



THE
ENVIRONMENT
PARTNERSHIP



LAND OFF COWM TOP, CASTLETON ROCHDALE ECOLOGICAL ASSESSMENT

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Executive Summary

1. TEP was commissioned, in March 2022 by Barrett Homes and GLP Limited, to carry out an ecological assessment of Land off Cowm Top, Castleton, Rochdale (central grid ref. SD 89126 10375), hereon in referred to as "the site". This is required to inform a proposed residential development at the site.
2. The site comprises poor semi-improved grassland with marshy grassland and dense scrub throughout. Small areas of tall ruderal vegetation, continuous bracken, defunct hedgerows and scattered trees are also present. Woodland lies adjacent to the site along with fishing pools and buildings associated with Trows Farm to the south. A single track lane extends to the north of the site.
3. It is not anticipated that any designated sites would be impacted by the proposals.
4. Pollution prevention and tree protection measures should be implemented at the site to minimise impacts to retained woodland, trees, and waterbodies.
5. A biodiversity impact assessment will be required, once planning proposals and landscaping scheme have been finalised, and mitigation should be provided.
6. Ecologically valuable habitats within the site, including the marshy grassland and hedgerows, should be retained, protected, and enhanced where possible under a management plan. Where these habitats are to be lost replacement planting should be provided within the scheme.
7. Himalayan balsam and Japanese knotweed - non-native invasive plant species - were recorded and an invasive species management plan will be required pre-commencement. Native bluebells were noted on site and loss of this species should be mitigated through new bluebell planting using locally sourced native bulbs.
8. The site was found to have county-level importance for foraging and commuting pipistrelle bats and local-level importance for both Myotis and noctule for foraging and commuting. However, there were no features of importance on the site itself for these species. The woodland and waterbodies to the south of the site is where most of the bat activity was recorded. The implementation of sensitive lighting design will ensure that the woodland and waterbodies can still function as bat foraging and commuting habitat in the long term.
9. The site was found to have local significance for breeding birds. Nesting habitats should be retained and enhanced where possible or replacement nesting habitat should be created in the scheme. Nesting bird checks will be required if vegetation clearance is proposed during the nesting period March to August.
10. Reptile presence/absence surveys were undertaken at the site during which no reptiles were recorded. No other protected fauna is anticipated to be present on the site.

1.0 Introduction

- 1.1 TEP was commissioned, in March 2022 by Barrett Homes and GLP Limited, to carry out an ecological assessment of Land off Cowm Top, Castleton, Rochdale, herein referred to as "the site". This assessment is required to inform a planning application for a proposed residential development at the site, as shown on the Planning Layout (ref: 496-P-PLF-01 Rev 04).
- 1.2 This report has the following objectives:
- To describe the existing vegetation and give an overview of the habitats present on the site;
 - To identify whether there are any features of conservation value such as legally protected species or habitats and species of principal importance listed under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006;
 - To identify any further survey requirements;
 - To identify scheme design options to mitigate ecological impacts;
 - To identify biodiversity enhancement opportunities.

Existing Ecology Information

- 1.3 A Preliminary Ecological Appraisal was undertaken of the site by Leigh Ecology Ltd, in 2016 (report reference: GLP/16-001D1).
- 1.4 Four designated sites were identified within 1km of the site. No notable species records were returned for the site within the desk-based assessment.
- 1.5 Onsite habitats were found to include a mosaic of poor semi-improved grassland, semi-improved neutral grassland, marshy grassland, ruderal vegetation, and scrub with fishing pools both on and adjacent to the site and woodland along the site boundaries.
- 1.6 Himalayan balsam *Impatiens glandulifera* (a non-native invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981) was recorded and the site was found to have suitability for badgers, bats, and reptiles.
- 1.7 TEP initially produced an Ecological Assessment of the site in January 2020 (TEP Ref: 7043.02.001) and this Ecological Assessment is an update to that report to ensure details of habitats and protected species remain current.

Site Context

- 1.8 The site comprises a parcel of land in Castleton, in the borough of Rochdale. Cripple Gate Lane borders the site to the north, the A627(M) to the east, Trows Lane and the M62 beyond this to the south and residential development off Leander Drive to the west.
- 1.9 The central grid reference for the site is SD 89126 10375 and a site location plan is shown in Figure 1 below.

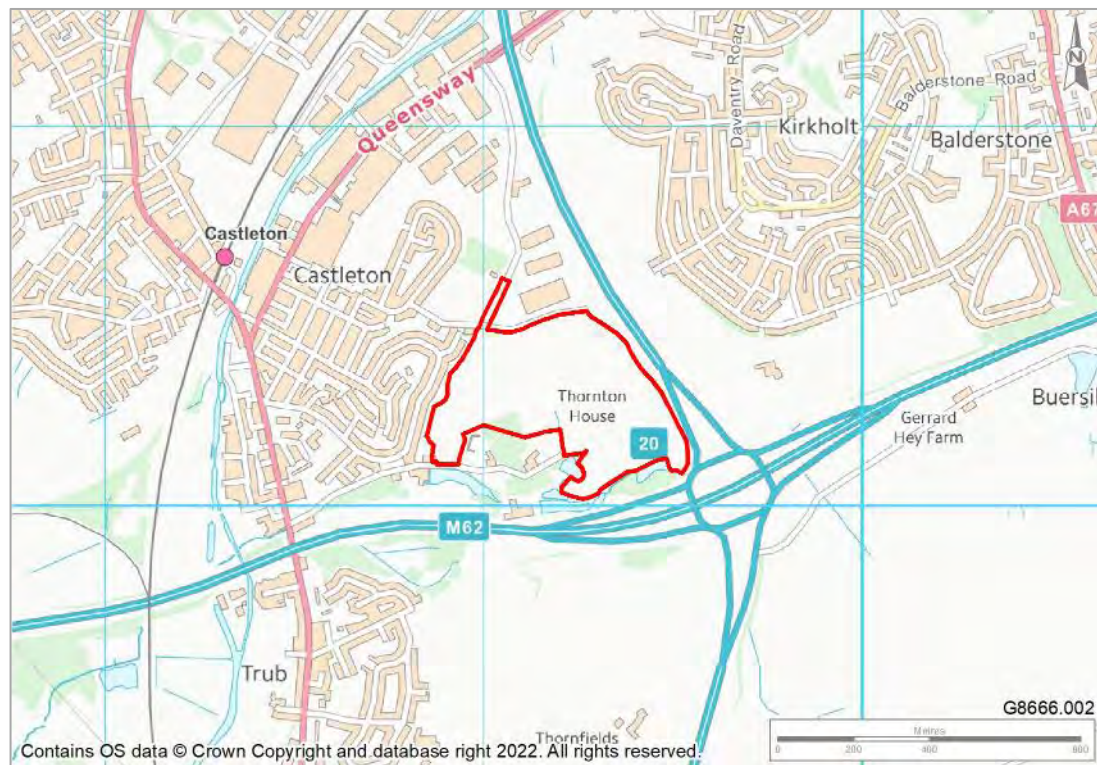


Figure 1: Site location plan

2.0 Methods

Desk Based Assessment

- 2.1 Information regarding historic species records and protected sites was requested/gathered from the sources listed in Table 1 in 2022. This collated data gives a useful indication of the distribution and abundance of ecological receptors at a given locale. An absence of records does not indicate the absence of protected species from the search area. Our survey work has sought to identify the potential for any protected species to be present.

Table 1: Sources of ecological information

Source of Information	Nature of Information
Magic Map	Maps showing internationally designated sites to 10km, nationally designated sites to 2km and habitats of value to biodiversity within and adjacent to the site
Greater Manchester Local Records Centre	Protected species records and locally designated sites within 1km
Rochdale Borough Council	Land allocations and relevant policies
ArcMap10	Ordnance & Aerial survey mapping

Habitats and Flora

Habitat Survey

- 2.2 A habitat survey was originally carried out by Senior Ecologist Lizi Pimlott (ACIEEM, FISC Level 3) on 11th January 2019. The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC 2010¹) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2017²). The method records the habitat types present within and immediately surrounding the site, based on the JNCC descriptions. Plant species were identified in accordance with Stace (2010) and recorded as target notes using the DAFOR scale.
- 2.3 Following the provision of the revised red line site boundary an updated site walkover was undertaken on 8th January 2020 by Ecologist Cameron Campbell (FISC Level 3). A further survey to confirm that the results of previous assessments were still valid was undertaken by Principal Ecologist Ian Holland (ACIEEM, FISC 4) in May 2022.

¹ JNCC 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

² CIEEM 2017. Guidelines for Preliminary Ecological Appraisal.

Limitations

- 2.4 The optimal survey window for habitat surveys is April to early-October when most plant species are visible. Although the 2019 and 2020 surveys were undertaken outside the optimal season, the 2022 survey was completed during an appropriate time of year.

Fauna

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

Bats

Preliminary Roost Assessment for Bats

- 2.6 A ground-level inspection of all trees within the site, including those along the site boundaries, was undertaken to assess their potential to support roosting bats. The inspection was completed by Licensed Bat Ecologist Lizi Pimlott (Natural England Class 2 licence registration no. 2016-22843-CLS-CLS) concurrently with the 2019 habitat survey and updated as part of the 2022 habitat survey. Binoculars were used to search for any field signs of bats or features with bat roosting potential. This was undertaken in line with Bat Conservation Trust (BCT) guidance (Collins, 2016³).
- 2.7 In addition, the habitats within and surrounding the survey area were assessed for their potential to support foraging and commuting bats.
- 2.8 Following the daytime inspection trees and habitats were categorised based on the criteria listed within Table 2 below.

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

Suitability	Roosting habitats	Commuting/foraging habitats
Negligible	No potential roost features are present that are likely to be used by bats.	No features present that are likely to be used by commuting or foraging bats. A general lack of linear features and low habitat, structural or floristic diversity.
Low	A tree of sufficient size and age to contain potential roost features but none seen from the ground or features seen with only limited roosting potential.	Habitat that could be used by small numbers of commuting bats (e.g. a gappy hedgerow or an unvegetated stream) or foraging bats (e.g. a lone tree or small patch of scrub) but which is isolated from the surrounding countryside.

Suitability	Roosting habitats	Commuting/foraging habitats
Moderate	A tree with one or more potential roost features that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but which is unlikely to support a roost of high conservation status (maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for commuting (e.g. lines of trees or scrub or linked back gardens), or foraging bats (e.g. trees, scrub, water, grassland).
High	A tree possessing one or more potential roost features that are suitable for use by larger numbers of bats on a regular bases and potentially for longer periods of time, due to their size, shelter, protection, conditions and surrounding habitat.	Continuous high-quality habitat that is strongly connected with the wider landscape that is likely to be used regularly by commuting bats (e.g. river valley, vegetated stream, woodland edge, hedgerow with trees) or foraging bats (e.g. broad-leaved woodland, grazed parkland, tree-lined watercourses or ponds).

Limitations

- 2.9 There are no strict seasonal constraints for ground-level tree inspections, however visibility could be restricted by the presence of foliage and vegetation during the summer months. As the original inspection was undertaken over the winter no such constraints, nor any other significant limitations, were encountered.

Nocturnal Bat Activity Transect & Automated Static Detector Surveys

- 2.10 Nocturnal bat activity transects and automated static detector surveys were undertaken in 2019. The surveys were undertaken in accordance with the BCT Guidelines, and the full methodology is included in the technical report provided in Appendix C.

Birds

- 2.11 A breeding bird survey was carried out in 2019, applying methods based on the standard breeding bird survey and common bird census methods developed by the British Trust for Ornithology (BTO). The full methodology is included in the technical report provided in Appendix D.

Reptiles

- 2.12 Reptile surveys were undertaken using a combination of visual searches and the deployment of artificial refugia, in accordance with Natural England guidance. 204 artificial refugia comprising 0.5m² sheets of corrugated metal and roofing felt were placed in suitable habitats across the site. The refugia, when warmed by the sun, provide attractive basking habitat for reptiles.
- 2.13 The artificial refugia were initially put out on site on the 26th March 2019, allowing two weeks for them to bed in.
- 2.14 Surveyors checked refugia for basking reptiles and conducted a visual search of the site over seven survey visits; between the 12th April and 30th May 2019, as detailed in Table 3 below. Refugia were removed on the final visit.

Table 3: Reptile Survey Details

Date	Start	End	Temp	Cloud	Wind	Rain
12/04/19	08.30	11.00	10C	4	1	0
18/04/19	09.00	11.00	10C	1	1	0
26/04/19	08.00	09.30	10C	5	1	0
03/05/19	09.00	10.30	10C	5	1	Light rain prior to survey
16/05/19	08.30	10.00	10C	1	2	0
23/05/19	09.00	11.00	14C	4	1	0
30/05/19	08.00	09.30	14C	6	1	Shower prior to and post survey

Limitations

- 2.15 Six refugia went missing during the surveys and eight were found to be piled up and had to be redistributed during the second survey visit. This was not considered to be a significant constraint as full coverage of the site was still achieved. No other limitations were encountered.

3.0 Results

Desk Based Assessment

Planning Context

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

Relevant Planning Policies and Guidance

- 3.2 The site and adjacent land are not allocated for biodiversity-related purposes under the Rochdale Local Plan but is designated as protected open land and a greenspace corridor.
- 3.3 Several biodiversity-related planning policies are applicable to the site, as follows:
- Policy G6 Enhancing green infrastructure - by improving the biodiversity value of waterbodies and urban areas (Core Strategy);
 - Policy G7 Increasing the value of biodiversity and geodiversity - by recognising and protecting sites and features of biodiversity value and supporting opportunities for enhancement. No development should result in a net loss of biodiversity or geodiversity interest in the borough and overall development in the borough should result in a net gain (Core Strategy);
 - Policy NE/2 Designated Sites of Ecological and Geological/Geomorphological Importance (Unitary Development Plan) - any development proposals adversely affecting sites and areas of ecological and geological/geomorphological importance will not be permitted
 - Policy NE/3 Biodiversity and Development (Unitary Development Plan) - any development should seek to retain features of ecological value and incorporate them into the development. Where this would place an unreasonable constraint on the development, steps to provide compensatory features or habitats of an equivalent nature and value, commensurate with the scale and type of development permitted may be required; and
 - Policy NE/4 Protected Species (Unitary Development Plan) - development proposals which would affect a species protected by National or European law or its habitat, will not be permitted unless it can be demonstrated that there is no adverse impact on the species concerned, loss of, or damage to habitats supporting such species is minimal and, where required, adequate alternative habitats are provided to sustain at least the current levels of the population of the species and where a proposal affects a European Protected Species, it fulfils the appropriate criteria for development as set out in National and European legislation.

Designated Sites

- 3.4 There are three internationally designated wildlife sites within 10km of the site:
- Rochdale Canal Special Area of Conservation (SAC) - 0.6km west and designated for its aquatic plant assemblage;

- South Pennine Moors SAC - 7.1km northeast and designated for its European dry heath, blanket bog, and woodland habitats; and
 - South Pennine Moors Phase 2 Special Protection Area (SPA) - 7.1km northeast and designated for its breeding bird assemblage.
- 3.5 There is one nationally designated wildlife site within 2km of the site. Rochdale Canal Site of Special Scientific Interest (SSSI) is located 0.6km west and designated for its aquatic plant assemblage.
- 3.6 The site lies within the Impact Risk Zone (IRZ) for Rochdale Canal SSSI. Residential development of 100 units or more within the IRZ require the Local Planning Authority (LPA) to consult with Natural England regarding potential impacts on the SSSI.
- 3.7 There is one locally designated wildlife site within 1km of the site:
- Hopwood woodland local Nature Reserve (LNR) - 1.72km south and designated for its diverse aquatic flora including floating water plantain.
- 3.8 There are seven non-statutory locally designated wildlife sites within 2km. the closest to site is A627M by Tandle Hill located 30m east of site. This is designated for its diverse plant species.
- Notable Habitats
- 3.9 Parcels of deciduous broad-leaved woodland adjacent to the south site boundary. This is designated as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- Notable Flora and Fauna
- 3.10 A number of species spread over a 1km search radius were identified through the data from Greater Manchester Local Records Centre. Species include those listed under any of the following:
- European Protected Species (EPS);
 - Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
 - Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
 - Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
 - Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
 - Species of principal importance under Section 41 of the NERC Act 2006 (S41); and
 - Red and Amber listed Birds of Conservation Concern (BRd/BAm);
 - Local Biodiversity Action Plan Species (LBAP).
- 3.11 These records are detailed in the relevant species sections below.

Habitats and Flora

Phase 1 Habitat Survey

- 3.12 Results of the Phase 1 habitat survey are provided below with detailed Target Notes (TN) presented in Appendix B and displayed on the Phase 1 Habitat Map within the Drawings Appendix (G8666.007).
- 3.13 The habitats of ecological value present within the site appear to be largely unchanged since the 2016 and 2019 surveys. These are listed below, and brief descriptions of these habitats are also given:
- Poor semi-improved grassland;
 - Marsh/marshy grassland;
 - Modified neutral grassland;
 - Dense/continuous and scattered scrub;
 - Continuous bracken;
 - Tall ruderal vegetation;
 - Hedgerows;
 - Semi-natural broad-leaved woodland;
 - Bare ground;
 - Scattered broad-leaved trees; and
 - Hardstanding
- 3.14 The following habitats, which lie adjacent to the site, are also discussed below;
- Plantation broad-leaved woodland;
 - Standing water; and
 - Running water.

Poor Semi-improved Grassland

- 3.15 An expanse of unmanaged poor semi-improved grassland covers the north of the site (TN1, Figure 2). This area was relatively damp and moss species were prevalent. Sward length was approximately 30cm tall and the assemblage of plants present indicate that soil pH is neutral, bordering on acidic. Grass species visible during the survey included abundant common bent *Agrostis capillaris* and Yorkshire fog *Holcus lanatus* as well as frequent red fescue *Festuca rubra* and cock's-foot *Dactylis glomerata*. Similar areas of grassland area also present along the proposed access road in the north of the site (TN16, TN18 and TN21).



Figure 2: Semi-improved grassland in the north of the site (looking south)

- 3.16 Much of the site is formed of sheep grazed poor semi-improved grassland (TN2, Figure 3). Sward length was approximately 20cm tall and red fescue and Yorkshire fog were dominant. Herbaceous species were more visible including abundant greater plantain *Plantago major*, ribwort plantain *Plantago lanceolata* and creeping buttercup *Ranunculus repens* as well as frequent common ragwort *Jacobaea vulgaris*.



Figure 3: Poor semi-improved grassland in the southwest of the site (looking north)

Marsh/Marshy Grassland

- 3.17 Patches of marshy grassland are present throughout the semi-improved grassland areas (TN3, Figure 4). Soft rush *Juncus effusus* was abundant. Marshy grassland is an LBAP priority habitat.



Figure 4: Marshy grassland in the southeast of the site (looking east)

Modified Neutral Grassland

- 3.18 Modified neutral grassland is present along the proposed access track to the northwest of the site (TN14).

Dense/Continuous and Scattered Scrub

- 3.19 Large thickets of European gorse *Ulex europaeus* are present in the northern part of the site (TN4, Figure 5). Areas of dense scrub are also present along the proposed access track to the northwest of the site (TN15 and TN19).
- 3.20 Scattered scrub included willow *Salix sp*, downy birch *Betula pubescens* and ash *Fraxinus excelsior* saplings.



Figure 5: Dense scrub in the north of the site (looking north)

Continuous Bracken

- 3.21 A relatively small area of dense bracken *Pteridium aquilinum* is present in the southeast part of the site (TN5). Scattered bracken is also present on site, generally associated with the base of hedgerow and tree lines.

Tall Ruderal Vegetation

- 3.22 Two small parcels of tall ruderal vegetation are present in the south of the site with frequent willowherb *Epilobium* sp. (TN6, Figure 6). Another area of tall ruderal vegetation is present along the proposed access road to the northwest of the site (TN20) and a large area lies in the southeast at TN22.



Figure 6: Tall ruderal vegetation in the southwest part of the site (looking south)

Hedgerows

- 3.23 Seven hedgerows are present in the site as follows (target notes and photographs shown in Appendix B of this report). Hedgerows are a LBAP priority habitat and S41 habitat of principal importance (HPI):
- Hedgerow H1 - native intact species-poor hedgerow along west site boundary, dominated by hawthorn *Crataegus monogyna*;
 - Hedgerow H2 - defunct species-poor hedgerow in the north of the site, dominated by hawthorn;
 - Hedgerow H3 - defunct species-poor hedgerow in the southeast of the site, dominated by hawthorn;
 - Hedgerow H4 - defunct species-poor hedgerow in the southeast of the site, dominated by hawthorn;
 - Hedgerow H5 - defunct native species-poor hedgerow with trees in the centre-south of the site, dominated by hawthorn with occasional English oak *Quercus robur*;
 - Hedgerow H6 - an intact species poor hedgerow dominated by hawthorn.;
 - Hedgerow H7 - a species poor hedge and trees which is dominated by hawthorn with rare English oak.

- 3.24 Hedge H4 contained native bluebell *Hyacinthoides non scripta* within the base of the hedgerow.

Bare Ground

- 3.25 A small area of bare ground covered in gravel is present in the northwest of the site (TN7, Figure 7) as well as a man-made excavation adjacent to the north part of the proposed access road (TN17).



Figure 7: Bare ground in northwest of the site (looking east)

Scattered Broad-leaved Trees

- 3.26 Scattered broad-leaved trees are present adjacent to the proposed access track in the north of the site. Species include young oak *Quercus sp.*, and willow *Salix sp.* Two lines of trees are present in the centre of site dominated by silver birch and English oak.

Hardstanding

- 3.27 The proposed access road to the north of the site comprises a single hardstanding track (TN13).

Plantation Broad-leaved Woodland

- 3.28 A small band of plantation broad-leaved woodland is present adjacent to the northwest site boundary, screening the site from the A627(M). The trees in this woodland are relatively young and include ash, oak, and hawthorn (TN8, Figure 8).



Figure 8: Plantation woodland adjacent to northeast site boundary

Semi-natural Broad-leaved Woodland

- 3.29 Semi-natural broad-leaved woodland is present along the southern site boundary and includes mature trees such as beech *Fagus sylvatica*, sycamore *Acer pseudoplatanus*, oak and willow (TN9, TN26, Figure 9).



