



Hampshire
County Council

Ecological Appraisal PLANNING SUBMISSION

Battle Street (Central Pool)
Reading

For
Hampshire County Council
Property Services

December 2021
Updated August 2022

Hampshire County Council Ecology Team

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Summary

An Ecological Appraisal (PEA) was undertaken in May 2021 at Battle Street (Central Pool), Reading. The site is a vacant plot that was previously the site of a swimming pool. The redevelopment of the site will result in the clearance and taking up of existing hardstanding and structures from the site; erection of seven buildings, up to four storeys in height, containing 49 affordable dwellings (Class C3 use), 13 supported living flats (Class C2 residential institution use), and older persons day centre (Class E(f)); and associated roadways, car parking, open space and other infrastructure.

Habitats to be directly impacted by the proposed works are small areas of scattered scrub and ephemeral/short perennial plants around an open area of hardstanding, and a small number of urban street trees. The site is considered to be of low ecological value overall.

The survey found no evidence that the site supports badgers, bats, hazel dormice, amphibians, reptiles, or notable invertebrates.

There is low potential for the site to support common nesting birds, and development proposals could possibly result in negative impacts including destruction of nests. A mitigation strategy is provided.

There are no recommendations for further survey work.

Landscape proposals and ecological enhancements have been developed, and these are set out in the report.

It is concluded that the development will have no adverse impacts on biodiversity and will deliver biodiversity gains in accordance with policy.

1. Introduction

Objectives

- 1.1. The purpose of this study was to gather ecological information about the site at Battle Street (Central Pool), Reading, and assess the impacts of the development proposals for the site on these features, in order to support a planning application with Reading Borough Council.
- 1.2. This took the form of a Preliminary Ecological Appraisal (PEA), which comprised an initial desk-based assessment followed by an Extended Phase 1 Habitat Survey of the site. As plans for the site developed, incorporating the initial ecological findings and recommendations, the ecological work was finalised as an Ecological Appraisal.
- 1.3. The Ecological Appraisal was carried out by Adam Eggesfield and Camilla Mitchell, experienced ecological surveyors with HCCET.

Site Description

- 1.4. The site at Battle Street is a is an approximately 0.52-hectare (ha) site that was formerly the site of a swimming pool located in central Reading. The surrounding area is urban and characterised by comprising a mixture of residential dwellings, retail and semi-industrial areas intersected with major roads and rail lines approximately 0.3km to the north and west.
- 1.5. The site of the previous swimming pool is fenced off with security hoarding. This comprises a compound of hardstanding with no built structures. The western part of the site, outside the fenced off section, is a disused car park with several landscaping street trees.
- 1.6. Location plan and aerial photo of the site showing the site boundary and its setting are shown in Appendix 1. The photos on the photo sheet in Appendix 2 show the general conditions at the site.

Proposed work

- 1.7. Reading Borough Council proposes redevelopment of the site. This will result in the clearance and taking up of existing hardstanding and structures from the site; erection of seven buildings, up to four storeys in height, containing 49 affordable dwellings (Class C3 use), 13 supported living flats (Class C2 residential institution use), and older persons day centre (Class E(f)); and associated roadways, car parking, open space and other infrastructure.
- 1.8. The existing site plan and the proposed works plan showing the site boundaries, current at the time of this report are at Appendix 3.

Limitations

- 1.9. All areas of the site were fully accessible and visible during the survey work. The weather was sunny with scattered clouds, no rain, temperature 11°C, and wind force 2. There are therefore no significant limitations to the survey work.

2. Methods

Desk-based assessment

- 2.1. A desk-based assessment was carried out by HCCET in April 2021. This was reviewed in August 2022 to assess if any significant changes to the initial assessment needed to be made. This comprised the following elements:

Zone of influence (Zol)

- 2.2. The development proposals and the site were reviewed to establish the likely extent of impacts from the scheme at which potential ecological receptors might be affected. This was based on established criteria (such as Natural England's Impact Zones for Sites of Special Scientific Interest (SSSI)), or published zones around certain European designated sites. Where established criteria are not present, the Zol was based on the ecologist's professional judgement. Where necessary, the Zol for relevant receptors are discussed in the following sections.

