



THE
ENVIRONMENT
PARTNERSHIP



TOWNFIELDS BURY PRELIMINARY ECOLOGICAL ASSESSMENT

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Document Title	Preliminary Ecological Assessment
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Document Ref	9302.02.001

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Date	October 2023
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CONTENTS	PAGE
Executive Summary	4
1.0 Introduction	5
2.0 Method	8
3.0 Results	13
4.0 Assessment of Potential Impacts.....	21
5.0 Mitigation and Enhancement	24
6.0 Conclusions.....	27

TABLES	PAGE
Table 1: Species scoped out of the baseline surveys	10

FIGURES	PAGE
Figure 1: Site Location Plan	6
Figure 3: Mammal entry into the site from railway in the south	17
Figure 4: Mammal trails in semi-improved grassland	17
Figure 5: Badger foraging (snuffle holes)	17

APPENDICES	
APPENDIX A:	Target Notes
APPENDIX B:	Drawings

Executive Summary

1. An updated extended Phase 1 habitat survey was carried out in October 2023 at the site known as Townfields in Bury to inform planning proposals and site development. This is further to the Ecological Desk Study and Ecological Constraints and Opportunities Report completed in March 2022.
2. The Townside Site of Biological Importance (SBI) will be affected as a result of the proposed development. However, the habitats which lead to this site being designated may have degraded over time and may require further survey to ensure that the SBI status is still relevant.
3. All habitats present on site including marshy grassland, woodland and scrub habitats will be lost as a result of the proposed development.
4. Invasive species Japanese knotweed was found on site. This should be controlled and treated in line with an invasive species management plan prior to site development.
5. A Precautionary Working Method Statement (PWMS) is recommended for notable mammals including badger and hedgehog which needs to be adhered to throughout the duration of works to avoid impacts on such species should they range onto site during construction operations.
6. A pre-commencement badger survey is required ahead of construction to ensure that badgers have not ranged into the site.
7. If tree T1 or the main road overpass will be removed or affected as part of the proposed development, these features may be subject to further pre-commencement inspections and nocturnal roost surveys to confirm if roosting bats are present on site. Bat boxes should be installed on new buildings and new or retained trees to mitigate for any lost roosting habitat.
8. A sensitive lighting strategy will be required during construction to minimise the effects of lighting on any commuting or foraging bats.
9. Works should be completed outside of the nesting bird period (typically March to August), or vegetation should be removed following a nesting bird check undertaken by an ecologist no more than 24 hours before removal. Bird boxes should also be installed on new buildings and new or retained trees as mitigation for any lost nesting habitat.
10. A NVC survey should be carried out to assess the plant species present on site for the potential to support populations of protected invertebrate species. A bug hotel should be installed on site to mitigate for any habitat lost which could support invertebrate populations.

1.0 Introduction

- 1.1 The Environment Partnership (TEP) was commissioned by Campbell Reith in October 2023 to undertake an updated Preliminary Ecological Assessment (PEA) to support of a planning application for redevelopment at Townfields, Bury (hereafter referred to as 'the site').
- 1.2 An Ecological Desk Study and Ecological Constraints and Opportunities Report has been produced to support this PEA, reported under separate covers (TEP Ref: 9302.001 and 9302.003 respectively). This PEA report should read in conjunction with these documents.
- 1.3 This PEA report includes details of the methods employed and any limitations of the surveys undertaken. Results are provided with supporting maps, together with an evaluation of the ecological features within the site, an assessment of the potential impacts associated with the development proposals and requirements for mitigation. The assessment has been undertaken with due consideration for current best practice guidelines (CIEEM 2017a¹, 2018²).

Site Location

- 1.4 The site is located in Bury town centre, immediately to the east and north of a railway line, south of the A58, and to the south and west of Bury College. The site is intersected in the east by the B6218. The location of the site is depicted by the red line shown in Figure 1. The approximate central grid reference of the site is SD 80511 10312.
- 1.5 The wider area comprises residential and industrial land to the north, west and east, with Bury College and sports grounds to the south.

¹ CIEEM (2017a) Guidelines for Ecological Report Writing, 2nd Edition. Chartered Institute of Ecology & Environmental Management

² CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester

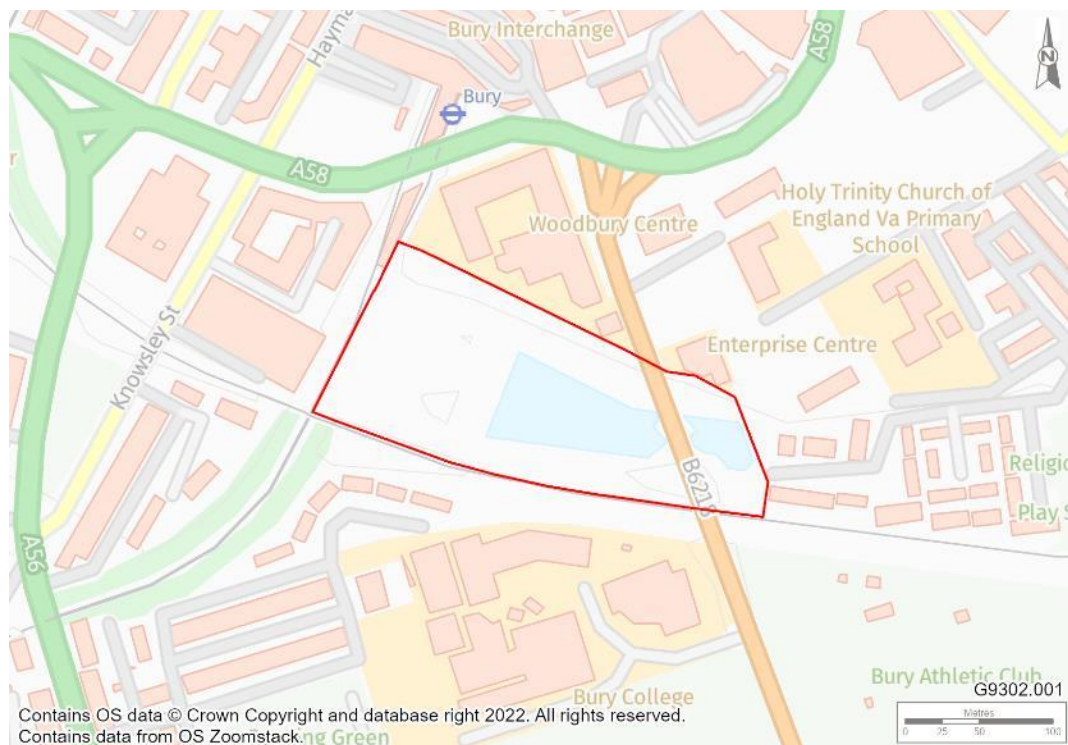


Figure 1: Site Location Plan

Proposals

- 1.6 No final site proposals have been confirmed for the proposed housing development. Therefore, a precautionary approach has been adopted when carrying out this Preliminary Ecological Assessment.

Planning Context

- 1.7 Relevant information regarding local planning policy is provided in the Ecological Desk Study (TEP Ref 9302.001).
- 1.8 The following policies within the Bury Unitary Development Plan (UDP) are of relevance to ecology and biodiversity:
- Policy EN6 Conservation of the Natural Environment
 - Policy EN8 Woodland and Trees
 - Policy EN9: Landscape; and
 - Policy EN10: Environmental Improvement.
- 1.9 The Bury Local Plan and Places for Everyone (PfE) joint development plan was due to be adopted in 2022 and replaced the UDP. The following policies within the Bury Local Plan and Places for Everyone joint development plan relate to biodiversity and nature conservation:
- Policy JP-G 1: Valuing important Landscapes
 - Policy JP-G 2: Green Infrastructure Network
 - Policy JP-G 3: River Valleys and Waterways
 - Policy JP-G 4: Lowland Wetlands and Mosslands
 - Policy JP-G 5: Uplands

- Policy JP-G 6: Urban Green Space
- Policy JP-G 7: Trees and Woodland
- Policy JP-G 8: Standards for Greener Spaces
- Policy JP-G 9: A Net Enhancement of Biodiversity and Geodiversity
- Policy JP-G 10: The Green Belt

1.10 Under the National Planning Policy Framework 2021 (NPPF), opportunities to achieve biodiversity net gain within developments should be pursued.

Scope

1.11 This ecological assessment considers potential ecological effects upon any notable habitats or species which may be present or adjacent to the site.

1.12 This report provides baseline information on the habitats and protected species present on site, gathered during a desktop study undertaken in March 2022 and the updated extended phase 1 habitat survey undertaken in October 2023.

1.13 This report presents the findings of the PEA, the objectives of which are to:

- Detail the methods and results of the aforementioned surveys;
- Identify features of ecological value within the application site such as legally protected species or habitats of importance to biodiversity;
- Identify any non-native invasive species on site and provide advice regarding removal or management;
- Advise on avoidance or mitigation requirements that may be needed prior to development commencing; and
- Provide outline recommendations for biodiversity enhancement within site proposals in accordance with the National Planning Policy Framework (NPPF).

2.0 Method

Desk Study

- 2.1 In line with current best practice (CIEEM, 2016³, 2017b⁴), information regarding designated sites, notable habitats and existing protected and notable species records of the past decade, within a 2km minimum radius of the site was collated and reviewed to inform this ecological assessment. Further detail regarding ecological zones of influence (EZOI) applied for different ecological features and the sources of information included are presented in the Ecological Desk Study (TEP Ref 9302.001).
- 2.2 In brief, key data sources included Natural England (open source data), Environment Agency (open source data); Bury Metropolitan Council Environment Viewer, Bury Unitary Development Plan (UDP) and other relevant planning documentation such as the Bury Local Plan and Places for Everyone joint development plan, Greater Manchester Ecology Unit Records Centre (GMEU) and Greater Manchester Biodiversity Action Plan (GM BAP) and a review of relevant (within the past ten years) species records.
- 2.3 Statutory designated wildlife sites were searched for as follows (EZOI applied for each is indicated in brackets):
- Ramsar sites (10km);
 - National Sites Network (10km), includes Special Areas of Conservation (SAC) and Special Protection Areas (SPA);
 - Site of Special Scientific Interest (SSSI) (5km);
 - National Nature Reserve (NNR) (5km); and
 - Marine Nature Reserve (MNR) (5km);
 - Local Nature Reserves (LNR) (2km).
- 2.4 Non-statutory designated wildlife sites were searched for within 2km of the site and, within Devon, these may include:
- Sites of Biological Importance (SBI);
 - County Wildlife Sites (CWS);
 - Potential County Wildlife Sites (pCWS);
 - Unconfirmed Wildlife Sites (UWS); and
 - Other Sites of Wildlife Interest (OSWI).
- 2.5 Regionally Important Geological Sites (RIGS) are also identified in the search results provided by GMEU, but assessment of RIGS and other geological features do not fall within the scope of this EcIA and are not discussed further.
- 2.6 Notable habitats were searched for within 2km of the site. Notable habitats may include those listed under any of the following:
- Ancient woodland;
 - Main rivers;

³CIEEM (2016) Guidelines for Accessing and Using Biodiversity Data. Chartered Institute of Ecology & Environmental Management

⁴CIEEM (2017b) Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology & Environmental Management

- Habitats of principal importance (HPI) as listed by the requirements of Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006⁵; and
- Local Biodiversity Action Plan Habitats (LBAP).

