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Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Preliminary Ecological Appraisal

Walshaw Road,
Bury,
BL8 1PU
Ref: P1173.19

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(see revision dates below)

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This document contains sensitive information regarding the location of a badger sett. The report is issued in confidence and on the basis that the material will not enter the public domain.

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P.1173.19

Preliminary Ecological Appraisal

Of

**Walshaw Road,
Bury,
BL8 1PU**

For

Redrow Homes

3 June 2019

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EXECUTIVE SUMMARY

A Preliminary Ecological Appraisal has been carried out at Walshaw Road, Bury, BL8 1PU on 1st May 2019 by Neil Everett and Liz Neale. The assessment comprised a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to assess the potential for protected species to use the site. The assessment provides baseline data as to current site conditions and where appropriate allows recommendations to be made in respect of further potential work in order to satisfy current wildlife legislation.

The survey area is dominated by agricultural land. The other habitats on site comprise improved, semi-improved and amenity grassland, with boundary species poor hedgerows, semi natural broadleaved woodland, four ponds, tall ruderal vegetation, scattered broadleaved trees and scrub.

Assessed against the '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' 2nd edition (2018), the habitats range in ecological value from **negligible** to **within the Zone of Influence**. Some of the habitats are likely to be lost to the proposals. Recommendations have been made to ensure no net loss of biodiversity as a result of any proposals for future redevelopment of the site.

The site could provide habitat for nesting birds, badger, hedgehog, amphibians, brown hare, water vole, reptiles and bat species. Measures can be taken to ensure these species are not adversely impacted by proposals for redevelopment of the area. These would need to be agreed with the local council ecologist and could include the need for detailed surveys for certain protected species including bats, reptiles, amphibians and badger.

There are no insurmountable constraints to development and the recommendations as outlined will maintain/enhance the ecological value of the proposed allocation. The majority of ecologically valuable habitats are proposed for retention and there is the potential to enhance retained habitats within the site boundary. The recommendations, if fully implemented, will enable any future redevelopment proposals to meet the requirements of national and local guidance and legislation including the NPPF and policy EN6 within the Bury Council Unitary Development Plan (UDP) (adopted August 1997).

Recommendations

1. Bat activity surveys to confirm the level of bat commuting and foraging activity throughout the site to be carried out between May and September in suitable weather conditions. between six and 12 nocturnal bat activity surveys will be required (one to two per month during the bat active season) together with deployment of static bat detectors in hedgerows that are to be lost within the proposals to determine bat use of these as commuting habitats.
2. For any trees lost to the proposals, a detailed daytime inspection would be required in the first instance. This can be undertaken at any time of year. Further nocturnal surveys (between May and September) may be required following the daytime inspection if the trees provide suitable shelter for roosting bats;
3. Further survey to assess the presence/ absence of GCN within the site. eDNA analysis of the four ponds within 250m of the site are undertaken to inform further survey and mitigation requirements.
4. Reptile surveys are recommended to assess the presence/ likely absence of reptiles within the site and to inform mitigation if required.

5. Further surveys to assess badger activity within the site. Use of Reasonable Avoidance Measures (RAMs) to avoid harm to badger during construction will be required and a Badger Mitigation Strategy may be needed to support the application;
6. Pre-commencement check of the site for native (English) bluebell in May and prior to ground clearance. Relocation of any native bluebell into retained woodland areas to ensure no loss of this BAP species. If works are to occur before May, any bulbs found during soil removal should be retained and grown on to confirm the species. If they are English bluebell, they should be replanted at an appropriate time once the ground works in that area have been completed;
7. Vegetation surveys may be required (between May and September), for the assessment of any woodlands likely to be impacted by the proposals;
8. Avoiding vegetation removal during the bird breeding season (1 March to 31 August inclusive) or undertaking a survey for breeding birds and ensuring any active nests found are protected within a suitable buffer zone until they are no longer in use;
9. Mitigation for the loss of nesting bird habitat with the provision of bird boxes such as open fronted nest boxes, 26mm hole nest boxes and 32mm hole nest boxes;
10. The use of Reasonable Avoidance Measures (RAM's) in relation to hedgehog, to include the strimming and hand clearing the bramble scrub and storage of construction materials on pallets to avoid harm to hedgehog;
11. Provision of a hedgehog hibernaculum on site to mitigate for loss of the bramble scrub, or enhance the site for hedgehog;
12. Lighting sensitive to the needs of bats, designed to avoid overspill onto key habitats including woodland, hedgerows and any identified during the bat activity surveys;
13. Habitat enhancement with the provision of bird and boxes. The provision of new woodland or shelter belts and hedgerow planting to improve connectivity between existing and new habitats could also enhance the site for wildlife. Suitable landscaping within the residential development incorporating species that provide a food or shelter resource to wildlife would also be beneficial to biodiversity.

1.0 Introduction

Ascerta has been instructed by Redrow Homes to carry out a preliminary ecological assessment of land at Walshaw Road, Bury, BL8 1PU (hereafter referred to as the site). The site OS grid reference is SD 891 093.

Our client wishes to identify the constraints and opportunities within the site with a view to secure continued allocation of the land for housing within the Local Plan. The ultimate aim of the client is for redevelopment of the site for residential purposes.

The site was visited on 1st May 2019, by Neil Everett and Liz Neale when a Preliminary Ecological Appraisal, which includes an assessment of the potential for protected species to be using the site or surroundings, was carried out in accordance with the *Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit (JNCC, 2010)*. The report was prepared following methods detailed in the CIEEM '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' (2018) and '*Guidelines for Ecological Report Writing*' (2017). This report presents the results of the survey including evaluation of habitats on site and potential for protected species to be using the site. The report includes recommendations for further actions where applicable in order to satisfy current wildlife legislation and to achieve our client's objectives.

2.0 Objectives

Our client's objectives are to ascertain the potential ecological constraints and opportunities of the site to inform potential future redevelopment of the site for residential purposes.

Our objectives are as follows:

- Identify and evaluate any features of ecological value and the potential of the site to support protected species based on the walkover survey and biological records search;
- Identify designated sites within 2km of the site;
- Review protected species records within 1km of the site;
- Map the habitats within the site using JNCC (2010) methods;
- Provide recommendations for further species-specific surveys and mitigation measures where current legislation requires;
- Provide recommendations that seek to enhance the ecological value of the site;
- Provide recommendations to assist our clients in achieving their objectives whilst satisfying current wildlife legislation.

3.0 Relevant Legislation

3.1 European Legislation

The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

3.2 UK Legislation

The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species Regulations 2017 (as Amended) (The Habitats Regulations). This provides for the designation and protection of 'European Sites' (SPAs, SACs and Ramsar Sites, including proposed or potential European Sites) and the protection of 'European Protected Species'.

The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended) (W&C Act). This Act is supplemented, *inter alia*, by provision in the Countryside and Rights of Way (CRoW) Act 2000, and the Natural Environment and Rural Communities Act 2006 (NERC Act). Additional species and habitat specific UK legislation includes the Protection of Badgers Act 1992 and the Hedgerow Regulations 1997.

The UK legislation is due to be updated, with the publication of The Environment (Principles and Governance) Bill, which is due to be passed through parliament in 2020. The draft Environment Bill sets out how the UK will maintain environmental standards following leaving of the EU. The Bill builds on the vision of the 25 Year Environment Plan, with the ambition from the government to leave the environment in a better state than it was when inherited.

The Defra Biodiversity Metric is being implemented to work alongside the Environment Bill. This tool calculates potential biodiversity impacts as a result of development and identifies mitigation and compensation requirements to ensure no net loss of biodiversity. In addition, it identifies measures that can be implemented in order to meet Biodiversity gain as a result of development.

The National Planning Policy Framework (NPPF) 2019 has been published to provide further planning guidance. Wildlife, biodiversity and ecological networks are referred to in Section 15 '*Conserving and enhancing the natural environment*'. The NPPF states that the planning system should contribute to and enhance the natural and local environment by: recognising the wider benefits of ecosystem services, minimising impacts on biodiversity and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Further guidance is provided within Government Circular 06/05: *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System*.

Species and Habitats of Principal Importance

Species and Habitats of Principal Importance are listed under section 41 of the NERC Act and are a material consideration in planning decisions. Planners require relevant, up to date information from ecological surveys in order to assess the effects of a proposed development on biodiversity as Councils have a statutory obligation under section 40 of the

NERC Act to consider biodiversity conservation in the determination of planning applications.

Background information about the lists of priority habitats and species (Species and Habitats of Principal Importance) can be found within the UK Biodiversity Action Plan (UK BAP). Although this has been succeeded by The 'UK Post-2010 Biodiversity Framework', many of UK BAP tools are still relevant. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. Most BAP priority habitats and species have Habitat Action Plans (HAP) and Species Action Plans (SAP) and there are also "grouped action plans" for groups of related species with similar conservation requirements. The LBAP relating to this Site is the Greater Manchester Biodiversity Action Plan.

Badgers

The legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992.

Under the Protection of Badgers Act 1992 it is an offence *inter alia* to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

The Badger Act 1992 defines a badger's sett as "*any structure or place which displays signs indicating current use by a badger*"

Natural England can issue licences to enable works to continue that may affect a protected species. In relation to disturbance of badgers, Natural England (2009) gives guidelines on disturbance which will require a licence. These includes: "*using very heavy machinery (generally tracked vehicles) within 30 metres of any entrance to an active sett; using lighter machinery (generally wheeled vehicles), particularly for any digging operation, within 20 metres; light work such as hand digging or scrub clearance within 10 metres. There are some activities which may cause disturbance at greater distances (such as using explosives or pile driving) and these should be given individual consideration.*"

Bats

In England, all bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife & Countryside Act 1981 (as amended). Several species of bat are also highlighted as Priority Species under the UK Biodiversity Action Plan and within the Local BAP.

