



ecological consultants

PRELIMINARY ECOLOGICAL APPRAISAL

West Street, Rochdale
Report Reference: BG22.226
October 2022



Brindle & Green Ecological Consultants specialise in delivering high quality and affordable ecological surveys and reports-tailored for their suitability for informing planning applications.

Brindle & Green surveyors have the necessary experience, technical ability, qualifications and accreditations to meet the high demands increasingly enforced by Local Authorities and Natural England.

Projects are undertaken against the recognised guidelines for the species or habitats being studied. Brindle & Green reports are uniquely designed to provide the reader with the best possible understanding of our client's proposals and to ensure that the information requested by the Local Planning Authority is easily found and understood.

This report has been prepared in accordance with the CIEEM (2017) **Guidance on Ecological Report Writing**. Chartered Institute of Ecology and Environmental Management, Winchester and CIEEM (2017) Technical guidance series, **Guidelines for Preliminary Ecological Appraisal**. Chartered Institute of Ecology and Environmental Management, Winchester

www.brindlegreen.co.uk





DOES YOUR REPORT MAKE RECOMMENDATIONS FOR
**FURTHER SURVEY WORK,
MITIGATION, MONITORING
OR ENHANCEMENT?**

Our consultancy services include specialist species surveys, landscape and mitigation, including European Protected Species Development Licences, on site supervision and monitoring.

Our contracting team deliver on site mitigation including exclusion fencing, badger sett construction and closure, tree climbing and soft landscaping.

For further information on consultancy or from our construction team please contact us on...



0800 222 9105



info@brindlegreen.co.uk

www.brindlegreen.co.uk

DID YOU KNOW BRINDLE & GREEN ALSO OFFER...



Our ecology team provide extended habitat, botanical and species survey including bat work. We also specialise in obtaining European Protected Species Licences.



Our arboriculture team deliver industry standard tree surveys, root impact assessment and tree protection plans.



Our marine team deliver shoreline surveys, marine mammal surveys, coral reef impact assessments and more within an ever diversifying division.



Our in house contracting team deliver GCN / Reptile fencing, badger sett exclusion and closure and habitat creation services.



Our science team offer GCN eDNA analysis & sample training, Bat eDNA analysis and can now provide White Clawed Crayfish eDNA analysis too.



Our Landscape consultants provide bespoke design schemes for commercial and private projects to satisfy a range of briefs. We can assess the potential scope of a proposed scheme from the earliest concept stage.

Document Control

Report	Name	Signature	Date
Prepared by	Matthew Norris Consultant Ecologist		29/09/2022
1 st Check by	Kinzie Watts Senior Ecologist		05/10/2022
2 nd Check by	Kerry Baker Consultant Ecologist		11/10/2022
Issued by (PDF)	Matthew Norris Consultant Ecologist		18/10/2022
Rev1			

Liability

Brindle & Green has prepared this report for the sole use of:

Roche Group

The report is in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party except the person, company, agent or any third party for whom the report is intended without the prior written permission of Brindle & Green.

The content of this report is, at least in part, based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by Brindle & Green unless otherwise stated in the report.

COPYRIGHT

© This report is the copyright of Brindle & Green. Unauthorised reproduction or usage by any person is prohibited.

Project Details

Project carried out by:

Brindle and Green

Unit 3, Silverhill Court

Radbourne

Derby.

DE6 4LY

Head Office: 0800 222 9105

Email: info@brindlegreen.co.uk

Website: www.brindlegreen.co.uk

Project carried out for:

Roche Group,

75/77 Drake Street,

Rochdale,

OL16 1SB

Project site:

Former West Street Baptist Church,

West Street,

Rochdale,

OL16 2EN

Grid reference: SD 90152 13817

Contents

1	Summary.....	7
2	Introduction.....	9
3	Methodology.....	10
4	Site Context.....	13
5	Results	15
6	Evaluation.....	24
7	Recommendations	28
	Appendix 1. Phase 1 Habitat Plan	33
	Appendix 2. Phase 1 Target Notes and Plant Species List.....	33
	Appendix 3. General References	36
	Appendix 4. Legislation, Policy and Guidance	37
	Appendix 5. Legislation, Guidance and Methodology for Preliminary Ecological Appraisals.....	38
	Appendix 6. Proposed Plans.....	43
	Appendix 7. Magic Data.....	43
	Appendix 8: Bat and Bird Box Examples	48

1 Summary

- 1.1 Brindle & Green Ltd were commissioned by Roche Group to undertake a Preliminary Ecological Appraisal incorporating a Phase 1 Habitat Survey and Protected Species Assessment at the Former West Street Baptist Church, West Street, Rochdale. This report summarises the potential ecological constraints to the outline planning application for site clearance to facilitate the development of six residential dwellings. Design plans are provided within Appendix 6 of this report. The survey was carried out on the 25th of August 2022.
- 1.2 The red line boundary is approximately 0.074ha in extent and comprises an area of disused land bordered by residential and commercial units to all aspects. The site consists of an area of early successional vegetation which has colonised the historic footprint of the demolished West Street Baptist church, with dense scrub, tall ruderal vegetation, and poor semi-improved grassland present on the site at the time of the survey. The site was evaluated to support site value on a regional scale.
- 1.3 The habitats described within this report have the potential to support protected and/or notable species. As such, this report outlines important measures to protect species during site clearance, and recommendations to improve the biodiversity status of the site post development.

A full description of the recommendations can be found within Chapter 7, the table below is a summary of the ecological issues recommended for further consideration as a result of our initial investigations:

Ecological Consideration	Recommendations (e.g., further survey, mitigation)	Timing
Habitats	A Biodiversity Impact Assessment should be undertaken to influence the design of the master plan to ensure a 'net gain' in biodiversity. See Chapter 7 for further information.	During the design phase.
Breeding birds	Works should be sympathetic to this group of species, with vegetation clearance undertaken following Reasonable Avoidance Measures (RAMS) outlined in Chapter 7.	During Site Clearance (Optimal timing between October - March outside of breeding bird season).

Ecological Consideration	Recommendations (e.g., further survey, mitigation)	Timing
Roosting Bats	Works should be sympathetic to this group of species, with vegetation clearance undertaken following Reasonable Avoidance Measures (RAMS) outlined in Chapter 7.	During site clearance works.
Reptiles	Works should be sympathetic to this group of species, with vegetation clearance undertaken following Reasonable Avoidance Measures (RAMS) outlined in Chapter 7.	During site clearance phase.
Invasive non-native Species	Works should seek to avoid the spread of invasive non-native and/or pernicious weed species during site clearance works. Recommendations are outlined within Chapter 7.	During site clearance works.

2 Introduction

- 2.1 The purpose of this assessment was to provide a Preliminary Ecological Appraisal of the site incorporating a Phase 1 Habitat Survey and Protected Species Assessment to establish the likelihood of the site supporting protected species. The survey provides detail on the need for any additional, more detailed protected species surveys, likely mitigation, and any opportunities for enhancement.
- 2.2 The red line boundary is approximately 0.074ha in extent and comprises an area of early successional vegetation of dense scrub, tall ruderal, and poor semi-improved grassland. The site is located within the Town of Rochdale, Greater Manchester. The site is bordered by a mixture of residential and commercial properties to all aspects of the site with further residential and commercial properties present to the wider landscape. The site is the subject of a full planning application for site clearance to facilitate the development of six residential dwellings. Design plans are provided within Appendix 6 of this report.
- 2.3 The legislation relevant to protected species within the United Kingdom is summarised within Appendix 4.
- 2.4 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, results of the desk study, and our survey of the site. This report pertains to this information only.

3 Methodology

3.1 Desk Study

Table 1 below lists organisations and/or resources used as part of the desk study process. Data regarding any known statutory or non-statutory sites, in addition to any records for protected species, were requested from the following sources:

Table 1. Ecological Data Resources

Consultant	Requested Data	Search Radius	Date Requested
MAGIC Maps	National and International Site Designations Granted EPS Development Licences	2km	21/09/2022
NBN Atlas Maps	Animal and plant species records for information purposes only.	2km	27/09/2022

3.2 Surveyors

The survey was carried out by Matthew Norris BSc (Hons.) MRSB, Consultant Ecologist, Natural England Great Crested Newt Licence (2020-44812-CLS-CLS), and Lloyd Wyatt QualCIEEM, Graduate Ecologist. The survey was overseen by Lucinda Sweet PhD, MCIEEM, Natural England Bat Licence Class 2 (2019-39122-CLS-CLS), Great Crested Newt licence (2016-22852-CLS-CLS), Director.

3.3 Survey Conditions

The survey was undertaken at 11:00am on the 25th of August 2022.

The outside temperature was recorded as 19°C, with dry, sunny conditions, and 1/8 cloud cover.