Scoping

- 2.3. An initial review of the site and the proposals were carried out to consider the likelihood of particular ecological receptors being present at the site or nearby (within relevant Zol). Where this scoping confidently concluded that a particular receptor is likely absent (for example there are unlikely to be water vole at a site with no on-site or nearby waterbodies), these are not considered in detail in the report.

Data search

- 2.4. Geographical Information Systems (GIS) mapping was used in order to identify records of statutory designated sites within a 1km radius of the site and to examine the site's ecological context.

- 2.5. The Reading Borough Council Local Plan Proposals Map was examined to identify other areas of identified biodiversity interest such as other patches of more ecologically rich habitats, and existing or proposed green links¹.
- 2.6. The Reading Borough Council planning website was searched for details of other relevant information relating to the site and immediate area.
- 2.7. The findings of the desk-based assessment in terms of establishing the local and wider ecological context of the site has also been used where relevant to inform recommendations for biodiversity net gain, as set out in Section 5.

Field survey

- 2.8. Field survey work was carried out on 21 May 2021. This followed the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. It should be noted that the habitat categories used by the Phase 1 Habitat Survey Methodology do not mirror the habitat types considered to be conservation priorities. Where relevant and necessary, this is discussed further in Section 4.
- 2.9. The site survey entailed two surveyors, Adam Eggesfield (Senior Ecologist) and Camilla Mitchell (Ecologist) undertaking a methodical investigation of all areas of the site in order to identify the presence of, or habitat considered suitable for supporting, legally protected species. Assessment of the nature and value of habitats and vegetation at the site was also carried out. A brief description of the survey methods used is provided below.
- 2.10. The site was inspected for field signs of badger *Meles meles* such as badger setts, latrine sites, dung piles, well-used trails, prints, foraging activity, and hairs.

¹ <https://www.reading.gov.uk/planning/planning-policy/new-local-plan/>

- 2.11. An assessment was made of the suitability of habitat on site to support hazel dormice *Muscardinus avellanarius*. Key habitats for this species are woodland, scrub, and hedgerows, particularly where these offer dense vegetation for nesting or hibernation, along with food resources such as hazelnuts, fruiting and nectar-rich plants (e.g. hawthorn, bramble) and honeysuckle (for nesting material). The presence of important landscape-scale habitat linkages between suitable habitats was considered.
- 2.12. The survey also included a consideration of the site's suitability to support breeding bird species. These will utilise a broad range of habitats, including structures such as houses and outbuildings, trees, scrub, isolated shrubs, dense herbaceous vegetation (terrestrial and aquatic) and open grassland.
- 2.13. The site's suitability to support reptiles was also considered. Key habitat features for reptiles include tussocky or patchy grassland, scrub edge, linear watercourses, ponds, compost heaps, brash piles, and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated or fragmented habitats even within urban areas.
- 2.14. An assessment was made of all water bodies and terrestrial habitat within the site and within the surrounding landscape for their suitability to support populations of amphibians, particularly great crested newt *Triturus cristatus* (GCN). Ponds were assessed where possible according to the Habitat Suitability Index (HSI) assessment method (Oldham et al, 2000).
- 2.15. Any suitable on site or nearby accessible waterbodies such as lakes, rivers, ditches, and streams were inspected for signs of water voles and otter. Signs of otter include spraints (droppings), holts and couches (resting places), haul outs, and anal jelly. Water vole signs include burrows (particularly with a grazed 'lawn' around their entrance), runs along the bank, latrines, feeding signs, runs, and footprints.
- 2.16. Trees were assessed for their potential to support bats, using methods guided by and consistent with that set out in Collins (ed) (2016). Relevant trees were inspected from ground level to identify evidence of bat activity and/or identify

the presence of any potential roost features (PRFs) such as rot holes, flaking bark, cracks or splits and areas of extensive deadwood.

- 2.17. Trees were inspected using Opticron Discovery 10x42 close-focussing binoculars and where necessary and safely possible, a ladder. High-powered torches (Clulite Clubman CB2 and Lenser P7.2) were used to illuminate potential roost and roost access features.
- 2.18. An assessment was made of the suitability of the site and the surrounding landscape to support foraging, commuting and other flying behaviours such as swarming and social interactions. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland, and open water and watercourses, which are highly attractive to bats as both a foraging resource and as commuting routes. The presence of such habitats, particularly in a mosaic with other suitable habitats, typically increases the potential for structures to be exploited by bats where suitable roost and access opportunities are present. The presence of unlit semi-natural vegetation and habitat linkages between the site and the surrounding landscape were also considered.
- 2.19. Bat roost suitability and foraging habitat quality was assessed according to the criteria set out in Collins (2016). The table in Appendix 5 sets out the guidelines for assessing roost suitability and foraging habitat quality.