Figure 9: Semi-natural broad-leaved woodland adjacent to south site boundary

Standing Water

- 3.30 There are several fishing pools to the south of the site (TN10, Figure 10). One of these pools has been drained (TN11). Ponds are an LBAP priority habitat and may also qualify as a HPI under S41.



Figure 10: Fishing pools adjacent to south site boundary

Running Water

- 3.31 A small stream, flowing east to west, connects the fishing pools to the south of the site (TN12, Figure 11).



Figure 11: Stream connecting the fishing pools to the south of the site

Invasive and Protected Plant Species

- 3.32 There are records of floating water-plantain *Luronium natans* (WCA8) within 1km of the site, associated with Rochdale Canal, most recently from 2011.
- 3.33 Native bluebell (WCA8) was identified at the southern woodland boundary, scattered across TN2, in the base of Hedgerow H4, in tall ruderal vegetation at TN6, associated with woodland at TN9 and in an area of dense scrub located at TN27.

- 3.34 The non-native invasive species Himalayan balsam and Japanese knotweed *Fallopia japonica* where both noted on site as shown in the Phase 1 habitat map (Ref: 8666.007). Himalayan balsam is spread across the site whilst Japanese knotweed is limited to a single stand along the proposed access road in the north of site.

Connectivity with the Wider Landscape

- 3.35 The site is isolated by major roads and urban development. The A627(M) lies to the east, the M62 to the south, residential development off Leander Drive to the west and industrial development to the north. However, there may be some connectivity between a nearby watercourse, which links the fishing pools to the south of the site, and the Rochdale Canal. In addition, there are some parcels of land to the north of Cripple Gate Lane (along the north site boundary) which could support local wildlife.

Fauna

Amphibians

- 3.36 Three records for great crested newt *triturus cristatus* (GCN) where identified 1km southwest of site, beyond the M62.
- 3.37 Six fishing pools fall adjacent to the south of the site which are described in the Habitats section above. These are the only waterbodies within 500m with habitat connectivity to the site. As these are heavily stocked with fish and subject to major disturbance by waterfowl these are evaluated as unsuitable for breeding GCN, but suitable for more common amphibians including common toad *Bufo bufo*.
- 3.38 The mosaic of grassland, woodland and scrub habitats provide a range of opportunities for amphibians to forage, shelter and disperse. Common frog *Rana temporaria* and common toad were found in small numbers during the reptile surveys.

Badger

- 3.39 Records of badger *Meles meles* (PBA) signs along the south embankment of the M62 were returned in the data search.
- 3.40 Mammal paths and areas of digging were noted within the site. A cluster of holes was identified as a fox earth within the previous ecology report. No conclusive evidence of badger was noted in this area or elsewhere within the site.
- 3.41 The mosaic of grassland, woodland and scrub habitats provide opportunities for badgers to forage and for sett excavation.

Bats

- 3.42 Common pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5), soprano pipistrelle *Pipistrellus pygmaeus* (EPS, WCA5, S41), Daubenton's bat *Myotis daubentonii* (EPS, WCA5, S41) and noctule bat *Nyctalus noctula* are amongst the bat species recorded within 1km of the site. Nine pipistrelle roosts have been recorded within 1km, the most recent being 2016. The closest of these records are for common and soprano pipistrelle roosts which were identified in properties along Leander Drive adjacent to the west site boundary in 1999 and 2001.

Preliminary Bat Roost Assessment

- 3.43 Three English oak were noted to have the potential to support roosting bats. One of the trees is located within hedgerow H5 and although no potential roost features were identified it is of an age and size where features could be present but not visible from ground-level. The second tree is in hedgerow H4 and contains a north facing branch cavity approximately 2.5m from the ground. This cavity was upward-facing and relatively open but could support low numbers of bats during periods of good weather. The third tree is within an area of scrub to the northwest of the proposed access track with a small number of small cavities in the trunk which are shallow in depth and could support low numbers of bats during periods of good weather.
- 3.44 Two sycamores were also identified in the southwest corner of site with low potential to support a small number of roosting bats. One tree contained several dead branches at approximately 4m (Figure 12) which, although no obvious holes or crevices could be seen, was indicative that obscured features may be present further up the canopy. A large rot hole approximately 1m in length was present on the second sycamore (Figure 13). This did not appear to lead to a cavity, but it is possible that a small crevice may be present associated with this feature which could be used by roosting bats.
- 3.45 All these trees were classified as Low bat roost suitability.



Figure 12 - sycamore with dead canopy branches



Figure 13

- 3.46 The woodland areas outside the site boundary, within the wider area, were not subject to the ground-level tree inspection. The plantation woodland adjacent to the northeast corner of the site comprises young and semi-mature spindly trees which are considered unlikely to contain potential roost features. The semi-natural woodland to the south has numerous large mature trees and is more likely to contain potential roost features.
- 3.47 The mosaic of grassland, woodland and scrub habitats and the fishing lakes could provide foraging opportunities for local bat populations but commuting and dispersal routes are restricted by surrounding urban barriers. The site was therefore classified as Low suitability for foraging bats.

Nocturnal Bat Activity Transect & Automated Static Detector Surveys

- 3.48 The site was found to have county-level importance for foraging and commuting pipistrelle bats and local-level importance for both *Myotis* and noctule for foraging and commuting. Full results of the bat activity surveys are included in Appendix C.

Birds

- 3.49 The following bird records of conservation concern have been returned within 2km of the site in the data search, between 1996 and 2017:
- Barn owl *Tyto alba* (WCA1)
 - Hobby Falco *Subbuteo* (WCA1)
 - Kingfisher *Alcedo atthis* (WCA1)
 - Little Ringed Plover *Charadrius dubius* (WCA1)
 - Peregrine Falco *peregrinus* (WCA1)
 - Bullfinch *Pyrrhula pyrrhula* (S41, BAm);
 - Cuckoo *Cuculus canorus* (S41, BRd);
 - Curlew *Numenius arquata* (S41, BRd);
 - Dunnock *Prunella modularis* (BAm);
 - Herring gull *Larus argentatus* (S41, BRd);
 - House sparrow *Passer domesticus* (S41, BRd);
 - Lapwing *Vanellus vanellus* (S41, BRd);
 - Lesser redpoll *Acanthis cabaret* (S41, BRd);
 - Linnet *Carduelis cannabina* (S41, BRd);
 - Reed bunting *Emberiza schoeniclus* (S41, BAm);
 - Skylark *Alauda arvensis* (S41, BRd);
 - Song thrush *Turdus philomelos* (S41, BRd);
 - Starling *Sturnus vulgaris* (S41, BRd);
 - Tree sparrow *Passer montanus* (S41, BRd) and
 - Willow tit *Poecile montanus* (S41, BRd).
- 3.50 The mosaic of grassland, woodland, tall ruderal and scrub habitats could provide breeding and foraging opportunities for a variety of common bird species. The stable block on Trows Farm, located outside the site boundary, was observed to support nesting swallows.

Breeding Bird Survey

- 3.51 Full results of the breeding bird surveys are included in the breeding bird survey technical report provided in Appendix D.
- 3.52 A total of 45 bird species were recorded within the site boundary and 100m buffer during the breeding bird survey: 30 species in visit one, 29 species in visit two and 39 species in visit three. Forty-three bird species were recorded within the site itself.
- 3.53 Ten bird species were confirmed to be breeding within the site boundary and 100m buffer. None of the species confirmed to be breeding within the site are notable species.
- 3.54 Fourteen other probable breeding species were recorded within the site and 100m buffer during the breeding bird survey. Of the probable breeding species recorded during the survey, bullfinch, dunnock, house sparrow, reed bunting, song thrush, starling and willow warbler are notable.

Brown Hare

- 3.55 Records of brown hare *Lepus europaeus* (S41) have been returned within 1km of the site, to the south of the M62, most recently from 2014.
- 3.56 The grassland on the site could provide opportunities for this species to create forms and to forage.

Hedgehog

- 3.57 Twenty-nine records of hedgehog *Erinaceus europaeus* (S41) has been returned within 1km of the site, to the east of the A627(M), in 2013.
- 3.58 The mosaic of grassland, tall ruderal, scrub, and woodland habitats could provide opportunities for this species to forage and shelter.

Invertebrates

- 3.59 Records of four S41 moth species were returned within 2km of the site
- 3.60 The mosaic of habitats has the potential to support a range of invertebrate species.

Otter

- 3.61 One record of otter *Lutra lutra* (EPS, WCA5, S41) was returned in the desk-based assessment, associated with Rochdale Canal, in 2014.
- 3.62 The fishing lakes and the stream which connects them to the south of the site could provide foraging habitat for otter and the adjacent woodland could provide opportunities for holt-creation. OS imagery suggests that these waterbodies may be linked to Rochdale Canal. No incidental evidence of otter was noted during the site visits.

Reptiles

- 3.63 Both grass snake *Natrix helvetica* (WAC5) and slow worm *Anguis fragilis* (WAC5) have been recorded within 2km of the site.

3.64 Reptiles typically favour a mosaic of habitats which provide opportunities for foraging, shelter, and basking. The grassland, woodland and scrub habitats could provide opportunities for foraging and shelter for common reptile species.

3.65 No reptiles were found on the site during the presence/absence surveys.

Water Vole

3.66 There is one record of water vole *Arvicola amphibius* within 1km of the site.

3.67 The fishing lakes and the stream which connects them to the south of the site could provide foraging opportunities for water vole. However, the banks of the lakes and stream have a very shallow gradient and do not provide burrowing opportunities. Rochdale Canal, which connects to the stream, has concrete-reinforced banks which make the watercourse unsuitable for water voles.

White-clawed Crayfish

3.68 One record of white-clawed crayfish *Austropotamobius pallipes* (EPS, WCA5, S41) was returned within 1km of the site, associated with Rochdale Canal, from 2011.

3.69 The fishing lakes and the stream which connects them to the south of the site could support white-clawed crayfish and OS imagery suggests that these waterbodies may be linked to Rochdale Canal. However, suitability is limited due to the lack of pebbly substrate in the waterbodies which white-clawed crayfish favour for shelter.

4.0 Conclusion

- 4.1 This section concludes the potential impacts on the ecological receptors in and around the application site from the proposed residential development.

Planning Context

- 4.2 Under the National Planning Policy Framework 2021 (NPPF), consideration should be given to biodiversity net gain within developments. Further assessment will be required to determine the impact on biodiversity once the planning proposals and landscaping scheme are finalised.
- 4.3 If the recommendations outlined within Chapter 5 of this document are implemented and biodiversity enhancements are incorporated into the scheme it is anticipated that the requirements of the biodiversity-related local planning policies will be met.

Designated Sites

- 4.4 There are no implications regarding designated sites and the site proposals. There are three internationally designated wildlife sites within 10km, one nationally designated wildlife site within 2km and two locally designated wildlife sites within 1km of the site.
- 4.5 The closest of these is A627M by Tandle Hill SBI which is 30m to the east of the site. This site is located beyond the A627M which forms a barrier to migration of terrestrial species. A footpath intersects the site, but this is a well maintained hardstanding footpath which can cater for increased visitor pressures. Therefore, no impacts are anticipated from the site proposals.
- 4.6 The site lies within the Natural England (NE) Impact Risk Zone (IRZ) for Rochdale Canal SSSI. Residential development of 100 units or more within the IRZ require the LPA to consult with Natural England regarding potential impacts on the SSSI. However, impacts are not anticipated to be significant as the SSSI lies beyond urban development barriers and has well established footpaths adjacent which are sufficiently managed to minimise disturbance relating to increased visitor pressure.
- 4.7 The remaining designations are all located over 0.55km from the site and lie beyond urban development barriers. Therefore, no direct impacts are anticipated from the proposals.

Habitats & Flora

- 4.8 The semi-improved grassland habitats on the site have been subject to low intensity grazing and the plant species identified are common and widespread with no locally rare species noted. Therefore, it is not envisaged that these habitats would qualify as important under the National Vegetation Classification (NVC).
- 4.9 The amenity grassland, modified neutral grassland, scrub, bracken and tall ruderal habitats within the site itself are ubiquitous and have relatively low ecological value. The hardstanding and bare ground have no ecological value.

- 4.10 Marshy grassland and hedgerows on the site are listed as priority habitat under LBAP and S41 respectively. Both of these habitats are species-poor, and the hedgerows are largely defunct; however, consideration should be given in relation to the loss of these habitats and the proposals.
- 4.11 Hedgerow H4 is considered important under the Hedgerow Regulations 1997 due to the presence of native bluebell.
- 4.12 The woodland and waterbodies adjacent to the site and the scattered trees on the site have higher ecological value and therefore there are implications in relation to these habitats and the proposals.

Invasive and Protected Plant Species

- 4.13 There are implications regarding non-native invasive species and the site proposals. Site clearance could result in the spread of Himalayan balsam and Japanese knotweed into the surrounding landscape. Both species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and it is therefore an offence to cause the spread of these species in the wild.
- 4.14 Native bluebells were noted across the site, and consideration should be given with regard to development and the loss of this species.

Fauna

Amphibians

- 4.15 There are no implications with regard to GCN and the site proposals. No suitable GCN breeding habitat is present on the site nor in the surrounding 500m which is the accepted ranging distance for this species. The pools adjacent to the south site boundary are heavily stocked with fish which would predate on GCN eggs and young. Although GCN are considered unlikely to be present on site the ponds may support breeding common toad, a Section 41 species. There is suitable terrestrial habitat on the site to support common toad and therefore there is potential for impact on this species from development.

Badger

- 4.16 There are no implications regarding badgers and the site proposals. Although the grassland, scrub and woodland habitats on and adjacent to the site do provide opportunities for this species the site is isolated from the surrounding landscape, and it is not anticipated that badgers would be able to access the site from the south or east without significant risk of mortality from traffic conclusions. The land to the north and west of the site are heavily urbanised and high levels of disturbance are likely to deter badgers from these areas. Badgers have a large ranging distance, and it is unlikely that the site could support a badger population in isolation. No significant impact is expected for badgers.

Bats

- 4.17 There are implications if the three trees with low bat roost suitability require removal or pruning as part of the development scheme.

- 4.18 All bat species and their roosts are legally protected in the UK. All bats are listed as European protected species of animals in Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the Habitats Directive. There is also protection for bats and roosts in England and Wales under the Wildlife & Countryside Act 1981 (as amended).
- 4.19 Although the site was found to have county-level importance for foraging and commuting pipistrelle bats and local-level importance for both *Myotis* and noctule for foraging and commuting, there were no features of importance on the site itself for these species. The woodland and waterbodies to the south of the site is where most of the bat activity was recorded. No direct impacts to these areas are anticipated, however there are implications regarding light spill from the adjacent development as well as pollution and siltation which could lower the quality of these habitats and subsequently their suitability for bats.

Birds

- 4.20 The 45 bird species recorded within the site boundary and 100m survey buffer represents a moderate species diversity with most species recorded being commonplace and widespread. The 38 confirmed, probable, and possible breeding bird species recorded within the site and surrounding 100m buffer indicates that it is of local significance for breeding birds. The survey results indicate that the greatest value of the site for breeding birds are the trees, tall ruderal, scrub, and hedgerows around the site perimeter and along field boundaries within the site.
- 4.21 All wild birds and their nests and eggs are protected under the Wildlife and Countryside Act 1981, as amended.
- 4.22 The removal of this vegetation could result in the destruction of active bird nests and other construction activities within proximity of retained habitats could result in the disturbance of nesting birds. Therefore, there are implications for nesting birds as a result of the proposed development.

Brown Hare

- 4.23 There are no implications regarding brown hare and the site proposals. Although the grassland on the site does provide opportunities for this species the site is isolated from the surrounding landscape, and it is not anticipated that brown hare would be able to access the site from the south and east without significant risk of mortality from traffic conclusions. The land to the north and west of the site are heavily urbanised and high levels of disturbance are likely to deter brown hare from these areas. Brown hare have a large ranging distance and it is unlikely that the site could support a hare population in isolation. No significant impact is expected for brown hare.

Hedgehogs

- 4.24 There are no implications regarding hedgehogs and the site proposals. Although the grassland, woodland and scrub on and adjacent to the site do provide opportunities for this species the site is isolated from the surrounding landscape, and it is not anticipated that hedgehogs would be able to access the site from the south or east without significant risk of mortality from traffic conclusions. The land to the north and west of the site are heavily urbanised and high levels of disturbance are likely to deter hedgehogs from these areas. Hedgehogs have a large ranging distance, and it is unlikely that the site could support a hedgehog population in isolation. No significant impact is expected for hedgehogs.

Invertebrates

- 4.25 There are no implications regarding invertebrates and the site proposals. The mosaic of habitats has the potential to support a range of invertebrate species, however the plant diversity is low and therefore the invertebrate community at the site is unlikely to be of high conservation significance and have been discounted for further evaluation within this report.

Otter

- 4.26 There are no implications regarding otter and the site proposals. There is low potential for otter to be present in the fishing pools which connect to the nearby Rochdale Canal. The fishing pools and adjacent woodland will not be directly impacted by the proposals., therefore otter will not be taken forward within this report

Reptiles

- 4.27 No reptiles were recorded on the site during the presence/absence surveys and therefore it can be concluded that reptiles are likely to be absent from the site. There are no implications regarding reptiles and the proposals and will not be taken forward within this report.

Water Voles

- 4.28 There are no implications regarding water vole and the site proposals. There is a low potential for water vole to be present in the fishing pools which connect to the nearby Rochdale Canal and possibly within the marshy grassland on the site. However, the lack of burrowing opportunities and habitat connectivity limits the suitability of the site. The fishing pools will not be directly impacted by the proposals.

White-clawed Crayfish

- 4.29 There are no implications regarding white-clawed crayfish and the site proposals. The fishing pools and connecting stream have limited suitability for this species due to the absence of pebbly substrate and no recommendations regarding impacts to white-clawed crayfish are given within this report.

5.0 Recommendations

- 5.1 As the site proposals had not been finalised at the time of writing this report, this section only provides general recommendations to avoid or, where this is not possible, mitigate for any adverse impact on wildlife in relation to the development of the site. Opportunities for appropriate enhancement are also set out.

Habitats and Flora

Biodiversity Net Gain

- 5.2 To minimise the loss of biodiversity, ecologically valuable habitats within the site, including the marshy grassland and hedgerows, should be retained, protected, and enhanced where possible under a management plan. Where these habitats are to be lost replacement planting should be provided within the scheme.
- 5.3 TEP are in the process of undertaking a detailed BNG assessment for this site which will be provided as a separate report.

Pollution and Siltation Prevention Measures

- 5.4 Best practice pollution and siltation prevention measures should be incorporated into the Construction Environmental Management Plan (CEMP) to minimise impacts to retained habitats and the fishing pools to the south of the site.

Tree Protection Measures

- 5.5 All retained trees on and adjacent to the site will be protected from incidental damage and disturbance during construction in accordance with current standards (BS5837:2012 Trees in relation to design, demolition, and construction – recommendations).
- 5.6 A 10m vegetation buffer should be incorporated along the edge of the woodland adjacent to the southern and north west boundaries of the site to protect and enhance these areas. Where this is not possible development should be undertaken in line with advice provided in the Arboricultural report to prevent impacts on adjacent trees/woodland.
- 5.7 Hedgerow H4 is considered important under the Hedgerow Regulations 1997 and should be retained where possible.

Invasive and Protected Plant Species

- 5.8 An invasive species management plan will be required detailing appropriate removal, disposal, and control methods with regards to the Japanese knotweed and Himalayan balsam on site.
- 5.9 Native bluebells are scattered across the site and a small number are likely to be lost during the development. Consideration should be given in the form of replacement planting of locally sourced native bluebell bulbs.

Fauna

Bats

- 5.10 A sensitive lighting design will be implemented for the scheme to avoid indirect impacts of lighting on nocturnal and crepuscular species during construction and post-construction. This will apply to retained and newly created habitats on the site as well as adjacent woodland, water bodies and wildlife corridors. There are four key lighting design principles:
- Use of unnecessary lighting will be avoided;
 - Spatial spread of lighting – the horizontal and vertical spread of artificial light will be minimised and take into account both primary and reflected light sources. Directional lighting can be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these;
 - Timing and duration of lighting – timers and bespoke dimming regimes may be used to ensure that luminaires are reduced at times of predicted low use. These can be set to change with the seasons and therefore reflect the shifting time of dusk and dawn throughout the year. Motion sensors provide further control to ensure that areas are illuminated only when required;
 - Intensity and colour of lighting – light intensity will be as low as possible whilst meeting the objectives of the intended function. The colour of lighting will need to take into account the sensitivity of the ecological receptors on site. Light sources selected should emit zero ultra-violet light wherever possible. Interim guidance from the Bat Conservation Trust (2014) recommends that white and blue spectrum light should be avoided or, where white lights are required, these should be of warm/neutral colour and have a peak wavelength above 550 nanometers. Narrow spectrum light sources should be used (to lower the range of species affected by lighting).

Birds

- 5.11 The trees, tall ruderal, scrub, and hedgerows around the site perimeter and along field boundaries within the site should be retained and enhanced where possible to maintain nesting opportunities for birds within the site. If trees are to be removed, they should be replaced using a range of native species to create a varied vegetation structure to suit a wide range of breeding bird species.
- 5.12 A nest box scheme including a variety of nest box types should be undertaken as part of the development, including small nest boxes with holes for bird species including house sparrow, great tit and blue tit. Open fronted nest boxes suitable for robin, large nest boxes with holes suitable for starling and large nest boxes suitable for jackdaw would provide additional nesting sites.

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

Opportunities for Biodiversity Enhancement

- 5.14 To comply with the NPPF and local policies, several opportunities for further habitat enhancements which will benefit biodiversity are identified below.
- 5.15 Enhancement in the form of additional bat and bird boxes and bug hotels (specification to be confirmed in order to incorporate into the new building design) should be considered. These should be sited at an appropriate height and aspect, close to the suitable habitat such as public green space or woodland adjacent to the site.
- 5.16 In newly created planting areas locally native plant species should be used where possible which will provide foraging opportunities for local wildlife.
- 5.17 For new grassland planting wildflower seed mixes, 70% wildflower suitable to the soil type at the site, could be used which would be favourable to invertebrates such as bees and butterflies.
- 5.18 Proposed attenuation areas could be enhanced to retain water and to include native planting.