Extended Phase 1 Habitat Survey

3.3.1 A Phase 1 habitat survey was undertaken following survey guidance (JNCC 2007) to establish the presence and distribution of habitat types within the site and potential ecological constraints to development. A Phase 1 Habitat Map was produced (Appendix 1) and where additional details were required Target Notes have been provided (Appendix 2). A plant species list (Appendix 2) summarising all plants identified on site was produced during the survey and all scientific nomenclature was produced according to Stace (2010).

3.3.2 This survey was extended to note the potential for habitats on site to support protected and/or notable species and for evidence of any such species. The habitats on site were assessed for their suitability to support protected species in relation to the habitat type found at the site. Any incidental sightings or field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a protected species was identified, further species-specific surveys may be recommended to ensure that the presence or otherwise of a legally protected species is fully considered prior to the determination of any planning approval or to guide an EPS development licence.

3.3.3 Legislation, guidance, and methodology for species relevant to this site are presented in full within Appendices 4 and 5 of this report.

3.3.4 Site Evaluation

Following the ecological appraisal, the site was classified into one of six groups (Table 2), to indicate whether the site is considered to hold ecological value on a local, national, or international scale. This evaluation is intended as a guide and only targeted survey work can establish the significance of protected species populations onsite.

Table 2. Definitions of each of the six evaluation brackets, indicating the importance of each habitat type and an example of their possible habitat status. (Table constructed following The CIEEM EcIA Guidelines, Terrestrial, Freshwater, and Coastal (2016) pages 16-17).

Evaluation Value	Comparable example
International	An internationally designated site or candidate site, including habitat or species included within Special Protection Areas (SPA) / Special Areas of

	Conservation (SAC), Ramsar Sites, listed under Annex 1 of the Habitats Directive.
National	Sites designated at UK level, e.g., Sites of Special Scientific Interest (SSSI), supporting species considered nationally threatened or rare. A regularly occurring regionally or county significant population/number of any nationally important species. A feature identified as of critical importance within Section 41 of the NERC Act (2006).
Regional	Key Habitat type included within the National Biodiversity Action Plan (BAP) /NERC Habitat of Principle Importance (HPI). A regularly occurring, locally significant number of a regionally important species.
County	Designated sites, such as Sites of Biological Importance (SBIs) or viable habitat / species populations of value at a county level (LBAP).
District	District level designated sites, such as Local Wildlife Sites (LWS) or habitats / species populations of value at a district (Which have features qualifying for LWS status). Sites/features that are scarce within the district or which appreciably enrich the district habitat resource.
Local / Site	Habitats or species populations of value in a local (i.e., within ~ 5km of the site) context. Habitats of poor to moderate biological diversity e.g., established conifer plantations, species poor hedgerows and un-intensively managed grassland which supports species which are common to the local area and whose loss can be easily mitigated.

3.4 Limitations

- 3.4.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The protected and notable species assessment provides a preliminary view of the likelihood of these species occurring on site, based upon the suitability of the habitats, known distribution of the species in the local area and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group.

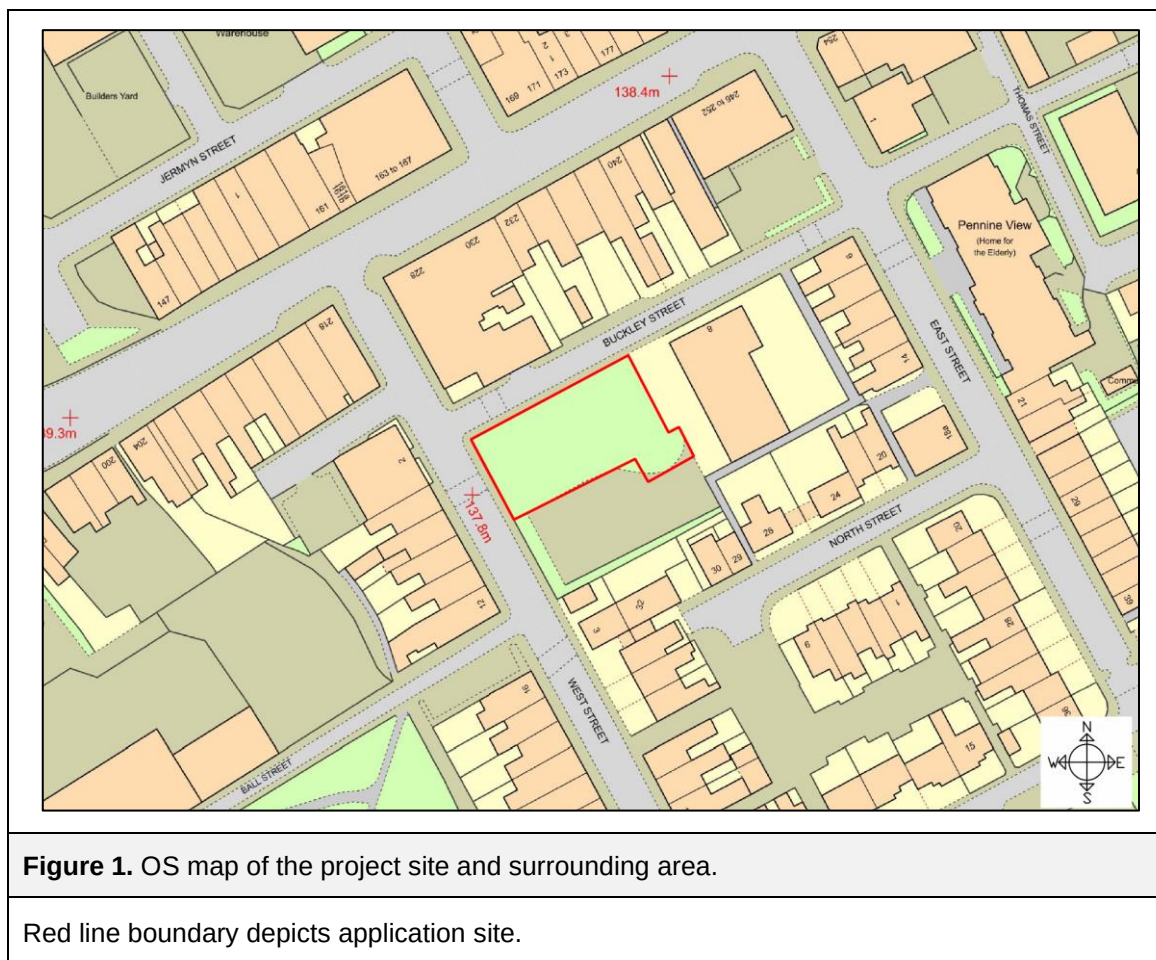
3.5 Report Lifespan

Given the transient nature of the subject we would consider the survey results contained to be accurate for 2 years.

4 Site Context

4.1 Site Description

The application site can be found at SD90152 13817 and is positioned to the northeast of Rochdale, Greater Manchester. The site pertains to an area of early successional vegetation which has colonised the historic footprint of the demolished West Street Baptiste church. It is within a highly urbanised area, consisting of residential and commercial premises to all aspects of the development site, with little connective green space to facilitate species dispersal to or from the site. Located between West Street and Buckley Street with the A58 main road to the north of the application boundary, which provides a barrier to species dispersal to the north of the application site. The river Roche is located to the south of the site 467m and is the only watercourse/waterbody within 500m of the development site providing a species dispersal corridor across Rochdale. However, the River Roche has no connective vegetation with the development site, limiting species dispersal and impacts through development.



4.2 **Zone of Influence**

The zone of influence describes the geographic extent of potential impacts of a proposed development. The small scale of the proposed development reduces the likelihood of impact to the surrounding area, however suitable connective vegetation could influence the presence of protected species within the application boundary. The zone of influence was therefore considered to be 250 metres from the application boundary for amphibians and reptiles, 30 metres for terrestrial mammals such as badgers, and within the area of impact for breeding birds.

5 Results

5.1 Desk Study

5.1.1 Designated Sites

The site was subjected to a search for designated sites within a 2km radius of the site using data supplied by the online desk-based resource MAGIC.

5.1.2 A search of the online resource Magic Maps found a single site with Statutory Designation within the 2km radius search.

Table 3. Summary of Designated Sites within a 2km radius of the application site.

