to client / local authority approval. Proprietary root barrier Greenblue Urban, ReRoot or similar to be installed in accordance with manufacturers instructions where relocation is not considered appropriate.

7. SHRUB: plants to be in accordance with BS 3936 and handled in accordance with NPS 'Handling & Establishment' guidelines and planted in accordance with BS 4428:1989. Nursery stock supplier to be approved by the Landscape Architect. All shrubs to have a minimum of three breaks, except Hedera with a minimum of two. Well water plants immediately after planting and prior to spreading of mulch. Planting areas to be covered with 75mm depth amenity grade bark mulch such as Melcourt 'Amenity' Bark Mulch (or similar approved by the landscape architect) and kept weed free.

8. HEDGE PLANTING: plants to be in accordance with BS 3936 and handled in accordance with the NPS 'Handling & Establishment' guidelines and planted in accordance with BS 4428:1989. Hedge plants to be pit planted in double staggered rows 350mm apart at 450mm centres (or as scheduled). In mixed species hedges; shrub species to be planted randomly throughout the length of hedge. Well water plants immediately after planting and prior to spreading of mulch. Planted areas to be covered with 75mm depth bark mulch and kept weed free. Where necessary plants to be protected from rabbits with rabbit fence and / or individual rabbit mesh guards securely staked.

9. NATIVE SHRUB PLANTING: plants to be in accordance with BS 3936 and planted in accordance with BS 4428:1989, subgrade to be cross ripped at 1.2m intervals prior to planting to alleviate compaction (excluding root protection areas). Transplants to be planted at 1 metre centres (or as scheduled) in random groupings of 3-5 and 7-10 shrub species depending on numbers of plants. Transplants to be root dipped with Alginure prior to planting. Planted areas to be protected from rabbits, with rabbit fence and / or individual mesh tree guards securely fixed to timber stake(s).

10. WILDFLOWER SEEDING: grass areas to be seeded in accordance with BS 4428:1989 during March, April or September. Unimproved or low fertility topsoil to be imported, cultivated and leveled to remove all minor hollows or ridges as required with any debris or stones greater than 20mm diameter removed to provide a fine weed free tilth . Do not apply fertiliser. Weeds to be eradicated by herbicide or repeated cultivation prior to sowing. Lightly rake areas after sowing and keep well watered. Areas to be kept free from unwanted plants and mown every 6 - 8 weeks during establishment year removing arisings. In subsequent years cut in early spring and autumn after setting seed (in accordance with manufacturers recommendations) removing arisings. Seed mixes to be supplied by Emorsgate Seeds and include the following sown in accordance with suppliers recommendations.

EL1	'Flowering Lawn Mixture' (sown at 4g/m2).
EG10	'Tussock Grass Mixture' to smaller areas within main site (sown at 10-15g/m2).
EH1	'Hedgerow mix' to hedges and shaded areas (sown at 4g/m2).
EW1	'Woodland Mixture' to shrub planting areas (sown at 4g/m2).

10. BULB PLANTING: each bulb to be planted at a depth of approximately twice its height; base in contact with bottom of hole. Backfilled with finely broken soil, lightly firmed to existing ground level. Bulbs should be firm and entire, not dried out; and free from pests, diseases and fungus.

11. MAINTENANCE: To be carried out at approximately monthly intervals during the defects liability / rectification period to include the following:

a. Eradicate weeds by hand or appropriate chemical means.
b. Cut out dead or / and damaged stock or branches, prune as required.
c. Ensure all shrubs and trees are firmed in, securely staked and tied with guards where applicable.
d. Collect litter, sweep and tidy site.
e. Apply suitable non-residual herbicides, pesticides and water as required.
f. Carry out mowing to wildflower areas as per Emorsgate Seeds Ltd aftercare First year & Established sward guidance.
g. Hedges to plot frontages be maintained at a max height of 2.0m.
h. Native shrub planting to be maintained free from perennial weeds, self set shrub and tree species.
i. At final visit apply granular fertiliser to all planted areas and top up bark mulch depth to 75mm.