APPENDIX A: Desk Based Assessment



THE
ENVIRONMENT
PARTNERSHIP



COWM TOP ROCHDALE ECOLOGY DESK STUDY

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APPENDICES

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

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

1.0 Introduction

- 1.1 The Environment Partnership (TEP) were commissioned, by GLP in February 2021, to complete an ecology desk-based assessment of land known as Cowm Top, located in Rochdale (hereafter referred to as 'the site').
- 1.2 The central grid reference of the site is SD 89126 10375 and the location of the site is shown in Figure 1 below.

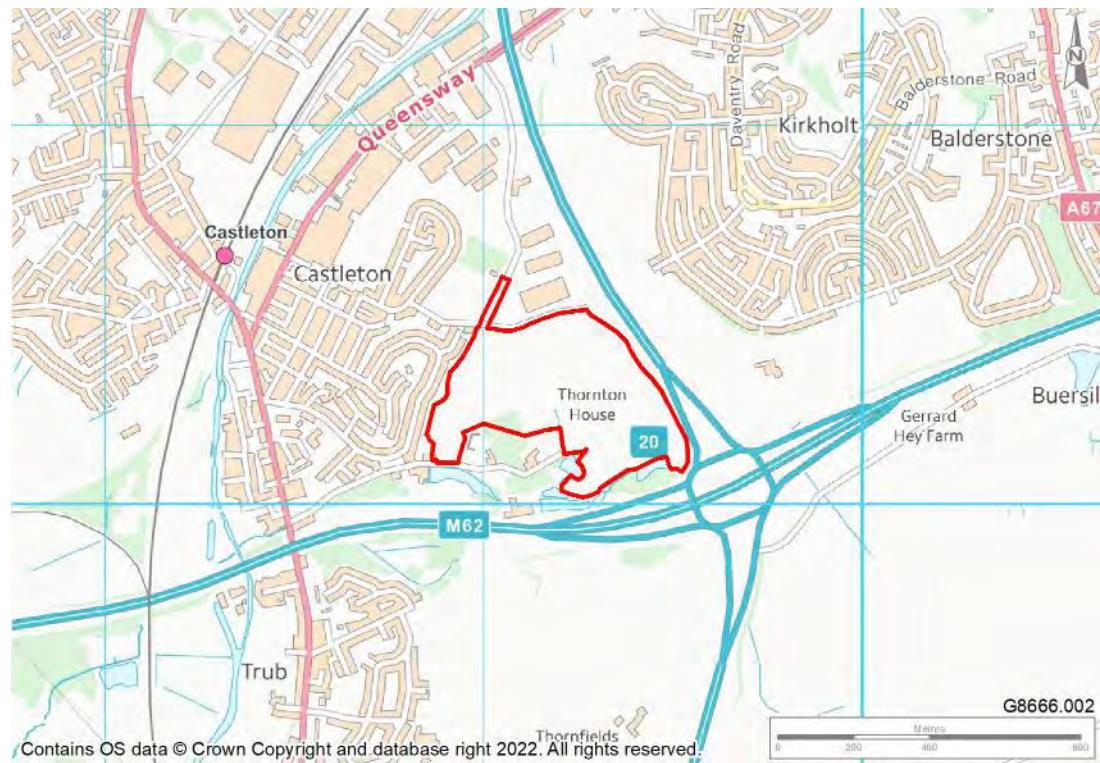


Figure 1: Site Location Plan

2.0 Method

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

Table 1: Sources of Ecological Information

Source of Information	Nature of Information
Magic Map	Statutory designated wildlife sites of international importance within 10km Statutory designated wildlife sites of national importance within 5km Statutory designated wildlife sites of local importance within 2km Natural England licences within 2km of the site Habitats of value to biodiversity within and adjacent to the site Great crested newt survey pond records 2017 - 2019 within 2km of the site
Greater Manchester Ecology Unit (GMEU)	Protected species records within 2km Non-statutory designated wildlife sites of local importance within 2km
Rochdale Council	Land allocations and relevant policies
ArcMap10	Ordnance & Aerial survey mapping

2.2 Statutory designated wildlife sites of international importance may include:

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

2.3 Statutory designated wildlife sites of national importance may include:

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

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

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

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

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

- Ancient woodland;
- Main rivers¹;
- Habitats of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (S41); and
- Local Biodiversity Action Plan Habitats (LBAP).

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

- European Protected Species (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (S41);
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

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

3.0 Legislation and Planning Policy

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

International Planning Policy

Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Protected Species

- 3.2 European Protected Species (EPS) and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 which makes it illegal to:
- Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs;
 - Deliberately disturb such an animal; and
 - Damage or destroy a breeding site or resting place of such an animal.
- 3.3 European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely:
- The development is for reasons of overriding public interest;
 - There is no satisfactory alternative; and
 - The favourable conservation status of the species concerned will be maintained and/or enhanced.
- 3.4 Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a duty to 'have regard to the requirements of the EC Habitats Directive' i.e. LPA's must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.

Protected Sites

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

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

National Planning Policy

National Planning Policy Framework 2021

- 3.7 The National Planning Policy Framework (NPPF21) sets out the Government's planning policies for England and how these are expected to be applied at a local level in development plans and how developers should address them. The Framework places great emphasis on plans and developments contributing to sustainable development.
- 3.8 The NPPF21 states:
- 3.9 When determining planning applications, local planning authorities should apply the following principles:
- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
 - development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and;
 - development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
- 3.10 The following should be given the same protection as habitats sites:
- potential Special Protection Areas and possible Special Areas of Conservation;
 - listed or proposed Ramsar sites; and

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

Wildlife and Countryside Act 1981

- 3.11 Animal species listed under Schedule 5 of the Wildlife and Countryside Act 1981 (and as amended) receive full protection which makes it illegal (subject to certain exceptions) to:
- Intentionally kill, injure or take any such animal;
 - Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and
 - Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
- 3.12 Some species receive partial protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which provide protection against intentional killing or injury of any such animal.
- 3.13 All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to exceptions) to:
- Intentionally kill, injure or take any wild bird;
 - Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
- 3.14 Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (and as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to:
- Intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.
- 3.15 Plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 (and as amended) are protected from unauthorised intentional picking, uprooting and destruction.

Natural Environment and Rural Communities (NERC) Act 2006

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

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

Protection of Badgers Act 1992

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

Local Planning Policy

Rochdale Core Strategy (adopted 19th October 2016)

- 3.19 The Core Strategy sets out how we will plan the future development in Rochdale borough. It guides new developments to appropriate locations while protecting our natural environment and built heritage.
- 3.20 The Core Strategy document can be viewed by following the link: <http://www.rochdale.gov.uk/pdf/2018-04-05-rochdale-core-strategy-v1.pdf>
- 3.21 The following policies relate to biodiversity and nature conservation:
- Policy G6 Enhancing Green infrastructure
 - Policy G7 Increasing the Value of Biodiversity and Geodiversity

Rochdale Unitary Development Plan (adopted June 2006)

- 3.22 The Unitary Development Plan (UDP) from our 1996-2016 Local Plan is still in place until the Allocations Development Plan is adopted.
- 3.23 The interactive policies map for the UDP can be viewed by following the link: <http://www.cartogold.co.uk/rochdale/rochdale.htm>
- 3.24 The site and adjacent land is allocated as protected open land and greenspace corridor.
- 3.25 The UDP document can be viewed by following the link: http://www.rochdale.gov.uk/pdf/2012-11-02_udp_adopted_written_statement_june_2006_v2.pdf
- 3.26 The following policies relate to biodiversity and nature conservation:
- Policy NE/2 Designated Sites of Ecological and Geological/Geomorphical Importance
 - Policy NE/3 Biodiversity and Development
 - Policy NE/4 Protected Species

Supplementary Planning Documents

- 3.27 A Supplementary Planning Document (SPD) for Biodiversity and Development can be viewed by following this link: <http://www.rochdale.gov.uk/pdf/2017-02-21-biodiversity-development-spd-updated-v2.pdf>

Local Biodiversity Action Plans (LBAP)

- 3.28 The LBAP document for Greater Manchester can be viewed by following the link: https://www.gmwildlife.org.uk/projects/gm_lbap/

- 3.29 The following habitats are identified within LBAPs for Greater Manchester:

- Grasslands;
- Unimproved neutral grassland;
- Acid grassland;
- Marshy grassland; and
- Grassland of high ecological value on previously developed land.
- Hedgerows;
- Lowland mosslands;
- Reedbeds & bittern;
- Ponds and lodges;
- Canals;
- Native woodlands;
- Uplands; and
- Urban managed greenspace.

- 3.30 The following species are identified within LBAPs for Greater Manchester:

- Bats;
- Black redstart;
- Farmland birds;
- Great crested newts;
- Hares;
- Native black poplar;
- Twite;
- Water vole; and
- Willow tit.

4.0 Site Designations

Statutory Designated Wildlife Sites of International Importance

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

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

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Rochdale Canal	SAC	0.6km west	Designated for supporting a large diversity of aquatic plant species.
South Pennine Moors	SAC	7.1km north east	The site supports European dry heath, transition mires and quaking bog as well as woodland habitats.
South Pennine Moors Phase 2	SPA	7.1km north east	Designated for supporting a varied breeding bird assemblage.

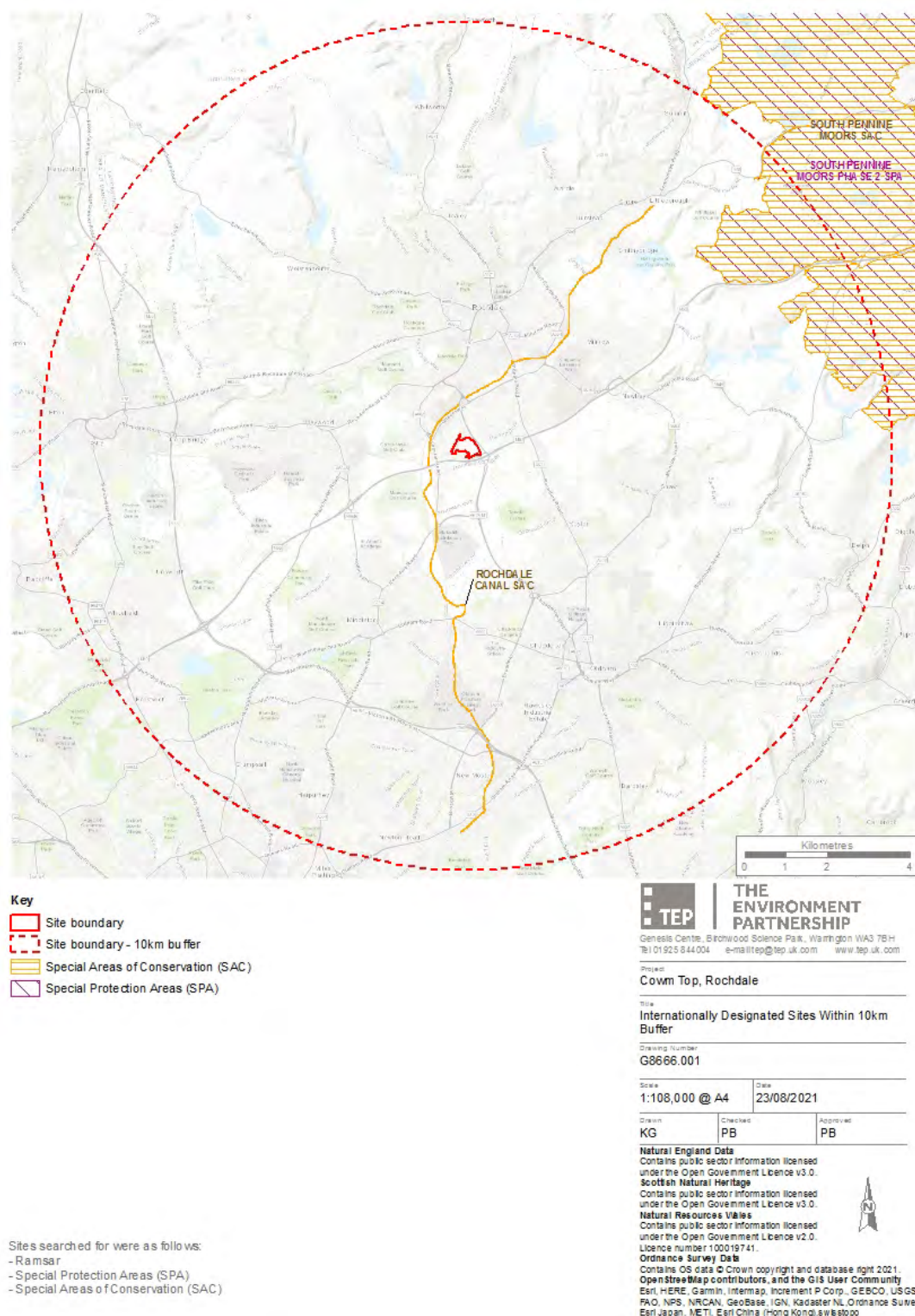


Figure 2: Internationally Designated Wildlife Sites within 10km of the Site

Statutory Designated Wildlife Sites of National Importance

- 4.2 There is one nationally designated sites within 5km of the sites boundary (Figure 3). These are detailed in Table 3 below. Citations are provided in Appendix B.

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

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Rochdale Canal	SSSI	0.6km west	The site contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce SAC species floating water plantain <i>Luronium natans</i>

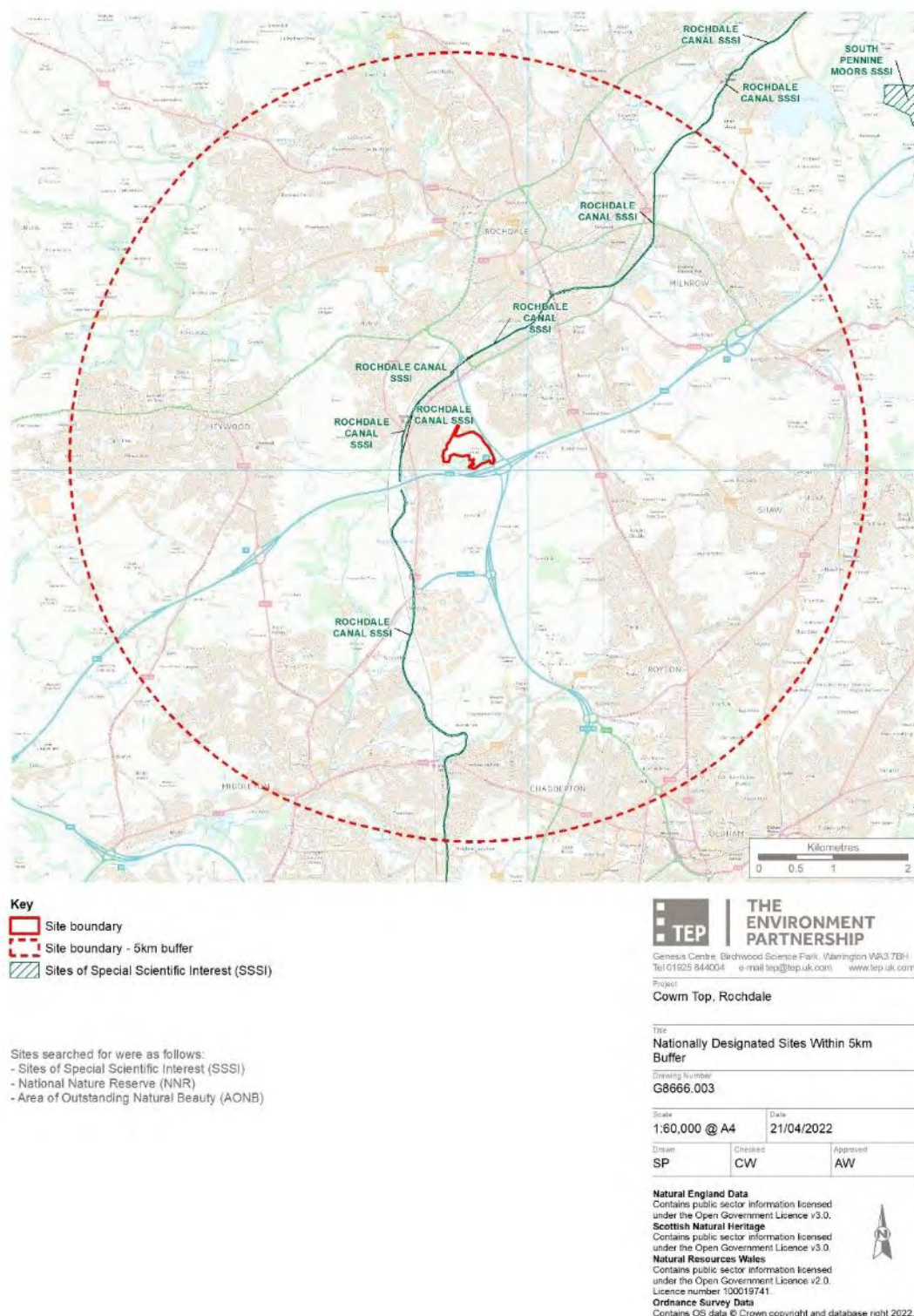


Figure 3: Nationally Designated Wildlife Sites within 5km of the Site

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

- 4.4 Residential development is listed as a risk category with regard to this SSSI. The Local Authority is required to consult with Natural England with regard to potential impacts on the SSSI as a result of the development type. Table 4 provides information on the likely impacts of development proposals on the SSSI.

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

Planning Proposal Categories	LPA Should Consult Natural England on Likely Risks from the Following:
Infrastructure	Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
Minerals, oil and gas	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural non-residential	Large non-residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m ² or footprint exceeds 0.2ha.
Residential	Residential development of 100 units or more.
Rural residential	Any residential development of 50 or more houses outside existing settlements/urban areas.
Air pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m ² , slurry lagoons & digestate stores > 200m ² , manure stores > 250t).
Combustion	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.
Waste	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
Composting	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
Discharges	Any discharge of water or liquid waste of more than 2m ³ /day to ground (i.e. to seep away) or to surface water, such as a beck or stream.

Planning Proposal Categories	LPA Should Consult Natural England on Likely Risks from the Following:
Water supply	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m ² or any development needing its own water supply.

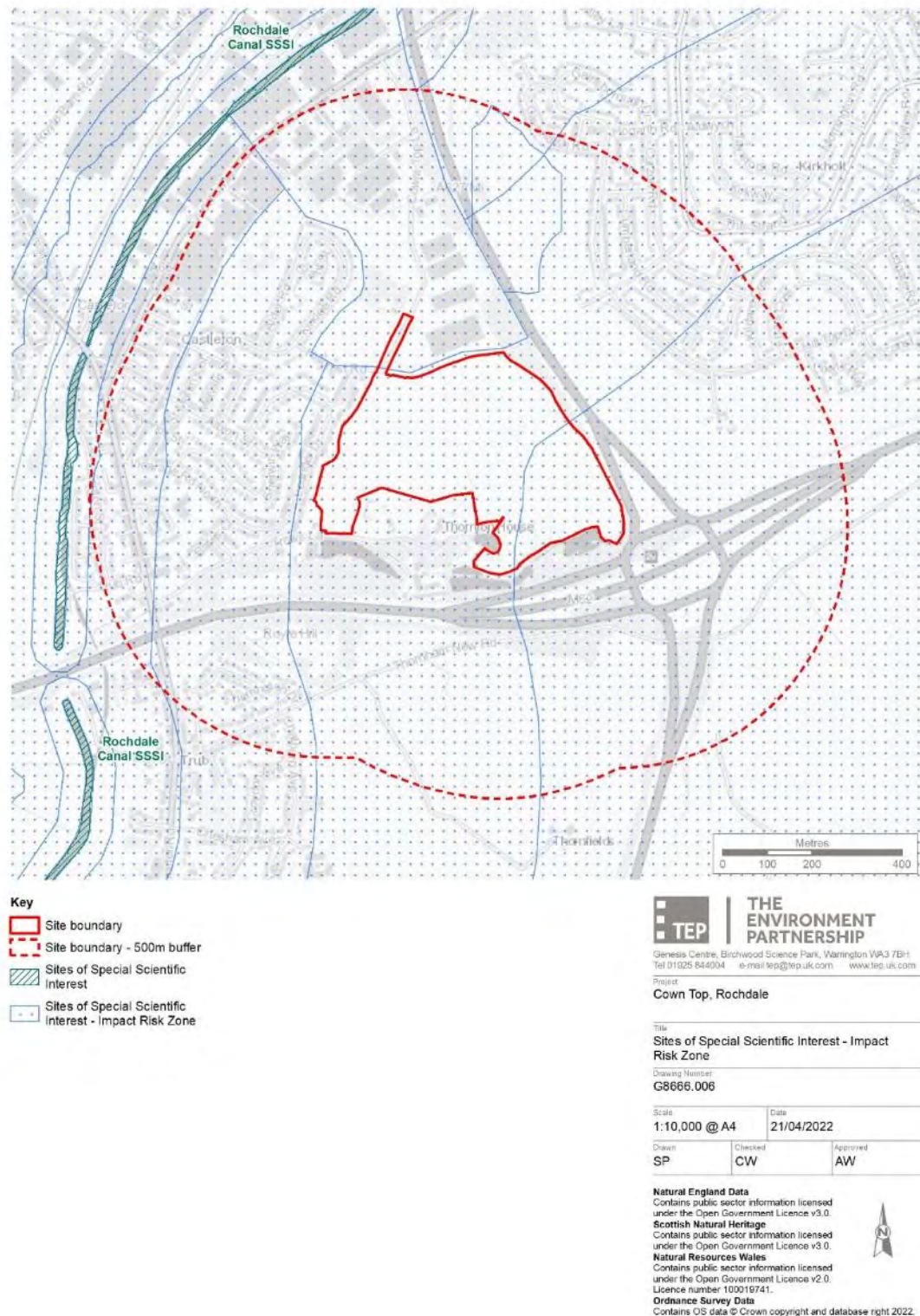


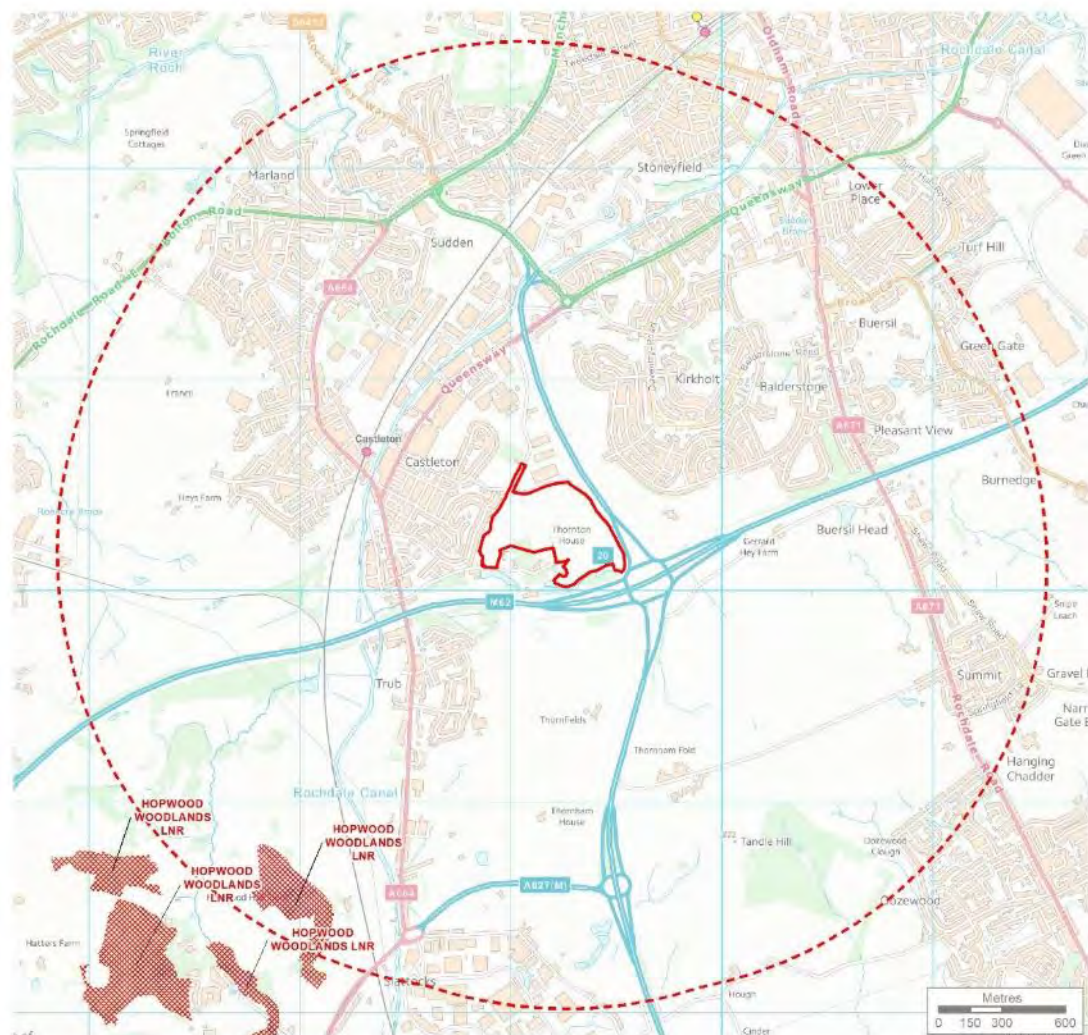
Figure 4: SSSI IRZ within the Site

Statutory Designated Wildlife Sites of Local Importance

- 4.5 There is one statutory locally designated wildlife sites 2km of the site (Figure 5), detailed in Table 5 below.