Site Name	Grid Ref	Status	Reason for Designation	Distance from site
Rochdale Canal	SD 90845 12454	Special Area of Conservation (SAC) and as a Site of Special Scientific Interest (SSSI)	A restored section of the Rochdale Canal extends approximately 20 km from Littleborough to Failsworth, passing through urban and industrialised parts of Rochdale and Oldham. It supports a rich and diverse aquatic plants and invertebrate fauna, attributed to a combination of high nutrient inlets and acidic water source within the Pennines.	1.5km South

5.1.3 Protected Species Assessment

Magic maps revealed five granted EPS licences within 2km of the site for the destruction of a non-breeding resting place of daubenton's bat (*Myotis daubentonii*), common pipistrelle (*Pipistrellus pipistrellus*), and soprano pipistrelle (*Pipistrellus pygmaeus*), which expired between 2010 and 2021. The nearest licence was 736m south-west of the site for all three species, between 2015 and 2020.

Habitats

- 5.1.4 The habitat types recorded on site are summarised below, and the frequency and distribution of habitat types is displayed within a Phase 1 Habitat Survey Map (Appendix 1 and 2).
- 5.1.5 Table 5 provides a list of habitat types present on site along with their inclusion (or otherwise) as a National and / or Local Habitat of Principle Importance (HPI) (Previously referred to as Biodiversity Action Plan (BAP)) (It should be noted that additional information is included within the text where a classification under Phase 1 survey methodology does not mirror habitat types considered to be conservation priorities).

Table 5. JNCC Habitat Types found on site and inclusion within UK BAP/HPI habitats.

Habitat Type	N HPI	L HPI	N/A
Poor Semi-improved Grassland			✓
Dense/Continuous – Scrub			✓
Tall Herb and Fern – Ruderal			✓
Scattered Trees			✓

5.1.6 Poor Semi-Improved Grassland

The site was dominated by poor semi-improved grassland covering 0.029ha of the redline boundary (Figure 2). The sward (approximately 15cm tall in places) was dominated by over 70% red fescue (*Festuca rubra*), with frequent false oat grass (*Arrhenatherum elatius*) and occasional Yorkshire fog (*Holcus lanatus*). Dicotyledon species recorded included abundant colts foot (*Tussilago farfara*), bird's-foot trefoil (*Lotus corniculatus*), vetch sp. (*Vicia sp.*), and white clover (*Trifolium repens*). Frequent species included horsetail (*Equisetum sp.*) (TN2), wood avens (*Geum urbanum*) and creeping buttercup (*Ranunculus repens*).



Figure 2. Area of unmanaged poor Semi – Improved grassland to the centre of the site.

5.1.7 Dense/Continuous – Scrub

To the northern and eastern borders of the site was dense/continuous scrub, that was likely managed within the last 12 months, covering approximately 0.023ha (Figure 3). Species composition was dominated by elm (*Ulmus procera*) saplings, with abundant butterfly bush (*Buddleia davidii*) and bindweed (*Calystegia sepium*). Occasional species included silver birch (*Fraxinus excelsior*) saplings, field maple (*Acer campestre*) saplings, mugwort (*Artemisia vulgaris*), oak (*Quercus robur*) saplings, dogrose (*Rosa canina*), and bramble (*Rubus*

fruticosa).



Figure 3. Dense/continuous scrub located to the northern and eastern boundaries of the site.

5.1.8 Tall Ruderal Herbs

Unmanaged tall ruderal herbs were recorded across the application site, particularly to the east and southern boundaries equating to approximately 0.021ha of the site (Figure 4). Species included rosebay willowherb (*Chamaenerion angustifolium*), with occasional horsetail (*Equisetum* sp.) (TN2), ground ivy (*Glechoma hederacea*), ragwort (*Senecio jacobaea*), and common comfrey (*Symphytum officinale*). In addition, within this habitat a single mature elm (*Ulmus procera*) tree was present to the south-western corner of the site (see T1 within Phase 1 Habitat Plan in Appendix 1).



Figure 4. Tall herb and Fern – Ruderal to the southern edge of the site and western boundary. Photo shows south-eastern corner of the development site.

5.1.9 Scattered Trees

A single mature elm tree (*Ulmus procera*) was located to the south-western corner of the site (see T1 within Habitat Plan in Appendix 1).



Figure 5. Single Mature elm tree located to the south-western corner of the site.

5.1.10 Invasive Weeds Assessment

An assessment of the site was made to establish the presence of invasive weeds included on schedule 9 of the Wildlife and Countryside Act 1981 (as amended). One invasive non-native species was present on the site; Variegated yellow archangel (*Lamium galeobdolon subsp. argentatum*) was present to the south-western (SD 90140 13806) corner of the site (Appendices 1 and 2, Target Note 3). Additionally, horsetail (*Equisetum sp.*), a pernicious species was present on the site with abundance on the western aspect of the site (SD 90134 13815), as shown in Target Note 2 (TN2) within the Phase 1 Habitat plan located in Appendix 1. Both plant species require appropriate removal and disposal by a specialist contractor to ensure they are not spread by the development within the site and/or off the site by machinery or work boots for example. A method statement detailing a biosecurity protocol for during the site works and in-line with specialist advice.

5.3 Fauna

5.3.1 Breeding Birds

5.3.1.1 Scrub and a mature tree on the site provides suitable nesting habitat for several common bird species. Three species of bird were recorded onsite during the survey, including house sparrow (*Passer domesticus*), robin (*Erithacus rubecula*), and blackbird (*Turdus merula*).

5.3.1.2 Based on a review of the habitat types on site and onsite during the survey, the site is considered to support an assemblage of bird species including some species considered to be of high conservation concern that are either legally protected or UK BAP species, such as starling (*Sturnus vulgaris*) and house sparrow (*Passer domesticus*).

5.3.2 Bats

The Magic data search showed five granted EPS licences for three bat species, with the closest located approximately 736m to the south-west of the site, indicating the presence of roosting bat species within the local area.

5.3.2.1 Roosting Bats

A single mature elm (*Ulmus procera*) tree within the south-western corner of the development site was assessed and categorised based upon Bat Conservation Trust guidance (see Appendix 5), assessed to have a low suitability to support roosting bats, with a rot hole located within the crown of the tree as shown in Figure 5 and detailed in Table 6.

Table 6. Summary of Bat Roost potential and evidence found on the tree present on the site (Supporting Figure 5).

High	Moderate	Low	Negligible	None
Building Number	Description	Bat evidence / Potential Roosting Features (PRFs)		Roost Suitability
T1	A mature elm (<i>Ulmus procera</i>) tree located to the south-western corner of the site provides suitability for bat roosting.	• Rot hole present to limb within crown could support a cavity suitable for roosting bats. No evidence of previous bat activity was recorded during the assessment.		Low



Figure 5. Mature elm (*Ulmus procera*) tree located within the south-western corner of the development site.

5.3.3 Foraging and Commuting Bats

The site supported vegetative features considered suitable to support commuting and foraging bats. The scrub, tall ruderal herbs and a mature tree within the site boundary, provide resources for foraging bats in a highly urbanised environment. Absence of lighting within the vicinity of the site and limited connectivity with nearby residential gardens, tree lines and green spaces, provides commuting pathways to the wider environment, such as the river Roche less than 500m from the development site. Therefore, the site is considered to provide a low suitability habitat for foraging and commuting bats, due to its significance within the local area for bat species.

5.3.4 **Badgers (*Meles meles*) and MSPI Hedgehog**

Badgers

5.3.4.1 No evidence of badger setts, or activity such as mammal runs, snuffle holes and latrines were found during the ecological appraisal of the site. However, the site supported habitat features such as dense scrub, which are considered conducive to supporting badger populations. However, given the extent of the site, and the location within a highly urbanised landscape suggest that this transient species is unlikely to traverse through or depend on habitats within the redline boundary.

MSPI Hedgehogs

5.3.4.2 No evidence of hedgehogs was recorded during the survey; however, the site supported a suitable habitat matrix comprising scrub, grassland, and tall ruderal with some connectivity to surrounding residential gardens which will provide hibernation and foraging habitat for the species.

5.3.5 **Great Crested Newts (*Triturus cristatus*)**

The site supported a mixture of scrub, semi-improved grassland, brick piles (TN1), and tall ruderal which is considered suitable to support the terrestrial phase for this species. The Magic EPS search showed a single record of GCN over 2km to the south-west of the application site but did not reveal any records or survey results on ponds in or within 250m of the site. However, given the site's isolated nature with no waterbodies present within 250 metres of the site they are unlikely to be present on the development site.

5.3.6 **Reptiles**

No evidence of reptiles was recorded during the survey; however, the site supported a suitable habitat matrix to support reptiles such as slow worm (*Anguis fragilis*). The scrub, grassland, and rubble piles (TN1) on site provided a variable habitat structure with suitable basking areas within the edges of the scrub and grassland, with suitable reptile refugia such as rubble recorded. However, given the site's small size and limited connectivity the site is unlikely to support a permanent population of reptiles throughout the year.