2.7 Pre-existing records for notable species were reviewed from the combined data sources, where found from within approximately 2km of the site. Notable species include those listed under any of the following:

- Protected animal species under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (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 non-native species under the Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Species of principal importance (SPI) as listed by the requirements of S41 of NERC;
- Protection of Badgers Act 1992 (PBA);
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Greater Manchester Biodiversity Action Plan Species (GM BAP).

Limitations

2.8 Species records can provide a useful indication of the species present within the search area, although the absence of a given species from the dataset cannot be taken to represent actual absence.

Habitats and Flora

Habitat Survey

2.9 An extended Phase 1 habitat survey was completed by a competent TEP ecologist initially in March 2022 and updated in October 2023. The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC, 2010⁶) and Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017b⁴). The method records the habitat types present, within the survey route, based on the JNCC descriptions. Plant species were identified in accordance with the New Flora of the British Isles (Stace, 2019⁷) and recorded as target notes using the DAFOR⁸ scale, where relevant.

⁵ Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

⁶ JNCC (2010) Handbook for Phase 1 Habitat Survey – a technique for environmental audit

⁷ Clive Stace (2019) New Flora of the British Isles

⁸ DAFOR = Dominant, Abundant, Frequent, Occasional & Rare

- 2.10 The survey was expanded to include off-site habitats adjacent to the site in order to provide context. Adjacent habitats were viewed from accessible locations within the site boundary. Habitats are displayed with the site boundary on Drawing G9302.007A.

Limitations

- 2.11 Any ecological survey represents a snapshot of ecological conditions at the time of survey; ecological conditions may change over time. Efforts to identify dominant plant species for the purposes of characterising broad habitat types do not constitute a detailed botanical survey.

Fauna

- 2.12 Ordnance Survey maps and aerials were reviewed to identify potentially suitable habitats offsite within influence (e.g. dispersal distances for mobile species) of the site. The Ecological Desk Study identified any pre-existing records for protected and notable species within at least 2km of the site.
- 2.13 The habitat survey included an extended assessment of the habitats present for their potential to support notable or protected wildlife species, as described at paragraph 2.7. Any signs indicating the presence of these species were recorded.
- 2.14 In combination, this data informed the ecological evaluation of the application site and impact assessment for the proposed development.
- 2.15 Table 1 confirms those species to be scoped out of the ecological baseline.

Table 1: Species scoped out of the baseline surveys

Species / Group	Reason for scoping out
Hazel dormouse	The Desk Study returned no records within 2km of the site. While the site contains potentially suitable habitats, the site is isolated with limited connectivity in the wider landscape with capacity for supporting hazel dormouse.
Wolverine	The Desk Study returned no records within 2km of the site. The site contains no suitable habitat to support wolverine and limited connectivity with any suitable habitat in the wider area.

Limitations

- 2.16 All surveys were completed within appropriate seasons over appropriate periods in accordance with industry standards for the specific survey. Nevertheless, the surveys will only identify habitats present at the site at the time of surveys. Additionally, the species investigated are mobile and will move into and out of areas over time. The scrub habitat present on site was still very dense at the time of survey, meaning that some signs of activity could have been obscured and not recorded during the survey. For these reasons a precautionary approach has been taken in the prediction of impacts. Where there is any doubt, except where specifically noted, species are assumed to be present, and the impact assessment assumes a higher level of significance (within the spectrum of possible significance).

- 2.17 Constraints or limitations upon survey methods or interpretation of survey findings are discussed in the relevant Ecological Technical Report.

Ecological Assessment Process

- 2.18 This PEA follows the published guidelines (CIEEM, 2018²) and accepted best practice approach (BS42020:2013⁹) of the mitigation hierarchy whereby impacts are first avoided or, where this is not possible, reduced or mitigated or, as a last resort, compensated.
- 2.19 In summary, the following procedure was undertaken during this EcIA:
- Describe the baseline and identify important ecological features;
 - Describe important ecological features and identify those which may potentially be affected by the Proposed Development;
 - Identify potential impacts upon important ecological features and characterise the effect of such impacts (in respect of biophysical changes and taking account of relevant aspects of ecosystem structure or function);
 - Incorporate measures to avoid or reduce these effects;
 - Determine whether residual ecological effects are considered significant after avoidance or mitigation;
 - Identify appropriate compensation measures to offset significant residual effects; and
 - Identify opportunities for ecological enhancement.
- 2.20 Important ecological features are identified and valued, ecological impacts are characterised and assessed, and recommendations for appropriate mitigation, compensation and enhancement are made, in accordance with CIEEM guidance².
- 2.21 BS42020:2013 defines a significant effect as one “which is important, notable, or of consequence, having regard to its context”. CIEEM describes significance as “a concept related to the weight that should be attached to effects when decisions are made”. CIEEM defines an ecological effect as significant if it is “sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project”.
- 2.22 BS42020:2013 sets out a practical approach to determining the significance of an ecological effect, applicable at all levels of decision making in legal and policy terms, as follows:
- will the effect on biodiversity influence the balance of planning considerations and therefore the decision as to whether planning permission is likely to be refused or granted; and
 - if planning permission is granted, is the effect important enough to warrant the use of planning conditions and/or obligations to guarantee proposed measures or to impose restrictions, or to seek further requirements (e.g. for mitigation, compensation, enhancement, monitoring or site management).

⁹ British Standards Institution (2013) BS 42020:2013: Biodiversity — Code of practice for planning and development. BSI Standards Limited, London

- 2.23 Significance is therefore assessed on a case-specific basis according to the importance of the ecological feature (site, habitat, or species) within the conservation hierarchy, and the effect upon it.

Assumptions

- 2.24 Information provided by third parties, including publicly available information, is assumed to be correct at the time of publication.