13. WATERING: all plant material (including turf) to be watered in dry periods until established during April through to September with a fine rose until the water penetrates the topsoil to at least 5cm depth and achieves field capacity. Frequency of watering regime to de determined by weather conditions, soil conditions and underlying geology, all plant beds to be watered to ensure soil is consistently moist to promote successful establishment. As a guide only it is suggested that during hot, dry periods, plants are to be watered every six to ten days. For individual trees it is suggested that 18 watering visits per year are carried out commencing late March (prior to budburst) and utilising a minimum of 50 litres of water per tree. Soil probe to be used to determine soil saturation to full depth of root ball.

LEGEND: SOFT LANDSCAPING

GROUND COVER: evergreen and decidous shrub ground cover planting with specimen shrubs.

DECIDUOUS HEDGE: shrub hedge planted in double or triple staggered rows as detailed.

SPECIMEN SHRUBS: specimen native shrub planting as detailed.

WILDFLOWER MEADOW AREAS: to be seeded with wildflower seed mix as detailed; refer to notes.

NATIVE SHRUB PLANTING: native shrub planting mix under planted with wildflower seed mix as detailed.

BULB PLANTING: native bulbs to be scattered within soil as detailed.

TREE PLANTING: tree planting with tree canopy spread illustrated at 25 years growth.

EXISTING TREES: to be retained in accordance with BS 5837 'Trees in relation to Construction' 2012.

TREES TO BE REMOVED

Plant Schedule

Trees

No.	Species Name	Specification	Girth	Height	Density
78 -	Acer campestre (*)	1+1: Transplant: 3 brks		40-50cm	2Ctr
40 -	Acer platanoides 'Emerald Queen'	3x :Semi mature :Clear Stem min. 200cm : :RB	20-25cm	500-550cm	Counted
51 -	Alnus glutinosa	1+1: Transplant - seed raised: B		60-80cm	2Ctr
104 -	Betula pendula (*)	1+1: Transplant: 3 brks		60-80cm	2Ctr
30 -	Carpinus betulus	3x :Extra Heavy Standard :Clear Stem 175-200 :5 brks :RB :PG 1	14-16cm	400-450cm	Counted
78 -	Corylus avellana (*)	1u1: 2/3 brks: BR		50-60cm	2Ctr
36 -	Ilex aquifolium (*)	Bushy: 3 brks		50-60cm	2Ctr
51 -	Pinus sylvestris	2+2: Transplant - seed raised: B		60-80cm	2Ctr
5 -	Prunus avium	3x :Extra Heavy Standard :Clear Stem 175-200 :5 brks :RB :PG 1	14-16cm	400-450cm	Counted
41 -	Quercus robur (*)	1u1: Transplant: 2 brks		50-60cm	2Ctr
8 -	Sorbus aria	3x :Extra Heavy Standard :Clear Stem 175-200 :5 brks :RB :PG 1	14-16cm	400-450cm	Counted
3 -	Sorbus aucuparia	3x :Extra Heavy Standard :Clear Stem 175-200 :5 brks :RB :PG 1	14-16cm	400-450cm	Counted
25 -	Sorbus aucuparia (*)	1+1 :Transplant - seed raised: B		60-80cm	2Ctr
51 -	Viburnum opulus (*)	1+1: 3 brks: BR		60-80cm	2Ctr