6 Evaluation

6.1 Development Proposals

The site is the subject of a full application for site clearance to facilitate the development of six residential dwellings and associated, drainage, landscaping, and access. Design proposals for the site are presented in Appendix 6 of this report.

6.2 Desk Study Impacts

Direct impacts on nearby designated sites because of the proposed development are considered unlikely. The application site is positioned over 1.5km north of a SAC/SSSI site recorded within the data search. Rochdale canal is a restored section of canal that is noted for its aquatic plant diversity and invertebrate assemblage. Though a significant site within the local area for biodiversity, it lacks connectivity to the development site and is located outside of Impact Risk Zone (IRZ) for the site. The initial proposals set out for the site (Appendix 6) show that the extent of the development proposals are contained within the site boundary and impacts on locally designated sites are considered unlikely and therefore it does not fulfil the requirement for further action.

6.3 Habitats

- 6.3.1 The habitats on site have been evaluated as having local value in relation to the immediate surroundings and a regional context. The site was dominated by dense/continuous scrub and tall ruderal herbs, which are locally frequent and not listed as a Habitat of Principle Importance (HPI), with the loss of habitats present on the site considered short term and will be replaced with habitats of a similar value.
- 6.3.2 Under the proposals, existing habitats such as, grassland and tall ruderal herbs on the site will be lost to facilitate the development of the scheme. Although the habitats are of low - medium distinctiveness and the loss is considered to be short term, with garden landscaping replacing the existing habitats for the proposed properties. However, the site qualifies for a Biodiversity Impact Assessment to ensure that a net gain, as described within the Environment Act 2021, can be achieved. Full recommendations are outlined within Chapter 7.

6.4 Breeding Birds

6.4.1 All wild birds, their eggs and nests are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure, or take any wild bird whilst nesting, or take, damage, or destroy the nest of any such bird while in use or being built. In addition, species listed on Schedule 1 of the Wildlife and Countryside Act 1981, or their dependant young are afforded additional protection from disturbance whilst they are at their nests.

6.4.2 The vegetation on site, such as scrub, tall ruderal and scattered trees were considered to provide suitable nesting habitat for common bird species and has the potential to support populations of birds of local and national interest such as dunnoek (*prunella modularis*), house sparrow (*Passer domesticus*), wren (*Troglodytes troglodytes*), and starling (*Sturnus vulgaris*). In the absence of mitigation direct or indirect impacts on individual birds, their young, eggs and habitats could occur. Chapter 7 provides recommendations relating to the need for Reasonable Avoidance Measures (RAMs) to prevent impacts to this species.

6.5 Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat, or intentionally kill, injure, or take any bat.

6.5.1 Roosting bats

A single Elm tree (T1) on site (SD 90138 13805) was considered to hold 'Low' suitability to support roosting bats. This tree is proposed for clearance as part of the redevelopment scheme, and as such could result in disturbance or injury to roosting bats, and the loss of suitable roosting habitat. The recommendations section (Chapter 7) of this report sets out important guidance on measures to avoid impacts on bat species and measures to support their conservation status.

6.5.2 *Foraging and Commuting Bats*

The application area comprised good quality habitats suitable for foraging and commuting bat species, such as scrub, tall ruderal, and a mature tree. As such the site is considered to hold low suitability as assessed against BCT guidelines due to its small size, limited vegetative connectivity, urban setting, and is unlikely to support a large number of bats and/or bat species. Therefore, it is not considered that the development will impact the local bat population, however proposals should still seek to maintain or improve current habitats for bat species through development. As such, chapter 7 sets out important guidance relating to mitigation of the development on the local bat population for this assessment.

6.6 **Badgers and MSPI Hedgehogs**

Badgers

Under the Protection of Badgers Act 1992, in England and Wales it is an offence to wilfully kill, injure, disturb, or take any badger, or intentionally or recklessly damage, destroy, or obstruct access to any part of a badger sett. There was no evidence of badger activity within zone of influence and given the limited connectivity of the site and the urbanised nature of the surrounding environment, badgers are not considered to be impacted by the development. Therefore, they are not considered further within this report.

MPSI Hedgehogs

Mammals of Principle Importance are listed under NERC S.41 as a priority species, with severe declines of the species in recent years. No evidence of hedgehogs was recorded during the survey; however, the site supported a suitable habitat matrix comprising scrub, grassland, and tall ruderal with some connectivity to surrounding residential gardens which will provide hibernation and foraging habitat for the species. As such it is therefore likely that harm or injury could be sustained to the species during the pre-construction clearing of the site. Chapter 7 sets out important guidance on measures to avoid impacts on this species and measures to support its conservation status.

6.7 **Great Crested Newts**

Great crested newts and their eggs, breeding sites and resting places are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the

Conservation of Habitats and Species Regulations 2017 (as amended). No waterbodies were found within the zone of influence of the development site. Therefore, it is considered unlikely that GCN would present a constraint to the planning application, particularly given the increasingly low densities at which GCN are found at increased distances from optimal habitat and breeding ponds. GCN are not thought to be present within the redline boundary and as such are not considered further within this report. If any evidence of GCN presence is uncovered during development works, then works should cease and the advice of an ecologist sought.

6.8 Reptiles

Reptiles are protected under the Wildlife and Countryside Act 1981 (as amended) making it illegal to intentionally kill or injure reptiles. No evidence of reptiles was recorded during the survey; however, the site supported a suitable habitat matrix comprising a variable sward structure of grassland and tall ruderal and brick pile refugia (TN1) with some connectivity to surrounding residential gardens. The site also provided suitable basking areas at the edges of the dense scrub and the grassland. However, when considering the small size of the site and the limited connectivity, it is unlikely that the site supports a resident reptile population throughout the year, more likely it is used by individuals commuting through the site on an intermittent basis. As such it is considered likely that harm or injury could be sustained to this group of species during the pre-construction clearing of the site. Chapter 7 sets out important guidance on measures to avoid impacts on this species and measures to support its conservation status.

6.9 Invasive Non-Native Species

Invasive Non-native Species are listed within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) making it illegal to intentionally release or spread a species listed under schedule 9. Two species were found during the survey; Variegated archangel (TN3) and horsetail (TN2) present on the western boundary of the site. Chapter 7 sets out important guidance on measures to avoid the spread of invasive non-native and/or pernicious species.

7 Recommendations

The site should be the subject of further ecological consideration, where the following indices should be protected from impact during the works to maintain the ecological value of the application site.

This survey can be used to guide the Master Plan to ensure that mitigation is employed to retain and enhance local biodiversity. As with all development sites; efforts should be made to support National and Local Biodiversity Action Plans and seek opportunities to incorporate ecological enhancement schemes within the proposed development. Such site enhancements are viewed positively considering the NPPF (2021) which seeks biodiversity enhancements and net gain through the planning process.

7.1 Habitats

Habitats	Timing
Recommendations	
A Biodiversity Impact Assessment should be undertaken to influence the design of the master plan. It should be used to inform the native planting and landscaping scheme to be incorporated into the overall design of the scheme.	During design phase
Enhancement Prescriptions	
Design proposals should seek to maximise biodiversity gains by the creating treelines and/or hedgerows with the use of native planting and shrubs.	Design stage

7.2 Breeding birds

Reptiles	Timing
Recommendations	
Works should seek to avoid impacts to bird species during the breeding season of March to September inclusive, by removing vegetation outside of this period, or by completing a nesting bird check 24 to 48 hours prior to vegetation removal works by an ecologist.	During the site clearance phase of the development.

Enhancement Prescriptions	
Native species planting, such as hedgerows along the boundaries within the landscaping (if appropriate) may provide enhancement opportunities.	Design phase and construction.
Including integrated bird boxes within residential units will increase available nesting habitat post development. Due to the proposed designs of the residential units, the most appropriate bird box to include would be two pairs (4 in total) of Manthorpe integrated swift (<i>Apus apus</i>) bricks on the eastern and western aspects of the end residential units (units 1 and 6). See figure 7 in Appendix 8 for the example integrated swift box brick (others can be used on approval).	Design phase and construction.

7.3 Roosting Bats

Roosting Bats	Timing
Recommendations	
The Elm <i>Ulmus procera</i> tree within the site holds low suitability for roosting bats. Works should seek to retain the tree if possible, or if not possible due to the site's size, a pre-cautionary working method should be followed in the form of Reasonable avoidance Measures (RAMs) during the active season for bat species (April to October) or completion of tree removal within the inactive period for bat species (November to March). RAMs completed within the active season should be to 'soft-fell' the tree by removing the limb of the tree with the feature sensitively, by cutting above and below the feature and then slowly lowering the limb down to the ground, placing it outside of the working area. It should be retained for a period of 24 to 48 hours post removal to facilitate any bats present to escape the feature and not be harmed by the works.	During the site clearance works.
Enhancement Prescriptions	
Design proposals should seek to include bat boxes by installing integrated bat boxes within residential units. Six bat boxes (1 bat box per residential unit) positioned on a south-western elevation at a height of at least 5 metres with an unobstructed flight path are recommended to mitigate the loss of a roosting feature and enhance roosting potential. An example integrated bat box used could be the Vivara Pro Build-in WoodStone as shown in Figure 6, within Appendix 8.	Design and construction phase.