Under the current legislation as summarised on pages 8 and 9 of the Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016) it is a criminal offence to:

"To kill, capture, injure or take a wild bat;

- *To damage or destroy a place used by a bat for breeding or resting. All offences of this nature are identified within the Habitats Regulations. This offence is unique in that it can be committed accidentally. No element of intentional, reckless or deliberate action needs to be evidenced;*

- *To disturb bats anywhere (roosts, flight lines or foraging areas) if levels of disturbance can be shown to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate or to affect significantly local distribution or abundance;*
- *To intentionally or recklessly disturb a bat, whilst it is occupying a place of shelter or protection;*
- *To intentionally or recklessly obstruct access to any place used by a bat for shelter or protection; and*
- *To be in possession or control of a bat alive or dead (or any part of a bat or anything derived from a bat, although bat droppings are generally considered to be acceptable), or to transport a bat, to sell or exchange a bat or to offer to sell or exchange a bat taken from the wild.”*

Breeding Birds

Breeding Birds are protected under the Wildlife and Countryside Act which make it an offence to:

- *intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst it is in use or being built;*
- *intentionally take or destroy the egg of any wild bird;*
- *have in one's possession or control any wild bird, dead or alive, or any part of a wild bird (including eggs), which has been taken in contravention of the Act or the Protection of Birds Act 1954;*
- *intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.*

Great Crested Newt

The great crested newt (*Triturus cristatus*) is fully protected under the Wildlife and Countryside Act, 1981 (as amended) and the Habitats Regulations, 2017. It is also a Species of Principal Importance. The legislation makes it an offence to:

- *Deliberately (or intentionally) kill, injure or capture (or take) a great crested newt, or great crested newt egg or eft;*
- *Deliberately (intentionally) damage or destroy any breeding site or resting place (i.e. pond, refuge, hibernaculum);*
- *Deliberately or recklessly obstruct access to any breeding site or resting place;*
- *Deliberately, intentionally or recklessly disturb a great crested newt, in particular disturbance which is likely to:*
 - *impair the ability of the great crested newt to survive, breed, reproduce, or to rear or nurture young;*
 - *impair the ability of the great crested newt to hibernate or migrate; or significantly affect the local distribution or abundance of great crested newts*

Invasive Species

It is an offence under Section 14(2) of the Wildlife and Countryside Act 1981 to ‘*plant or otherwise cause to grow*’ in the wild any plant in Schedule 9 Part II.

Other Aquatic Species

Water vole (*Arvicola amphibious*) are a Species of Principal Importance and also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose;
- intentionally kill, injure or take water voles;
- possess or control live or dead water voles or derivatives;
- sell water voles or offer or expose for sale or transport for sale; and
- publish or cause to be published any advertisement which conveys the buying or selling of water voles.

Otter (*Lutra Lutra*) are similarly protected under the Wildlife and Countryside Act, 1981 (as amended) and have additional protection as a European Species under The Habitats Regulations 2017 (as amended).

3.3 Local Policy

The site lies within Bury and is covered by the Bury Council Unitary Development Plan (UDP) (adopted August 1997). Policy EN6 deals with Conservation and the Natural Environment and is the policy of relevance here. This policy has been taken into account when preparing this report.

The following table provides a summary of the main species within the UK that could be encountered within or within proximity of this development site, together with the legislation that affords them protection.

Table 3.1 Protected Species and the Associated Legislation.

Species		Legislation
Amphibians	Great crested newt (<i>Triturus cristatus</i>)	Schedule 5, W&C Act 1981 (as amended);
Mammals	Badger (<i>Meles meles</i>)	Protection of Badgers Act 1992.
	All species of bat Otter (<i>Lutra lutra</i>)	Schedule 5, W&C Act 1981 (as amended); Schedule 2, The Habitats Regulations 2017 (as amended); and Section 41, NERC.
	Water vole (<i>Arvicola amphibious</i>)	Schedule 5, W&C Act 1981 (as amended) and Section 41, NERC.
Birds	All wild birds	Schedule 5, W&C Act 1981 (as amended) and Section 41, NERC.

It is a criminal offence to intentionally, wilfully kill, injure or take any of the aforementioned protected species or to destroy or disturb its habitat.

4.0 Survey Methods

The Preliminary Ecological Appraisal involved the collection and review of data from a desk study and field survey along with assessment of the value of the habitats following CIEEM guidelines.

4.1 Desk Study

A review of the designated sites and habitats within 2km of the site has been undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) and the Natural England websites.

A review of UK and Local priority species and habitats known to occur in the region of the site has been undertaken; using the Joint Nature Conservation Committee website and local records from Greater Manchester Ecology Unit (Appendix 3).

4.2 Field Survey

A walkover survey of the site was conducted on 1st May 2019, when the habitat types and features of ecological interest were identified and mapped in compliance with the Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit (*JNCC, 2010*). The survey methods involve the recording and mapping of all habitat types and ecological features present on site, including the identification of the main species present and examination of the potential for any protected species. Habitats were mapped and target notes made for any interesting features.

The surveys particularly focused on the following species and habitat features:

- Mammals (badgers, bats, otter and water vole);
- Birds;
- Amphibians and reptiles;
- Invertebrates;
- Hedgerows and boundaries;
- Invasive plant species; and
- Plant communities and trees.

4.3 Bat Survey Methods

The survey methods followed the guidelines set out by the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016). Habitats, Buildings and Trees were assessed for suitability for use by bats and categorised independently using table 4.1 page 35 within the Bat Conservation Trust Guidelines (Collins, 2016).

Preliminary Ecological Appraisal for Bats

Habitats on site were assessed for their suitability for bats to use them for roosting, commuting and foraging both on the site and surrounding area. Commuting and foraging habitat suitability was categorised **low** to **high**. Commuting and foraging habitat valued as Moderate or above may need further survey effort if lost to the proposals.

Preliminary Roost Assessment Trees

All trees were inspected for Potential Roost Features (PRFs). Features searched for included: Natural or woodpecker holes, cracks/splits in major limbs, loose bark, hollows/cavities, dense epicormic growth, bird and bat boxes. Where such features were found they were investigated for scratches or staining, bat droppings and smoothing of

surfaces around entry points. Trees assigned a suitability of **moderate** or above may require further inspection if they are to be lost to the development.

Table 4.1: Guidelines for assessing Potential Roost Features (PRFs), commuting and foraging habitat within a proposed development site. Guidelines taken from table 4.1 page 35 of the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016).

Suitability	Roosting Habitats	Commuting and Foraging Habitats
Negligible	<i>Negligible habitat features on site likely to be used by roosting bats.</i>	<i>Negligible habitat features on site likely to be used by commuting or foraging bats.</i>
Low	<i>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c</i>	<i>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</i>
Moderate	<i>A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).</i>	<i>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</i>
High	<i>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 ^a and surrounding habitat.</i>	<i>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees 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.</i>

^a For example, in terms of temperature, humidity, height above ground level, light levels and levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI,2015).

4.4 Badger Survey Methods

The site was searched for setts and badger field signs including foraging areas, latrines and tracks. Attention was paid to the presence of the following field signs:

- Setts: single holes or a series of holes likely to be interconnected underground;
- Latrines: badgers usually deposit faeces in excavated pits;
- Paths and footprints;
- Scratching posts: at the base of trees;
- Snuffle holes: areas where badgers have searched for insects;
- Day nest: bundles of vegetation where badgers may sleep above ground; and
- Traces of hair.

4.5 Water vole and Otter

The Walshaw brook located adjacent to the southern boundary of the site was briefly assessed from the site boundary for use by otters and water voles following methods outlined in Chanin P (2003). *Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough* and Strachan, R., Moorhouse, T., Gelling, M. (2011). *Chanin P (2003). Water Vole Conservation Handbook, 3rd Edition. Wildlife Conservation Research Unit: Abingdon.*

Signs of otter use including prints, spraints, couches or holts were searched for from the stream banks and the river bank within the southern sector of the site. Signs of water vole use, including latrines, footprints, feeding remains, runs and burrows were searched for along the both banks of the river.

4.6 Evaluation

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

Value judgements are based on characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations such as SSSIs. For undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource are considered. Ecological resource quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

Although we cannot assess the survey findings fully in relation to the draft Environment Bill and Biodiversity Metric, the recommendations detailed within this report aim to meet requirements of the Environment Bill and Biodiversity Metric as far as possible at this stage.

4.7 Limitations

The site visit was undertaken in early May. The phase 1 habitat survey was undertaken during the optimal survey period. Therefore, no limitations to the phase 1 habitat survey occurred. The preliminary roost assessment of trees where undertaken during the sub-optimal survey period and suitable features may not have been visible due to the foliage growth. The Walshaw brook located adjacent to the southern boundary was surveyed for water vole and otter field signs from the boundary, therefore it is likely field signs were

missed during the survey. There is a building present within the site however, it was not assessed for roosting bat or nesting bird potential during the survey due access restrictions.

This report is a high level assessment aimed at providing support for continued allocation of the site for redevelopment. The above limitations are not considered a limit to the report conclusions.

5.0 Survey Results

5.1 Desk Study

One statutory site was identified within a 2km radius of the proposed development site. This site is Kirklees Valley Local Nature Reserve (LNR) located approximately 357m north of the site boundary. Three non-statutory sites were identified within 1km of the proposed development (with distance and direction from the site):

- Kirklees Brook LNR and Site of Biological Importance (SBI) (357m north)
- Cyrus Ainsworth's Nurseries & Parkers Lodges SBI (511m south)
- Cockey Moor Wood Pasture and Marsh SBI (960m south west)

The site lies within a Natural England SSSI Impact Risk Zone of the Rochdale Canal SSSI and SAC which is located approximately 9890m east of the site boundary. The proposed development is for residential dwellings and will not trigger a consultation with Natural England. Categories that would currently trigger a consultation with Natural England include, infrastructure such as Airports, helipads and other aviation proposals.

Following a review of records held by the Greater Manchester Ecology Unit, several priority species were identified within 1km of the site boundary. These species include bats, great crested newts and bird species (WCA Sch1 and NERC S41 species). Daubenton's bat and pipistrelle bat sp. activity have been recorded at Pond 3 within the site.

One European Protected Species Licence (EPSL) application within 2km of the site since 2015 was identified using Magic Maps;

- 2015-8936-EPS-MIT-1 for the destruction of a resting place for common pipistrelle. Start date 01/05/2015, end 30/06/2015 approximately 1.6km south east of the site boundary.

A list of key habitats is shown in table 5.1 below and a summary description of key habitats within the survey area is provided in Section 5.2. Notes on the presence or potential presence of protected species are provided in Section 5.3. The Phase 1 Habitat map can be found in Appendix 1. The Target Notes (TN) and lists of species recorded during survey are presented in Appendix 2.