3.0 Results

Planning Context

- 3.1 The NPPF at Chapter 11: Conserving and Enhancing the Natural Environment requires that development delivers net gains in biodiversity in addition to minimising the impacts on biodiversity. The chapter highlights the need to protect and enhance valued landscapes, geological conservation interests and soils, as well as recognising the wider benefits of ecosystems.
- 3.2 The Bury Unitary Development Plan (UDP) was adopted by Bury Council on 29th August 1997. The UDP was replaced by the Bury Local Plan and Places for Everyone joint development plan in 2022. The site is allocated in both policies as a Site of Biological Importance. Relevant extracts of the local planning policies are provided in the Ecological Desk Study (TEP Ref 9302.001). The following policies relate to biodiversity and nature conservation:

- Policy EN6 Conservation of the Natural Environment
- Policy EN8 Woodland and Trees
- Policy EN9: Landscape; and
- Policy EN10: Environmental Improvement
- Policy JP-G 1: Valuing important Landscapes
- Policy JP-G 2: Green Infrastructure Network
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- Policy JP-G 10: The Green Belt

Designated Sites

Statutory Wildlife Sites

- 3.3 Full details regarding designated sites are provided within the Ecological Desk Study (TEP Ref 9302.001).
- 3.4 There is one statutory designated site of international importance within 10km of the site, none of national importance within 5km and two of regional or local importance within 2km. These are:
- Rochdale Canal Special Area of Conservation (SAC), located 8km to the east of the site, which is designated for its population of *Luronium natans*;
 - Chesham Woods Local Nature Reserve (LNR), located 1.8km to the northeast of the site, which is designated for its woodland habitats and bird and butterfly assemblages; and
 - Hollins Vale LNR, located 1.9km to the southeast of the site, which is designated for its woodland and wetland habitats and associated plant and animal assemblages.

- 3.5 SSSI Impact Risk Zones (IRZ) highlight the potential for effects on a SSSI if certain types of development are planned within a specified radius of it. The site falls within a single Impact Risk Zone (IRZ). The proposals do not meet any of the risk parameters identified for this IRZ.

Non-Statutory Wildlife Sites

- 3.6 There are ten non-statutory wildlife sites identified within 2km of the site. Details are presented in the Ecological Desk Study. Of most relevance are the following:
- Townside Site of Biological Interest (SBI), located within the site boundary, which is designated for its swamp and marsh habitats, along with an exceptional population of smooth newts found in 2012.
- 3.7 Other non-statutory wildlife sites identified by the Ecological Desk Study (TEP Ref 9302.001) are located at least 1.2km from the proposed works and have no impact pathways relevant to the site or the proposed nature of the works. Given this and the small scale and nature of the proposals and distances concerned, no significant effect would be anticipated to arise upon these other non-statutory wildlife sites and they are therefore scoped out from further assessment.

Habitats and Flora

Pre-existing Data

- 3.8 The Desk Study identified no notable habitats on, adjacent to or connected with the site.
- 3.9 No records of Protected and notable or Non-native invasive flora species were returned within 2km of the site.
- 3.10 Habitats of ecological value present in and around the site are described below and illustrated in Drawing G9302.007A. Target notes (TN) and photographs illustrative of the habitat/feature described are provided in Appendix A.

Marsh/marshy grassland

- 3.11 The main ecological feature within the site was the historical pond turned marsh/marshy grassland. This made up the central and eastern areas of the site (TN1 and TN4). These areas were previously mapped as swamp and marsh (Great Manchester Biodiversity Priority Habitat) in 2016, as part of the designation for Townfield SBI. The Phase 1 survey found that the habitat on site was of poor quality and has been overrun with bramble *Rubus fruticosus* agg as well as willow *Salix* sp. and silver birch *Betula pendula* scrub. Soft rush *Juncus effusus*, horsetail *Equisetum* sp., rough meadow grass *Poa trivialis* and willowherb species *Epilobium* sp. were also present. There was a stand of Japanese knotweed *Reynoutria japonica* near the road overpass in this area (TN1).

Semi-improved neutral grassland

- 3.12 The western area and a large section of the southern boundary comprised species-poor semi-improved neutral grassland (TN7). Three pyramid grass mounds made up the majority of this area with species such as false oat grass *Arrhenatherum elatius* and red fescue *Festuca rubra* abundant. Species such as sweet vernal grass *Anthoxanthum odoratum* and meadow buttercup *Ranunculus acris* were also present.

Dense continuous scrub

- 3.13 In the north of the site was a large embankment of dense continuous scrub dominated by bramble with occasional scattered silver birch trees and grey willow scrub, rose species *Rosa sp.* are also present. (TN5) There were occasional more open areas of fragmented grassland dominated by Yorkshire fog *Holcus lanatus* with rough meadow grass *Poa trivialis* and false oat-grass also present.

Semi-natural broadleaved woodland

- 3.14 In the southeastern and southwestern corners of the site were two small areas of semi-natural broadleaved woodland (TN2 and TN8). These areas both lie on the embankment that borders the railway line to the south of the site. Willow species dominate these areas with occasional alder *Alnus glutinosa* and some elder *Sambucus nigra*. The understorey was sparse, dominated mostly by litter and very little vegetation other than dandelion *Taraxacum officinale agg.* and cleavers *Galium aparine*.

Scattered trees and scrub

- 3.15 Around the site were areas of self-seeding regeneration of trees and scrub such as silver birch and willow. On the northern boundary embankment there were more mature trees of silver birch as well as cherry laurel *Prunus laurocerasus*. An area of mature hybrid poplar trees (TN3) was present in the south of the site near to the railway embankment.

Hardstanding

- 3.16 The site was previously accessed from the west, with two hardstanding pathways running into the site, these entrances were found to be blocked by the metro-way bordering the site. The pathway runs around the site, turning into gravel/stone rather than tarmac in the southeast corner of the site where it meets Market Street. The site was below street level and so runs underneath the road way. Three large stone archways allowed access between the east of the site and the west.

Notable or Invasive Flora

- 3.17 Japanese knotweed *Fallopia japonica* was historically recorded on site and was recorded on site during the phase 1 survey within the marshy grassland at TN1.