7.4 Foraging & Commuting Bats

Foraging & Commuting Bats	Timing
Recommendations	
To minimise the impact of the development on foraging and commuting bat species a sensitive lighting scheme is recommended, following the principles set out in 'Bats and artificial lighting in the UK' (ILP & BCT, 2018). It should be implemented to minimise the overall light spillage to the development boundaries to the eastern, southern, and western boundaries and any created soft landscaping of the development in particular.	During clearance, construction, and post development.

7.5 Reptiles

Reptiles	Timing
Recommendations	
Habitat features such as grassland, scrub, and tall ruderal were considered conducive to finding slow worms on the site. To ensure the species is not impacted by the development a precautionary working method should be followed in the form of Reasonable avoidance Measures (RAMs) during the active season for reptiles (April to October) including the following actions: - Clearance of rubble piles present on the site should be dismantled by hand to facilitate the species to easily escape from the working area. - Vegetation removal should be completed directionally, if cut within the active season for reptiles. I.e., working from one side of the site to the other cut the vegetation in lengths down to 150mm until completed across the site. Once complete over the whole site to 150mm, vegetation can be cut to ground level, again directionally to facilitate the escape of reptile species from the working area. Once completed the area should be maintained until works commence on the site, to maintain unsuitability for reptiles. - The base of the ruderal vegetation should be checked prior to removal. - If burning any cleared vegetation, carry out immediately after piling to prevent reptiles moving in prior to burning. - If clearance works can be completed within the inactive season (November to March) then no	During the site clearance phase RAMs should be followed in the active season between April to October.

reasonable avoidance measures are required to be followed for reptile species, as the site is unlikely to support species within hibernation period.	
Enhancement Prescriptions	
Native species planting, such as hedgerows along the boundaries within the landscaping may provide enhance opportunities for the species, improving connectivity with the surrounding landscape.	Design phase.

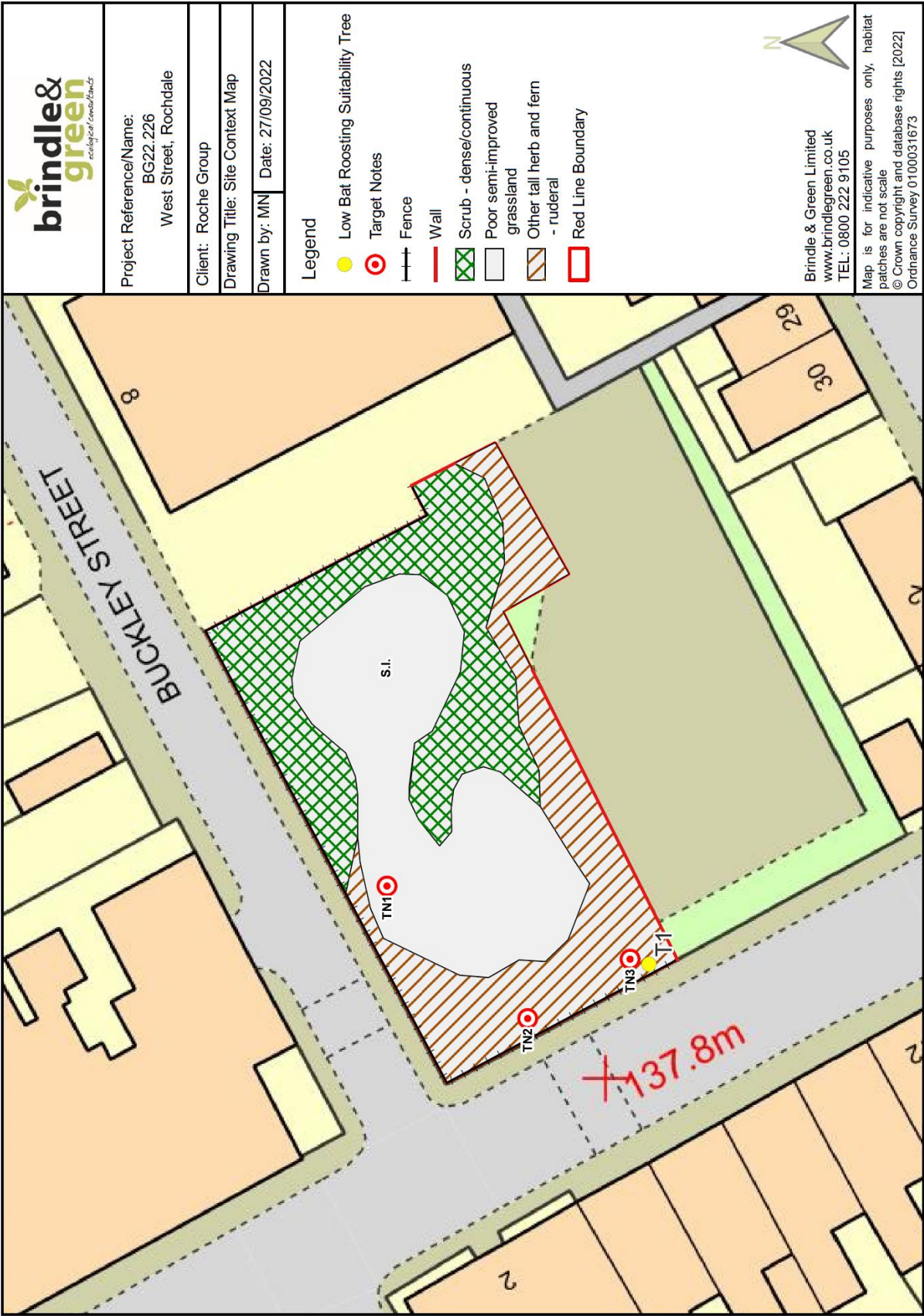
7.6 MSPI European Hedgehog

Hedgehogs	Timing
Recommendations	
To ensure the species is not impacted by the development a precautionary working method should be followed in the form of Reasonable avoidance Measures (RAMs) during the active season (April to October) including the following actions: - Clearance of rubble piles present on the site should be dismantled by hand to facilitate the species to easily escape from the working area. - Pipework should be capped if left overnight on the ground or in open excavations. Or alternatively should be stored off the ground. - Undertake works within daylight hours. - The base of the ruderal vegetation should be checked prior to removal. - If burning any cleared vegetation, carry out immediately after piling to prevent hedgehogs moving in prior to burning. - Materials and liquids should be stored off the ground on pallets, to limit the potential for individuals to hide within the materials. - Covering excavations overnight or providing a ramp in the form of a board leading out of the excavation, or sloped side(s) to the excavations will facilitate escape for the species.	During the site clearance phase RAMs should be followed in the active season between April to October.
Enhancement Prescriptions	
Native species planting, such as hedgerows along the boundaries (if appropriate) within the landscaping may provide enhance opportunities for the species, improving connectivity with the surrounding landscape. For hedgehogs, gaps approximately 20x20cm could be left in any new boundary fencing to enable any hedgehogs present to continue to use the site post-construction.	Design phase.

7.7 Invasive Non-native Species

Invasive Non-Native Species	Timing
Recommendations	
To ensure the species (TN2 and 3) are not spread by the development a biosecurity method statement should be implemented prior to all clearance works being completed on the site. Measures should detail the appropriate removal and handling process of the invasive/pestiferous species and any associated biosecurity measures required to prevent dispersal from the development site. Works should also be carried out by an experienced invasive non-native species removal expert.	During the site clearance phase at all times of the year.
Enhancement Prescriptions	
Not applicable for type of ecological factor.	

Appendix 1. Phase 1 Habitat Plan



Appendix 2. Phase 1 Target Notes and Plant Species List

Target Note Number	Description
T1	Mature elm (<i>Ulmus procera</i>) tree, with a single rot hole present within the canopy of the tree, which could provide low suitability for bat roosting.
TN1	Brick rubble piles from church demolition.
TN2	Area of horsetail (<i>Equisetum sp.</i>).
TN3	Area of variegated yellow archangel (<i>Lamium galeobdolon subsp. argentatum</i>).