5.2 Habitat Survey



The site lies to the north west of Bury and comprises an area of farmland. The habitats on site include semi improved, improved and amenity grassland with boundary hedgerows. Semi natural broadleaved woodland is present within the east of the site and four waterbodies are located within the survey area. Tall ruderal vegetation, scrub and scattered broadleaved trees are also present. These habitats are presented on plan P.1173.19.01 (Appendix 1)


The site is bound by Walshaw Road and Walshaw Brook to the south, Scobell Street to the north and Tottington Road to the north east. The site is surrounded by residential developments with agricultural land to the south of the site.


Weather conditions during the survey were mild (14°C), dry (7/8 cloud cover) with a F1 (Beaufort Scale) therefore, appropriate for this type of survey. Table 5.1 details the habitat types recorded on the site.

Table 5.1 Habitat Types on the Proposed Development Site.



Description	Photograph
<p>Semi-improved grassland: A small, semi improved grassland field is located central within the site. This area of habitat has been left unmanaged. Species present included Timothy grass and meadow buttercup.</p> <p>The areas are of value to birds, small mammal species, reptiles and amphibians. Bats may also use the areas for forage. The longer sward also provides good foraging habitat for barn owl.</p> <p>This type of habitat is less common within the wider environment and would need to be replaced with wildflower planting or areas of grassland under a relaxed mowing regime.</p>	
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Detailed vegetation surveys and bat activity surveys may be required if significant areas of this grassland are to be lost to the proposals to inform appropriate mitigation (see section 5.3 below).</p>
<p>Improved Grassland: The Site is dominated by improved grassland that is grazed by livestock. Species present include sweet vernal grass, perennial rye grass, Yorkshire fog, Poa sp., Fescue sp. and clover.</p> <p>The areas are of value to birds, small mammal species, reptiles and amphibians. Bats may also use the areas for forage. The longer sward also provides some foraging habitat for barn owl. This type of habitat is common within the wider environment, but it is likely that some mitigation for loss would be required in the form of wildflower planting or areas of grassland under a relaxed mowing regime.</p>	 <p>Improved grassland grazed by sheep.</p>
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Detailed vegetation surveys are unlikely to be required due as this habitat is intensely managed. However, it could be of value to bats, so bat activity surveys are likely to be required to inform appropriate mitigation (see section 5.3).</p>


Description	Photograph
<p>Tall ruderal: Tall ruderal vegetation is located in two small areas within the site, located central and to the west of the site. Species present include common nettle, common cleavers, herb robert and cow parsley.</p> <p>This habitat is common in the wider environment and any loss can be mitigated for by provision of areas of wildflower.</p>	
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Detailed vegetation surveys are unlikely to be required as this habitat is species poor.</p>
<p>Semi-natural broadleaved woodland: An area of semi-natural broadleaved woodland is located within the north east of the site. Species present within the canopy include sycamore, elder, alder, horse chestnut, hazel, and beech. Species present within the understory include ash, sycamore and goat willow. Species present in the understory include bracken, bramble, herb robert and ivy.</p> <p>Multiple trees within the woodland have been identified to have negligible- low bat roosting potential, with a feature of ivy cladding.</p> <p>The woodland provides suitable foraging and commuting habitat for bats. The woodland provides suitable sheltering and foraging opportunities for amphibians, reptiles and small mammals.</p>	
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Replacement of woodland is costly financially and in terms of land requirements within the Biodiversity net gain legislation due to be passed in parliament in 2020. Enhancing retained woodland would be an easier way to meet the Biodiversity targets. If the woodland has to be lost, detailed vegetation surveys would be required to inform the Biodiversity Metric Calculations and develop appropriate mitigation</p>

Description	Photograph
<p>Species poor hedgerows: Species poor hedgerows border grassland fields throughout the site. All hedgerows within the site compose of hawthorn, elder and holly, An assessment under the Important Hedgerows Regulations has not been undertaken at this stage.</p>	
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Detailed vegetation surveys of any hedgerow may be required if they are to be lost to the proposals. Nesting bird surveys may be required if this habitat is to be cleared between 1 March and 31 August (see section 5.3 below)</p>

Description	Photograph
<p>Scattered trees: Multiple scattered broadleaved trees are present along the field boundaries within the site. Species include sycamore, willow sp., hawthorn, field maple, oak sp., and cherry sp.</p> <p>The scattered broadleaved trees are of value to nesting birds, commuting and foraging bats. This habitat is common within the wider landscape.</p>	
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Retain the scattered trees where possible, or replace in accordance with the relevant Local Plan Policy. Any removal of trees should be outside the nesting bird season if possible (see Section 5.3 below)</p>

Description	Photograph
<p>Dense / continuous scrub: A small area of dense / continuous scrub is located within the north of the site along a fenced boundary. This habitat is dominated by bramble, with common nettle and young sycamore present. The habitat is of value to birds, reptiles, amphibians, small mammal species and, may also be of value to nesting birds such as robin. This habitat is common within the wider landscape.</p>	<p>None available</p>
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>Retain and enhance if possible or replace with dense planting of hawthorn and blackthorn to mitigate for loss. Any removal of vegetation should be outside the nesting bird season if possible (see Section 5.3 below)</p>

Description	Photograph
<p>Areas of wet grassland (TN6): Small areas of wet grassland are located within two improved grassland fields. This habitat is dominated by soft rush with horsetail sp., sweet vernal grass, buttercup sp., dandelion and crucifer sp.</p> <p>This habitat is of value to amphibians and reptiles and is less common within the wider landscape.</p>	
<p>Ecological Value</p>	<p>Within the Zone of Influence</p>
<p>Further Work</p>	<p>These naturally wet areas could be retained as a focus for SUDS proposals. If they are to be lost, more detailed vegetation surveys may be required to inform mitigation requirements and ensure no net loss of biodiversity.</p>
<p>Amenity grassland: Small areas of amenity grassland are present within the site. This habitat is heavily managed and species present include Fescue sp., dandelion, Poa sp., buttercup sp. and common nettle. This habitat is considered to have low ecological value and is common in the wider landscape.</p>	
<p>Ecological Value</p>	<p>Negligible</p>
<p>Further Work</p>	<p>No further work required</p>

Description	Photograph
<p>Hard standing: Areas of hard standing comprising compact stone is present within the site. This habitat is of negligible ecological value and is common within the wider landscape.</p>	
<p>Ecological Value</p>	<p>Negligible</p>
<p>Further work</p>	<p>Not required</p>
<p>Introduced shrub: Introduced shrub are present within residential garden located along the site boundary however, located within the ownership boundary. Species present include daffodil, laurel and conifer sp. This habitat is of low value to nesting birds and is common within the wider landscape.</p>	<p>None available</p>
<p>Ecological Value</p>	<p>low</p>
<p>Further work</p>	<p>As this habitat is outside the site boundary no further survey is required.</p>

Water bodies: There are three water bodies located within the site and one located outside of the site however, within the ownership boundary.

Pond 1 – Pond 1 is located within the west of the site and is fed by the stream which borders the site to the south. This pond is approximately 1840m² and has a Habitat Suitability Index score of ‘Good’.

Pond 2 – Pond 2 is located within the east of the site and is approximately 2984m² and has a Habitat Suitability Index score of ‘Average’.

Pond 3 – Pond 3 is a large pond (13,670m²) located within the south of the site and is bordered by semi natural broadleaved woodland and has a Habitat Suitability Index score of ‘Average’.

Pond 4 – Pond 4 is located within the ownership boundary however, outside of the site. This pond is approximately 1264m² and has a Habitat Suitability Index score of ‘Average’.



Pond 1



Pond 2



Pond 3



Pond 4

Ecological Value

Within the Zone of Influence

Further Work	There are suitable aquatic and terrestrial habitat present within the site to support GCN and other amphibians. Therefore, further survey requirements are required. It is recommended that eDNA samples are taken from all four ponds present to assess if GCN are present or absent. If the analysis of the samples return a positive result additional population size class surveys will be required to assess the population present and inform mitigation.
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5.3 Protected and Invasive Species

Species Results	Evaluation and Recommendations
<p>Badger: No badger records were returned within 1km of the site. However, the site provides suitable habitat for commuting, foraging and sett creation. The site has good connectivity to the wider landscape via boundary hedgerows, grassland and woodland.</p> <p>No obvious signs of badger use of the site was noted during the walkover survey, however a detailed assessment of the site for badger activity was not undertaken.</p>	<p>As suitable habitat for badger was found to be present within the site for foraging and commuting and sett creation, an update assessment of badger use of the site will likely be required to determine badger use throughout the site to support a planning application. If badgers are found, measures will need to be taken to ensure no harm to badger as a result of the proposals and would likely require the inclusion of wildlife corridors along key badger commuting routes, to enable continued badger access across the site.</p>
Ecological Value	Within the Zone of Influence

Species Results	Evaluation and Recommendations
<p>Bats: Bat records have been returned for bat activity and roost within 1km of the site. Species include brown long eared bat, common pipistrelle, Daubenton's bat, Natterer's bat, Noctule bat, soprano pipistrelle, whiskered and Brandt's bat. Bat activity for Daubenton's bat and pipistrelle sp. was identified near to Pond 3.</p> <p>A pipistrelle sp. roost was recorded approximately 97m south of the site.</p> <p><u>Preliminary Ecological Appraisal for Bats</u> <i>Habitats:</i> The habitats on site, including the intact species poor hedgerows, semi natural broadleaved woodlands, waterbodies, grassland and scattered trees have the potential to provide good bat foraging and commuting habitat.</p> <p><i>Trees:</i> An Elder tree located at TN4 on P1173.19.01 plan in Appendix 1, was identified to have moderate bat roosting potential as ivy cladding and holes within the bark where present. The semi natural broadleaved woodlands were not assessed in detail, and suitable features may be present.</p>	<p><i>Habitat:</i> The habitats on the site are considered to provide moderate-high bat commuting and foraging suitability. Bat activity surveys are likely to be required to inform a detailed planning application and appropriate mitigation. These would require between six and 12 nocturnal bat activity surveys (one to two per month during the bat active season) together with deployment of static bat detectors in hedgerows that are to be lost within the proposals to determine bat use of these as commuting habitats.</p> <p><i>Trees:</i> One Elder tree was identified to have moderate bat roosting potential and therefore, if lost to the proposals required two nocturnal surveys to assess the use by roosting bats.</p> <p>The trees within the site provide at least negligible to moderate bat roost habitat. The trees were not subject to a detailed inspection during the visit, if they are to be included within the proposals further daytime surveys will be required to assess for bat roost potential. Nocturnal surveys may also be required if the trees are to be lost within the proposals.</p> <p>To enable bats continued use of retained commuting and foraging habitats on the site it is advised that lighting is kept to a minimum and designed to avoid spill into the foraging habitat i.e. the areas of broadleaved woodland. Lighting design should follow advice set out in <i>Bats and lighting in the UK-bats and the built environment series</i>, (Bat Conservation Trust, 2018).</p>
<p>Evaluation</p>	<p>Moderate-high bat commuting and foraging habitat, at least moderate roosting habitat.</p>