3. Results

Desk-based assessment

Designated sites and notable habitats

- 3.1. There are no statutory designated sites such as Sites of Special Scientific Interest (SSSIs) within the search area.
- 3.2. Outside of the designated sites and other more ecologically valuable habitats, the surrounding landscape is a mature urban area characterised by a matrix of residential dwellings, retail and semi-industrial areas intersected with major and minor roads and rail lines approximately 0.3km to the north and west. There are mature treelines and small parcels of urban woodland adjacent to the railway line and more open areas of grassland and parkland habitats adjacent to the River Thames runs to west to east approximately 1.25km to the north of the site.

Previous planning history

- 3.3. An ecological survey report was produced to support the demolition of the previous swimming pool building at the site (Windrush Ecology, 2018). A review of this identified that the previous structures at the site had negligible bat roost suitability, and the site overall had negligible ecological value as it was dominated by existing buildings and hardstanding. The street trees in the adjacent car park were concluded to be of value at the site level only, and they offered negligible bat roost suitability.

Fieldwork scoping / Zone of influence

- 3.4. Initial assessment identified no watercourses on or near the site and therefore impacts on riparian mammals were scoped out from the assessment.
- 3.5. The surrounding habitat is a built-up urban area, and the site itself is an open plot dominated by hardstanding with no remaining built structures. There appear to be no potentially sensitive areas within the immediate adjacent areas. The proposals are for construction of dwellings. Therefore, the zone of influence

is considered to be the site itself plus a small surrounding radius of no more than 50m.

Field Survey

Habitats

- 3.6. The main habitats present at and around the site are shown in the Phase 1 habitat map in Appendix 4.
- 3.7. The site is predominantly open with a hardstanding surface consisting of compacted gravel and crushed building materials – see Photo 1 in Appendix 2. To the southern boundary are sections of brick wall and timber fencing, the eastern, northern, and western boundaries have construction site type timber hoarding and sections of brick wall.
- 3.8. To the west of the old swimming pool footprint is an area of tarmac hardstanding car park. There are four planted street trees in the centre of this. These are cherry *Prunus* sp., apple *Malus* sp., and hornbeam *Carpinus betulus*, typical species found in urban planting schemes.
- 3.9. Throughout the old swimming pool site are sparse areas of ephemeral perennial plants (Photos 2 and 3) including ragwort, herb-Robert *Geranium robertianum*, spear thistle *Cirsium vulgare*, green alkanet *Pentaglottis sempervirens*, barren brome *Anisantha sterilis*, cleavers *Galium aparine*, pellitory-of-the-wall *Parietaria judaica*, dandelion *Taraxacum* agg., common poppy *Papaver rhoeas*, common mouse-ear *Cerastium fontanum*, wild carrot *Daucus carota*, and bristly oxtongue *Helminthotheca echioides*. Vegetation growth is denser at the edges of the site, particularly the eastern and northern boundaries.
- 3.10. To the eastern and northern boundaries are areas of sparse scrub including bramble *Rubus fruticosus* agg and buddleia *Buddleja davidii*. At the south-west of the site are ornamental shrub species from the adjacent properties including pyracantha *Pyracantha* sp., buddleia, and ivy *Hedera helix*. See Photos 4 and 5.

Badger

3.11. The site supports no vegetation or habitats suitable for supporting badger. The site is well contained within brick walls and timber hoarding fencing and is not connected to areas of suitable badger habitat. The location of the site within an urban setting in central Reading with no connectivity to suitable badger habitats such as woodland, scrub and extensive areas of residential gardens means that the site is unlikely to be utilised by and colonised by badgers. Badgers are therefore considered to be likely absent from the site.

Bats – built structures and trees

3.12. There are no built structures on site. The four street trees in the car park area are relatively young and have no potential roost features. Bat roosts are therefore considered to be likely absent from the site.

Bats – foraging and commuting

3.13. The site is located in a built-up urban area with street lighting and little in the way of suitable foraging habitats for bats. The site is not connected to the treelines and small parcels of woodland in the wider area. The site is considered to have negligible suitability for supporting foraging and commuting bats.