Plant Species List with DAFOR Scale		
Scientific nomenclature follows Stace (2010) for vascular plant species and common names follow BSBI List of British & Irish Vascular Plants and Stoneworts.		
Please note that this plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.		
Abundance was estimated using the DAFOR scale as follows: D = dominant, A = abundant, F = frequent, O = occasional, R = rare, LF = locally frequent.		
Common Name	Scientific Name	Estimated Abundance (DAFOR)
Poor Semi-Improved Grassland		
Red Fescue	<i>Festuca rubra</i>	D
Horsetail	<i>Equisetum sp.</i>	F
False oat grass	<i>Arrhenatherum elatius</i>	F
Wood Avens	<i>Geum urbanum</i>	F
Colts Foot	<i>Tussilago farfara</i>	F
Bird's-foot Trefoil	<i>Lotus corniculatus</i>	F
Creeping Buttercup	<i>Ranunculus repens</i>	F
Vetch sp.	<i>Vicia sp.</i>	F
Hedgerow Cranesbill	<i>Geranium pyrenaicum</i>	O
Herb Robert	<i>Geranium robertianum</i>	O
Dandelion	<i>Taxacum spp.</i>	O
Yorkshire Fog	<i>Holcus lanatus</i>	O
Ragwort	<i>Senecio jacobaea</i>	O
Broadleaved Dock	<i>Rumex obtusifolia</i>	O
White Clover	<i>Trifolium repens</i>	O
Scrub – Dense/Continuous		
Elm	<i>Ulmus procera</i>	D
Butterfly Bush	<i>Buddleia davidii</i>	A
Bindweed	<i>Fallopia convolvulus</i>	A
Silver birch	<i>Fraxinus excelsior</i>	O
Field Maple	<i>Acer campestre</i>	O
Mugwort	<i>Artemisia vulgaris</i>	O
Oak	<i>Quercus robur</i>	O
Dogrose	<i>Rosa canina</i>	O
Bramble	<i>Rubus fruticosus</i>	O
Tall Herb and Fern – Ruderal		
Willowherb sp.	<i>Epilobium sp.</i>	D
Horsetail	<i>Equisetum sp.</i>	O

Ground ivy	<i>Glechoma hederacea</i>	O
Ragwort	<i>Senecio jacobaea</i>	O
Comfrey	<i>Symphytum officinale</i>	O
Ragwort	<i>Senecio jacobaea</i>	O
Scattered Trees		
Elm	<i>Ulmus procera</i>	D

Appendix 3. General References

Bell, S. McGillivray, D. (2006) *Environmental Law*. 6th ed. Oxford University Press.

British Standards Institution (2013) BS 42020: *Biodiversity – Code of practice for planning and development*, British Standards Institution London

Byron, H (2000) *Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes*. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy.

CIEEM (2017) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

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

Joint Nature Conservation Committee (JNCC) *Handbook for Phase 1 habitat survey* (2003). JNCC.

Langton T, Beckett C and Foster J (2001) *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.

Mitchell-Jones A.J. McLeish, A.P. (2004) *Bat Workers Manual* (3rd Edition). Joint Nature Conservation Committee.

Mitchell-Jones A.J. *Bat Mitigation Guidelines* 2004. English Nature.

Rodwell, J.S. Joint Nature Conservation Committee (JNCC). *National Vegetation Classification: Users' handbook* (2006). JNCC.

Rose, F. (2006). *The Wild Flower Key* (Revised edition). Penguin books Ltd, London

Stace, C. (2010). *Field Flora of the British Isles*. Cambridge University Press

Sutherland, W.J. (1996) *Ecological Census Techniques*. Cambridge University Press.

Treweek, J. (1999) *Ecological Impact Assessment*. Blackwell Science.

Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

Appendix 4. Legislation, Policy and Guidance

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Department for Communities and Local Government. National Planning Policy Framework. (2021)
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- The Protection of Badgers Act 1992
- The Natural Environment and Rural Communities Act 2006 (Including National and Local Biodiversity Action Plan (LBAP / HPI))
- Hedgerow Regulations 1997

Appendix 5. Legislation, Guidance and Methodology for Preliminary Ecological Appraisals.

Legislation, Guidance and Methodology

Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

The bird breeding season is typically accepted to start in February/March and continue through until September/October, however breeding birds can be found all year round depending on the given species and climatic conditions.

A site's habitat composition, locality, association to designated sites as well as current usage and management are all considered in the decision as to whether further bird related surveys are required. In addition, surveys may be recommended based on incidental bird records collected during a Preliminary Ecological Appraisal, species identified within an ecological data search or target species listed within a local biodiversity action plan.

Bird surveys are carried out in accordance with:

Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods*. RSPB.

Bats

Roosting Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Areas of concern; can be encountered in many types of structure and care should therefore be taken when undertaking maintenance or demolition of suitable structures and trees.

Site assessments of buildings, commuting and foraging habitat and trees are undertaken in accordance with: Collins, J (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, (3rd edition), Bat Conservation Trust, London. (Table 1 & 2 Below).

Preliminary Ecological Surveys look for evidence of bat presence such as feeding remains, bat droppings, roosting individuals and staining around potential access points. The suitability of site features are also assessed because absence of bat evidence, is not confirmation of a negative result.

Within trees, features searched for include; natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, hollows, and dense cover of ivy over the tree. If evidence is found, or a building supports features conducive to supporting roosting bats then further presence / absence bat surveys and/or roost characterisation surveys will be recommended.

Foraging and Commuting bats

Habitat features on site are assessed for their suitability to support foraging and commuting bat populations. This assessment is independent from the suitability of the site to support roosting bats and provides information on the likeliness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration.

Table 1: Guideline for assessing the suitability of a structure to support roosting habitat (Buildings and Trees), amended from Collins, J (2016)

Category	Description of roosting habitat	Number of additional presence / absence surveys required
Negligible Suitability	Suitable cavities may exist, but these are less than ideal.	None
Low Suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. The feature and surrounding habitat do not provide enough shelter, conditions* space for larger roost types such as a maternity or hibernation roost. A tree of sufficient size and age to support roosting bats, but with no features observed from the ground, or the features only have a limited potential to support roosting bats.	One survey between May and August Trees – No further surveys required
Moderate Suitability	A structure or tree considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed).	Two surveys between May and September (with at least one survey undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to ideally be undertaken at least two weeks apart.
High Suitability	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat.	Three surveys between May and September (with at least two surveys undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn, undertaken at least two weeks apart.
Confirmed	This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.	

(* in this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc)

Table 2: Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins J (2016)

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Negligible Suitability	Negligible habitat features on site likely to be used by commuting or foraging bats.	None
Low Suitability	Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment.	Transect /spot count/ timed search survey: One survey visit per active season AND Static automated surveys: One location per transect, over a five-night period, per season.

	Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.	
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens. Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.	Transect /spot count/ timed search survey One survey visit per month At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Two locations per transect, over a five-night period, per month (April to October).
High Suitability	Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland. Site is close to and connected to known roosts.	Transect /spot count/ timed search survey Up to two survey visits per month (April to October). At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Three locations per transect, over a five-night period, per month (April to October).

(** This is only a guide for survey effort required the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site-by-site basis).

Badgers (*Meles meles*)

Badgers are protected under the Protection of Badgers Act 1992. It is illegal to wilfully kill, injure, disturb or take any badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a badger sett.

Site assessments are undertaken in accordance with:
Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*.

During the PEA, the site and the 30-metre zone of Influence considered for this species are searched for evidence of badger activity. The surveyor will identify evidence of activity, or habitat suitability for this protected species. Even if no evidence of badger activity is found, if local conditions suggest that the habitat may be suitable for badger, further surveys will be recommended.

Amphibians

The great crested newt and natterjack toad are fully protected under Schedule 5 of the wildlife and countryside Act 1981. The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond.

Great Crested Newt (*Triturus cristatus*)

The great crested newt, is fully protected under the Conservation of Habitat Regulations 2017 (as amended), making it an offence to intentionally or recklessly kill, injure, disturb or take great crested newts, intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection.

The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond. Sites should be considered suitable to support great crested newts if distribution and historical records suggest newts may be present, there is a pond within 500m of the development or the development site includes suitable terrestrial habitat refuges.

Great crested newt site assessments are undertaken in accordance with:

English Nature. (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough. and Langton T, Beckett C and Foster J (2001) *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.

Prior to a site visit, a desk study pond search is undertaken. When searching for ponds, Brindle & Green apply a total of 4 sources to establish their location. The following online sources are used:

OS MAPPING VIA PRO MAP, GOOGLE EARTH PRO, GOOGLE MAPS and MAGIC MAPS

Each identified pond (Access permitting) is subjected to a Habitat Suitability Index (HSI) assessment providing a score for each pond. This survey should be undertaken during the summer period to be fully accurate, however assumptions can be made out of season to guide survey recommendations.

Reptiles

Two species of reptile, the sand lizard and smooth snake, and their habitats are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. All other native British reptiles are protected against intentional killing and injury.