Table 5: Details of Statutory Locally Designated Wildlife Sites within 2km of the Site

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
Hopwood Woodland	LNR	1.72km south	Presence of diverse aquatic flora including floating water plantain.



Key
 Site boundary
 Site boundary - 2km buffer
 Local Nature Reserve

Sites searched for were as follows:
 - Local Nature Reserves

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

Project
 Cowm Top, Rochdale

Title
 Statutory Locally Designated Sites Within
 2km Buffer

Drawing Number
 G8666.004

Scale
 1:25,000 @ A4

Date
 21/04/2022

Drawn
 SP

Checked
 CW

Approved
 AW

Natural England Data
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Scottish Natural Heritage
 Contains public sector information licensed
 under the Open Government Licence v3.0.
Natural Resources Wales
 Contains public sector information licensed
 under the Open Government Licence v2.0.
 Licence number 100019741.
Ordnance Survey Data
 Contains OS data © Crown copyright and database right 2022.



Figure 5: Statutory Locally Designated Wildlife Sites within 2km of the Site

Non-statutory Designated Wildlife Sites of Local Importance

- 4.6 There are seven non-statutory locally designated wildlife sites within 2km of the site (Figure 6). These are detailed in Table 6 below. Citations for A627M by Tandle Hill and Rochdale Canal (Scowcroft to Warland) are provided in Appendix D.

Table 6: Details of Non-statutory Locally Designated Wildlife Sites within 2km of the Site

Name of Designation	Type of Designation	Location of Designation in Relation to Site	Reason for Site Designation
A627M by Tandle Hill	SBI	30m east, intersected by A627M	Supports diverse plant species including southern marsh orchid, common spotted orchid and goatsbeard.
Rochdale Canal (Scowcroft to Warland)	SBI	0.6km west	Aquatic plant assemblage
Sudden Brook (west)	SBI	1.6km east	Reason for designation unknown
Tandle Hill Country Park	SBI	1.5km southeast	Reason for designation unknown
Gerrard Wood	SBI	1.6km south	Reason for designation unknown
Lords Wood	SBI	1.8km southwest	Reason for designation unknown
Oozewood Flushes	SBI	1.9km southwest	Reason for designation unknown

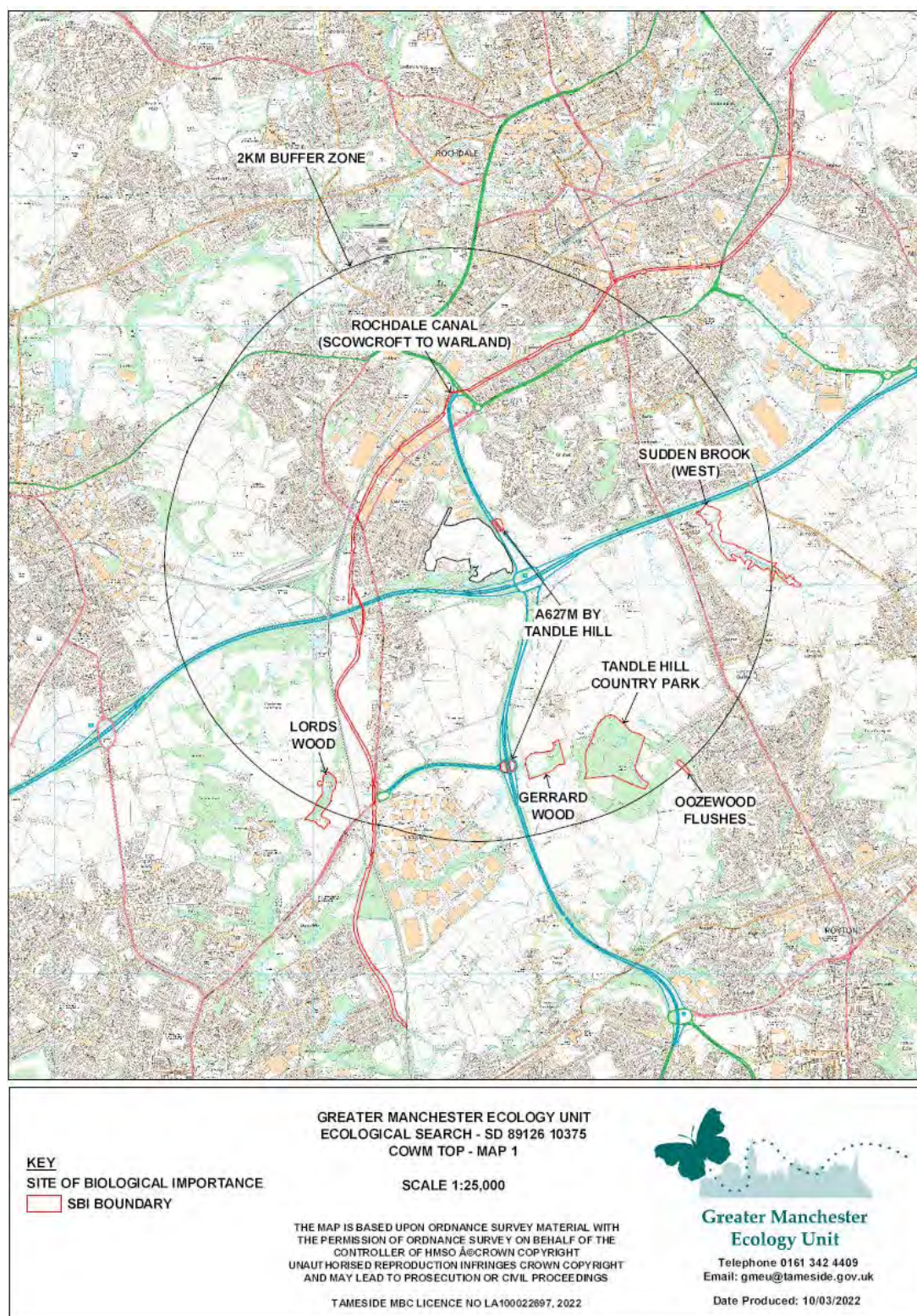


Figure 6: Non-statutory Locally Designated Wildlife Sites within 2km of the Site

5.0 Habitats

- 5.1 Priority Inventory Habitat deciduous woodland is present adjacent to the south of site (Figure 7).



Key

	Site boundary
	Site boundary - 500m buffer
	Statutory main rivers (England)
	Deciduous woodland
	Lowland fens

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

Title
Notable Habitats Within and Adjacent to the Site

Drawing Number
G8666.005

Scale
1:9,000 @ A4

Date
21/04/2022

Drawn SP	Checked CW	Approved AW
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Natural England Data
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Scottish Natural Heritage
Contains public sector information licensed under the Open Government Licence v3.0.
Natural Resources Wales
Contains public sector information licensed under the Open Government Licence v2.0.
Licence number 100010741
Ordnance Survey Data
Contains OS data © Crown copyright and database right 2022.

Figure 7: Notable Habitats within and adjacent to the Site

6.0 Species

- 6.1 37 species records were returned from GMEU for within 2km of the site. These are shown in Table 7. Full species records are provided in Appendix E.
- 6.2 A review of Magic Maps did not return any class licence returns or pond survey data for great crested newts between 2017 and 2019 within 2km of the site.

Table 7: Notable Species Records within 2km of the Site

Name of Species	Legislation	Number of Records Returned	Closest Record to Site
<i>Amphibians</i>			
Great crested newt	WCA5, S41, LBAP	3	1.0km southwest, beyond the M62
<i>Birds</i>			
Barn owl	WCA1	1	1.0km southwest
Hobby	WCA1	1	1.5km south
Kingfisher	WCA1	12	0.6km west
Little Ringed Plover	WCA1	5	0.7km west
Peregrine	WCA1	3	1.7km south
Bullfinch	S41, Bam	66	0.6km west
Cuckoo	S41, BRd	1	0.5km south
Curlew	S41, BRd	3	1.6km southeast
Dunnock	BAm	359	2.0km southeast
Herring gull	S41, BRd	3	0.6km west
House sparrow	S41, BRd	366	2.0km northwest
Lapwing	S41, BRd	28	1.7km south
Lesser redpoll	S41	7	1.9km southwest
Linnet	S41, BRd	11	0.3km south
Reed bunting	S41, BAm	28	1.5km northeast
Skylark	BRd	11	1.4km southeast

Name of Species	Legislation	Number of Records Returned	Closest Record to Site
Song thrush	S41, BAm	63	1.6km northeast
Starling	S41, BRd	389	2.0km west
Tree sparrow	S41, BRd	2	1.4km southwest
Willow tit	S41, LBAP	5	0.6km south
<i>Invertebrates</i>			
Dot moth	S41	1	1.4km southeast
Small heath butterfly	S41	1	1.3km southeast
Wall butterfly	S41	1	0.7km west
White-letter hairstreak butterfly	S41	1	On site
<i>Mammals</i>			
Water vole	WCA5, S41, LBAP	1	0.6km west
Otter	WCA5, S41	1	2km north, associated with Rochdale Canal
Brown hare	S41, LBAP	19	1.2km southeast
Hedgehog	S41	29	0.4km southwest
Common pipistrelle (roost)	WCA5, LBAP	20	1.7km northwest
Soprano pipistrelle	WCA5, S41, LBAP	1	0.3km east
Pipistrelle sp. (roost)	WCA5, S41, LBAP	15	0.7km southwest
Noctule bat (roost)	WCA5, S41, LBAP	1	1.5km southeast
Whiskered/Brandt's bat	WCA5, S41, LBAP	1	1.3km south

Name of Species	Legislation	Number of Records Returned	Closest Record to Site
Daubenton's bat	WCA5, LBAP	1	0.5km west
<i>Plants</i>			
Floating water plantain	S41	20	0.6km west
<i>Reptiles</i>			
Grass snake	WAC5	1	1.0km south southwest. Beyond the M62
Slow worm	WAC5	1	1.3km southeast, beyond the M62

Natural England Mitigation Licences

- 6.3 Twp Natural England mitigation licences have been identified within 2km of the site. These are detailed in Table 8 below.

Table 8: Natural England Mitigation Licences within 2km of the Site

Licence Number		Dates	Licensable Activities
EPSM2012-5119	Common pipistrelle	13/11/2012 to 30/11/2013	Destruction of a resting place
2016-20262-EPS-MIT	Common pipistrelle	01/03/2016 to 28/02/2021	Destruction of a resting place

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

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

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

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

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

SITE UK0030266
SITENAME Rochdale Canal

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

1. SITE IDENTIFICATION

1.1 Type B	1.2 Site code UK0030266	Back to top
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1.3 Site name

Rochdale Canal

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

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:

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

2. SITE LOCATION

[Back to top](#)

2.1 Site-centre location [decimal degrees]:

Longitude

-2.161111111

Latitude

53.53055556

2.2 Area [ha]:

24.86

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code

Region Name

UKD3

Greater Manchester

2.6 Biogeographical Region(s)

Atlantic (100.0
%)

3. ECOLOGICAL INFORMATION

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

[Back to top](#)

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

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

4. SITE DESCRIPTION

4.1 General site character

[Back to top](#)

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

Other Site Characteristics

2 Terrestrial: Geomorphology and landscape: lowland

4.2 Quality and importance

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

4.3 Threats, pressures and activities with impacts on the site

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

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

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

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

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

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

<http://publications.naturalengland.org.uk/category/3212324>

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

5. SITE PROTECTION STATUS (optional)

[Back to top](#)

5.1 Designation types at national and regional level:

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

6. SITE MANAGEMENT

[Back to top](#)

6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
---------------	-----------------

Address: _____

Email: _____

6.2 Management Plan(s):

An actual management plan does exist:

☐

Yes

☐

No, but in preparation

☒

No

6.3 Conservation measures (optional)

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

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

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

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

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

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

3.1 Relative surface

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

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

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

3.1 Global assessment (abbreviated to 'Global' in data form)

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

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

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

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

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

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

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

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

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

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
-----	--	------------------

4.1 Habitat class code

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

4.3 Threats code

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

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

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

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

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

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

SITE UK0030280
SITENAME South Pennine Moors

TABLE OF CONTENTS

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

1. SITE IDENTIFICATION

1.1 Type B	1.2 Site code UK0030280	Back to top
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1.3 Site name

South Pennine Moors

1.4 First Compilation date 2001-03	1.5 Update date 2015-12
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1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:

Date site proposed as SCI:	2001-03
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2005-04
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

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B			650.24	0	M	C	C	C	B
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- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

4. SITE DESCRIPTION

4.1 General site character

[Back to top](#)

Habitat class	% Cover
N09	4.8
N08	45.5
N07	42.7
N19	0.1
N10	4.8
N21	0.1
N06	1.0
N16	1.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: sandstone, sedimentary, basic, peat, acidic, nutrient-poor 2 Terrestrial: Geomorphology and landscape: upland, hilly, crags/ledges, slope, valley

4.2 Quality and importance

Northern Atlantic wet heaths with Erica tetralix for which the area is considered to support a significant presence. European dry heaths for which this is considered to be one of the best areas in the United Kingdom. Transition mires and quaking bogs for which the area is considered to support a significant presence. Old sessile oak woods with Ilex and Blechnum in the British Isles for which this is considered to be one of the best areas in the United Kingdom. Blanket bogs for which this is considered to be one of the best areas in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

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

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	H04		B
H	A11		B
H	J02		B
H	J01		I
H	G01		I

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
H	A06		I
H	A02		I
H	B06		I
H	A03		I
H	B02		I
H	D05		I
H	A04		I

Rank: H = high, M = medium, L = low

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

4.5 Documentation

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

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

<http://publications.naturalengland.org.uk/category/3212324>

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

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

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

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

☐	Yes
☐	No, but in preparation
☒	No

6.3 Conservation measures (optional)

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

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

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

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

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

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

3.1 Relative surface

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

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

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

3.1 Global assessment (abbreviated to 'Global' in data form)

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

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

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

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

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

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

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

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

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

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
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4.1 Habitat class code

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

4.3 Threats code

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

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

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

EC Directive 79/409 on the Conservation of Wild Birds: Special Protection Area

SOUTH PENNINE MOORS
(SOUTH PENNINE MOORS, PHASE 2)

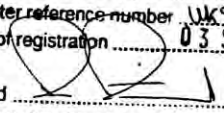
The South Pennine Moors proposed Special Protection Area is an upland of international importance. It provides habitat for an important assemblage of breeding moorland and moorland fringe birds.

The South Pennine Moors (phase 2) qualifies under Article 4.1 of the EC Directive on the Conservation of Wild Birds (79/409) by supporting nationally important breeding populations of two species listed in Annex 1. The most recent count is of 28 pairs of merlin *Falco columbarius* (4.3% of the British breeding population) and 292 pairs of golden plover *Pluvialis apricaria* (1.2%). The density of breeding golden plover is high compared to other regional populations in northern England and Scotland.

The site qualifies under Article 4.2 by supporting, in summer, a diverse assemblage of breeding migratory birds of moorland and moorland fringe habitats including: golden plover, lapwing *Vanellus vanellus*, dunlin *Calidris alpina*, snipe *Gallinago gallinago*, curlew, redshank *Tringa totanus*, common sandpiper *Actitis hypoleucos*, short-eared owl *Asio flammeus*, whinchat *Saxicola rubetra*, wheatear *Oenanthe oenanthe*, ring ouzel *Turdus torquatus* and twite *Carduelis flavirostris*. The population of twite in the South Pennines is geographically distinct and isolated from others in northern Britain, Ireland and Europe.

The South Pennine Moors support the southernmost assemblage in Britain of breeding merlin, red grouse *Lagopus lagopus*, golden plover, dunlin, short-eared owl and twite. These species are either extremely local, rare or absent further south. Together with the scattered populations of merlin, golden plover, dunlin and twite in Ireland these are the most southwestern breeding populations in the world. The South Pennine Moors thus have an important role in maintaining the breeding range of these species.

CAR
January 1995

This citation / map relates to a site entered in
the Register of European sites for Great Britain.
Register reference number UK908022
Date of registration 03 SEP 1998
Signed 
on behalf of the Secretary of State for the Environment

UNITARY AUTHORITY: Oldham, Rochdale

SITE NAME: Rochdale Canal

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

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

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

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

Date Notified (under 1981 Act): 16 August 2000

Reasons for Notification

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

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

General Description

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

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

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

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

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

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

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

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

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

Other information

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

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

APPENDIX B: Target Notes

Target Notes Report

Target Note 001

An expanse of poor semi-improved grassland covers the north of the site which is slightly more diverse than that of TN2 due to an absence of grazing but nonetheless is still classified as species-poor. This area was relatively damp and moss species were prevalent. No evidence of recent management was noted. Sward length was approximately 30cm tall and the assemblage of plants present indicate that soil pH is neutral, bordering on acidic.

The following plant species were identified during the survey:

<i>Agrostis capillaris</i>	Common Bent	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	A
<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Holcus lanatus</i>	Yorkshire-fog	A
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Juncus inflexus</i>	Hard Rush	F
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Senecio jacobaea</i>	Common Ragwort	F
<i>Luzula campestris</i>	Field Woodrush	F
Moss sp.	Moss species	F
<i>Plantago major</i>	Greater Plantain	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Rumex acetosa</i>	Common Sorrel	F
<i>Taraxacum officinale</i> agg.	Dandelion	F
<i>Juncus effusus</i>	Soft Rush	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Achillea millefolium</i>	Yarrow	O
<i>Cirsium palustre</i>	Marsh Thistle	O
<i>Conopodium majus</i>	Pignut	O
<i>Hieracium</i> sp.	Hawkweed species	O
<i>Rumex acetosella</i>	Sheep's Sorrel	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O
<i>Hypochaeris radicata</i>	Common Cat's-ear	O
<i>Nardus stricta</i>	Mat-grass	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Centaurea nigra</i>	Knapweed	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Dactylis glomerata</i>	Cock's-foot	R
<i>Sorbus aucuparia</i>	Rowan	R
<i>Equisetum arvense</i>	Field Horsetail	R
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	R



Target Note 002

The majority of the site is formed of poor semi-improved grassland which appears to have been previously grazed by horses. Sward length was approximately 20cm tall.

The following plant species were identified during the survey:

<i>Festuca rubra</i>	Red Fescue	D
<i>Holcus lanatus</i>	Yorkshire-fog	D
<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Plantago major</i>	Greater Plantain	A
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Luzula campestris</i>	Field Woodrush	F
<i>Hypochaeris radicata</i>	Common Cat's-ear	F
<i>Lathyrus pratensis</i>	Meadow Vetchling	F
<i>Scorzoneroide autumnalis</i>	Autumn Hawkbit	F
<i>Trifolium repens</i>	White Clover	F
<i>Achillea millefolium</i>	Yarrow	O
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Matricaria discoidea</i>	Pineapple-weed	O
<i>Odontites verna</i>	Red Bartsia	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Lolium perenne</i>	Perennial Ryegrass	O
<i>Ranunculus acris</i>	Meadow Buttercup	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Senecio jacobaea</i>	Common Ragwort	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Taraxacum officinale agg.</i>	Dandelion	O
<i>Anemone nemorosa</i>	Wood Anemone	R
<i>Caltha palustris</i>	Marsh-marigold	R
<i>Conopodium majus</i>	Pignut	R
<i>Hyacinthoides non-scripta</i>	Bluebell	R
<i>Cardamine pratensis</i>	Cuckooflower	R
<i>Impatiens glandulifera</i>	Himalayan Balsam	R
<i>Persicaria maculosa</i>	Redshank	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Trifolium dubium</i>	Lesser Trefoil	R



Target Note 003

Patches of marshy grassland are present throughout the semi-improved grassland areas.