Species Results	Evaluation and Recommendations
<p>Breeding Birds: Multiple records of S41 bird species were returned within 1km of the site. These species include bullfinch, dunnock, house sparrow, song thrush and starling.</p> <p>The closest record is for dunnock have been recorded approximately 300m south east of the site.</p> <p>Full details are included within Appendix 3. The site provides nesting and foraging habitat for these species.</p> <p>The habitats on the site offer nesting opportunities for common bird species within trees and the species poor hedgerows. The less intensively managed grasslands offer habitat for ground nesting birds such as skylark. Birds including magpie, blackbird and Canada geese were noted during the walkover survey.</p> <p>The site may be of value for overwintering bird species as grazing habitat, although the value of this habitat will be influenced by the use of the fields by cattle or sheep over the winter. No records of species such as pink footed geese or Whooper swans were returned within 1km of the site. However, this could be due to the lack of survey effort for these species rather than them not being present on site.</p>	<p>There will be habitat loss for breeding and foraging birds as a result of the proposals. The loss can be mitigated for by appropriate provision within the development proposals, to include inbuilt nest features for birds within buildings, together with provision of tree and shrub planting to include nesting habitat.</p> <p>If significant areas of grassland under a relaxed management regime are to be lost to the proposals, breeding bird surveys may be required to inform mitigation requirements for ground nesting birds such as skylark.</p> <p>Most resident and migrant birds breed in the spring and summer months, although woodpigeons and collard doves nest throughout the year. In order to avoid harm to nesting birds, vegetation should not be cleared during the bird breeding season along with any demolition works on the building (between 1 March and 31 August). If vegetation needs to be cleared during this period a nesting bird survey will be required, conducted by a suitably qualified ecologist, before works begin. If any active nests are observed during the survey, exclusion zones will be set up and works will not occur in these areas until nesting is complete.</p>
Ecological Value	Within the Zone of Influence to local

Species Results	Evaluation and Recommendations
<p>Amphibians: Two records for GCN were returned within 1km of the site. The records for GCN were recorded approximately 850m north of the site boundary within the Kirklees Brook SBI. One record of common toad was recorded within Pond 3 within the site.</p> <p>Four ponds are located within 250m of the site. All four ponds (Ponds 1, 2, 3 & 4) have been assessed using the Habitat Suitability Index to determine their suitability to support amphibians, results are detailed within Table 5.1 above.</p> <p>Suitable terrestrial habitat to support amphibians is present within the site including the improved, semi-improved and wet grassland, hedgerows, scrub, ponds, and woodland.</p>	<p>The site contains suitable terrestrial and aquatic habitat for amphibians, within the semi natural broadleaved woodland, hedgerows, improved, semi-improved and wet grassland and ponds.</p> <p>The watercourse located along the southern boundary of the site is not a suitable breeding habitat for amphibians due to the speed of the flowing water.</p> <p>Further survey for amphibians will be required prior to the proposed works. It is recommended that eDNA sampling of ponds 1, 2, 3 and 4 is undertaken to support a detailed planning application. If results from the eDNA sampling return a positive result population size class surveys will be required to inform mitigation.</p>
Ecological Value	Within the zone of influence
<p>Reptiles: No records of reptiles were returned for the site or the wider area, this could be due to lack of survey effort for these species rather than the species not being present on the site or within the wider environment. The site is located within reptile species known distribution area as mapped on the NBN Atlas.</p> <p>The site provides some habitat for common lizard and grass snake within the hedgerows, grassland, scrub and woodland.</p> <p>The site has good connectivity to the wider landscape to the south via connective hedgerows, woodland and the watercourse that borders the site to the south. The site lies south and east of urban developments, therefore, there is poor connectivity to the wider landscape to the north and east of the site boundary.</p>	<p>The site provides some habitat for common lizard and grass snake within the semi improved grassland areas, woodland, scrub and hedgerows, however connectivity to the wider landscape is limited due to the dense urban area that lies to the north and east of the site. However, there is good connectivity to the landscape to the south and west of the site.</p> <p>The majority of grassland and connective hedgerows will be lost to the proposals as detailed on the Barton Wilmore Concept Master Plan for Walshaw (land at) Rev I. To inform a detailed planning application, reptile surveys are recommended due to the proposed habitat loss within the site. The reptile surveys would confirm presence / likely absence of reptiles within the site and inform further mitigation (if required). Reptile surveys are best conducted in April/May and September, although they can be conducted throughout the summer provided the surveys are undertaken within optimal weather conditions.</p>
Ecological Value	To be confirmed

Species Results	Evaluation and Recommendations
<p>Other species No records of hedgehog, water vole, otter or white clawed crayfish were returned for the site, but this could be due to lack of survey effort for these species rather than the species not being present on the site.</p> <p>The stream located south of the site may provide suitable habitat for water vole. They may also provide commuting corridors and forage for otter.</p> <p>The grazing improved grassland fields present within the site do not provide suitable habitat for Brown hare.</p>	<p>It is advised that if works are to occur within 5m of the streams, a survey for water voles should be undertaken to identify appropriate mitigation measures to avoid harm to water vole and inform the planning application.</p> <p>The stream substrate is unlikely suitable for use by white clawed crayfish so surveys for this species would not be required in this case.</p> <p>Habitat exists for hedgehog and hedgehog could be influenced by the proposals as they have large territories. Therefore it is recommended that Reasonable Avoidance Measures (RAMs) be employed in respect to hedgehog during the works. These include:</p> <ul style="list-style-type: none"> • Construction materials stored on pallets so as not to create a hedgehog refuge area; • Existing refuge areas (brash pile and bramble scrub) should be removed by hand so hedgehog within are not harmed during their removal; <p>To enable hedgehog continued use of the site it is advised that gaps of at least 13cm by 13cm are left under any new garden fences to enable hedgehog to roam freely within the area following development. To mitigate for the loss of habitat that could be used by hibernating hedgehog (such as bramble scrub) it is recommended that a hedgehog hibernaculum is provided within the landscaping.</p>
Ecological Value	Within the Zone of Influence
<p>English Bluebell. During the walkover survey English bluebell were noted within the woodland and at the base of a hedgerow (TN1)</p>	<p>A pre-commencement check of the site for native bluebell in May and prior to ground clearance will be required. Relocation of any native bluebell into retained woodland areas to ensure no loss of this BAP species. If works are to occur before May, any bulbs found during soil removal should be retained and grown on to confirm the species. If they are English bluebell, they should be replanted at an appropriate time once the ground works in that area have been completed;</p>
Ecological Value	Within the Zone of Influence

<p>Invasive Species: Rhododendron and Himalayan balsam WCA Sch 9 species have been identified within the semi natural woodland and improved grassland field margin located at TN2 and TN3 displayed on P.1173.19.01 within Appendix 1.</p>	<p>Invasive species are listed in Schedule 9 Part II of the Wildlife and Countryside Act 1981. It is advised that an update survey for invasive species be undertaken between May and October to support any future planning application for the site. if invasive species establish within the site prior to development that they are controlled and/or disposed of using suitable methods to avoid spread in the wild during works.</p>
<p>Ecological Value</p>	<p>N/A</p>

6.0 Assessment & Recommendations

6.1 Designated Sites and Habitats

The site lies within a Natural England SSSI Impact Risk Zone for the Rochdale Canal SSSI however, Natural England will not need to be consulted for this type of planning proposal as the proposals are for the erection of residential dwellings. The influence of the proposals on the statutory and non-statutory protected sites within the search area cannot be confirmed until the proposals have been finalised.

The habitats on site comprise improved, semi improved, wet and amenity grassland, scrub, intact species poor hedgerows, semi natural broadleaved woodland, tall ruderal, hard standing, watercourse and ponds, introduced shrub and scattered broadleaved trees. These habitats are considered to have an ecological value of **within the Zone of Influence** of the site or lower. Some of these habitats will be lost to the proposals, such as the areas of semi improved grassland and hedgerows as displayed on the Barton Wilmore Concept Master Plan for Walshaw (land at) Rev I. It is recommended that the woodland areas be retained and where possible new areas or woodland or shelter belts be created to provide shelter and forage for species. New hedgerow planting within the site is also recommended to improve the connectivity for species such as small mammals between existing and new habitats. Improving the species diversity of hedgerows and the woodlands, together with wildflower planting, will help to mitigate for loss of vegetated habitat. The inclusion of new habitats and the improvement of existing habitats will improve the ecological connectivity across the site following development as marked on drawing P.1173.19.02.

Areas of more valuable habitat have been marked on drawing P.1173.19.02 as a potential constraint to development (pink). Although there could be some development in these areas, they will require greater compensatory measures than other areas such as the improved grassland. If retained, these pink areas could be used as potential areas for ecological enhancement in order to meet the biodiversity net gain requirements. Areas marked in blue are areas that could be significantly enhanced in order to meet the biodiversity net gain requirements, for example by hedgerow or screening belt planting. The majority of blue areas are marked along the site boundaries, in order to improve connectivity to offsite habitats. The areas are indicative, and there is some flexibility with zones for retention and enhancement to fit in with the development requirements for access.

Bats

Records for Daubenton's bat and pipistrelle bat sp. have been returned located at Pond 3 within the site. It is likely that bats will be using the habitats present within the site for commuting and foraging.

The trees on the site have not been fully assessed for bat roost potential and will require further daytime surveys if they are to be lost within the proposals. Nocturnal surveys will be required if the trees are assessed as having at least moderate bat roost potential.

The habitats on the site are considered to provide **moderate-high** bat commuting and foraging suitability. Bat activity surveys are likely to be required to inform a detailed planning application and appropriate mitigation. These would require between six and 12 nocturnal bat activity surveys (one to two per month during the bat active season) together with deployment of static bat detectors in hedgerows that are to be lost within the proposals to determine bat use of these as commuting habitats.