British reptiles are found in exposed, undisturbed areas, such as areas without cultivation with differing areas of grassland sward length. Suitable areas include abandoned sand quarries, fallow farmland land, heathland, post-industrial land, railway corridors etc. If these types of suitable features are found then further reptile surveys are recommended.

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

Gent T and Gibson S (2003) *Herpetofauna Workers Manual*. JNCC, Peterborough.

Invasive non-native weeds

Plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) are examples of invasive non-native weeds classified under Part II of Schedule 9 of the Wildlife and Countryside act 1981. Any person who causes these species to grow or spread in the wild by dumping or other means is guilty of an offence. The plant and the soil these species are found growing in are classified as waste material and should be treated as such.

A simple walk over survey of the site to determine if these species are present was carried out during the PEA. A full list of Schedule 9 species can be found at Plantlife.org

Botanical Value

There are 60 plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 where it is an offence to intentionally pick or uproot or destroy any of these plant species.

During the PEA, a phase one habitat survey was undertaken following JNCC guidance. Further assessments are made to determine whether habitats comprise those identified as Habitats of principle Importance under S42 of NERC Act 2006.

Surveys can be undertaken year-round, however, if species or site conditions suggest higher botanical interest a full botanical survey will be recommended.

Invertebrates

The following invertebrates are European protected species, and it is considered an offence if you capture, kill, disturb or injure, on purpose or by not taking enough care. It is also against the law to damage or destroy a breeding or resting place, obstruct access to their resting or sheltering places, possess, sell, control or transport live or dead protected invertebrates, or parts of them.

Large blue butterflies (eggs, caterpillars, chrysalises and adults)
Fisher's estuarine moths (eggs, caterpillars, chrysalises and adults)
Little ramshorn whirlpool snails

Approximately 400 additional species form the invertebrate species of Principal Importance in England and are included within Schedule 5 of the Wildlife and Countryside Act 1981 and S4I of NERC Act 2006.

If suitable habitat for invertebrates is identified during the PEA further surveys will be recommended.

Ecological Enhancement

In March 2021 the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - *opportunities to incorporate biodiversity in and around developments should be encouraged.*

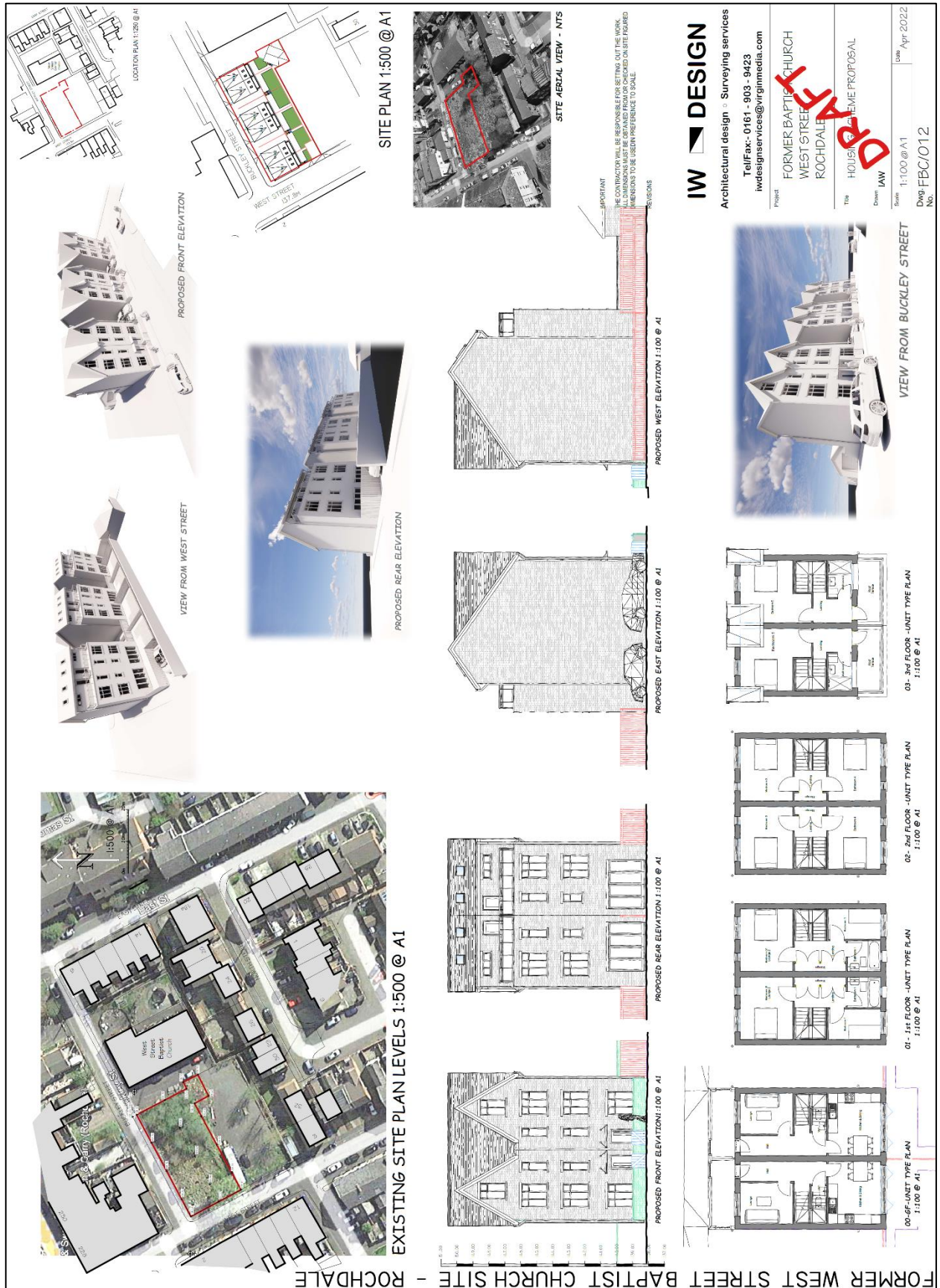
For new buildings guidance such as in the following will be used:
Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