The following plant species were identified during the survey:

<i>Juncus effusus</i>	Soft Rush	A
<i>Cardamine sp.</i>	Bitter-cress Species	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Urtica dioica</i>	Nettle	F
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	F
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Cirsium palustre</i>	Marsh Thistle	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Cardamine pratensis</i>	Cuckooflower	O
<i>Dryopteris filix-mas</i>	Male-fern	O
<i>Epilobium sp.</i>	Willowherb species	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Rumex acetosa</i>	Common Sorrel	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Angelica sylvestris</i>	Wild Angelica	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Carex pendula</i>	Pendulous Sedge	R



Target Note 004

Large thickets of European gorse are present in the northern part of the site.

The following plant species were identified during the survey:

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Holcus lanatus</i>	Yorkshire-fog	A
<i>Ulex europaeus</i>	Gorse	A
<i>Potentilla erecta</i>	Tormentil	A
<i>Agrostis capillaris</i>	Common Bent	F
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Cytisus scoparius</i>	Broom	R
<i>Sorbus aucuparia</i>	Rowan	R



Target Note 005

A relatively small area of dense bracken is present in the south east part of the site.

<i>Pteridium aquilinum</i>	Bracken	D
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Target Note 006

Two small parcels of tall ruderal vegetation are present in the south of the site.

<i>Urtica dioica</i>	Nettle	D
<i>Galium aparine</i>	Cleavers	A
<i>Equisetum sp.</i>	Horsetail species	F
<i>Pteridium aquilinum</i>	Bracken	F
<i>Epilobium sp.</i>	Willowherb species	F
<i>Salix species</i>	Willow species	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Hyacinthoides non-scripta</i>	Bluebell	O
<i>Ilex aquifolium</i>	Holly	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Sambucus nigra</i>	Elder	R
<i>Betula pubescens</i>	Downy Birch	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Ulex europaeus</i>	Gorse	R
<i>Ulmus glabra</i>	Wych Elm	R



Target Note 007

A small area of bare ground covered in gravel is present in the north west of the site.



Target Note 008

A small band of plantation broad-leaved woodland is present adjacent to the north west site boundary, screening the site from the A627(M). The trees in this woodland are relatively young.

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Quercus</i> sp.	Oak species	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Ilex aquifolium</i>	Holly	O
<i>Salix</i> species	Willow species	O



Target Note 009

Semi-natural broad-leaved woodland is present along the southern site boundary and includes mature trees.

<i>Pteridium aquilinum</i>	Bracken	F
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Aesculus hippocastanum</i>	Horse-chestnut	O
<i>Betula pubescens</i>	Downy Birch	O
<i>Fagus sylvatica</i>	Beech	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Ilex aquifolium</i>	Holly	O
<i>Quercus robur</i>	English Oak	O
<i>Salix species</i>	Willow species	O
<i>Sambucus nigra</i>	Elder	O
<i>Ulmus glabra</i>	Wych Elm	O
<i>Hyacinthoides non-scripta</i>	Bluebell	O
<i>Impatiens glandulifera</i>	Himalayan Balsam	O
<i>Sorbus aucuparia</i>	Rowan	O



Target Note 010

There are a number of fishing pools to the south of the site.



Target Note 011

A drained down fishing pool.



Target Note 012

A small stream, flowing east to west, connects the fishing pools to the south of the site.



Target Note 013

Hardstanding lane approximately 4m wide. Occasional drainage grills along edge. Evidence of littering. Fringed on both sides by approximately 1m wide strip of modified neutral grassland (TN014), Beyond these strips there is a 2m high metal fence, through which some species are encroaching from adjacent land.



Target Note 014

Strips of modified neutral grassland, approximately 1 m in width, bordering the eastern and western side of the hardstanding lane.

<i>Poa sp.</i>	Meadow-grass species	A
<i>Agrostis stolonifera</i>	Creeping Bent	F
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	F
<i>Epilobium sp.</i>	Willowherb species	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Jacobaea vulgaris</i>	Common Ragwort	F
<i>Moss sp.</i>	Moss species	F
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O

<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Vicia</i> sp.	Vetch species	O
<i>Fagus sylvatica</i>	Beech	R
<i>Geranium molle</i>	Dove's-foot Cranesbill	R
<i>Hieracium</i> sp.	Hawkweed species	R
<i>Lolium perenne</i>	Perennial Ryegrass	R
<i>Salix</i> species	Willow species	R



Target Note 015

Area of dense bramble scrub opposite existing warehouse development.

<i>Rubus fruticosus</i> agg.	Bramble	D
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	O
Moss sp.	Moss species	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Tilia</i> sp.	Lime species	R



Target Note 016

Small area of species-poor semi-improved grassland, left unmanaged.

<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Geranium molle</i>	Dove's-foot Cranesbill	O
<i>Jacobaea vulgaris</i>	Common Ragwort	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Moss sp.</i>	Moss species	R
<i>Urtica dioica</i>	Nettle	R



Target Note 017

Man-made excavation immediately to the east of the fence



Target Note 018

The habitat to the east of the hardstanding lane comprises species-poor semi-improved grassland with marshy tendencies near fence. Beyond this the ground slopes uphill. Bare soil is present near the warehouse.

<i>Agrostis stolonifera</i>	Creeping Bent	A
<i>Juncus effusus</i>	Soft Rush	A
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	F

Moss sp.
Rumex obtusifolius

Moss species
Broad-leaved Dock

F
F



Target Note 019

Area of dense bramble scrub to the west of the fenceline with scattered broad-leaved trees, young to semi-mature in age.

Rubus fruticosus agg.
Acer pseudoplatanus
Dryopteris dilatata
Hedera helix
Dryopteris filix-mas
Fagus sylvatica
Sambucus nigra

Bramble
Sycamore
Broad Buckler-fern
Ivy
Male-fern
Beech
Elder

D
A
F
F
O
O
O



Target Note 020

Bank of tall ruderal immediately to the west of the fenceline, extending south through the site.

<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	D
<i>Moss sp.</i>	Moss species	A
<i>Dryopteris filix-mas</i>	Male-fern	O
<i>Jacobaea vulgaris</i>	Common Ragwort	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Digitalis purpurea</i>	Foxglove	R



Target Note 021

Area of species-poor semi-improved grassland with young scattered broad-leaved trees. Marshy tendencies in the south.

<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Moss sp.</i>	Moss species	A
<i>Fraxinus excelsior</i>	Ash	F
<i>Juncus effusus</i>	Soft Rush	F
<i>Quercus sp.</i>	Oak species	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Poa sp.</i>	Meadow-grass species	O
<i>Lolium perenne</i>	Perennial Ryegrass	R



Target Note TN21

An area of dense scrub in the south of site which appears to be self sett around an adjacent fishing lake.

<i>Salix species</i>	Willow species	D
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Alnus glutinosa</i>	Alder	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Sambucus nigra</i>	Elder	O
<i>Larix sp.</i>	Larch species	R



Target Note TN22

Tall ruderal vegetation which lies between sloping ground at TN21 and an adjacent lake, making the ground generally wet underfoot.

<i>Urtica dioica</i>	Nettle	D
<i>Heracleum sphondylium</i>	Hogweed	A
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Dryopteris filix-mas</i>	Male-fern	F
<i>Epilobium sp.</i>	Willowherb species	F
<i>Equisetum sp.</i>	Horsetail species	F
<i>Galium aparine</i>	Cleavers	O
<i>Cardamine pratensis</i>	Cuckooflower	R



Target Note TN23

An area of bare ground and ephemeral vegetation which looks to have been recently cleared.

<i>Festuca rubra</i>	Red Fescue	D
<i>Plantago lanceolata</i>	Ribwort Plantain	A
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	A
<i>Juncus effusus</i>	Soft Rush	F
<i>Bellis perennis</i>	Daisy	F
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Rumex acetosa</i>	Common Sorrel	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Cardamine sp.</i>	Bitter-cress Species	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Stellaria media</i>	Chickweed	R



Target Note TN24

Two depressions which likely hold water during high rain fall, though were dry at the time of survey and are unlikely to support amphibians.

<i>Juncus effusus</i>	Soft Rush	D
<i>Salix species</i>	Willow species	A
<i>Typha latifolia</i>	Greater Reedmace	F



Target Note TN25

Damp ground within a narrow valley. It is likely this valley has a narrow stream during high rainfall.

Iris pseudacorus
Caltha palustris
Ficaria verna

Yellow Flag Iris
 Marsh-marigold
 Lesser Celandine

D
 F
 F



Target Note TN26

A line of semi-natural broad leaved woodland at the southern site boundary.

<i>Acer pseudoplatanus</i>	Sycamore	D
<i>Aesculus hippocastanum</i>	Horse-chestnut	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Urtica dioica</i>	Nettle	F
<i>Galium aparine</i>	Cleavers	O
<i>Sisymbrium officinale</i>	Hedge Mustard	O
<i>Ulmus</i> sp.	Elm species	O
<i>Quercus robur</i>	English Oak	R
<i>Sambucus nigra</i>	Elder	R
<i>Sorbus aria</i>	Whitebeam	R



Target Note TN27

A band of dense scrub in the north west corner of site.

<i>Rubus fruticosus</i> agg.	Bramble	D
<i>Impatiens glandulifera</i>	Himalayan Balsam	A
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Sambucus nigra</i>	Elder	F
<i>Salix hybrid</i>	Willow hybrid	O
<i>Hyacinthoides non-scripta</i>	Bluebell	R



Hedgerow H1

Native intact species-poor hedgerow. Leggy and outgrown, approximately 5m tall and 3m wide.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Ilex aquifolium</i>	Holly	O
<i>Sambucus nigra</i>	Elder	O
<i>Aesculus hippocastanum</i>	Horse-chestnut	R
<i>Prunus</i> sp.	Cherry species	R
<i>Syringa vulgaris</i>	Lilac	R



Hedgerow H2

Defunct native hedgerow. Leggy and outgrown, approximately 3m tall and 2m wide.

Crataegus monogyna
Rubus fruticosus agg.

Hawthorn
Bramble

D
A



Hedgerow H3

Defunct native hedgerow. Approximately 3m tall and 2m wide. Leggy and outgrown.

Crataegus monogyna
Rubus fruticosus agg.
Prunus sp.

Hawthorn
Bramble
Cherry species

D
A
R



Hedgerow H4

Defunct native hedgerow, leggy and outgrown. Approximately 3m tall and 2m wide.

Crataegus monogyna
Anthriscus sylvestris
Pteridium aquilinum
Hyacinthoides non-scripta

Hawthorn
Cow Parsley
Bracken
Bluebell

D
F
F
O



Hedgerow H5

Defunct native species-poor hedgerow with trees.

Crataegus monogyna
Salix caprea
Dryopteris filix-mas
Impatiens glandulifera
Dryopteris dilatata
Quercus robur
Aesculus hippocastanum
Fagus sylvatica

Hawthorn
 Goat Willow
 Male-fern
 Himalayan Balsam
 Broad Buckler-fern
 English Oak
 Horse-chestnut
 Beech

D
 A
 F
 F
 O
 O
 R
 R



H6

An intact species poor native hedgerow.

Crataegus monogyna
Rubus fruticosus agg.
Prunus sp.
Quercus robur
Sorbus aucuparia

Hawthorn
 Bramble
 Cherry species
 English Oak
 Rowan

D
 A
 R
 R
 R

H7

A species poor hedgerow and trees separating horse grazed fields.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Ilex aquifolium</i>	Holly	R
<i>Sambucus nigra</i>	Elder	R
<i>Quercus robur</i>	English Oak	R

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

APPENDIX C: Nocturnal Bat Activity Survey Report



THE
ENVIRONMENT
PARTNERSHIP



COWM TOP LANE CASTLETON, ROCHDALE BAT ACTIVITY REPORT

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Document Title	Bat Activity Report
Prepared for	BDW Trading Ltd and Global Land and Property Ltd
Prepared by	TEP - Warrington
Document Ref	7403.02.004

Author	Lizi Pimlott
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Checked	John Crowder
Approved	John Crowder

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Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
2.0	08/01/20	LP	JC	Updated red line site boundary	Superceded
3.0	09/03/20	LP	JC	Updated red line site boundary	Issued

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APPENDICES

APPENDIX A: Transect Survey Data

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DRAWINGS

G7403.02.007 – Bat Transect Survey Visit 1

G7403.02.008 - Bat Transect Survey Visit 2

G7403.02.009 - Bat Transect Survey Visit 3

G7403.02.010 - Bat Transect Route and Static Monitoring Locations

1.0 Introduction

- 1.1 TEP was commissioned, in December 2018 by BDW Trading Ltd and Global Land and Property Ltd, to carry out nocturnal bat activity surveys of Cowm Top Lane in Castleton, Rochdale, hereon in referred to as "the site". This assessment is required to inform a planning application for a proposed residential development at the site.
- 1.2 This report details the results of the nocturnal bat activity surveys and should be read in conjunction with the ecological assessment report for the site which was produced by TEP in March 2020 (report ref: 7403.02.002).
- 1.3 Within the desk study undertaken to inform the ecological assessment the following bat species were recorded within 1km of the site:
- Common pipistrelle *Pipistrellus pipistrellus*;
 - Soprano pipistrelle *Pipistrellus pygmaeus*;
 - Daubenton's bat *Myotis daubentonii*; and
 - Noctule bat *Nyctalus noctula*.
- 1.4 A day roost of common pipistrelle bats was identified within the farm house at Trows Farm adjacent to the site during nocturnal bat roost surveys undertaken in 2019.
- 1.5 The ecological assessment states that the mosaic of grassland, woodland and scrub habitats and the fishing lakes could provide foraging opportunities for local bat populations but commuting and dispersal routes are restricted by surrounding urban barriers. The site was therefore classified as low suitability for foraging bats.

Site Context

- 1.6 The site comprises a parcel of land in Castleton, in the borough of Rochdale. Cripple Gate Lane borders the site to the north, the A627(M) to the east, Trows Lane and the M62 beyond this to the south and residential development off Leander Drive to the west.
- 1.7 The central grid reference for the site is SD 89126 10375 and a site location plan is shown in Figure 1 below.



Figure 1: Site location plan

2.0 Method

- 2.1 Nocturnal bat activity surveys to determine the species present, assess the level of bat activity across the site and identify important foraging and commuting areas were carried out, with due consideration for the Bat Conservation Trust (BCT) Guidelines (Collins, 2016¹). Three surveys were undertaken between April and October, to cover the main “bat seasons” (April/May, June/July/August and September/October), in appropriate weather conditions. Each survey entailed one transect (shown in Drawing G7403.010) walked by a pair of surveyors, with paused monitoring points of three minutes each, to gain good coverage of the site. The third transect (September 2019) was walked in reverse. Survey details for the transect surveys are included in Appendix A. This was complemented by the use of three automated static bat detectors (shown in Drawing G7403.02.010) set to record over five consecutive nights. Survey details for the static monitoring surveys are included in Appendix B. Central grid references for the static locations are SD 88973 10391 (Location 1), SD 89230 10061 (Location 2) and SD 89189 10247 (Location 3).
- 2.2 Sonogram analysis was carried out on all recorded bat passes to confirm species identification as far as possible.
- 2.3 For the purposes of this assessment and of assigning value to bats, the guidance set out in (Wray et. al. 2010²) has been followed.
- 2.4 The guidance provided by Wray et. al. (2010) includes a framework for identifying the importance of bats in the landscapes through the evaluation of habitats. Applying this framework, bat roosts can be valued according to species rarity (Table 1).

Table 1: Species rarity in England (adapted from Wray et. al 2010)

Rarity	Species*
Common (population over 100,000)	Common pipistrelle Soprano pipistrelle Brown long-eared

¹ Collins J. 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition. Bat Conservation Trust.

² Wray, S.W., Wells, D., Long, E., Mitchell-Jones, J. (2010). Valuing Bats in Ecological Impact Assessment. In Practice 70: 23-27.

Rarity	Species*
Rarer (population 10,000 to 100,000)	Lesser horseshoe bat Daubenton's bat Natterer's bat Whiskered bat Leisler's bat Noctule Nathusius' pipistrelle Serotine Brandt's bat
Rarest (population under 10,000)	Greater horseshoe Bechstein's bat Barbastelle Grey long-eared Alcaho bat Greater mouse-eared bat

2.5 Wray et. al. (2010) identifies a numerical scoring system which can be applied to foraging habitat (Table 2) and commuting habitat (Table 3). The score derived from these evaluations is then applied to the geographical scale proposed by the CIEEM EcIA guidelines (Table 4).

Table 2: Valuing commuting habitat for bats

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Linear Features (Score)
Common (2)	Individual bats (5)	None (1)	Absence of (other) linear features (1)
Common (2)	Small number of bats (10)	Small number (3)	Un-vegetated fences and large field sizes (2)

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Linear Features (Score)
Rarer (5)	Large number of bats (20)	Moderate number/ not known (4)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)
Rarer (5)	Individual bats (5)	Large number of roosts, or close to a SSSI for the species (5)	Well-grown and well connected hedgerows, small field size (4)
Rarest (20)	Small number of bats (10)	Close to or within a SAC for the species (20)	Complex network of mature well established hedgerows, small fields and rivers/streams (5)

Table 3: Valuing foraging habitat for bats

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Features (Score)
Common (2)	Individual bats (5)	None (1)	Industrial or other site without established vegetation (1)
Rarer (5)	Small number of bats (10)	Small number (3)	Suburban areas or intensive arable land (2)
Rarest (20)	Large number of bats (20)	Moderate number /not known (4)	Isolated woodland patches, less intensive arable and/or small towns and villages (3)

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Features (Score)
N/A	N/A	Large number of roosts, or close to a SSSI for the species (5)	Larger or connected woodland blocks, mixed agriculture, and small villages/hamlets (4)
N/A	N/A	Close to or within a SAC for the species (20)	Mosaic of pasture, woodlands and wetland areas (5)

Table 4: Scoring system for commuting and foraging habitats

Score	Geographic Value
1 – 10	Not important
11 – 20	Local
21 – 30	County
31 – 40	Regional
41 – 50	National

Limitations

- 2.6 No limitations were encountered during the bat activity transect surveys.
- 2.7 Detector failure was experienced during the first period of static monitoring in April and May 2019. The automated detector at Location 1 did not make any recordings during the monitoring period. When the data log was downloaded no bat sonogram files had been recorded. It is possible that no bats were present during this time, but more likely that there was a detector error given bats have been recorded in this area. No errors had been logged, but it is assumed that the detection rate is lower at Location 1 during the first static monitoring survey. The interpretation of the data in this report takes this into consideration. However the BCT guidelines state that only one automated detector is required to complement each walked transect for sites of low suitability for foraging and commuting bats. As three automated detectors were deployed for a single walked transect on this site, the minimum data requirements have been exceeded. Therefore this equipment malfunction is not considered to be a significant limitation.

- 2.8 Weather constraints were encountered during the first period of static monitoring in April and May 2019. Light rain occurred for six hours, between 22:20 and 23:20 and from 00:20 and 03:20 on the third night (2nd/3rd May 2019). On the fourth night temperatures ranged between 3C and 6C for the majority of the night. The BCT guidelines state that static monitoring must be undertaken for a minimum of five consecutive nights per survey. To overcome the weather constraints encountered on the third and fourth nights the static monitoring was continued for an additional two nights (seven nights in total). Temperatures on the fifth, sixth and seventh nights were on the cool side, dropping to 4C to 6C for short periods. This is typical of weather conditions during the spring months and, as bat activity was still recorded during these nights this was not considered to be a significant constraint. The data from the third and fourth nights has been omitted from the sonogram analysis so that each static monitoring period comprised five nights with suitable weather conditions.
- 2.9 Some species, such as brown long-eared bats *Plecotus auritus* can be relatively difficult to detect due to the low amplitude (i.e. quiet) calls. Presence of brown long-eared was recorded on site but the activity of this species may be underestimated. The conclusions and interpretation in this report takes this into consideration.
- 2.10 Bats vary their calls dependent on the habitats they fly in and on their activity (commuting, foraging, social interaction, etc). It is not always possible to identify bat calls to species level owing to the overlap of call parameters between some species and/or poor quality recordings (e.g. brief and distant passes). In these cases, it is accepted that species are identified to genus level or group level (e.g. *Myotis*, *Myotis/Plecotus* and *Nyctalus/Eptesicus*) (Russ, 1999³). Where call parameters are inconclusive the species has been labelled as 'unknown'. This ensures the dataset is interpreted accurately and transparently.

³ Russ J. 1999. The bats of Britain and Ireland. Echolocation calls, sound analysis, and species identification. Alana Ecology Ltd. Bishops Castle.

3.0 Results

Transects

Bat Assemblage

- 3.1 The walked transect across the site recorded a species assemblage of at least three species across the three nocturnal bat activity surveys undertaken: pipistrelle species (PIPSPE); noctule (NYCNOC); and Myotis species (MYOSPE). Pipistrelle bats produced 89% of the contacts recorded during transects. Figure 2 summarises the composition of the species assemblage recorded over the three transect surveys.

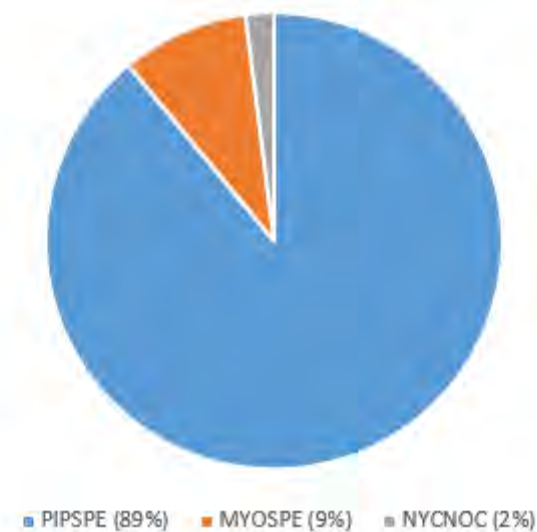


Figure 2: Species assemblage recorded during transects

Seasonal Variation in Activity

- 3.2 The abundance and diversity of bats was highest during Visit 2 in June 2019. Figure 3 summarises the abundance and diversity of bats recorded over the three transect surveys.