If bats are found to be roosting within the trees, a licence from Natural England will be required for the destruction of a bat roost. The site also provides habitat for nesting birds

and badger. Further works to be taken in relation to protected species are presented in Section 5.3 above

Breeding birds

There will be habitat loss for breeding and foraging birds as a result of the proposals. However, the loss can be mitigated for by:

- appropriate provision within the development proposals, to include inbuilt nest features for birds within building; and
- provision of tree and shrub planting to include nesting habitat.

If significant areas of grassland under a relaxed management regime are to be lost to the proposals, breeding bird surveys may be required to inform mitigation requirements for ground nesting birds such as skylark.

Amphibians

Suitable aquatic and terrestrial habitats are present within the site and records of GCN have been returned within 1km of the site. Further surveys of the four ponds located within 250m of the site are required. It is recommended that eDNA samples of the four ponds are taken. If the samples return a positive result, further population size class surveys will be required to inform mitigation.

Reptiles

The site provides some habitat for common lizard and grass snake within the semi improved grassland areas, woodland, scrub and hedgerows. There is good connectivity to the wide landscape within the south and west of the site however, poor connectivity to the north and east where urban development's lie.

Reptile surveys are recommended to confirm presence/ likely absence of reptiles within the site, as suitable habitats such as semi improved grassland will be lost to the proposals as displayed on the Barton Wilmore Concept Master Plan for Walshaw (land at) Rev I. Reptile surveys are best conducted in April/May and September, although they can be conducted throughout the summer provided the surveys are undertaken within optimal weather conditions.

Badger

Suitable habitat for foraging, commuting badgers and sett creation are present within the site and further surveys may be required to determine badger use throughout the site, depending on the proposals. Measures will need to be taken to ensure no harm to badger as a result of the proposals and would likely require the inclusion of wildlife corridors along key badger commuting routes, to enable continued badger access across the site.

To avoid harm to badger that may stray on to site during construction it is advised that spoil heaps are fenced off to prevent badger access and that deep excavations have ramps to enable badger escape should they fall in. It is likely a Badger Method Statement would be required to support the proposals at planning application stage.

English Bluebell

English bluebell are present within the site, a pre-commencement check of the site for native bluebell in May and prior to ground clearance will be required in key areas. Relocation of any native bluebell into retained woodland areas will be needed to ensure no

loss of this BAP species. If works are to occur before May, any bulbs found during soil removal should be retained and grown on to confirm the species. If they are English bluebell, they should be replanted at an appropriate time once the ground works in that area have been completed;

Other Species

It is advised that if works are to occur within 5m of the watercourse that borders the site in the south, a survey for water voles should be undertaken to identify appropriate mitigation measures to avoid harm to water vole and inform the planning application.

Habitat exists for hedgehog and hedgehog could be influenced by the proposals as they have large territories. Therefore, it is recommended that Reasonable Avoidance Measures (RAMs) be employed in respect to hedgehog during the works. These include:

- Construction materials stored on pallets so as not to create a hedgehog refuge area;
- Existing refuge areas (brash pile and bramble scrub) should be removed by hand so hedgehog within are not harmed during their removal;

To mitigate for the loss of habitat that could be used by hibernating hedgehog (such as bramble scrub) it is recommended that a hedgehog hibernacula is provided within the landscaping.

6.2 Enhancements

In order to meet requirements for biodiversity protection and enhancement outlined within the NPPF, it is recommended that ecological enhancements are included where possible. These need to be confirmed once the proposals are finalised but could include:

1. Provision of bird boxes attached to retained trees and new buildings as appropriate on site;
2. Provision of bat boxes attached to a retained or new tree on site and provision of bat boxes attached to or incorporated within new buildings;
3. Provision of new woodland or shelter belt planting to connect existing features and enhancement of the existing water courses on site to include native tree species, a woodland wildflower mix and bulb planting to include native species;
4. Wildflower planting incorporating meadow flower mix to include native species;
5. Hedgerow planting to improve connectivity between existing and newly created habitats to include native species; and
6. Suitable landscaping within the residential development incorporating native species that provide a food or shelter resource to wildlife.

7.0 Conclusions

The impact on the local ecology as a result of the proposals cannot be fully confirmed until the proposals have been finalised. However, provided that the recommendations detailed above are followed to support a detailed planning application, the impact on the local ecology should be limited and there could be net gain in biodiversity. In summary these include:

1. Bat activity surveys to confirm the level of bat commuting and foraging activity throughout the site to be carried out between May and September in suitable weather conditions. between six and 12 nocturnal bat activity surveys will be required (one to two per month during the bat active season) together with deployment of static bat detectors in hedgerows that are to be lost within the proposals to determine bat use of these as commuting habitats.
2. For any trees lost to the proposals, a detailed daytime inspection would be required in the first instance. This can be undertaken at any time of year. Further nocturnal surveys (between May and September) may be required following the daytime inspection if the trees provide suitable shelter for roosting bats;
3. Further survey to assess the presence/ absence of GCN within the site. eDNA analysis of the four ponds within 250m of the site are undertaken to inform further survey and mitigation requirements.
4. Reptile surveys are recommended to assess the presence/ likely absence of reptiles within the site and to inform mitigation if required.
5. Further surveys to assess badger activity within the site. Use of Reasonable Avoidance Measures (RAMs) to avoid harm to badger during construction will be required and a Badger Mitigation Strategy may be needed to support the application;
6. Pre-commencement check of the site for native (English) bluebell in May and prior to ground clearance. Relocation of any native bluebell into retained woodland areas to ensure no loss of this BAP species. If works are to occur before May, any bulbs found during soil removal should be retained and grown on to confirm the species. If they are English bluebell, they should be replanted at an appropriate time once the ground works in that area have been completed;
7. Vegetation surveys may be required (between May and September), for the assessment of any woodlands likely to be impacted by the proposals;
8. Avoiding vegetation removal during the bird breeding season (1 March to 31 August inclusive) or undertaking a survey for breeding birds and ensuring any active nests found are protected within a suitable buffer zone until they are no longer in use;
9. Mitigation for the loss of nesting bird habitat with the provision of bird boxes such as open fronted nest boxes, 26mm hole nest boxes and 32mm hole nest boxes;
10. The use of Reasonable Avoidance Measures (RAM's) in relation to hedgehog, to include the strimming and hand clearing the bramble scrub and storage of construction materials on pallets to avoid harm to hedgehog;
11. Provision of a hedgehog hibernaculum on site to mitigate for loss of the bramble scrub, or enhance the site for hedgehog;
12. Lighting sensitive to the needs of bats, designed to avoid overspill onto key habitats including woodland, hedgerows and any identified during the bat activity surveys;
13. Habitat enhancement with the provision of bird and boxes. The provision of new woodland or shelter belts and hedgerow planting to improve connectivity between existing and new habitats could also enhance the site for wildlife. Suitable landscaping within the residential development incorporating species that provide a food or shelter resource to wildlife would also be beneficial to biodiversity.

There are no insurmountable constraints to development and the recommendations as outlined will maintain/enhance the ecological value of the proposed allocation. The recommendations will enable the proposals to meet the current requirements of national and local guidance and legislation including the NPPF and policy EN6 within the Bury Council Unitary Development Plan (UDP) (adopted August 1997).

8.0 References

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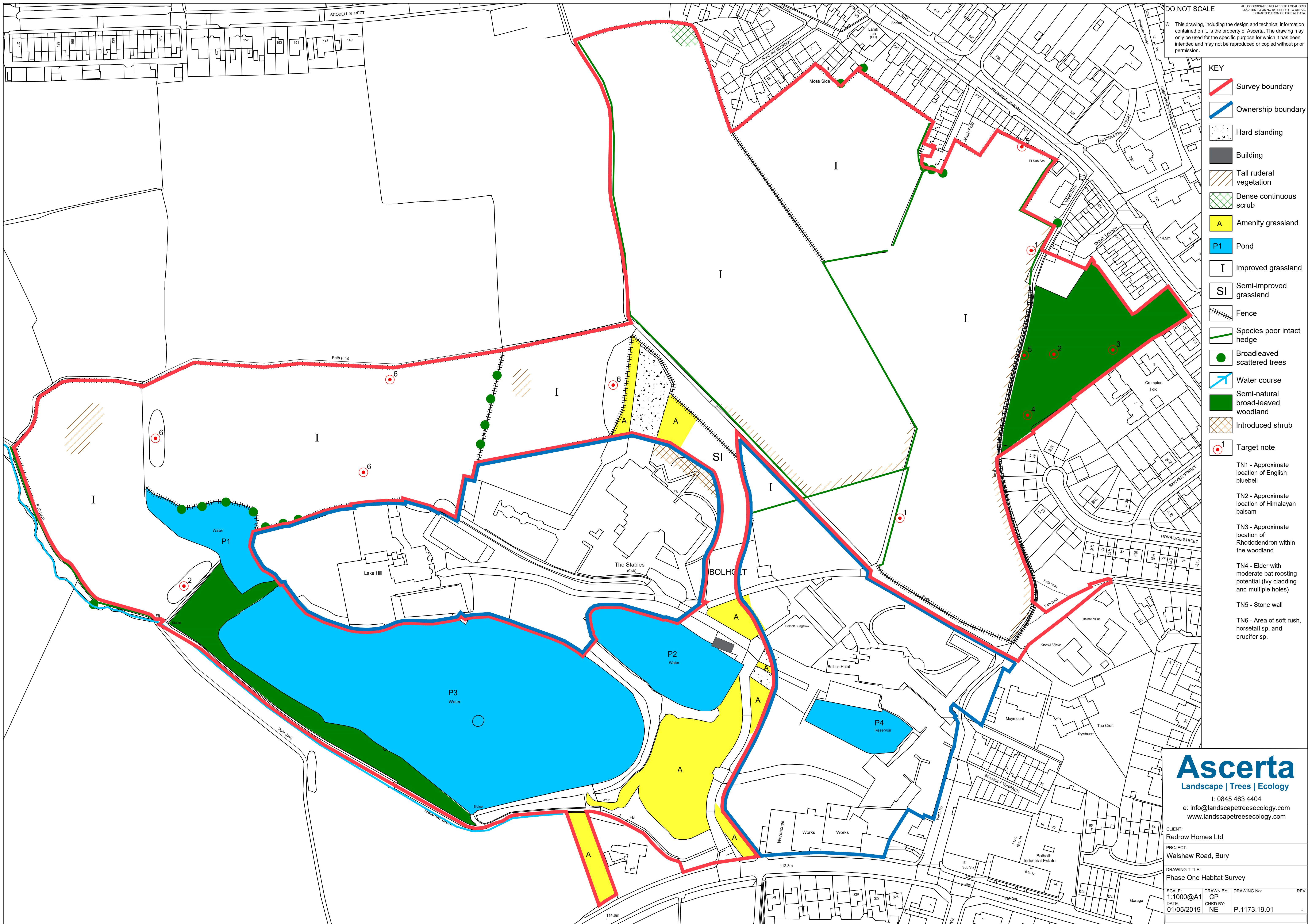
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Appendix 1