Hedging

No.	Species Name	Specification	Girth	Height	Pot Size	Density
238 -	Acer campestre	1+1 :Transplant :B		60-80cm		0.45Ctr Double Staggered at 0.35m offset
123 -	Acer campestre	1+1 :Transplant :B		60-80cm		0.45Ctr Triple Staggered at 0.3m offset
78 -	Cornus sanguinea	1+1 :Transplant :Branched :2 brks :B		40-60cm		0.45Ctr Double Staggered at 0.35m offset
41 -	Cornus sanguinea	1+1 :Transplant :Branched :2 brks :B		40-60cm		0.45Ctr Triple Staggered at 0.3m offset
159 -	Corylus avellana	1+2 :Transplant :Branched :3 brks		60-80cm		0.45Ctr Double Staggered at 0.35m offset
82 -	Corylus avellana	1+2 :Transplant :Branched :3 brks		60-80cm		0.45Ctr Triple Staggered at 0.3m offset
478 -	Crataegus monogyna	1+1 :Transplant :B		60-80cm		0.45Ctr Double Staggered at 0.35m offset
247 -	Crataegus monogyna	1+1 :Transplant :B		60-80cm		0.45Ctr Triple Staggered at 0.3m offset
159 -	Ilex aquifolium	Leader With Laterals		40-60cm	3L	0.45Ctr Double Staggered at 0.35m offset
82 -	Ilex aquifolium	Leader With Laterals		40-60cm	3L	0.45Ctr Triple Staggered at 0.3m offset
159 -	Ligustrum vulgare (*)	0/2 :Cutting :Branched :3 brks :B		60-80cm		0.45Ctr Double Staggered at 0.35m offset
82 -	Ligustrum vulgare (*)	0/2 :Cutting :Branched :3 brks :B		60-80cm		0.45Ctr Triple Staggered at 0.3m offset
78 -	Prunus spinosa	1+1 :Transplant :Branched :2 brks :B		60-80cm		0.45Ctr Double Staggered at 0.35m offset
41 -	Prunus spinosa	1+1 :Transplant :Branched :2 brks :B		60-80cm		0.45Ctr Triple Staggered at 0.3m offset
46 -	Rosa pimpinellifolia	1+1 :Transplant :Branched :3 brks :B		40-60cm		0.45Ctr Double Staggered at 0.35m offset
24 -	Rosa pimpinellifolia	1+1 :Transplant :Branched :3 brks :B		40-60cm		0.45Ctr Triple Staggered at 0.3m offset
46 -	Sambucus nigra	1+1 :Transplant :Branched :3 brks :B		60-80cm		0.45Ctr Double Staggered at 0.35m offset
24 -	Sambucus nigra	1+1 :Transplant :Branched :3 brks :B		60-80cm		0.45Ctr Triple Staggered at 0.3m offset
159 -	Viburnum opulus	1+2 :Transplant :Branched :3 brks :B		60-80cm		0.45Ctr Double Staggered at 0.35m offset
82 -	Viburnum opulus	1+2 :Transplant :Branched :3 brks :B		60-80cm		0.45Ctr Triple Staggered at 0.3m offset