Hazel dormouse

3.14. There is no suitable dormouse habitat on site and is located in a built-up urban area which is wholly unsuitable for dormice. Dormice are considered to be likely absent from the site.

Birds

3.15. The site itself supports limited areas of sparse scrub which, at the time of the survey, appeared unsuitable for supporting nesting birds. However, if this vegetation was to develop into a more densely structured area of scrub it would potentially be suitable for supporting common nesting birds.

3.16. The street trees in the car park offer some limited suitability of supporting nesting birds

3.17. To the south-west of the site (indicated with Target Note on the Phase 1 Map in Appendix 4) was a dense area of introduced shrub growing over the wall from

the adjacent site. House sparrows *Passer domesticus* were nesting in the shrubs.

3.18. The site is therefore considered suitable for supporting low numbers of common nesting birds.

3.19. Black redstart *Phoenicurus ochruros*, a notable bird species, has been found to nest in nearby urban areas. However, the site offers no suitable nesting locations for this species, which prefers to nest on taller structures that mimic rocky cliff faces of its natural habitat.

Reptiles

3.20. The site is predominantly hardstanding with little vegetation and no habitats considered to be suitable for supporting reptiles. The site is not connected to areas with suitable habitat for reptiles. Reptiles are therefore considered to be likely absent from the site.

Amphibians

3.21. There are no waterbodies on site and no habitats suitable for supporting amphibians in their terrestrial phase. The site has no connectivity to habitats suitable for supporting amphibians. Amphibians are therefore considered to be likely absent from the site.

Invertebrates

3.22. The site is predominately hardstanding with little vegetation and does not support habitats considered suitable for supporting a significant assemblage of invertebrates. Notable invertebrates are therefore considered to be likely absent from the site.

Other mammals

3.23. The site is currently unsuitable for supporting hedgehogs *Erinaceus europaeus* due to the lack of vegetation and foraging habitat. The surrounding landscape is heavily dominated by hardstanding with only a very small number of isolated and fragmented areas of garden spaces. It is considered that hedgehogs are likely absent from the surrounding area.

4. Impact Assessment

Planning policy and legislation

- 4.1. Paragraph 180 of the National Planning Policy Framework (NPPF) (MHCLG, 2021) requires that when determining planning applications, if significant harm to biodiversity 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.
- 4.2. Policy CS36 'Biodiversity and Geology' of the Reading Borough Council Adopted Core Strategy (revised 2015) states that:
- "Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes."*
- 4.3. The supporting text to the policy states that:
- "Protected species identified by the Species Action Plan of the Reading Biodiversity Action Plan (BAP) and their habitats must also be protected from any direct or indirect harm resulting from development."*
- 4.4. Many species of animal are legally protected under both domestic or international law (the Wildlife and Countryside Act 1981 (as amended)² and the Conservation of Habitats and Species Regulations 2017³ respectively). Badgers and their setts are protected under the Badgers Act 1992⁴.
- 4.5. With reference to bats, hazel dormice, and great crested newts, these are European Protected Species (EPS). This legislation makes it an offence to kill, injure or disturb them, or to destroy or damage their breeding sites and resting places (even when the animals are not present). For such work to legally

² <http://www.legislation.gov.uk/ukpga/1981/69>

³ <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

⁴ <http://www.legislation.gov.uk/ukpga/1992/51/contents>

proceed, Natural England (the Government's statutory nature conservation agency) will issue a licence for the work to be able to proceed legally, subject to the proposals meeting certain criteria.

- 4.6. The following sections consider the potential impacts on any identified ecological features and whether the development would be in accordance with policy and legislation.

Potential impacts on sites, habitats, and species

Designated sites

- 4.7. There are considered to be no impacts to designated sites from the proposed works.

Vegetation and habitats

- 4.8. The proposals will entail the loss of a small amount of ephemeral short perennial vegetation and scattered scrub. These habitats are typical of highly disturbed and cleared areas such as vacant urban plots. These habitats are of low ecological value and ephemeral by character. There is considered to be no significant impacts to notable or valuable habitats on site.
- 4.9. The street trees in the car park will be lost to the development. These are of value at the site level only as they are commonly planted urban trees and do not form part of a coherent ecological network.

Badger

- 4.10. Badgers are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on badgers.

Hazel dormouse

- 4.11. Hazel dormice are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on hazel dormice.