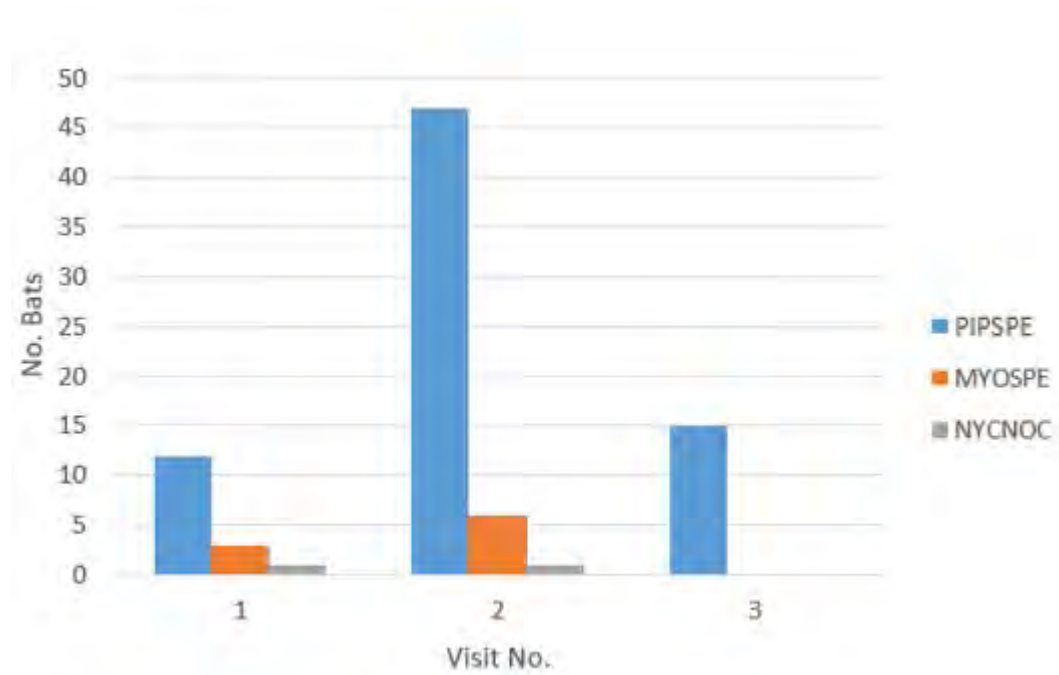


Figure 3: Seasonal variation in activity recorded during transects

Spatial Variation in Activity

- 3.3 Bat activity was recorded throughout the three transects but the highest levels of activity were noted along tree lines in the central and southern parts of the site. There were no clear patterns with the distribution of different bat species across the site.
- 3.4 The spatial distributions of species recorded during the transect surveys are illustrated on Drawings G7403.02.007 (visit 1), G7403.02.008 (visit 2) and G7403.02.009 (visit 3).

Nightly Activity

- 3.5 Foraging (indicated by circular flight lines in the above drawings) was recorded infrequently along the transect during each survey. The majority of foraging that was recorded was by pipistrelle bats; not surprising given the relative abundance of this species during each transect survey. The key focal areas where foraging was recorded included the woodland and trees in the south of the site with occasional foraging also recorded in the species-rich grassland in the north and around the buildings at Trows Farm.
- 3.6 Commuting (indicated by straight flight lines in the above drawings) was recorded sporadically throughout the site with bats moving to and from the woodland areas to the south of the site.
- 3.7 No social calls were recorded during the three transect surveys.

Static Monitoring

Bat Assemblage

- 3.8 Species assemblage during the static monitoring was the same as that of the transect surveys, with Myotis species, noctule and pipistrelle species recorded. Common pipistrelle produced 88% of the contacts recorded during transects. Figure 4 summarises the composition of the species assemblage recorded over the three static monitoring surveys.

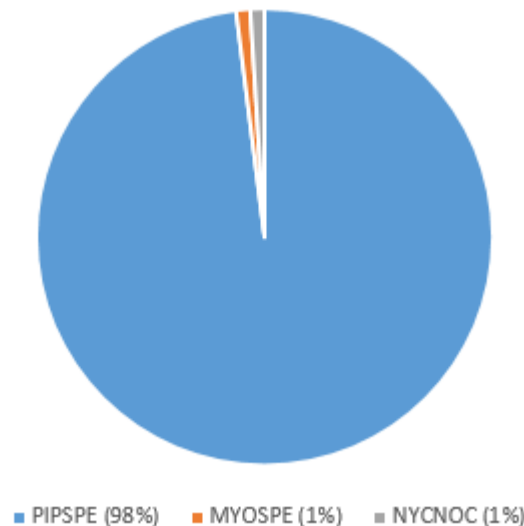


Figure 4: Species assemblage recorded during static monitoring

Seasonal Variation in Bat Activity

- 3.9 The abundance of bats peaked during Visit 3 in September 2019. Species diversity was consistent across the three surveys. Figure 5 summarises the bat activity levels (bats per night) across the site recorded for each species group during each monitoring period.

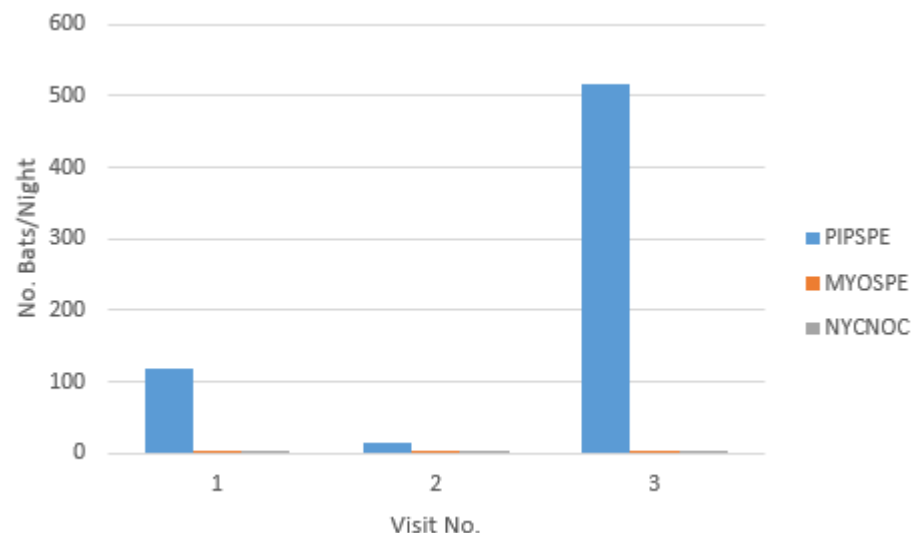


Figure 5: Seasonal variation in activity recorded during static monitoring

Spatial Variation in Bat Activity

- 3.10 Bat activity was highest at Location 3 in the centre of the site for Visits 1 (April/May 2019) and 2 (June 2019) whilst Location 1 had the highest bat activity during Visit 3 (September 2019). Figures 6 to 8 summarise the bat activity levels (bat per night) recorded for each species group at each monitoring location during each survey.

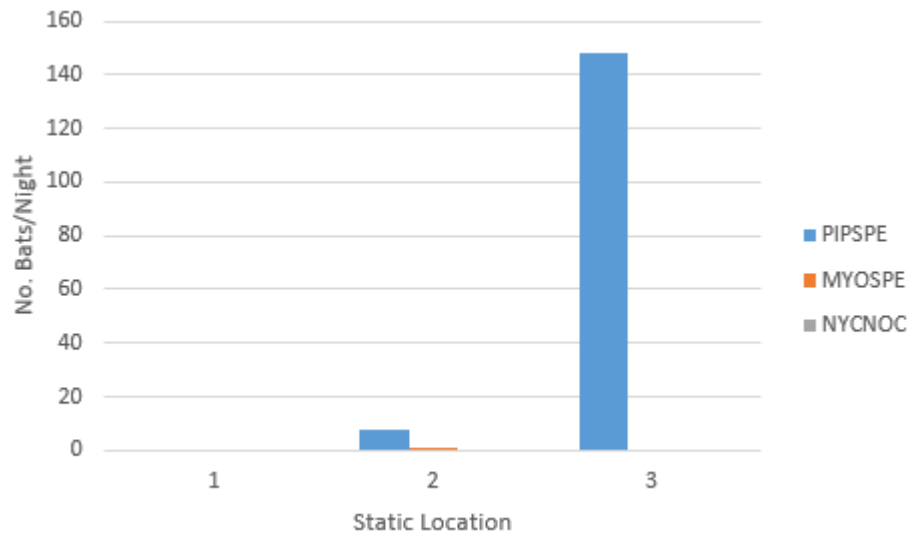


Figure 6: Spatial variation in activity recorded during the first static monitoring survey (April/May 2019).
Note - detector failure at Location 1 during this survey and no recordings obtained.

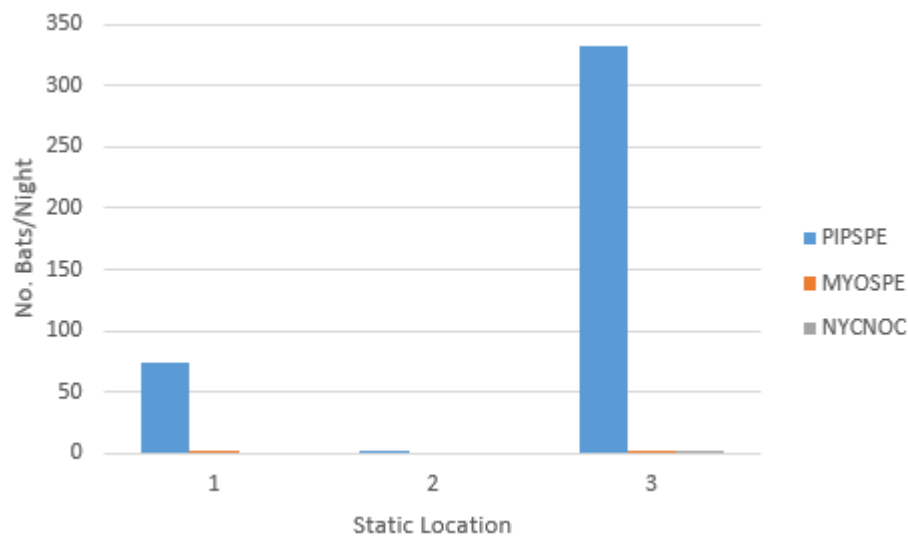


Figure 7: Spatial variation in activity recorded during the second static monitoring survey (June 2019)

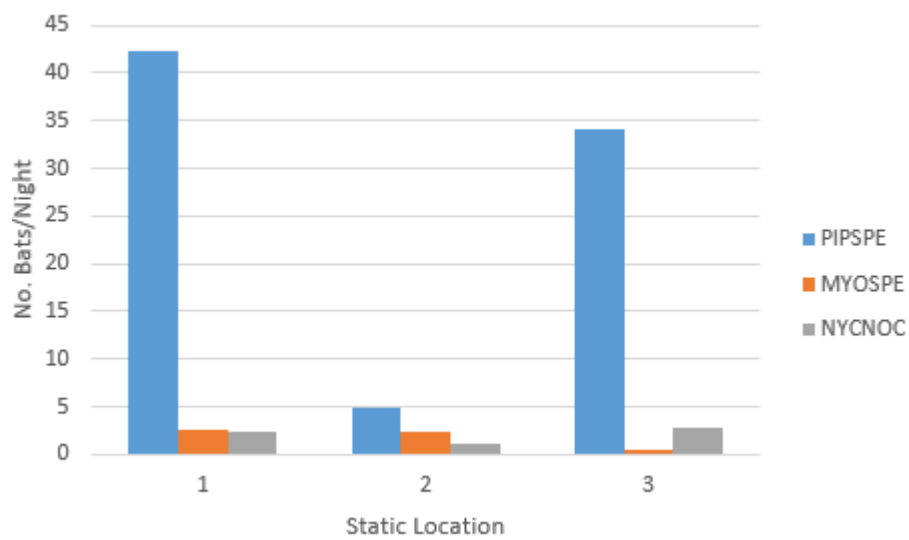


Figure 8: Spatial variation in activity recorded during the third static monitoring survey (September 2019)

4.0 Conclusion and Recommendations

- 4.1 Table 5 and Table 6 summarise the evaluation for commuting and foraging bats respectively, applying the framework set out in Chapter 2.0.

Table 5: Evaluation of the site for commuting bats

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Linear Features (Score)	Value (Score)
Pipistrelle (2)	Large number of bats (20)	Small number (3)	Un-vegetated fences and large field sizes (2)	County (27)
Myotis (5)	Small number of bats (10)	None (1)	Un-vegetated fences and large field sizes (2)	Local (18)
Noctule (5)	Individual bats (5)	None (1)	Un-vegetated fences and large field sizes (2)	Local (13)

Table 6: Evaluation of the site for foraging bats

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Features (Score)	Value (Score)
Pipistrelle (2)	Large number of bats (20)	Small number (3)	Isolated woodland patches, less intensive arable and/or small towns and villages (3)	County (28)

Species (Score)	Number Of Bats (Score)	Roosts/Potential Roosts Nearby (Score)	Type And Complexity Of Features (Score)	Value (Score)
Myotis (5)	Small number of bats (10)	None (1)	Isolated woodland patches, less intensive arable and/or small towns and villages (3)	Local (19)
Noctule (5)	Individual bats (5)	None (1)	Isolated woodland patches, less intensive arable and/or small towns and villages (3)	Local (14)

- 4.2 The site has county-level importance for foraging and commuting pipistrelle bats (taking into account the presence of the confirmed day roost at Trows Farm adjacent to the site) and local-level importance for both Myotis and noctule for foraging and commuting.
- 4.3 Recommendations relating to tree protection measures and sensitive lighting design are included in the ecological assessment (report ref: 7403.02.002). These should be sufficient to maintain the integrity of the woodland and other habitats adjacent to the site as a foraging and commuting resource. Within the central and southern parts of the site mature trees should be retained and protected from construction activities and light spill within the scheme as these are a valuable commuting and foraging features for bats. The north, east and west parts of the site are open and exposed and have limited value for bats. A well designed landscaping scheme will service to enhance the foraging and commuting habitats at the site for local bat populations.

APPENDIX A: Transect Survey Data

Visit	Date	Sunset	Start	End	Temperature °C		Wind**		Cloud*		Precipitation	Moon Illumination %
					Start	End	Start	End	Start	End		
1	29/04/2019	20.35	20.35	22.50	12	9	1	1	7	4	None	Third quarter
2	03/06/2019	21.30	21.30	23.34	13	11	1	1	8	7	None	New moon
3	16/09/2019	19.23	19.23	21.23	14	12	1	1	3	3	None	Full moon

*Cloud cover is reported in oktas or eighths (i.e. 0 oktas represents the complete absence of cloud, 1 okta cloud cover of 1 eighth or less, and so on to 8 oktas which represents full cloud cover), with the additional convention that 9 oktas represents sky obscured by fog or mist.

**Wind strength is reported using the Beaufort Scale of Wind Force, this scale runs from 0 to 12, information on the conditions experienced during surveys are as follows: 0 – Calm (vertical smoke); 1 - Light Air (slight smoke drift); 2 - Light Breeze (leaves gently rustle).

APPENDIX B: Static Monitoring Data

Static Monitoring Visit 1

Night	Date	Sunset	Sunrise	Weather Conditions	Temperature °C		Wind (mph)*		Precipitation		Moon Illumination %	Humidity %	
					Low	High	High	Beaufort Scale	Type	Duration (mins)		Low	High
1	30/04/2019 - 01/05/2019	20.36	5.35	Cool, passing clouds	9	13	3	1	None	N/A	Waning Crescent	72	94
2	01/05/2019 - 02/05/2019	20.38	5.33	Overcast and cool	5	11	8	3	Light shower	Max 30 mins	Waning Crescent	77	100
3	02/05/2019 - 03/05/2019	20.40	5.31	Light rain	7	11	9	3	Drizzle	Max 6 hours	Waning Crescent	77	100
4	03/05/2019 - 04/05/2019	20.41	5.29	Cool, passing clouds	3	7	13	4	None	N/A	New moon	76	87
5	04/05/2019 - 05/05/2019	20.43	5.27	Chilly, passing clouds	7	9	9	2	None	N/A	New moon	50	93
6	05/05/2019 - 06/05/2019	20.45	5.25	Overcast and cool	6	8	12	3	None	N/A	New moon	62	76
7	06/05/2019 - 07/05/2019	20.47	5.23	Cool, passing clouds	4	9	6	2	None	N/A	New moon	58	93

*Wind strength is reported using the Beaufort Scale of Wind Force, this scale runs from 0 to 12, information on the conditions experienced during surveys are as follows: 0 – Calm (vertical smoke); 1 - Light Air (slight smoke drift); 2 - Light Breeze (leaves gently rustle).

Static Monitoring Visit 2

Night	Date	Sunset	Sunrise	Weather Conditions	Temperature °C		Wind (mph)*		Precipitation		Moon Illumination %	Humidity %	
					Low	High	High	Beaufort Scale	Type	Duration (mins)		Low	High
1	03/06/2019 - 04/06/2019	21.28	4.45	Cool	11	13	10	3	None	N/A	New moon	72	82
2	04/06/2019 - 05/06/2019	21.29	4.45	Cool, passing clouds	9	13	8	3	None	N/A	New moon	88	100
3	05/06/2019 - 06/06/2019	21.30	4.44	Cool	6	10	3	1	None	N/A	Waxing crescent	82	100
4	06/06/2019 - 07/06/2019	21.31	4.43	Cool	7	12	3	1	None	N/A	Waxing crescent	72	87
5	07/06/2019 - 08/06/2019	21.32	4.43	Cloud and fog	11	13	6	2	Rain	30 minutes	Waxing crescent	94	100

*Wind strength is reported using the Beaufort Scale of Wind Force, this scale runs from 0 to 12, information on the conditions experienced during surveys are as follows: 0 – Calm (vertical smoke); 1 - Light Air (slight smoke drift); 2 - Light Breeze (leaves gently rustle).

Static Monitoring Visit 3

Night	Date	Sunset	Sunrise	Weather Conditions	Temperature °C		Wind (mph)*		Precipitation		Moon Illumination %	Humidity %	
					Low	High	High	Beaufort Scale	Type	Duration (mins)		Low	High
1	03/09/2019 - 04/09/2019	19.54	6.22	Light rain	13	16	8	3	Light rain	All night	Waxing crescent	88	100
2	04/09/2019 - 05/09/2019	19.52	6.23	Passing clouds	9	14	18	5	Light rain	1 hour	Waxing crescent	77	82
3	05/09/2019 - 06/09/2019	19.49	6.25	Cool	12	13	13	4	None	None	First quarte	82	94
4	06/09/2019 - 07/09/2019	19.47	6.27	Passing clouds	12	13	8	3	Light rain	1 hour	First quarte	88	94
5	07/09/2019 - 08/09/2019	19.44	6.29	Cool	4	14	6	2	None	None	First quarte	76	93

*Wind strength is reported using the Beaufort Scale of Wind Force, this scale runs from 0 to 12, information on the conditions experienced during surveys are as follows: 0 – Calm (vertical smoke); 1 - Light Air (slight smoke drift); 2 - Light Breeze (leaves gently rustle).