Shrubs

No.	Species Name	Specification	Diameter	Height	Pot Size	Density
59 -	Berberis thunbergii 'Atropurpurea'	Branched :5 brks :C :PG 8		30-40cm	3L	2/m²
191 -	Brachyglottis 'Sunshine'	Branched :4 brks :C :PG 8		30-40cm	3L	3/m²
264 -	Ceanothus 'Blue Mound'	Branched :5 brks :C :PG 8	30-40cm		3L	3/m²
32 -	Ceanothus thyrsiflorus repens	Bushy :5 brks :C :PG 8	30-40cm		3L	3/m²
15 -	Cornus sanguinea	Branched :5 brks		80-100cm	10L	Counted
439 -	Cornus sanguinea	1+1 :Transplant :Branched :2 brks :B		40-60cm		1/m²
15 -	Corylus avellana	1+2 :Branched :4 brks		80-100cm		Counted
439 -	Corylus avellana	1+2 :Transplant :Branched :3 brks		60-80cm		1/m²
559 -	Cotoneaster conspicuus 'Decorus'	Branched :3 brks :C :PG 8 / PG 13		30-40cm	3L	3/m²
439 -	Crataegus monogyna	1+1 :Transplant :B		60-80cm		1/m²
101 -	Escallonia 'Red Elf' (*)	Bushy :4 brks :C :PG 9		40-60cm	3L	3/m²
145 -	Euonymus europaeus	1+2 :Transplant :Branched :5 brks :B		60-80cm		1/m²
78 -	Euonymus fortunei 'Emerald Gaiety'	Bushy :7 brks :C :PG 8	20-30cm	20-30cm	3L	3/m²
66 -	Hebe 'Mrs Winder'	Bushy :5 brks :C :PG 9		30-40cm	3L	3/m²
82 -	Hypericum 'Hidcote'	Bushy :5 brks :C :PG 8		30-40cm	3L	3/m²
1105 -	Hypericum x moserianum	Bushy :7 brks :C :PG 8		30-40cm	3L	4/m²
292 -	Ilex aquifolium	Leader With Laterals		40-60cm	3L	1/m²
99 -	Lavandula angustifolia 'Hidcote'	Bushy :5 brks :C :PG 10		20-30cm	3L	3/m²
292 -	Ligustrum vulgare (*)	0/2 :Cutting :Branched :3 brks :B		60-80cm		1/m²
187 -	Lonicera pileata	Bushy :6 brks :C :PG 2	30-40cm		3L	3/m²
401 -	Mahonia aquifolium 'Apollo'	Branched :2 brks :C :PG 8		20-30cm	3L	4/m²
389 -	Prunus laurocerasus 'Otto Luyken'	Bushy :5 brks :C :PG 8		40-60cm	5-7.5L	3/m²
266 -	Pyracantha coccinea 'Red Cushion' (*)	Bushy :5 brks :C :PG 1	30-40cm		3L	3/m²
145 -	Rosa canina (*)	1+1 :Transplant :Branched :3 brks :B		40-60cm		1/m²
145 -	Sambucus nigra	1+1 :Transplant :Branched :3 brks :B		60-80cm		1/m²
37 -	Skimmia japonica 'Rubella'	Bushy :4 brks :C :PG 8		30-40cm	5L	3/m²
106 -	Spiraea japonica 'Anthony Waterer'	Branched :6 brks :C :PG 6		30-40cm	3L	3/m²
292 -	Viburnum lanata	1+2 :Transplant :Branched :3 brks		60-80cm		1/m²
292 -	Viburnum opulus	1+2 :Transplant :Branched :3 brks :B		60-80cm		1/m²
131 -	Viburnum tinus 'Eve Price' (*)	Bushy :5 brks :C :PG 1		30-40cm	5L	2/m²

Bulbs

No.	Species Name	Specification	Diameter	Pot Size	Density
2705 -	Galanthus Nivalis	Grade 5/6			150/m²
4708 -	Hyacinthoides non-scripta	Grade 6/7			100/m²
2385 -	Narcissus pseudonarcissus	Grade 5/6			100/m²

INSET PLAN

rev	date:	amendments:	alt:
B	11/02/2021	Site area extended.	E.H

bea landscape design ltd

client: CANMOOR

project: GRIMSHAW LANE, MANCHESTER

title: PLANTING PLAN

status: PLANNING

date:	drawn:	number:
OCT'20	E.C.H	20-93-05
scale@A0:	**checked:**	**revision:**
1:500	T.G-W	B

Landscape Institute Registered Practice

Bea Landscape Design Ltd
132A 'The Westlands', Compton Road,
Wolverhampton, WV3 9QB

T: 01902 424 950 / 01902 425 001

E: info@bealandscape.co.uk
W: www.bealandscape.co.uk

THE ENVIRONMENT PARTNERSHIP

HEAD OFFICE

Genesis Centre,
Birchwood Science Park,
Warrington
WA3 7BH

Tel: 01925 844004
E-mail: tep@tep.uk.com

MARKET HARBOROUGH

Harborough Innovation Centre,
Airfield Business Park,
Leicester Road,
Market Harborough
Leicestershire
LE16 7WB

Tel: 01858 383120
E-mail: mh@tep.uk.com

GATESHEAD

Office 26, Gateshead International Business Centre,
Mulgrave Terrace,
Gateshead
NE8 1AN

Tel: 0191 605 3340
E-mail: gateshead@tep.uk.com

LONDON

8 Trinity Street,
London,
SE1 1DB

Tel: 020 3096 6050
E-mail: london@tep.uk.com

CORNWALL

4 Park Noweth,
Churchtown,
Cury,
Helston
Cornwall
TR12 7BW

Tel: 01326 240081
E-mail: cornwall@tep.uk.com