Designated Sites

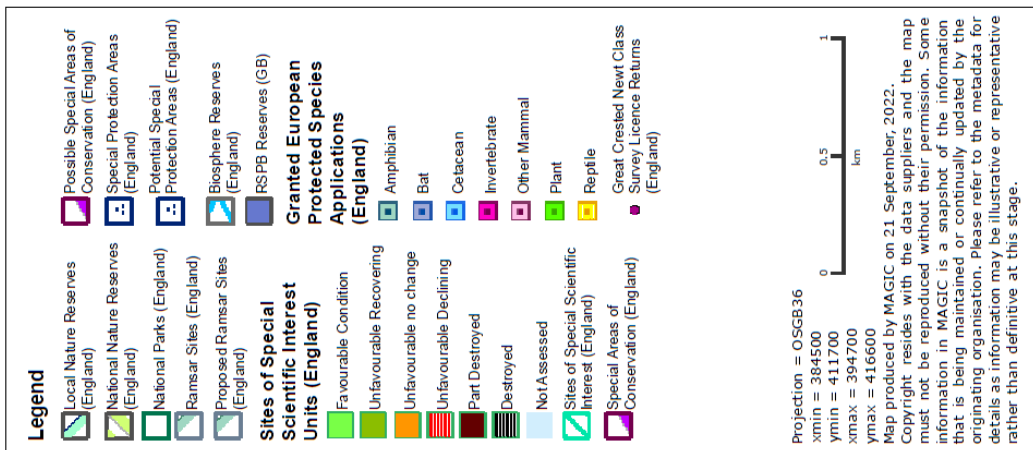
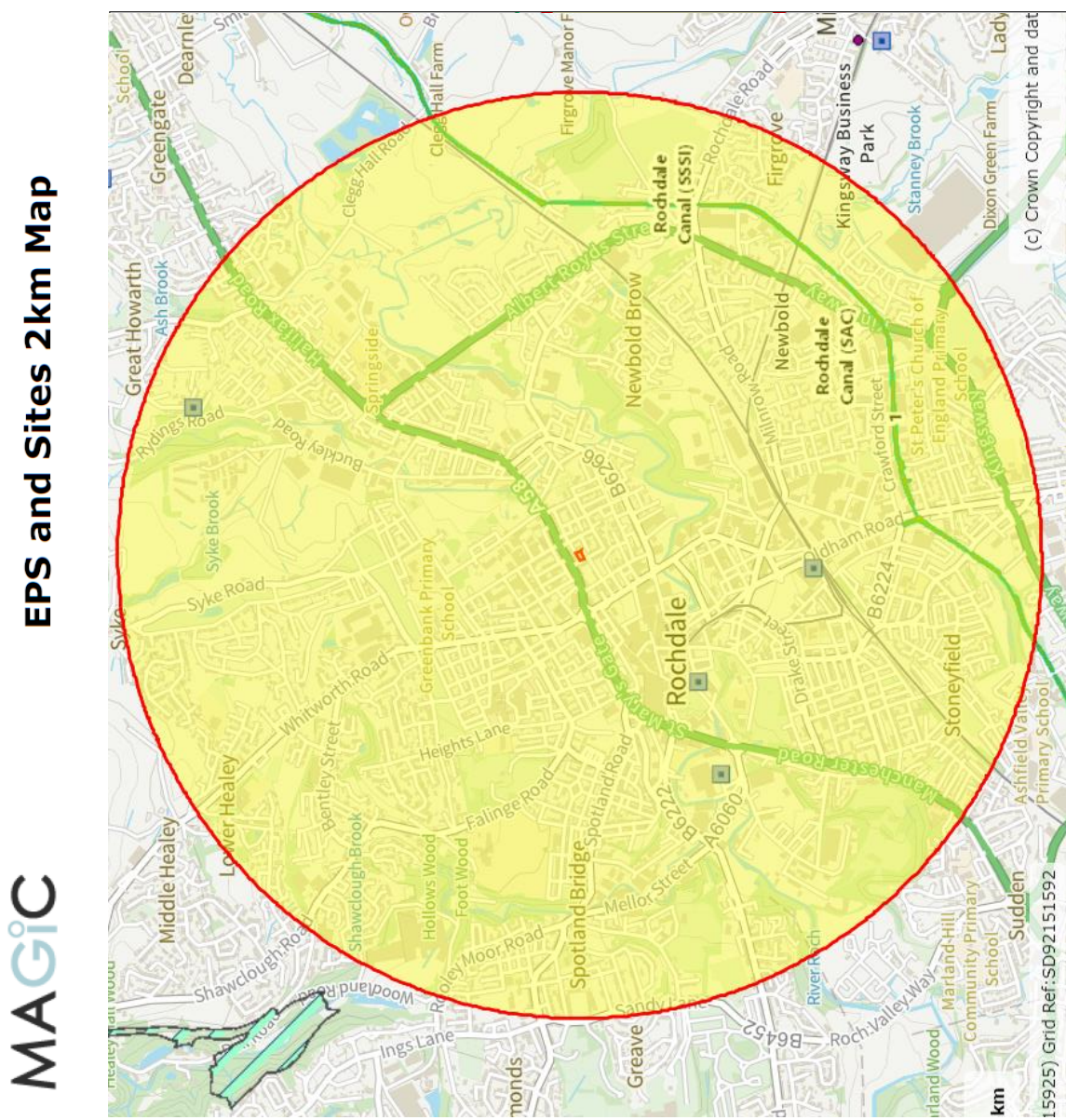
Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives. European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats supports.

Information of Designated Protected Areas is received through Ecological Data Searches and Magic Map searches.

Appendix 6. Proposed Plans



Appendix 7. Magic Data



Site Check Report Report generated on Wed Sep 21 2022
 You selected the location: Centroid Grid Ref: SD90151381
 The following features have been found in your search area:

Granted European Protected Species Applications (England)

Case reference of granted application	2015-8047-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	C-PIP, DAUB, S-PIP
Site county of licence	Greater Manchester
Licence Start Date	24/03/2015
Licence End Date	31/08/2020
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	2016-19740-EPS-MIT-1
Species group to which licence relates	Bat
Species on the licence	C-PIP
Site county of licence	Greater Manchester
Licence Start Date	01/04/2016
Licence End Date	31/03/2021
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	2016-19740-EPS-MIT-2
Species group to which licence relates	Bat
Species on the licence	C-PIP
Site county of licence	Greater Manchester
Licence Start Date	20/06/2016
Licence End Date	01/04/2021
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	EPSM2009-709
Species group to which licence relates	Bat
Species on the licence	C-PIP
Site county of licence	Greater Manchester
Licence Start Date	08/04/2009
Licence End Date	31/12/2010
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	
Does licence allow damage of a resting place	
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	EPSM2011-2750
Species group to which licence relates	Bat
Species on the licence	C-PIP; S-PIP
Site county of licence	Lancashire
Licence Start Date	15/02/2011
Licence End Date	31/07/2013
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	
Does licence allow damage of a resting place	
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown

Sites of Special Scientific Interest Units (England)

Name	ROCHDALE CANAL
Reference	1056518
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1026037
Hectares	26.37
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1026037

Sites of Special Scientific Interest (England)

Name	Rochdale Canal SSSI
Reference	1007365
Natural England Contact	C2L Innovation & Support Team
Natural England Phone Number	0845 600 3078
Hectares	26.37
Citation	2000430
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000430

Special Areas of Conservation (England)

Name	ROCHDALE CANAL
Reference	UK0030266
Hectares	26.11
Hyperlink	http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0030266

Great Crested Newt Class Survey Licence Returns (England)

No Features found

Great Crested Newt Pond Surveys 2017 - 2019

No Features found

Local Nature Reserves (England) - points

No Features found

Local Nature Reserves (England)

No Features found

National Nature Reserves (England) - points

No Features found

National Nature Reserves (England)

No Features found

National Parks (England)

No Features found

Ramsar Sites (England) - points

No Features found

Ramsar Sites (England)

No Features found

Proposed Ramsar Sites (England) - points

No Features found

Proposed Ramsar Sites (England)

No Features found

Sites of Special Scientific Interest Units (England) - points

No Features found

Sites of Special Scientific Interest (England) - points

No Features found

Special Areas of Conservation (England) - points

No Features found

Possible Special Areas of Conservation (England) - points

No Features found

Possible Special Areas of Conservation (England)

No Features found

Special Protection Areas (England) - points

No Features found

Special Protection Areas (England)

No Features found

Potential Special Protection Areas (England) - points

No Features found

Potential Special Protection Areas (England)

No Features found

Biosphere Reserves (England) - points

No Features found

Biosphere Reserves (England)

No Features found

RSPB Reserves (GB) - points

No Features found

RSPB Reserves (GB)

No Features found

Appendix 8: Bat and Bird Box Examples

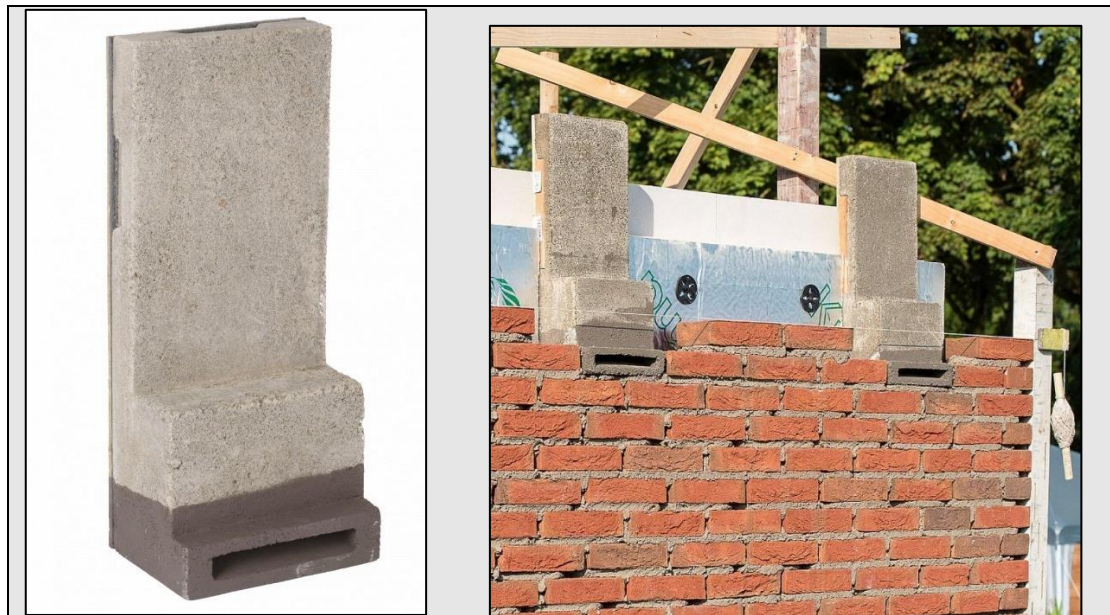


Figure 7: Example integrated Vivara Pro Build-in WoodStone bat box, available from NHBS, which could be incorporated within the residential development. Other makes and suppliers are available.



Figure 7: Example Manthorpe integrated swift (*Apus apus*) brick available from NHBS which could be incorporated into the eaves of the residential development. Other makes and suppliers are available.