Habitat Connectivity

- 3.18 The site had limited connectivity to the wider area due to the main roads (A58 and A56) to the north and west of the site, railway lines to the west and south, and the residential developments to the south and east.

Fauna

Amphibians

- 3.19 The desk study returned the following amphibian records within 2km of the site:
- Great crested newt *Triturus cristatus* (EPS, WCA5, S41, LBAP); and
 - Common toad *Bufo bufo* (S41).
- 3.20 There are no habitats, in the form of standing water, within the site or within 500m of the site that offered potential for breeding amphibians. The woodland, marshy grassland and scrub habitats within the site were suitable for foraging, commuting and hibernating amphibians. However, as there was no breeding habitat within 500m of the site, the likelihood of foraging, commuting and hibernating amphibians being present on site is considered to be low.

Badger

- 3.21 The desk study returned results of badger *Meles meles* (PBA) within 2km of the site.
- 3.22 In the previous survey in 2022, signs of foraging and commuting badgers in the forms of snuffle holes, mammal tracks and obvious mammal entry to the site were observed. No signs of setts or sett construction were found within or adjacent to the site. During the 2023 survey, no signs or setts were recorded. However, during both surveys, the dense scrub in the north of the site made it difficult to access and survey, therefore there are limitations to the survey. There is suitable sett building and foraging habitat within the site and there is connective habitat corridors from the site to other suitable badger habitat in the wider area.



Figure 2: Mammal entry into the site from railway in the south



Figure 3: Mammal trails in semi-improved grassland



Figure 4: Badger foraging (snuffle holes)

Bats

3.23 The desk study returned the following bats records within 2km of the site:

- Bats (EPS, WCA5, LBAP);
- Common Pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5, LBAP);
- Pipistrelle sp. *Pipistrellus sp.* (EPS, WCA5, LBAP);
- Brown Long-eared bat *Plecotus auritus* (EPS, WCA5, S41, LBAP);

- Daubenton's Bat *Myotis daubentonii* (EPS, WCA5, S41, LBAP);
 - Nathusius' Pipistrelle *Pipistrellus nathusii* (EPS, WCA5, S41, LBAP);
 - Noctule *Nyctalus noctula* (EPS, WCA5, S41, LBAP);
 - Soprano Pipistrelle *Pipistrellus pygmaeus* (EPS, WCA5, S41, LBAP);
 - Whiskered Bat *Myotis mystacinus* (EPS, WCA5, S41, LBAP); and
 - Whiskered/Brandt's Bat *Myotis mystacinus/Myotis brandti* (EPS, WCA5, S41, LBAP).
- 3.24 The majority of the trees within the site were young in age and are unsuitable for roosting bats.
- 3.25 One tree on site (T1) was found to have low potential for roosting bats during the phase 1 habitat survey.
- 3.26 There are no buildings within or adjacent to the site that have any features suitable for roosting bats. The Market Street archways have potential to support roosting bats and during the Phase 1 survey some holes, cracks in mortars and crevices suitable for roosting bats were observed.
- 3.27 The site also offers suitable foraging habitat for bats especially the scrub and woodland areas.

Birds

- 3.28 The desk study returned the following bird records within 2km of the site:
- Barn Owl *Tyto alba* (WCA1, LBAP);
 - Bittern *Botaurus stellaris* (WCA1, S41, BAm);
 - Black Redstart *Phoenicurus ochruros* (WCA1, BAm, LBAP);
 - Common Scoter *Melanitta nigra* (WCA1, S41, BRd);
 - Grey Heron (heronry) *Ardea cinerea* (S41);
 - Hobby *Falco subbuteo* (WCA1);
 - Kingfisher *Alcedo atthis* (WCA1, BAm);
 - Little Ringed Plover *Charadrius dubius* (WCA1);
 - Peregrine *Falco peregrinus* (WCA1);
 - Scaup *Aythya affinis* (WCA1, S41, BRd);
 - Black-tailed Godwit *Limosa limosa* (WCA1, S41, BRd);
 - Bullfinch *Pyrrhula pyrrhula* (S41, BAm);
 - Common Redpoll *Acanthis flammea* (S41, BAm);
 - Cuckoo *Cuculus canorus* (S41, BRd);
 - Curlew *Numenius arquata* (S41, BRd);
 - Dunnock *Prunella modularis* (S41, BAm);
 - Grasshopper Warbler *Locustella naevia* (S41, BRd);
 - Hawfinch *Coccothraustes coccothraustes* (S41, BRd);
 - Herring Gull *Larus argentatus* (S41, BRd);
 - House Sparrow *Passer domesticus* (S41, BRd);
 - Lapwing *Vanellus vanellus* (S41, BRd, LBAP);
 - Lesser Redpoll *Acanthis cabaret* (S41, BRd);
 - Linnet *Linaria cannabina* (S41, BRd, LBAP);
 - Reed Bunting *Emberiza schoeniclus* (S41, BAm, LBAP);
 - Skylark *Alauda arvensis* (S41, BRd, LBAP);

- Song Thrush *Turdus philomelos* (S41, BAm);
- Spotted Flycatcher *Muscicapa striata* (S41, BRd);
- Starling *Sturnus vulgaris* (S41, BRd, LBAP);
- Tree Pipit *Anthus trivialis* (S41, BRd);
- Tree Sparrow *Passer montanus* (S41, BRd, LBAP);
- Twite *Linaria flavirostris* (S41, BRd, LBAP);
- Willow Tit *Poecile montanus* (S41, BRd, LBAP);
- Wood Warbler *Phylloscopus sibilatrix* (S41, BRd); and
- Yellow Wagtail *Motacilla flava* (S41, BRd, LBAP).

- 3.29 Suitable habitat within site was found to support a wide range of common bird species. The woodland, continuous scrub and grassland offered potential for nesting and foraging birds.