Breeding birds

- 4.12. At the time of the survey nesting house sparrow were present in shrub vegetation adjacent to the site. The scattered bramble scrub habitat on site has the potential to develop into a more densely structured area of scrub that could

support nesting birds. The street trees in the car park may also support nesting birds in the spring and summer. If nesting birds are present on site and vegetation is cleared during the nesting bird season (indicatively March – August inclusive) destruction and damage to nests and birds may occur.

Reptiles

4.13. Reptiles are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on reptiles.

Amphibians

4.14. Amphibians including GCN are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on GCN and common amphibians.

Bats

4.15. Bats and bat roosts are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on bats.

Impact assessment summary

4.16. In summary, in the absence of measures to avoid, mitigate, or compensate for impacts, it is concluded that the development would have the potential for the following impacts:

- Slight net loss of biodiversity through loss of street trees and small area of developing scrub and ephemeral vegetation.
- Impacts to nesting birds.

4.17. The following section sets out a strategy to address these impacts.

5. Mitigation and Enhancement Strategy

Introduction

- 5.1. This section provides details of the measures to be followed as part of the development proposals ensure that potential ecological constraints are properly addressed.

Mitigation

Net loss of biodiversity

- 5.2. A detailed set of landscape proposals has been developed and accompany the planning submission. Key features of this include:
- Extensive new tree planting within shared spaces, including the main courtyard area and street frontages (canopy cover to exceed approximately 360m²).
 - Amenity grassland areas (approximately 330m²).
 - Formal planting areas in shared spaces incorporating a range of plants species beneficial to pollinating invertebrates (approximately 85m²).
 - Extensive use of sedum green roofing (approximately 600m²).
- 5.3. Given that the existing site is almost wholly bare tarmac and crushed building waste, with minimal vegetation, this would deliver a significant net gain in biodiversity at the site. A formal Biodiversity Net gain calculation is provided, demonstrating that the development will deliver a 334% net gain in biodiversity.

Nesting birds

- 5.4. At the time of the survey the site does not support nesting birds, however nesting house sparrows are present in shrub vegetation adjacent to the site and the site has scattered scrub habitat that has the potential to develop into more dense scrub that could support nesting birds in future. In order to avoid impacts to nesting birds it is recommended to clear vegetation outside of nesting bird season (i.e. the period September – late February) to avoid suitable bird nesting habitat developing on site.

Species enhancements

- 5.5. In addition to the landscaping measures set out above, the new development will incorporate 2x in-wall bat box units, 2x in-wall general bird nest units, 2x external swift boxes, and 2x 'bee bricks' as shown in Figures 1a to 1d, below.



Figure 1a 'Manthorpe' RSPB integrated swift box



Figure 1b Bird brick house



Figure 1c 'Habibat' in-wall bat roost unit

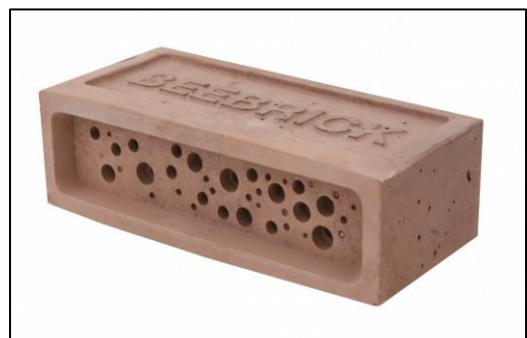


Figure 1d 'Bee Brick'

6. Conclusions

- 6.1. The Ecological Appraisal at Battle Street, Reading, identified that the site supports habitats of low ecological value.
- 6.2. The survey found no evidence that the site supports badgers, bats, hazel dormice, amphibians, reptiles, or notable invertebrates.
- 6.3. There is low potential for the site to support common nesting birds, and development proposals could possibly result in negative impacts including destruction of nests. Measures are set out to avoid this.
- 6.4. There are no recommendations for further survey work.
- 6.5. Landscaping proposals, drawing on the findings of the ecological assessment, would ensure that the development would result in no overall net loss of biodiversity and would deliver biodiversity gains.
- 6.6. Additional species-specific enhancements are also proposed for bats, swifts, and invertebrates.
- 6.7. Provided these measures are followed, it is concluded that the development will have no adverse impacts on biodiversity and will deliver biodiversity gains in accordance with policy.
- 6.8. Unless otherwise advised, the findings and recommendations in this report are solely based on the plans and brief provided to HCCET. The results and findings are valid for two years from the date of the initial field survey. HCCET should be contacted if this report is to be used after this period to check if any updating work need to be undertaken.