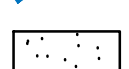

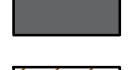


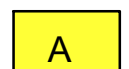


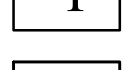
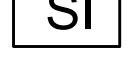

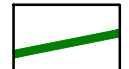
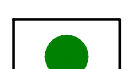




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KEY

-  Survey boundary
 -  Ownership boundary
 -  Hard standing
 -  Building
 -  Tall ruderal vegetation
 -  Dense continuous scrub
 -  A Amenity grassland
 -  P1 Pond
 -  I Improved grassland
 -  SI Semi-improved grassland
 -  Fence
 -  Species pool intact hedge
 -  Broadleaved scattered trees
 -  Water course
 -  Semi-natural broad-leaved woodland
 -  Introduced shrub
 -  1 Target note
- TN1 - Approximate location of English bluebell
- TN2 - Approximate location of Himalayan balsam
- TN3 - Approximate location of Rhododendron within the woodland
- TN4 - Elder with moderate bat roosting potential (Ivy cladding and multiple holes)
- TN5 - Stone wall
- TN6 - Area of soft rush, horsetail sp. and crucifer sp.

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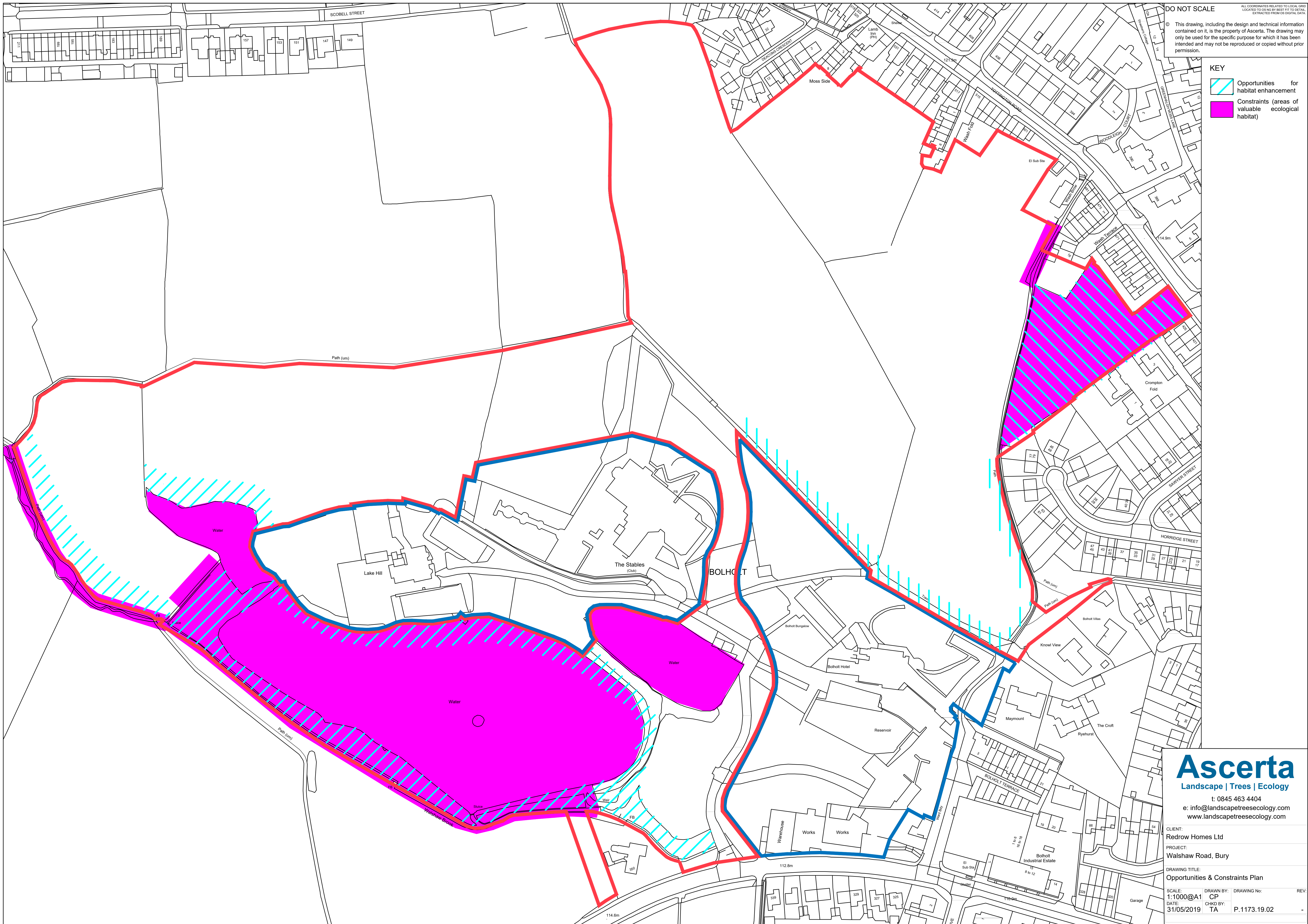
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 e: info@landscapetreeseecology.com
 www.landscapetreeseecology.com

CLIENT: Redrow Homes Ltd

PROJECT: Walshaw Road, Bury

DRAWING TITLE: Phase One Habitat Survey

SCALE: 1:1000@A1	DRAWN BY: CP	DRAWING No:	REV:
DATE: 01/05/2019	CHKD BY: NE	P.1173.19.01	



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- KEY**
- Opportunities for habitat enhancement
 - Constraints (areas of valuable ecological habitat)

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CLIENT:
Redrow Homes Ltd

PROJECT:
Walshaw Road, Bury

DRAWING TITLE:
Opportunities & Constraints Plan

SCALE: 1:1000@A1	DRAWN BY: CP	DRAWING No: P.1173.19.02	REV:
DATE: 31/05/2019	CHKD BY: TA		

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Appendix 2

Species List

Table 1: Flora Species

English Name	Scientific Name
Alder	<i>Alnus glutinosa</i>
Ash	<i>Fraxinus excelsior</i>
Beech	<i>Fagus sylvatica</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus agg</i>
Broadleaved dock	<i>Rumex obtusifolius</i>
Bullrush	<i>Typha sp.</i>
Cherry	<i>Prunus sp.</i>
Cleavers	<i>Galium aparine</i>
Clover	<i>Trifolium repens</i>
Common daisy	<i>Bellis Perennis</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Dandelion	<i>Taraxacum officinale</i>
Elder	<i>Sambucus nigra</i>
Fescue sp.	<i>Festuca sp.</i>
Goat willow	<i>Salix caprea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Herb robert	<i>Geranium robertianum</i>
Holly	<i>Ilex aquifolium</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Horsetail sp.	<i>Equisetum sp.</i>
Ivy	<i>Hedera Helix</i>
Laurel	<i>Laurus sp.</i>
Maple	<i>Acer sp.</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow foxtail	<i>Alopecurus pratensis</i>
Meadow grass	<i>Poa sp.</i>
Oak	<i>Quercus robur</i>
Perennial ryegrass	<i>Lolium perenne</i>
Rowan	<i>Sorbus aucuparia</i>
Spear thistle	<i>Cirsium vulgare</i>
Stinging nettle	<i>Urtica dioica</i>
Sweet vernal grass	<i>Anthoxanthum odoratum</i>
Sycamore	<i>Acer pseudoplatanus</i>
Timothy	<i>Phleum pratense</i>
Vetch	<i>Vicia sp.</i>
Willow sp.	<i>Salix sp.</i>
Yellow flag iris	<i>Iris pseudacorus</i>
Yorkshire fog	<i>Holcus lanatus</i>

Table 2: Fauna Species

English Name	Scientific Name
Black bird	<i>Turdus merula</i>
Buzzard	<i>Buteo buteo</i>
Canada goose	<i>Branta canadensis</i>
Crow	<i>Corvus</i>
Magpie	<i>Pica pica</i>
Oystercatcher	<i>Haematopus ostralegus</i>
Pied wagtail	<i>Motacilla alba</i>
Wood Pigeon	<i>Columba palumbus</i>

Target Notes

TN1 - Approximate location of English bluebell

TN2 - Approximate location of Himalayan balsam

TN3 - Approximate location of Rhododendron within the woodland

TN4 - Elder with moderate bat roosting potential (Ivy cladding and multiple holes)

TN5 - Stone wall

TN6 - Area of soft rush, horsetail sp. and crucifer sp.