Invertebrates

- 3.30 The desk study returned the following invertebrate records within 2km of the site:

- Cinnabar moth *Tyria jacobaeae* (S41);
- Moth species (S41); and
- White-letter hairstreak *Satyrrium w-album* (S41).

- 3.31 There was limited habitat suitable for invertebrates within the site. Dead standing and fallen wood within the woodland area and parts of the marshy grassland and dense scrub habitat could support an invertebrate population.

Reptiles

- 3.32 The desk study returned no results of reptile within 2km of the site.

- 3.33 There was no habitat within the site likely to support reptiles. Reptiles favour a range of habitat types and varying topography to provide a combination of necessary conditions required for shelter, foraging and basking. The scrub offers some suitability for shelter and foraging reptiles, however, is isolated from other suitable reptile habitats in the wider landscape.

Otter

- 3.34 The desk study returned results of otter *Lutra lutra* (EPS, WCA5) within 2km of the site.

- 3.35 Otters require primarily riparian habitats for foraging and commuting with otters also requiring wetlands or woodland in close proximity for shelter. There were no suitable habitats within or adjacent to the site that would support otter at any of its life stages.

Other Relevant Species

- 3.36 Records of brown hare *Lepus europaeus* (WCA5, LBAP), hedgehog *Erinaceus europaeus* (S41) and brown trout *Salmo trutta* (S41) were returned within 2km of the site.

- 3.37 The habitats on site did not contain the features such as hedgerows, open grassland or watercourses to support brown hare and brown trout.

- 3.38 The scrub and woodland habitats within the site boundary were suitable to support foraging and hibernating hedgehogs.

4.0 Assessment of Potential Impacts

- 4.1 This section assesses the potential impacts on ecological features associated with the Proposed Development described in Section 1.0 Proposals

Wildlife Sites

Statutory Designated Sites

- 4.2 Given the distance and barriers to dispersal such as main roads and railway lines between the site and any statutory-designated sites, it is not considered likely that there will be any impacts on any designations as a result of the proposals. Therefore, they will not be discussed further in this report.

Non-statutory Designated Sites

- 4.3 The Townside SBI within the site boundary will be negatively impacted as a result of the proposed development. Mitigation for these impacts will be discussed in section 5.0 of this report. All other non-statutory designated sites are a considerable distance from the site and behind significant barriers such as main roads, so it is considered unlikely that they will be affected as a result of the proposed development.

Habitats and Flora

Notable Habitats

- 4.4 No notable habitats are found within the site or adjacent to the site, and it is considered unlikely that any protected habitats will be affected as a result of the proposed development.

Other Habitats

- 4.5 No detailed masterplans have been produced to show the plans for the development proposals, so it has been assumed that the only post-development habitats present on site will be hardstanding/buildings and residential gardens. All other habitats present on site will be lost and therefore negatively impacted. Mitigation for this will be discussed in Section 5.0 of this report.

Notable or Invasive Flora

- 4.6 A stand of invasive species Japanese knotweed was recorded within the marshy grassland habitat on site. This area is assumed to be lost as a result of the development. Mitigation measures for its removal will be discussed in Section 5.0 of this report.

Fauna

Amphibians

- 4.7 The lack of suitable breeding habitat for amphibians within the site boundary and within 500m of the site mean that it is considered unlikely that there will be any amphibians present on site. It is not considered likely that amphibians will be impacted as a result of the proposed development and therefore they will not be discussed further in this report.

Badger

- 4.8 Signs of badger activity have been noted on site during the site visit and habitats present on site could be used by badger for foraging. The overgrown scrub habitat present on site could contain further signs of activity which were not recorded during the site survey. Therefore, there is potential for badgers to be present on site and for them to be negatively impacted as a result of the proposed development.

Bats

- 4.9 The one tree found on site with low bat potential will be lost as part of the proposed development. This will have negative impacts on any roosting bats using the site. The Market Street archways also have potential to support roosting bats, and if the proposed development will affect this structure, then there will be further impacts on roosting bats on site.
- 4.10 The scrub and woodland habitats present on site will be lost as part of the proposals, which would negatively impact any commuting or foraging bats in the area. Mitigation for these impacts will be discussed in Section 5.0 of this report.

Birds

- 4.11 There is a risk of damage or destroying a nest if tree felling or lopping or vegetation clearance is carried out in the nesting period (generally considered to be between March to August inclusive, although geographical position of the site will influence this period and some species nest also commonly nest outside this period).
- 4.12 The loss of the scrub and woodland habitat on site will impact foraging and nesting birds on site. Mitigation for these impacts will be discussed in Section 5.0 of this report.

Invertebrates

- 4.13 The deadwood, scrub and marshy grassland present on site could support a small population of invertebrates, and the loss of these habitats will have a negative impact on these populations. Mitigation for this impact will be discussed in Section 5.0 of this report.

Otter

- 4.14 There is a lack of suitable habitat present within the site and connected to the site which would support otter at any stage of it's lifecycle. It is therefore considered unlikely that otter will be present on site, and this species will not be impacted as a result of the proposed development. Therefore, this species will not be discussed further in this report.

Reptiles

- 4.15 There is no suitable basking habitat present on site and the suitable foraging and sheltering habitats present within the scrub present on site is isolated from any suitable habitat in the wider area. It is considered unlikely that reptiles will be present on site and therefore they will not be impacted as a result of the proposed development. This species will not be discussed further in this report.

Brown hare

- 4.16 There is no habitat present on site to support brown hare and no connectivity to habitats in the wider landscape which support the species. It is considered unlikely that there will be brown hare present on site and they will not be impacted as a result of the proposed development. This species will not be discussed further in this report.

Hedgehog

- 4.17 The loss of the scrub and woodland habitats present on site will impact any hedgehog present on site. Mitigation for these impacts will be discussed in Section 5.0 of this report.