DRAWINGS

G7403.02.007 – Bat Transect Survey Visit 1

G7403.02.008 - Bat Transect Survey Visit 2

G7403.02.009 - Bat Transect Survey Visit 3

G7403.02.010 - Bat Transect Route and Static Monitoring Locations



KEY

- Site boundary
- Survey boundary
- Myotis species
- Noctule
- Common pipistrelle
- Pipistrelle species
- Bat flightline (colour denotes bat species)

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Site Map

1:40,000

Rev	Description	Drawn	Approved	Date

TEP | **THE ENVIRONMENT PARTNERSHIP**

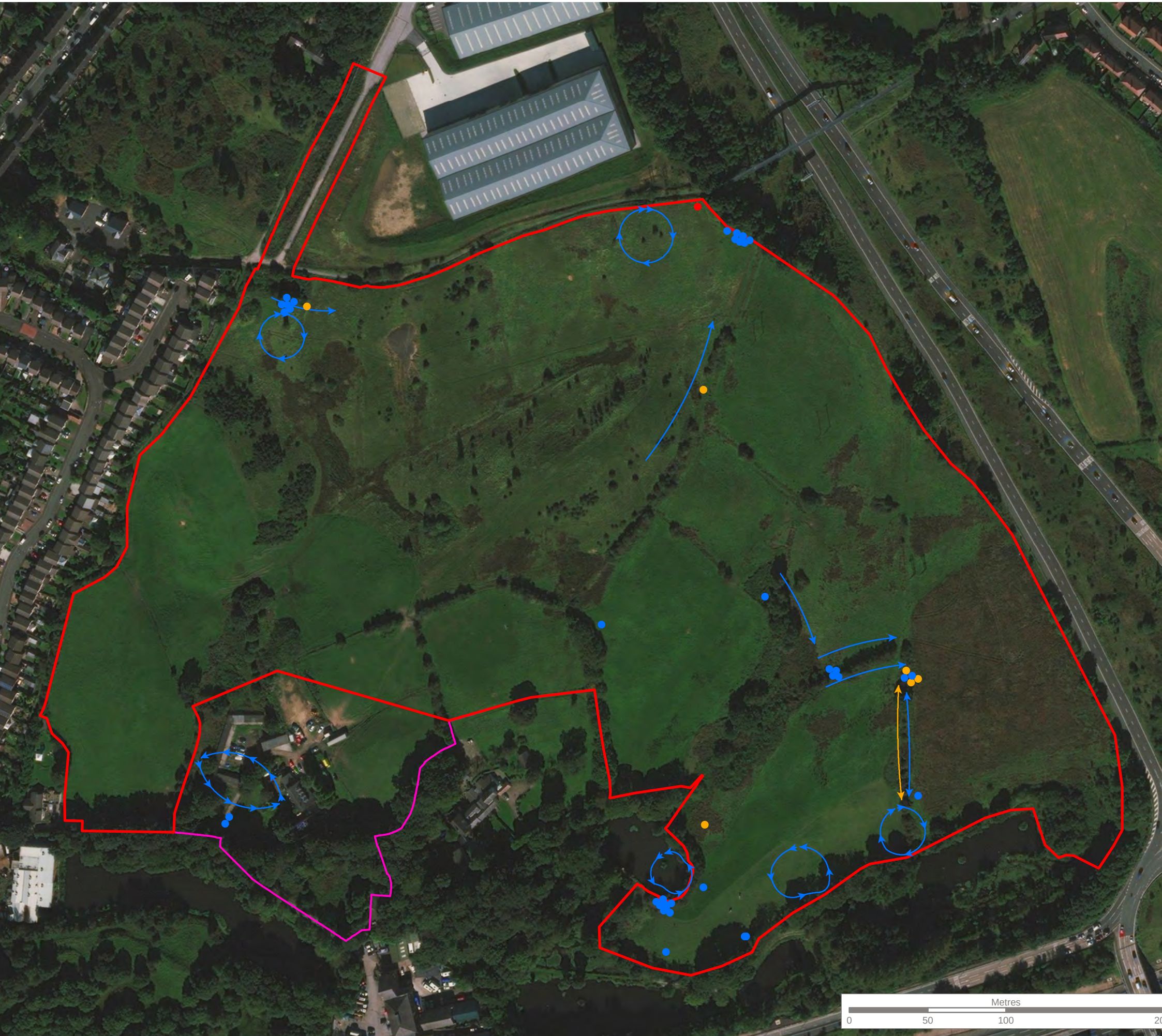
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Trows Farm, Castleton

Title
Bat Activity Transect
Visit 1 - 29th April 2019

Drawing Number
G7403.02.007

Drawn	Checked	Approved	Scale	Date
MK/CW	JO	LP	1:2,500 @ A3	09/03/2020



KEY

- Site boundary
- Survey boundary
- Myotis species
- Noctule
- Common pipistrelle
- Bat flightline (colour denotes bat species)

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Site Map

1:40,000

Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

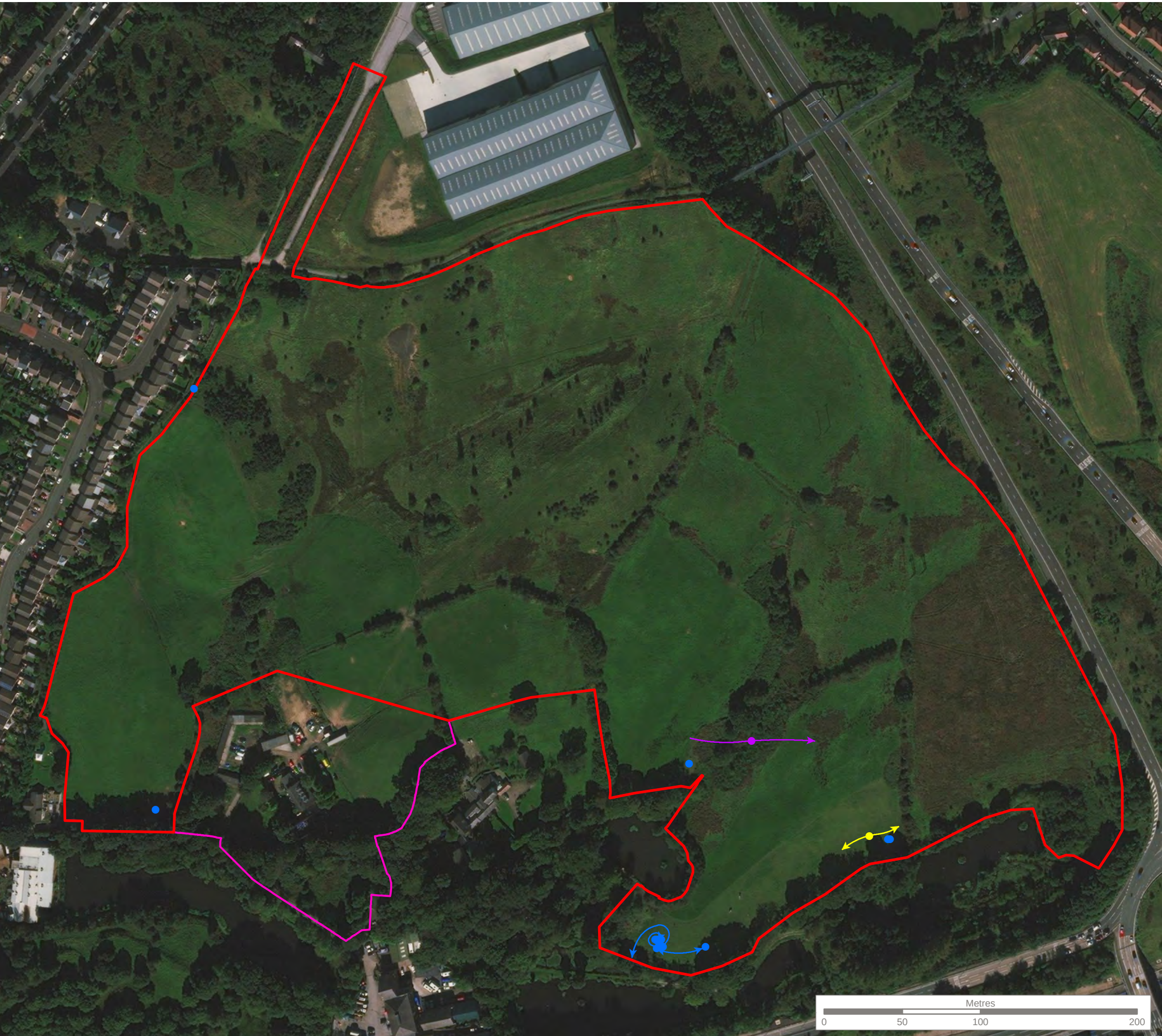
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Trows Farm, Castleton

Title
Bat Activity Transect
Visit 2 - 03rd June 2019

Drawing Number
G7403.02.008

Drawn	Checked	Approved	Scale	Date
MK/CW	JO	LP	1:2,500 @ A3	09/03/2020



KEY

- Site boundary
- Survey boundary
- Common pipistrelle
- Pipistrelle species
- Unknown species
- Bat flightline (colour denotes bat species)

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Site Map

1:40,000

Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

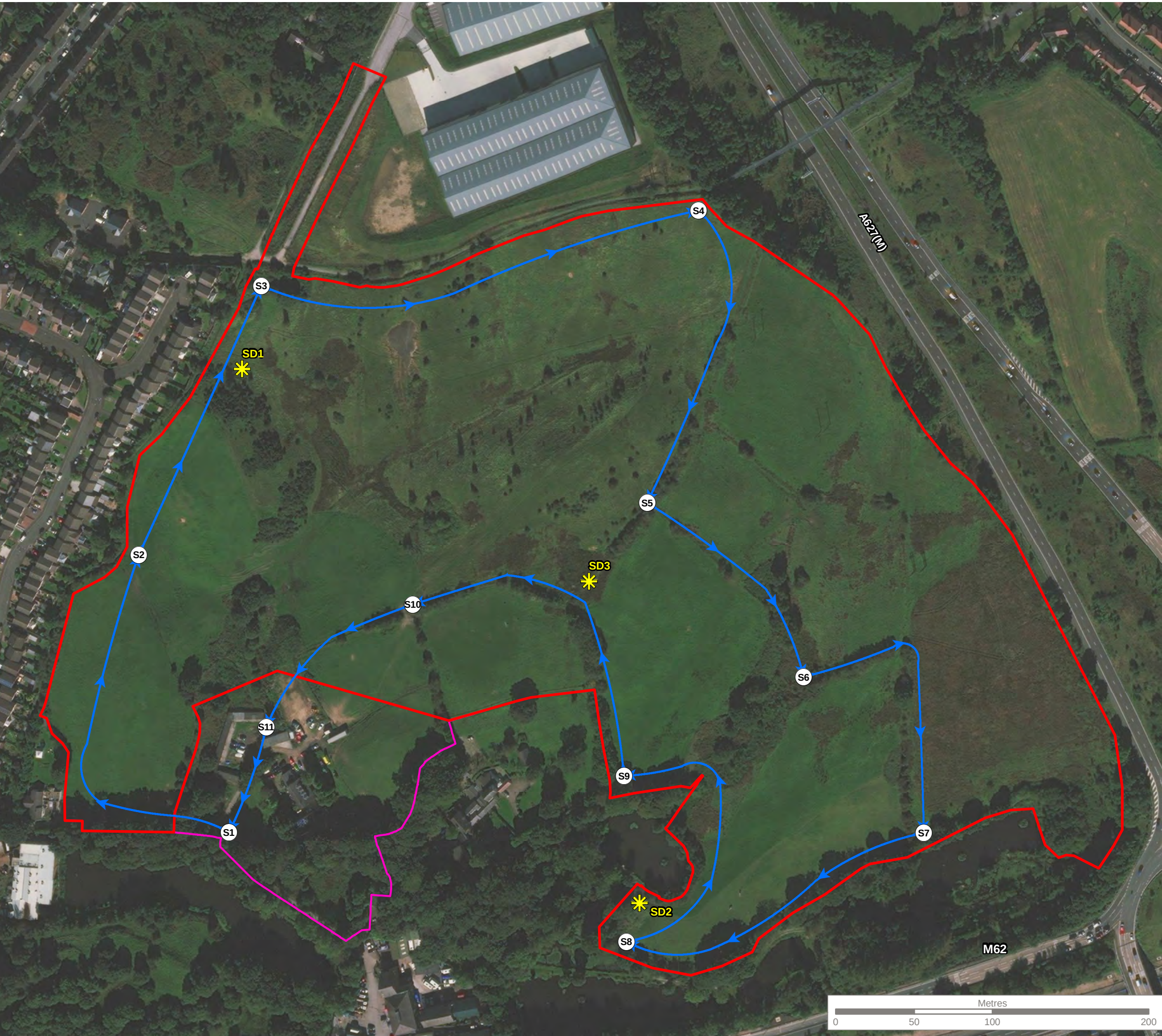
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Trows Farm, Castleton

Title
Bat Activity Transect
Visit 3 - 16th September 2019

Drawing Number
G7403.02.009

Drawn	Checked	Approved	Scale	Date
MK/CW	JO	LP	1:2,500 @ A3	09/03/2020



KEY

- Site boundary
- Survey boundary
- Static detector location
- Survey stop reference
- Bat transect route

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Site Map

1:40,000

Rev	Description	Drawn	Approved	Date

TEP | **THE ENVIRONMENT PARTNERSHIP**

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

Project
Trows Farm, Castleton

Title
Bat Activity Transect Route and Static Detector Locations

Drawing Number
G7403.02.010

Drawn	Checked	Approved	Scale	Date
CR/CW	JO	LP	1:2,500 @ A3	09/03/2020

APPENDIX D: Breeding Bird Survey Report



THE
ENVIRONMENT
PARTNERSHIP



COWM TOP LANE, CASTLETON, ROCHDALE

BREEDING BIRD SURVEY

TEP Technical Report March 2020

TEP

Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

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

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

Document Title	Cowm Top Lane, Castleton, Rochdale Breeding Bird Survey Report
Prepared for	BDW Trading Ltd and Global Land and Property Ltd
Prepared by	TEP Ltd
Document Ref	7503.005

Author	Jenny Gibson
Date	March 2020
Checked	Mike Walker
Approved	Mike Walker

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
2.0	08/01/20	LP	MW	Updated red line site boundary	Superseded
3.0	09/03/20	DY	LP	Updated red line site boundary	Issued

CONTENTS

1.0	General Details	5
2.0	Introduction	6
3.0	Method	8
4.0	Results.....	9
5.0	Evaluation and Recommendations.....	14
6.0	References	16

1.0 General Details

Central NGR	SD 89126 10375
Site Location	Cowm Top Lane, Castleton, Rochdale
Date(s)	Visit 1 = 05/04/2019 Visit 2 = 10/05/2019 Visit 3 = 07/06/2019
Surveyor(s)	Tim Ross, Marianna Szpunar, Bill Aspin
Weather	1st visit - Dry and cold with partial cloud cover 2nd visit – Mostly dry with partial cloud cover 3rd visit - Dry with full cloud cover
Methods	Three morning survey visits using transect method, including a buffer extending 100m around the site boundary.
Seasonal Constraints	The survey was undertaken during the optimum breeding bird survey period. There are no constraints associated with the survey.
Drawing References	G7403.02.004 Breeding Bird Survey - Visit 1 05.04.2019 G7403.02.005 Breeding Bird Survey - Visit 2 10.05.2019 G7403.02.006 Breeding Bird Survey - Visit 3 07.06.2019

2.0 Introduction

- 2.1 TEP Ltd was commissioned in December 2018 by BDW Trading Ltd. and Global Land and Property Ltd to provide ecology services in relation to Cowm Top Lane, Castleton, Rochdale, hereon in referred to as "the site".
- 2.2 The breeding bird survey forms part of a suite of ecology services. The report has been requested to inform future design, therefore there are currently no site proposals available.
- 2.3 The drawings for the breeding bird survey include two boundaries, the site boundary (S) and a 100m offset buffer (SBU). Drawings G7403.02.001 to G7403.02.003 illustrate these boundaries as well as the results of each visit of the survey.

Site Overview

- 2.4 The site comprises a parcel of land in Castleton, in the borough of Rochdale. Cripple Gate Lane borders the site to the north, the A627(M) to the east, Trows Lane and the M62 beyond this to the south and residential development off Leander Drive to the west. The site is centred on grid reference SD 89126 10375. There are several waterbodies to the south of the site, beyond that is the M62. To the east of the site lies a residential development. The wider landscape is largely residential with open fields to the south east.

Pre-existing Site Data

- 2.5 Desktop records of protected or notable bird species recorded within a 1km radius of the site were gathered from Greater Manchester Local Records Centre (GMLRC). Bird species classed as notable are those listed on any of the following:
- Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
 - Species of principal importance under Section 41 of the Natural Environment and Communities Act 2006 (S41);
 - Red and Amber listed Bird of Conservation Concern (BoCC) species (Eaton *et al.* 2015) (BRd/ BAm);
 - Bird species listed on the Greater Manchester Local Biodiversity Action Plan (LBAP).
- 2.6 The desk study (ref: 7403.02.001) identified approximately 80 records of 14 notable bird species recorded at the site, these are listed below:
- | | |
|---------------------------|-----------------------------|
| • Bullfinch (S41, BAm) | • House Sparrow (S41, BRd) |
| • Cuckoo (S41, BRd) | • Lapwing (S41, BRd) |
| • Curlew (S41, BRd) | • Lesser Redpoll (S41, BRd) |
| • Herring Gull (S41, BRd) | |

- Lesser Spotted Woodpecker (S41, BRd)
- Linnet (S41, BRd)
- Reed Bunting (S41, BAm)
- Skylark (S41, BRd)
- Song Thrush (S41, BRd,)
- Starling (S41, BRd)
- Willow Tit (S41, BRd, LBAP)

3.0 Method

- 3.1 The survey was carried out applying methods based on the Breeding Bird Survey (BBS) and Common Bird Census (CBC) methods developed by the British Trust for Ornithology (Gilbert *et al.* 1998).
- 3.2 Visits were carried out in the morning period, starting at least half an hour after dawn. Each survey visit was carried out approximately 4 weeks apart, over the period April to June.
- 3.3 Bird species and activity patterns were recorded and mapped using standard BTO symbology.
- 3.4 Three survey visits were undertaken using pre-determined transect routes to cover the entire site.
- 3.5 Bird species within the 100m surrounding the site boundary were also recorded during the survey, as a proportion of the bird's foraging or nesting habitat is likely to be within the site.

4.0 Results

Visit	Date	Start Time	Finish Time
Visit 1	05/04/19	06:55 hrs	09:35 hrs
Visit 2	10/05/18	08:45 hrs	10:50 hrs
Visit 3	05/06/18	06:10 hrs	09:30 hrs

Table 1: Counts of bird species recorded during the 2018 breeding bird season, including conservation and likely breeding status.

Species	Visit 1		Visit 2		Visit 3		Status	Likely Breeding Status (No. of pairs)	
	S	SBU	S	SBU	S	SBU		S	SBU
Blackbird	7	12	9	12	6	7		C (1), Pr (4)	C (1), Pr (6)
Blackcap			1	3	2	6		Po	Pr (3), Po
Black-Headed Gull		1		1	1	2	BAm	N	Po
Blue Tit	5	9	4	5	5	9		C (2), Pr (1)	C (3), Pr (1)
Bullfinch			2	2	2	2	S41, BAm	Pr (1)	Pr (1)
Buzzard					3	3		Po	Po
Canada Goose	4	12	2	4		3		Po	C (2), Pr (1)
Carrion Crow	2	6	1	3	6	6		N	Po
Chaffinch		1		2	1	1		Po	Pr (1)
Chiffchaff		1	2	5	1	1		Po	Pr (3), Po
Coal Tit					1	1		N	N

Species	Visit 1		Visit 2		Visit 3		Status	Likely Breeding Status (No. of pairs)	
	S	SBU	S	SBU	S	SBU		S	SBU
Collard Dove	1	1			1	1		N	N
Cormorant				2		1		N	N
Dunnock	6	10	3	11	2	3	S41, BAm	Pr (2)	Pr (4)
Goldfinch	2	4	4	4	6	6		C (1), Pr (3)	C (1), Pr (3)
Great Tit	5	13	5	7	4	9		Pr (2)	C (2), Pr (2)
Greenfinch	3	3			1	1		Pr (1)	Pr (1), Po
Grey Heron		1	1	1				N	N
Herring Gull	2	2				1	S41, BRd	N	Po
House Martin			2	2			BAm	Po	Po
House Sparrow		3	2	3	2	4	S41, BAm	Po	Pr (2 col), Po
Jackdaw	1	1	8	8	1	2		N	Po
Kestrel	1	1	2	2	1	1	BAm	Po	Po
Lesser Black-backed Gull	1	1	2	2	7	7	BAm	N	Po
Linnet					1	1	S41, BRd	Po	Po
Little Egret					1	1		N	N
Long-tailed Tit	1	1						Pr (1)	Pr (2)

Species	Visit 1		Visit 2		Visit 3		Status	Likely Breeding Status (No. of pairs)	
	S	SBU	S	SBU	S	SBU		S	SBU
Magpie	6	9	2	5	4	5		Pr (1), Po	Pr (2), Po
Mallard		5		3		1	BAm	N	Po
Meadow Pipit	1	1					BAm	N	N
Mistle Thrush					1	1	BRd	Po	Po
Moorhen		1	1	4				N	C (1), Po
Nuthatch		1			1	1		Po	Po
Oystercatcher	1	1					BAm	N	N
Reed Bunting	2	3	1	1	2	2	S41, BAm	Pr (2)	Pr (2)
Robin	2	4	3	5	6	6		C (1), Pr (1)	C (1), Pr (1)
Sand Martin					7	8		N	C (1 col)
Song Thrush			1	1	3	4	S41, BRd	Pr (1)	Pr (1)
Starling		6	3	9	45	45	S41, BRd	Po	Pr (1 col)
Swallow					4	5		N	C (1 col)
Swift					4	6	BAm	N	Po
Whitethroat					4	4		C (1)	C (1), Po
Willow Warbler			8	11	2	2	BAm	Pr (2)	Pr (2)
Wood Pigeon	4	11	20	23	9	16		Po	Po

Species	Visit 1		Visit 2		Visit 3		Status	Likely Breeding Status (No. of pairs)	
	S	SBU	S	SBU	S	SBU		S	SBU
Wren	5	15	6	13	3	8		Pr (2), Po	Pr (3), Po
Total Species	21	30	25	29	36	39			

S: Site; SBU: Site including 100m buffer

Status Key: WCA1 = Schedule 1, S41 = Section 41; BRd = BoCC Red List; BAm = BoCC Amber List; LBAP = Local Biodiversity Action Plan Species.

Likely Breeding Status Key: C = Confirmed, Pr = probably breeding within site, Po = possibly breeding within site, N = not breeding within site. col = colony

Results Summary

- 4.1 This breeding bird survey has been conducted to identify areas of importance for birds and any constraints concerning birds for any future proposals.
- 4.2 There are historic records of fourteen notable species that have been recorded at the site. Seven of these species; bullfinch, herring gull, house sparrow, linnet, reed bunting, song thrush and starling were recorded within the site and/or 100m survey buffer during the 2019 breeding bird survey.
- 4.3 A total of forty five bird species were recorded within the site boundary and 100m buffer during the breeding bird survey; 30 species in visit one, 29 species in visit two and 39 species in visit three. Forty three bird species were recorded within the site itself.
- 4.4 Ten bird species were confirmed to be breeding within the site boundary and 100m buffer. These are blackbird (1 pair), blue tit (3 pairs), Canada goose (2 pairs) goldfinch (1 pair), great tit (2 pairs), kestrel (1 pair), moorhen (1 pair), robin (1 pair), swallow (1 pair) and whitethroat (1 pair). Blackbird (1 pair), blue tit (2 pairs), goldfinch (1 pair), kestrel (1 pair), robin (1 pair), and whitethroat (1 pair) were confirmed to be breeding within the site itself. None of the species confirmed to be breeding within the site are notable species.
- 4.5 Fourteen other probable breeding species were recorded within the site and 100m buffer during the breeding bird survey, with 10 of these probable breeding species noted within the site itself.
- 4.6 Of the probable breeding species recorded during the survey, bullfinch (1 pair), dunnock (2 pairs), house sparrow (2 colonies), reed bunting (2 pairs), song thrush (1 pair), starling (1 colony) and willow warbler (2 pairs) are considered to be notable. Of

these species, bullfinch, dunnock, reed bunting, song thrush and willow warbler were probably breeding within the site itself.

5.0 Evaluation and Recommendations

- 5.1 The 45 bird species recorded within the site boundary and 100m survey buffer represents a moderate species diversity with the majority of species recorded being commonplace and widespread.
- 5.2 Fuller (1980) devised a method of classifying the ornithological interest of sites for conservation based on three site attributes: population size, rarity and diversity.
- 5.3 No significant breeding bird concentrations (i.e. 1% or more of the national breeding population) or nationally rare breeding bird species (i.e. between 1 and 1,000 breeding pairs) (Musgrove *et al.* 2013) were recorded during the survey.
- 5.4 The total number of confirmed, probable and possible breeding bird species recorded within a site also indicates its significance. Table 2 includes the breeding diversity criteria devised by Fuller.