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Appendix 3

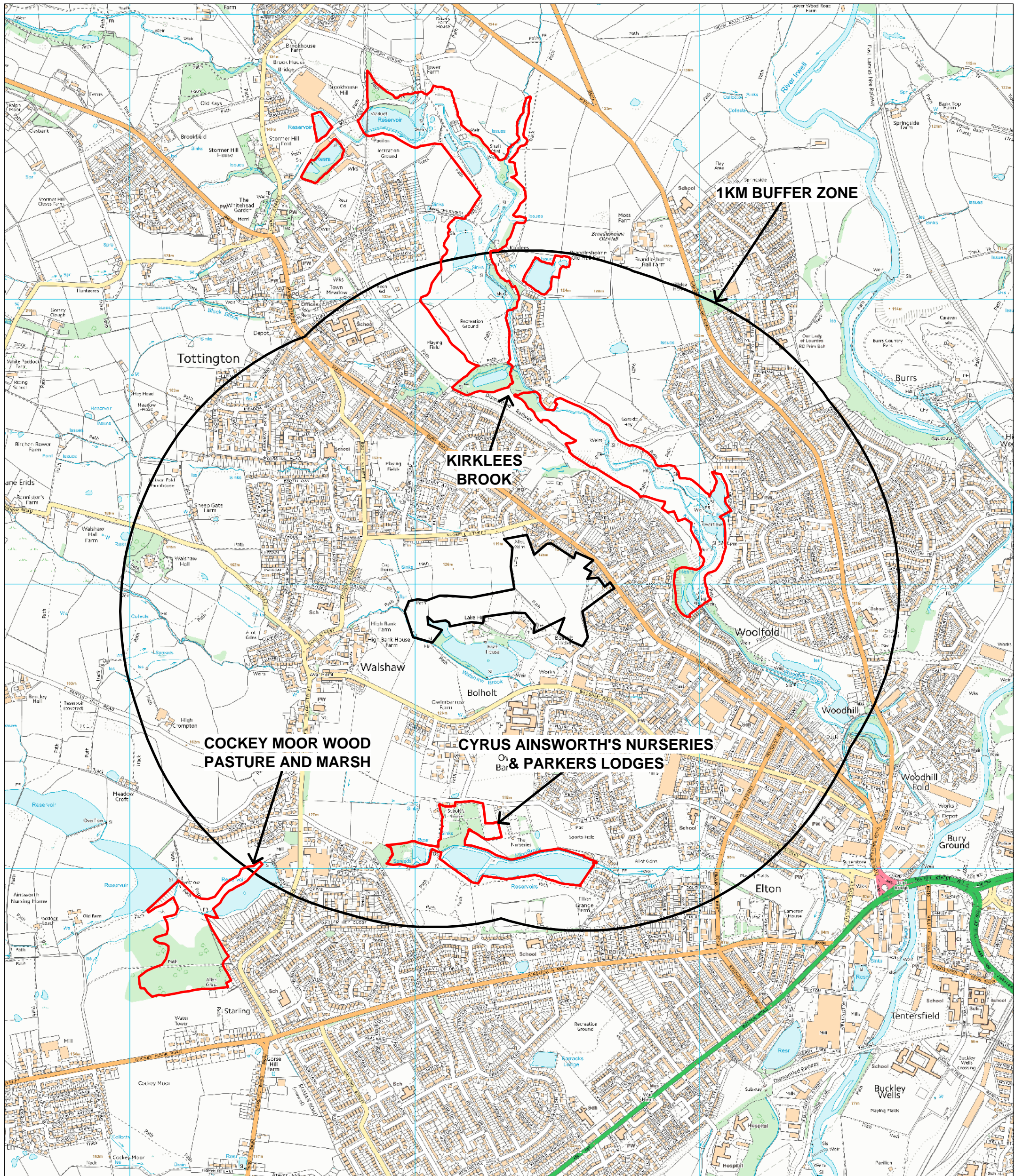
Table 3: Habitat Suitability Index


Pond number	SI ₁ Location	SI ₂ Pond Area	SI ₃ Pond Drying	SI ₄ Water Quality	SI ₅ Shade	SI ₆ Fowl	SI ₇ Fish	SI ₈ Ponds	SI ₉ Terrestrial Habitat	SI ₁₀ Macrophytes	Product	HSI	Suitability
1	Zone A	1 >2000m2	0.8 Rarely Dri	1 Poor	0.33 0-60%	1 Minor	0.67 Possible	0.67 >12	1 Moderate	0.67 6-10%	0.4 0.031761	0.708254	Good
2	Zone A	1 350m2	0.7 Never Dri	0.9 Poor	0.33 0-60%	1 Minor	0.67 Minor	0.33 >12	1 Poor	0.33 6-10%	0.4 0.006068	0.600208	Average
3	Zone A	1 >2000m2	0.8 Never Dri	0.9 Poor	0.33 0-60%	1 Minor	0.67 Minor	0.33 >12	1 Moderate	0.67 6-10%	0.4 0.014079	0.652916	Average
4	Zone A	1 1200m2	0.925 Never Dri	0.9 Poor	0.33 0-60%	1 Minor	0.67 Possible	0.67 >12	1 Poor	0.33 6-10%	0.4 0.016279	0.662464	Average

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Appendix 4



KEY
SITE OF BIOLOGICAL IMPORTANCE
 **SBI BOUNDARY**

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SD 7850 1176
WALSHAW ROAD - MAP 1

SCALE 1:12,500

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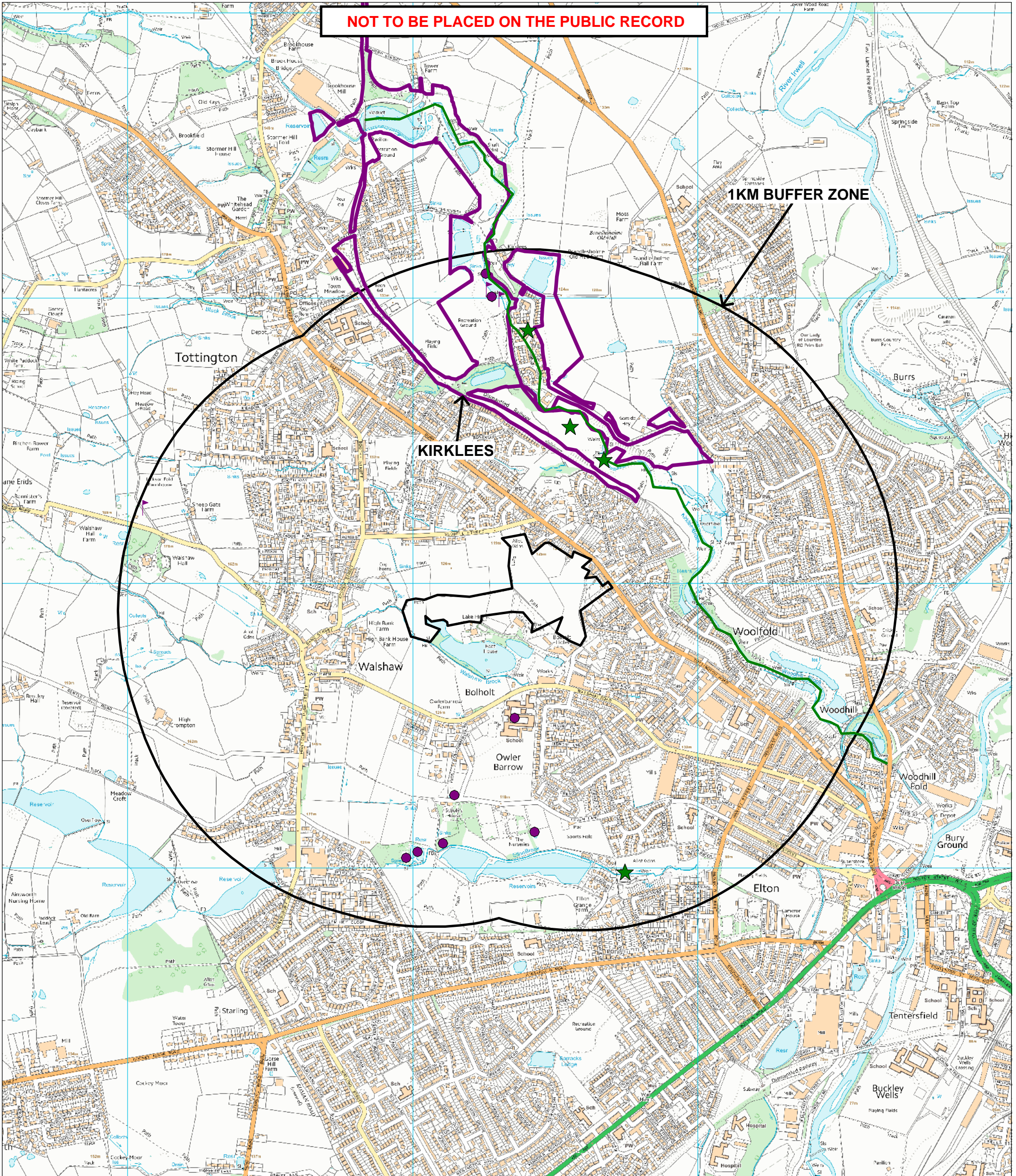


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Date Produced: 24/04/2019

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KEY
PROTECTED SPECIES

-  GREAT CRESTED NEWT
-  GREAT CRESTED NEWT ABSENCE
-  KINGFISHER

SITES

-  LOCAL NATURE RESERVES

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SD 7850 1176
WALSHAW ROAD - MAP 2

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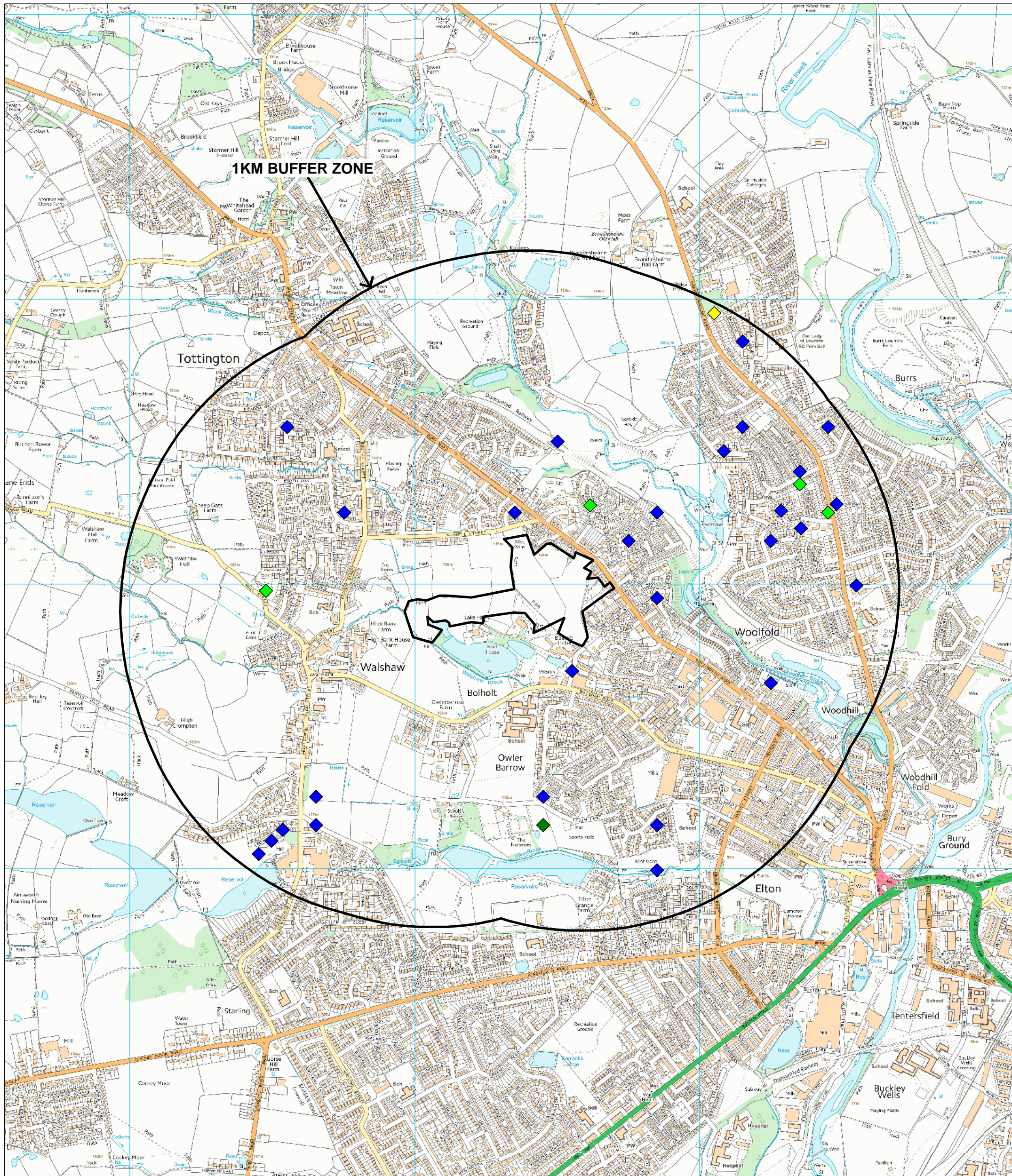
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- KEY**
- ◆ BAT SP
 - ◆ COMMON PIPISTRELLE
 - ◆ PIPISTRELLE SP
 - ◆ SOPRANO PIPISTRELLE