5.0 Mitigation and Enhancement

- 5.1 This section describes appropriate and proportionate measures for impact avoidance, mitigation and enhancement required or recommended to address the potential ecological effects described in Section 4.0.

Wildlife Sites

- 5.2 SBIs are non-statutory designations made by local authorities under the Town and Country Planning system and are a material consideration when planning applications are being determined.
- 5.3 Townside SBI was designated in 2005 for its open water and marshland habitats. In further surveys in 2012, it was confirmed that the open water habitat had been lost, but that marsh and swamp habitats were still present and the site could still support a population of smooth newts in some seasonal pools within the marsh. Following our surveys in 2022 and 2023, it appears that the marsh and swamp habitats have been further degraded and now do not seem suitable for supporting populations of breeding amphibians. It is recommended that an NVC survey is carried out in order to determine whether or not the site still contains the habitats listed in the SBI designation, or if the site has degraded to no longer contain priority marsh and swamp land.

Habitats and Flora

- 5.4 The loss of the woodland, marsh and scrub habitat on site should be mitigated for. Planting within the scheme design should take place in order to ensure there is no net loss of biodiversity, in line with the National Planning Policy Framework. Any trees lost should be replaced on a minimum one-for-one basis to ensure there is no net loss of trees and native species should ideally be used in replacement planting.
- 5.5 Japanese knotweed present on site will be controlled and treated in line with an invasive species management plan.

Fauna

Badger

- 5.6 Badgers are protected under the Protection of Badgers Act 1992 from killing, injury and certain acts of cruelty. Their setts are also protected from damage, obstruction, or destruction.

Avoidance and Mitigation Required

- 5.7 It is recommended that a pre-commencement badger survey is undertaken on site and the surrounding 30m (where possible), to ensure badgers have not ranged into the site. The pre-commencement survey should take place no earlier than 3 months prior to commencement of development.
- 5.8 A Precautionary Working Method Statement (PWMS) is recommended for notable mammals including badger to set out the working methods that will need to be adhered to throughout the duration of works to avoid impacts on such species should they range into the site during construction operations.

Bats

- 5.9 All British bats are European protected species, afforded full protection under the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended). Bats are protected from killing or injury, and from disturbance at the place of rest. Bat roosts are also protected from obstruction, damage or destruction (whether or not a bat is in occupation at the time).

Avoidance and Mitigation Required

- 5.10 Ahead of the clearance of vegetation on site including the removal of T1, pre-commencement inspections of the potential roost features will be required in order to confirm whether or not roosting bats are present. A further nocturnal bat survey will be required between April and October to confirm the presence or absence of roosting bats in this feature.
- 5.11 If the main road overpass is to be affected as a result of the proposals, further inspection of potential roost features present in the walls and arches of this structure will be required, and potentially a further nocturnal bat roost survey.
- 5.12 During construction of the proposed residential development, a sensitive lighting strategy will be required to minimise the effects of lighting on any commuting or foraging bats in the area.
- 5.13 Bat boxes should be installed on new buildings and new or retained trees as mitigation for any potential roost sites that will be lost as a result of the development.

Birds

- 5.14 Native nesting birds, their nests and eggs are protected under the Wildlife & Countryside Act 1981 (as amended) from damage and destruction, from the time of nest construction to fledging of the young. Many are also SPI.

Avoidance and Mitigation Required

- 5.15 Works should be completed outside of the nesting period (typically taken to be March to August inclusive). Where avoidance of the nesting period is not practicable, a nesting bird check must be carried out by an ecologist no more than 24 hours prior to the works, to confirm that no active nests are present. In the event that an active nest is identified, works within the surrounding area must halt until the chicks have fledged. The required radius of the exclusion area will depend on the species found nesting and the context of the nesting location.
- 5.16 Consideration for bird boxes should be given on new buildings and new or retained trees as mitigation for any potential nesting sites that will be lost as a result of the development.

Invertebrates

- 5.17 The invertebrates historically recorded on site are S41 species of principal importance.

Avoidance and Mitigation Required

- 5.18 The loss of the dead wood scrub and marshy grassland present on site could negatively impact any populations of protected invertebrates present on site. An NVC survey would determine if the plant species present within the site would support any priority species.
- 5.19 A bug hotel should be added to the design proposals to mitigate for the loss of any potential habitat for invertebrates as a result of the development.

Hedgehog

- 5.20 Hedgehog is S41 species of principal importance.
- 5.21 PWMS for notable mammals to include hedgehog is recommended to set out the working methods that will need to be adhered to throughout the duration of works to avoid impacts on these species that may be encountered during the construction stage.
- 5.22 Brash piles should be formed and retained on site, providing sheltering and hibernation opportunities for hedgehogs locally. These can be created from the trees and scrub on site which will require removal.

6.0 Conclusions

- 6.1 The site is considered to be of low to moderate ecological value. The project footprint is small and located entirely within the operational extent of the site.
- 6.2 The majority footprint of the project comprises marshy grassland, dense scrub, and woodland. The assumed design of the project will result in a loss of habitat and biodiversity which should be mitigated for. This is subject to change as the design proposals are finalised.
- 6.3 Impacts upon protected or notable species that may utilise the habitats will be avoidable by the implemented of precautionary measures including timing vegetation removal to avoid sensitive periods, adopting sensitive construction methods.
- 6.4 All impacts are therefore anticipated to be temporary and reversible in the short term. With implementation of the recommended precautionary working methods, no significant ecological effects are expected on statutory or non-statutory wildlife sites, notable habitats or protected or notable species.