Table 2: Significance of the total number of breeding species recorded at a site

Local	County	Regional	National
25-49	50-69	70-84	85+

- 5.5 Based on the above criteria, the 38 confirmed, probable and possible breeding bird species recorded within the site and surrounding 100m buffer indicates that it is of local significance for breeding birds. The 30 confirmed, probable and possible breeding bird species recorded within the site itself indicates that the site itself is also of local significance for breeding birds.
- 5.6 No ground nesting farmland bird species were recorded during the 2019 breeding bird survey.
- 5.7 A number of notable bird species associated with nesting in scrub, hedgerows and trees were recorded as confirmed or probable breeding species within the proposed site and 100m survey buffer, including bullfinch, dunnock, song thrush, starling and willow warbler. All of these species apart from starling were likely to breed within the site itself. Two pairs of reed bunting are likely to be breeding with wetter areas and associated marshy grassland vegetation within the site.
- 5.8 It is likely that house sparrow, starling, swift and house martin nested in the residential properties and gardens adjacent to the site within the 100m buffer.
- 5.9 Mallard nest on the ground close to water, with one possible breeding pair on a pond to the south of the site in the 100m survey buffer.

-
- 5.10 The survey results indicate that the greatest value of the site for breeding birds are the trees, shrubs, scrub and hedgerows around the site perimeter and along field boundaries within the site. If it is necessary to remove hedgerows, trees and scrub, this would reduce the amount of breeding and nesting habitat available for these species. This habitat should therefore be retained and/or enhanced wherever possible. If trees are to be removed, they should be replaced using a range of native species to create a varied vegetation structure to suit a wide range of breeding bird species. Fruiting tree and shrub species and/or species that are attractive to insects will also provide additional foraging resources for numerous bird species.
- 5.11 A nest box scheme including a variety of nest box types should be undertaken as part of the development, including small nest boxes with holes for bird species including house sparrow, great tit and blue tit. Open fronted nest boxes suitable for robin, large nest boxes with holes suitable for starling and large nest boxes suitable for jackdaw would provide additional nesting sites.
- 5.12 All wild birds and their nests and eggs are protected under the *Wildlife and Countryside Act 1981*, as amended. It is recommended that all tree and vegetation clearance across site avoids the core breeding bird season, March to August inclusive; although bird nesting can take place outside this period. If vegetation clearance works are necessary during the core breeding bird season, or at any time when bird nesting is suspected, a nesting bird check of the affected area by an ecologist is required immediately prior to the clearance works taking place. Extensive clearance of potential bird nesting habitat is not always practical and development programmes should take this constraint into account.

6.0 References

Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D., Stroud, D. and Gregory, R., 2015. Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds*, 108, pp.708-746.

Ferguson-Lees, J., Castell, R. and Leech, D., 2011. A field guide to monitoring nests.

Fuller, R.J., 1980. A method for assessing the ornithological interest of sites for conservation. *Biological Conservation*, 17(3), pp.229-239.

Gilbert, G., Gibbons, D.W. and Evans, J., 1998. Bird Monitoring Methods: a manual of techniques for key UK species.

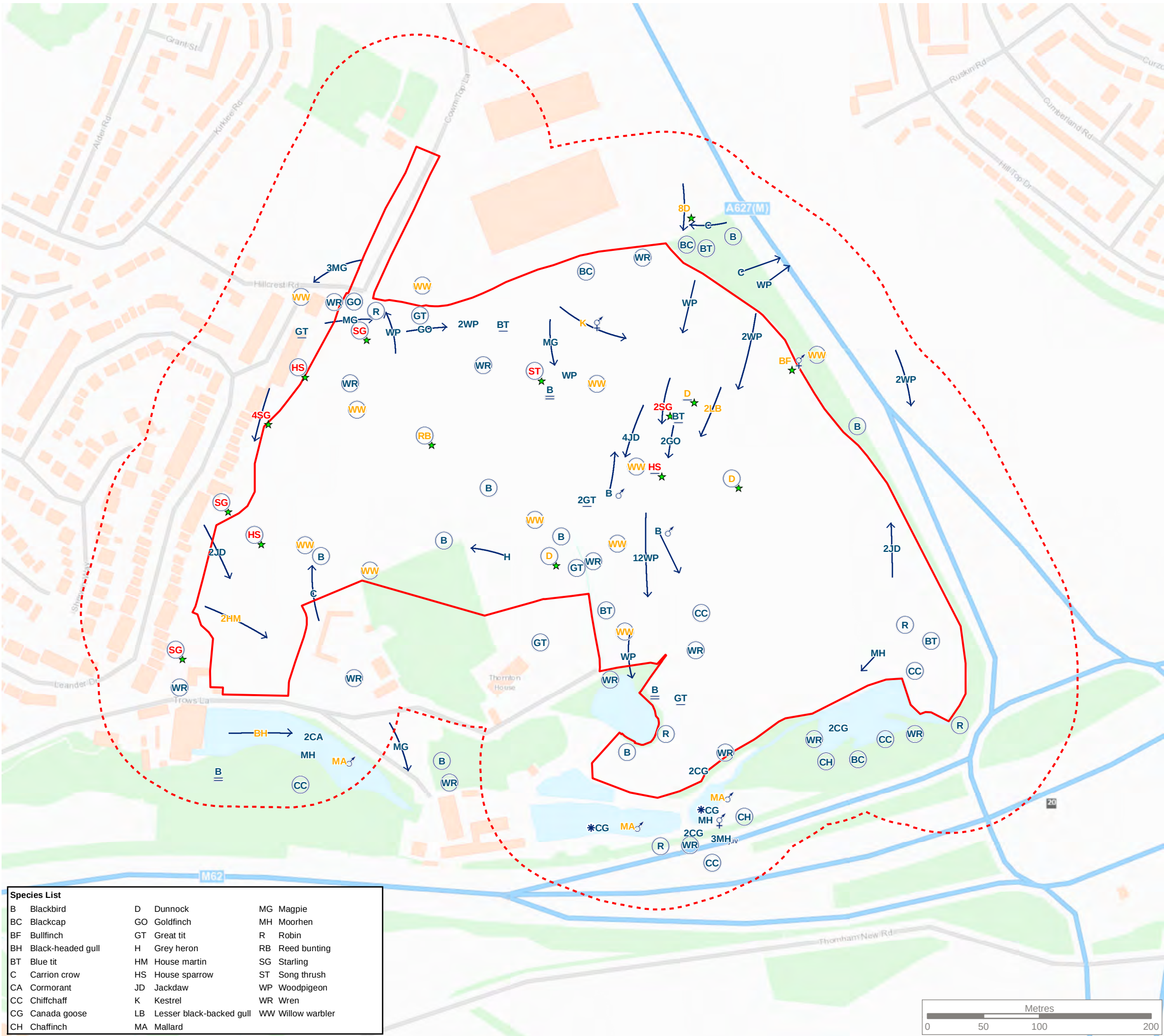
Musgrove, A., Aebischer, N., Eaton, M., Hearn, R., Newson, S., Noble, D., Parsons, M., Risely, K. and Stroud, D., 2013. Population estimates of birds in Great Britain and the United Kingdom. *British Birds*, 106, pp.64-100.

DRAWINGS

G7403.02.004 Breeding Bird Survey - Visit 1 05.04.2019

G7403.02.005 Breeding Bird Survey - Visit 2 10.05.2019

G7403.02.006 Breeding Bird Survey - Visit 3 07.06.2019



Species List					
B	Blackbird	D	Dunnock	MG	Maggie
BC	Blackcap	GO	Goldfinch	MH	Moorhen
BF	Bullfinch	GT	Great tit	R	Robin
BH	Black-headed gull	H	Grey heron	RB	Reed bunting
BT	Blue tit	HM	House martin	SG	Starling
C	Carrion crow	HS	House sparrow	ST	Song thrush
CA	Cormorant	JD	Jackdaw	WP	Woodpigeon
CC	Chiffchaff	K	Kestrel	WR	Wren
CG	Canada goose	LB	Lesser black-backed gull	WW	Willow warbler
CH	Chaffinch	MA	Mallard		

KEY

Site boundary

Site boundary - 100m offset

Section 41 species

A male

juv

Juvenile

Male and female pair

A bird calling

A bird in song

A bird repeatedly giving alarm-calls/other vocalisations

*

A nest occupied with eggs/brood

Directional flight line

Note
Red Red List Species **Amber** Amber List Species

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Rev	Description	Drawn	Approved	Date

TWP

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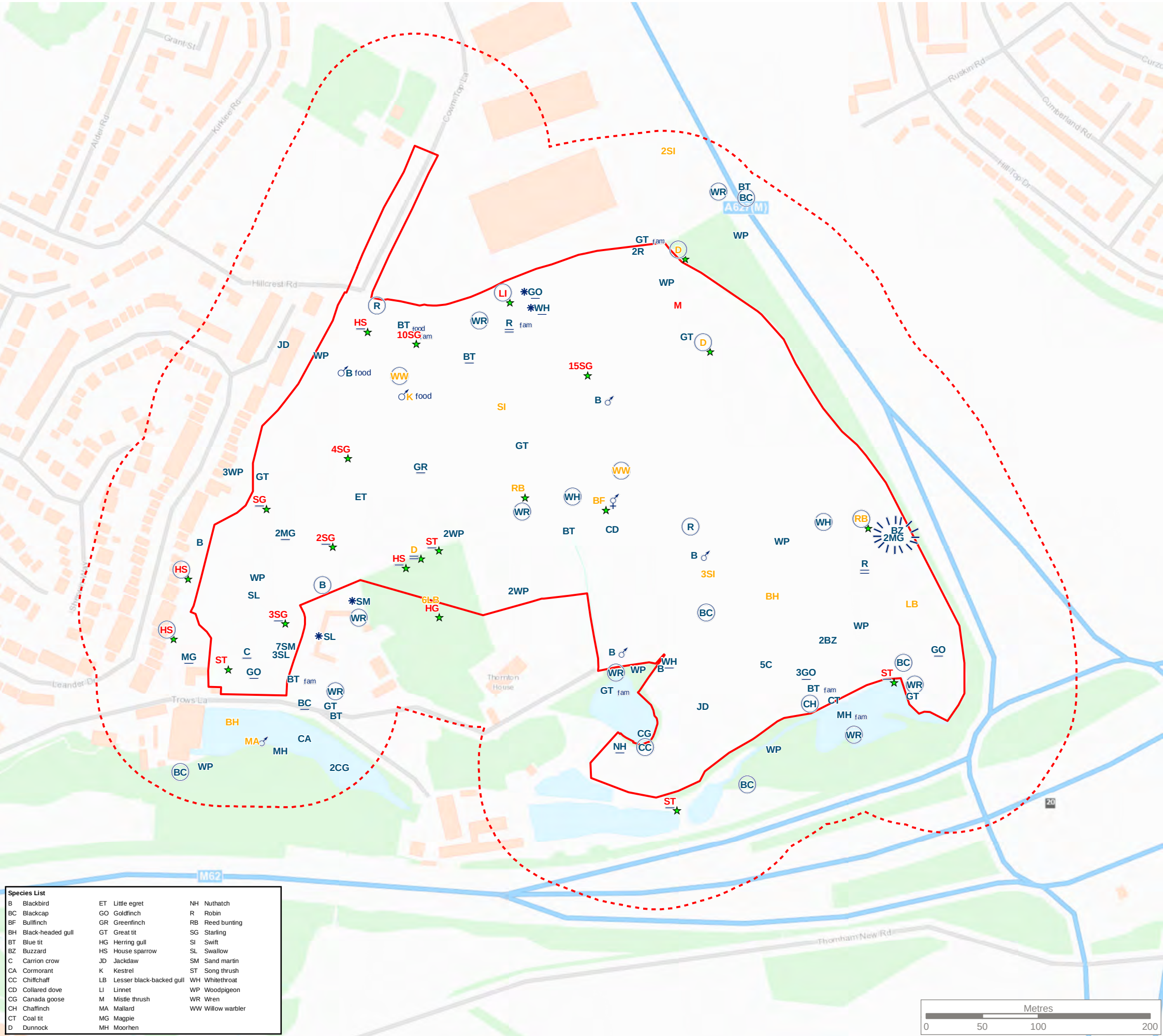
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Trows Farm, Castleton

Title
Breeding Bird Survey - Visit 2
10th May 2019

Drawing Number
G7403.02.005

Drawn	Checked	Approved	Scale	Date
RE/CW JO	DY		1:3,500 @ A3	09/03/2020



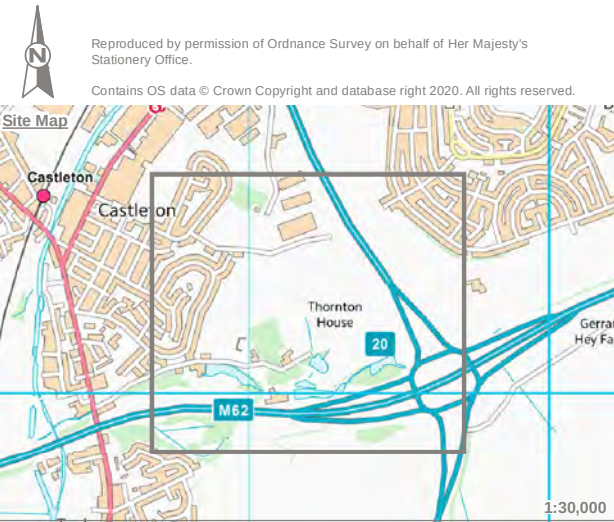
Species List		
B Blackbird	ET Little egret	NH Nuthatch
BC Blackcap	GO Goldfinch	R Robin
BF Bullfinch	GR Greenfinch	RB Reed bunting
BH Black-headed gull	GT Great tit	SG Starling
BT Blue tit	HG Herring gull	SI Swift
BZ Buzzard	HS House sparrow	SL Swallow
C Carrion crow	JD Jackdaw	SM Sand martin
CA Cormorant	K Kestrel	ST Song thrush
CC Chiffchaff	LB Lesser black-backed gull	WH Whitethroat
CD Collared dove	LI Linnet	WP Woodpigeon
CG Canada goose	M Mistle thrush	WR Wren
CH Chaffinch	MA Mallard	WW Willow warbler
CT Coal tit	MG Magpie	
D Dunnock	MH Moorhen	

KEY

- Site boundary
- Site boundary - 100m offset
- Section 41 species
- A male
- Family group of birds
- Male and female pair
- Family group of birds calling
- Family group of birds repeatedly giving alarm-calls/other vocalisations
- A bird calling and a nest occupied with eggs/brood
- A bird calling
- A bird carrying food
- A bird in song
- A bird repeatedly giving alarm-calls/other vocalisations
- A nest occupied with eggs/brood
- An aggressive encounter between two birds
- A male carrying food
- Male and female calling

Note

Red Red List Species Amber Amber List Species



Rev	Description	Drawn	Approved	Date



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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Trows Farm, Castleton

Title
Breeding Bird Survey - Visit 3
7th June 2019

Drawing Number
G7403.02.006

Drawn	Checked	Approved	Scale	Date
RE/CW JO	DY		1:3,500 @ A3	09/03/2020

Drawings

Phase 1 Habitat Survey (G8666.007) Planning Layout (Ref: 496 - P - PLF - 01 Rev 04)

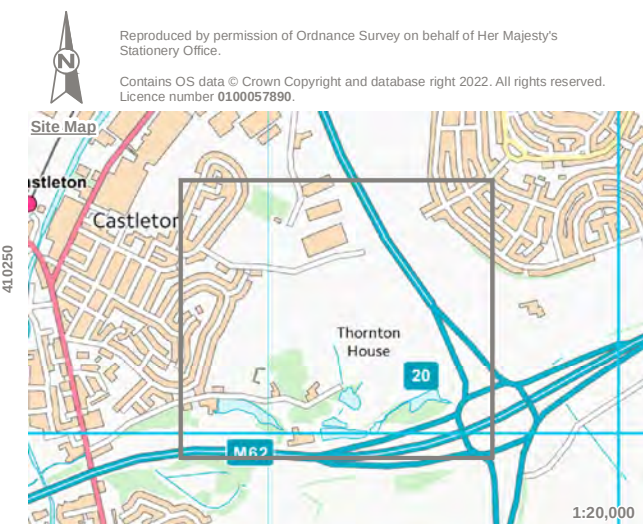


KEY

- Site boundary
- Target note
- Native blue bell
- Himalayan balsam
- Japanese knotweed
- Scattered scrub
- Scattered broad-leaved tree
- Scattered coniferous tree
- Broad-leaved tree with low bat suitability
- Running water
- Species-poor intact hedge
- Species-poor defunct hedge
- Species-poor hedge and trees
- Fence
- Semi-natural broad-leaved woodland
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Modified neutral grassland
- Marsh/marshy grassland
- Poor semi-improved grassland
- Continuous bracken
- Tall ruderal
- Standing water
- Bare ground with ephemeral/short perennial
- Bare ground
- Hardstanding

Note:

The locations of habitats and habitat features are indicative.



Rev	Description	Drawn	Approved	Date

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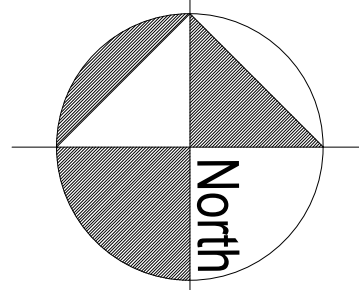
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Cown Top, Rochdale

Title
Phase 1 Habitat Survey

Drawing Number
G8666.007

Drawn	Checked	Approved	Scale	Date
SP	MK	IH	1:3,000 @ A3	09/06/2022



SCHEDULE OF ACCOMMODATION

Barratt Type	House Type	Sqft	No	Total Sqft
Private Sales Units				
Kensley - End	2 Bed Terraced House	624	8	4992
Kensley - Mid	2 Bed Terraced House	624	2	1248
Brandon - End	3 Bed Semi / Mews House	706	10	7060
Moresby	3 Bed Detached / Semi Detached Dual Aspect House	854	11	9394
Moresby - End	3 Bed Detached / Semi Detached Dual Aspect House	854	8	6832
Ellerton - End	3 Bed Semi / Mews House	830	68	56440
Ellerton - Mid	3 Bed Semi / Mews House	830	17	14110
Maidstone - End	3 Bed Semi / Mews House	830	16	13280
Maidstone - Mid	3 Bed Semi / Mews House	830	4	3320
Luttworth - SH	3 Bedroom Detached House	1000	13	13000
Kingville - End	4 Bed Townhouse	1072	66	10722
Kingville - Mid	4 Bed Townhouse	1072	20	21440
Stambourne - End	3 Bed Townhouse	1157	8	9256
Stambourne - Mid	3 Bed Townhouse	1157	4	4628
Alderny	4 Bed Dual Aspect Detached House	1225	25	30625
Dealy	3 Bedroom Int. Garage Detached House	881	2	1762
Windermere	4 Bedroom Int. Garage Detached House	1073	28	30044
Ripon	4 Bedroom Int. Garage Detached House	1121	11	12331
Halton	4 Bedroom Int. Garage Detached House	1267	17	21539
Lamberton	5 Bed Detached House	1552	18	27936
Private Total		356	359989	

DAVID WILSON HOMES

Archford (End)	3 bed house	832	33	27456
Archford (Mid)	3 bed house	832	6	4992
Hadley (End)	3 bed house	1001	1	1001
Hadley (Del)	3 bed house	1001	1	1001
Abbydale	3 bed house	1026	5	5130
Greenwood (End)	3 bed house	1179	28	33012
Greenwood (Mid)	3 bed house	1179	3	3537
Millford	4 bed house	1335	18	24030
Bayswater	4 bed house	1342	5	6710
Kirkdale	4 bed house	1354	9	12186
Hertford	4 bed house	1364	9	12276
Bradgate	4 bed house	1454	1	1454
Alfordale	4 bed house	1491	7	10437
Hilden	5 bed house	1539	8	12312
Emerson (Corner)	5 bed house	1822	4	7288
Emmerson	5 bed house	1822	1	1822
Private Total		139	164624	

Total number of units and square footage	495	524613
Gross Site Area in Acres		TBC
Open Space & Undevelopable Area in Acres		TBC
Net Site Area in Acres		31.21
Density (Units per Acre)		16
Density (Units per Hectare)		39
Square Foot / Acre		16,809

WARNING TO HOUSE PURCHASERS
Property Misdescriptions Act 1991

Buyers are warned that this is a working drawing and is not intended to be treated as descriptive material describing, in relation to any particular property or development, any of the specified matters prescribed by any Order made under the above act. The contents of this drawing may be subject to change at any time, and alterations and variations can occur during the progress of the works without revisions of the drawing. Consequently the layout, form, content and dimensions of the finished construction may differ materially from those shown. Nor do the contents of this drawing constitute a contract, part of any contract, or warranty.

KEY:

- Application Boundary Red Edge
- 5m Access Way
- 6m Access Way
- 10m Access Way
- Landscape Buffer
- Proposed dwelling and house type code
- Proposed garage(s) to be built
- AS/OPP Denotes handing of plot (As or Opposite)
- Personnel gates
- Indicative Tree Planting
Refer to PGLA Landscaping Design for actual positions
- POS
Refer to PGLA Landscaping Design for actual positions
- Private Grassed Areas
Refer to PGLA Landscaping Design for actual positions

Note:
Retaining Walls are shown on the site plans as this site has a very varied terrain.

04	Amended to LPA Comments	02.08.22	CL
03	Amended to noise report and JS comments. Also considered engineers comments	01.07.22	CL
02	Amended to initial LPA comments	23-05-22	AA
01	Amended to WSP comments	18-05-22	AA

Rev	Description	Date	Drawn	Chk'd
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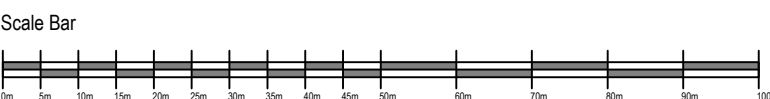
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Manchester
M16 9HQ
Tel: 0161 872 0161
Fax: 0161 855 2828

Job	TROWS FARM CASTLETON		
Title	PLANNING LAYOUT FULL		
Design By	Date	Drawing Number	Rev
AA	APR 22	496 - P - PLF - 01	04
Drawn By	Scale @ A1		
NC	1: 1000		

Right of way. To allow machinery to the northern lodge. From the southern boundary up to the lodge the easement is 6m. Around the actual lodge itself it is 10m.

Potential 5m easement / right of way for last lodge.





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