**GREATER MANCHESTER ECOLOGY UNIT
 ECOLOGICAL SEARCH - SD 7850 1176
 WALSHAW ROAD - MAP 4A**

SCALE 1:12,500

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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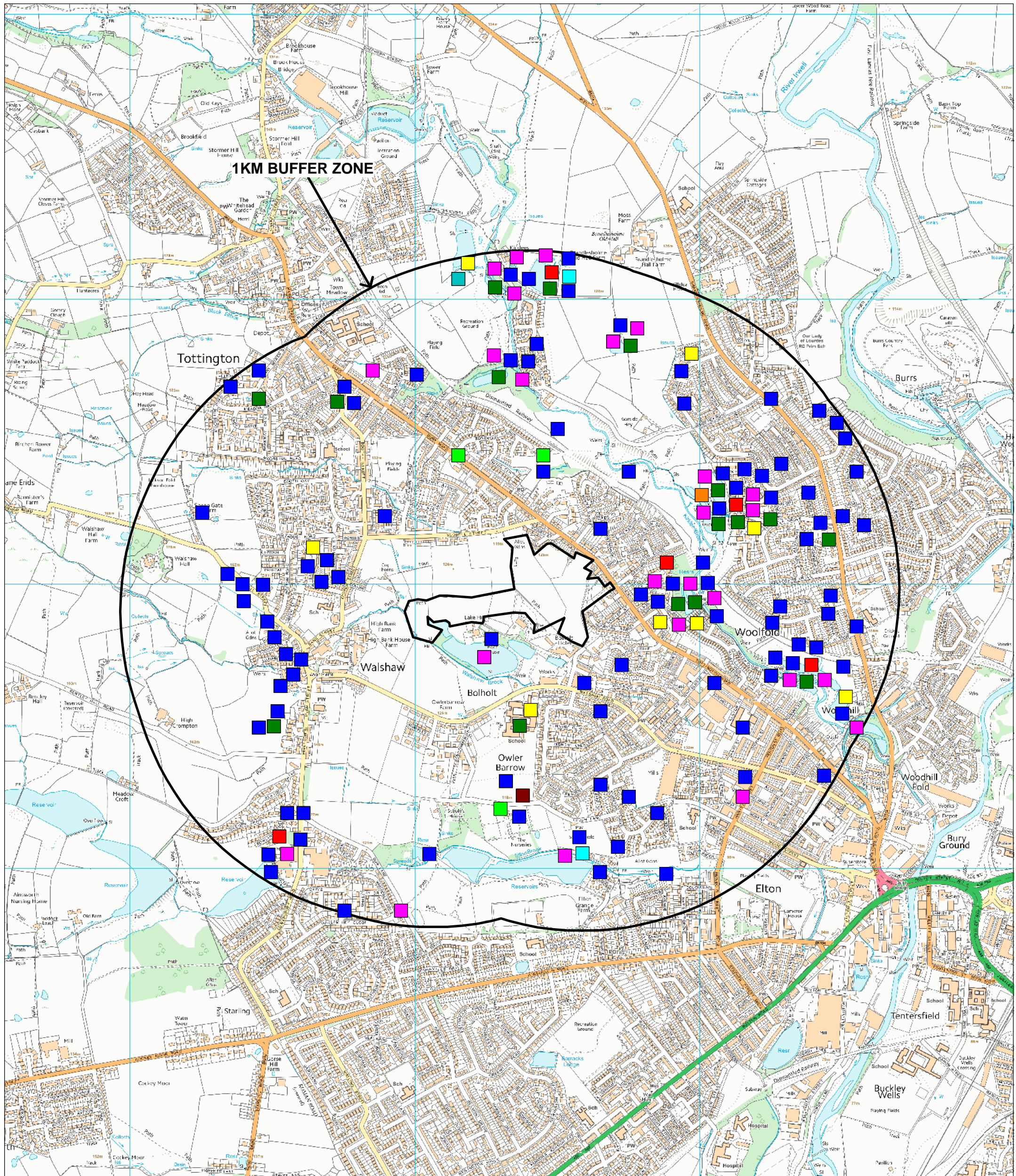
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**KEY
BAT SIGNS**

- BAT SP
- BROWN LONG-EARED BAT
- COMMON PIPISTRELLE
- DAUBENTON'S BAT
- NATTERER'S BAT
- NOCTULE BAT
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE
- WHISKERED BAT
- WHISKERED/BRANDT'S BAT

**GREATER MANCHESTER ECOLOGY UNIT
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WALSHAW ROAD - MAP 4B**

SCALE 1:12,500

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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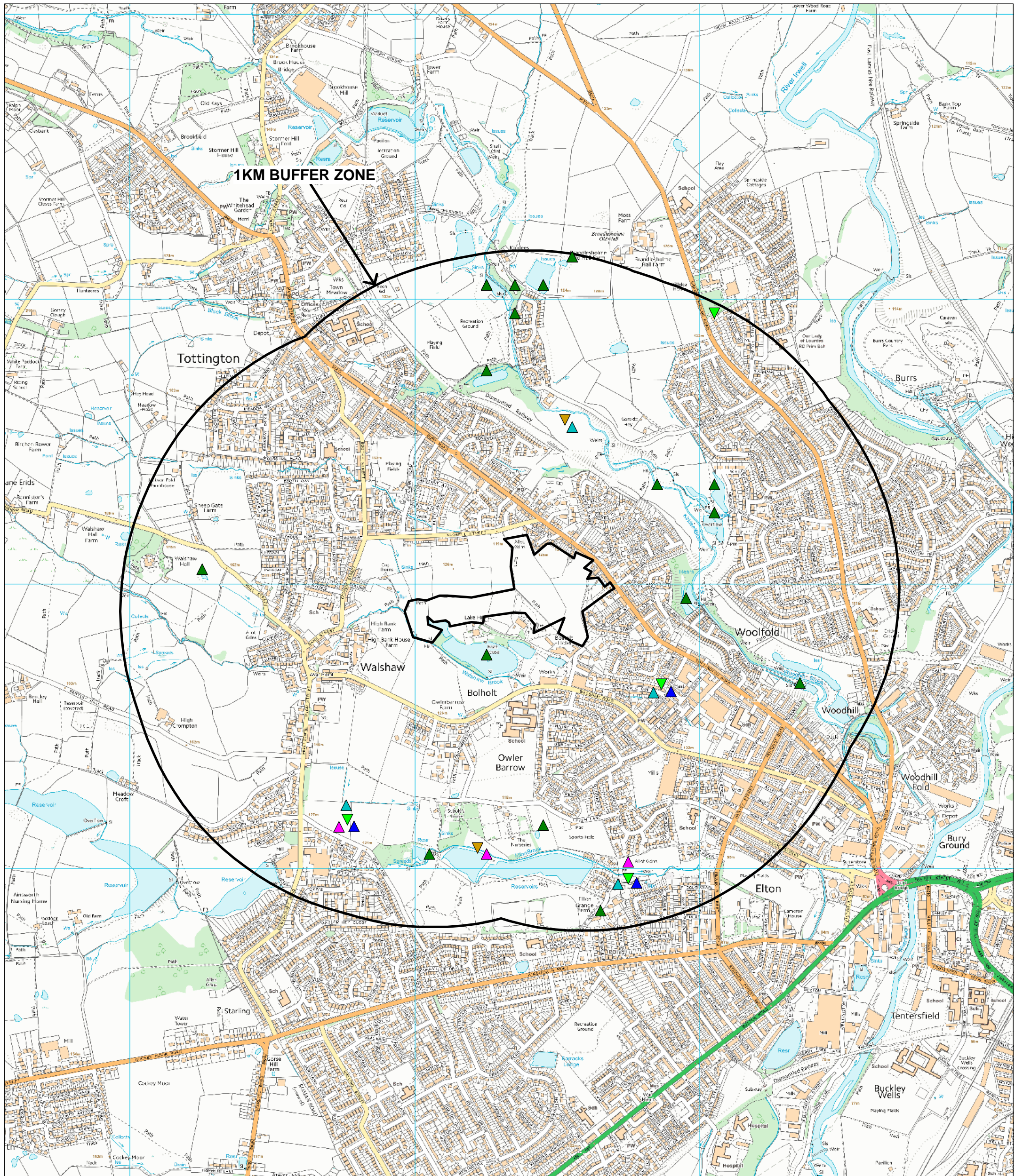
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KEY
SECTION 41 SPECIES

- ▲ BULLFINCH
- ▲ COMMON TOAD
- ▲ DUNNOCK
- ▲ HOUSE SPARROW
- ▲ SONG THRUSH
- ▲ STARLING

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WALSHAW ROAD - MAP 5

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