APPENDIX A: Target Notes

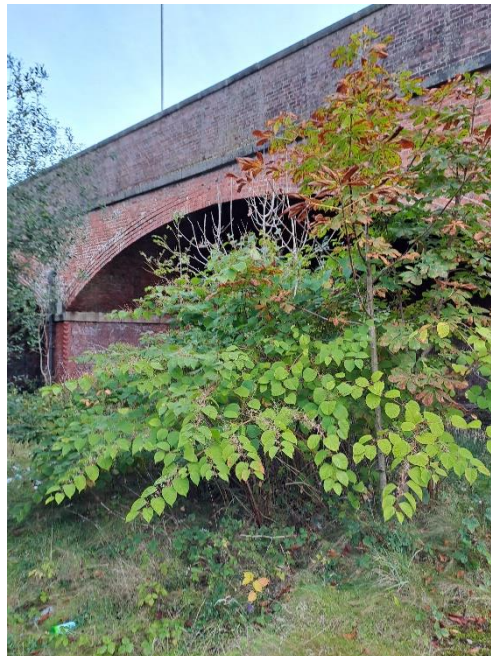
9302.02 Pyramid Park Target Notes Report

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

Target Note TN1

Area of marshy grassland in location of historical drained pond. This area is dropped and bordered by a small brick wall. The marsh is invaded by encroaching regeneration scrub and trees such as birch and willow and some areas are overrun by bramble. Japanese Knotweed present

<i>Betula pendula</i>	Silver Birch	A
<i>Carex spicata</i>	Spiked Sedge	F
<i>Juncus effusus</i>	Soft Rush	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Salix caprea</i>	Goat Willow	F
<i>Salix cinerea</i>	Grey Willow	F
<i>Equisetum</i> sp.	Horsetail species	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Carex otrubae</i>	False Fox-sedge	R
<i>Epilobium</i> sp.	Willowherb species	R
<i>Reynoutria japonica</i>	Japanese Knotweed	R



Target Note TN2

Area of semi-natural broadleaved woodland. This bank of woodland sits next to the pathway on entrance to the site from Townfields Close and extends to the railway line in the south.

<i>Salix</i> species	Willow species	A
<i>Betula pendula</i>	Silver Birch	F
<i>Galium aparine</i>	Cleavers	F
<i>Taraxacum officinale</i> agg.	Dandelion	F
<i>Alnus glutinosa</i>	Alder	O
<i>Sambucus nigra</i>	Elder	R



Target Note TN3

Planted corridor of poplar trees. These mature trees link to the railway embankment which acts as a wildlife corridor.

<i>Populus sp.</i>	Poplar species	D
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Target Note TN4

Large area of marsh/marshy grassland within the centre of the site, the location of the historical pond. Situated at the base of the northern embankment and borders the poplar corridor. Mostly birch and willow regeneration, likely to dry out in the summer.

<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Betula pendula</i>	Silver Birch	F
<i>Carex spicata</i>	Spiked Sedge	F
<i>Juncus effusus</i>	Soft Rush	F
<i>Salix caprea</i>	Goat Willow	F
<i>Salix cinerea</i>	Grey Willow	F
<i>Carex otrubae</i>	False Fox-sedge	R
<i>Epilobium sp.</i>	Willowherb species	R



Target Note TN5

Northern embankment of the site dominated by dense continuous bramble. Few mature trees lie at the top of the embankment on the border of the site

<i>Rosa sp.</i>	Rose species	F
<i>Betula pendula</i>	Silver Birch	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	R
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Hedera helix</i>	Ivy	R
<i>Prunus laurocerasus</i>	Cherry Laurel	R



Target Note TN6

Area of hardstanding path leading down under railway/tramway. Brick and concrete embankment on the southern side.

<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Prunus laurocerasus</i>	Cherry Laurel	R



Target Note TN7

Poor semi-improved grassland dominates the rest of the site in the form of three pyramid shaped grassland mounds and the southern embankment that borders the railway line.

<i>Arrhenatherum elatius</i>	False Oat-grass	A
<i>Festuca rubra</i>	Red Fescue	A
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O
<i>Ranunculus acris</i>	Meadow Buttercup	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	R



Target Note TN8

Woodland in south western corner of the site bordering tramway and railway line. Similar species composition to TN2



APPENDIX B: Drawings

G9302.007A Phase 1 Habitat Survey

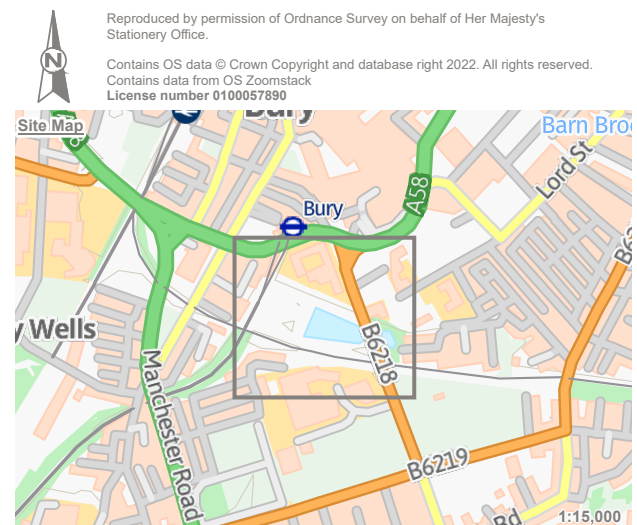


KEY

- Site boundary
- Target note
- Mammal entry point
- Japanese knotweed*
- Scattered scrub (birch)
- Scattered broad-leaved tree
- Broad-leaved tree with low bat suitability
- Semi-natural broad-leaved woodland
- Continuous bramble scrub
- Marsh/marshy grassland
- Species-poor semi-improved grassland
- Hardstanding

Note:

The locations of habitats and habitat features are indicative.



A		Addition of JK and low potential bat tree.		AR	EH	23/10/2023
Rev	Description			Drawn	Approved	Date



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Project
Townfields, Bury

Title
Phase 1 Habitat Survey

Drawing Number
G9302.007A

Drawn	Checked	Approved	Scale	Date
BJ	CW	EH	1:1,200 @ A3	24/10/2023



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