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Appendix 1 – Site Location and Aerial Photo

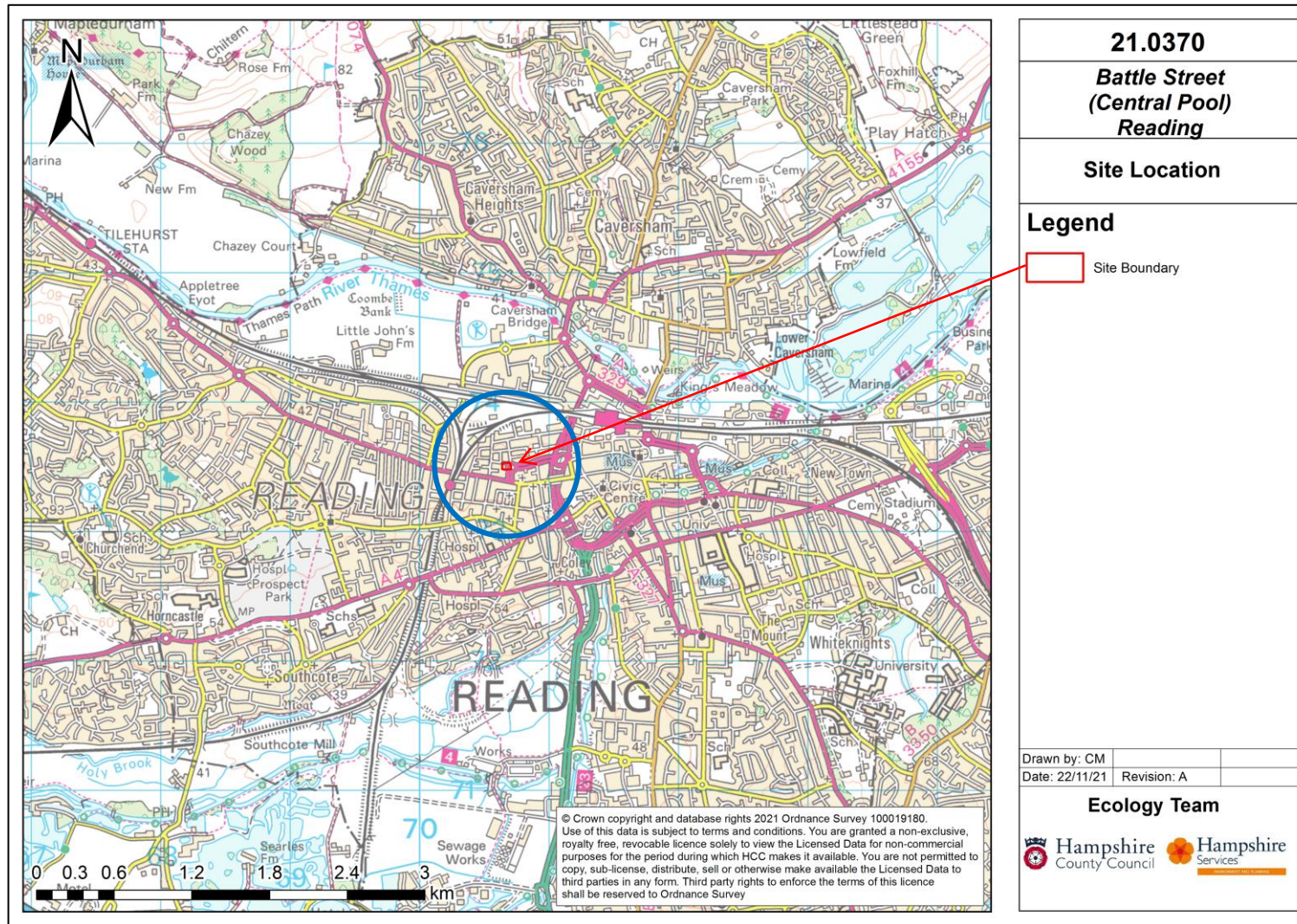


Figure A1.1 Site location



Figure A1.2 Aerial photo of site

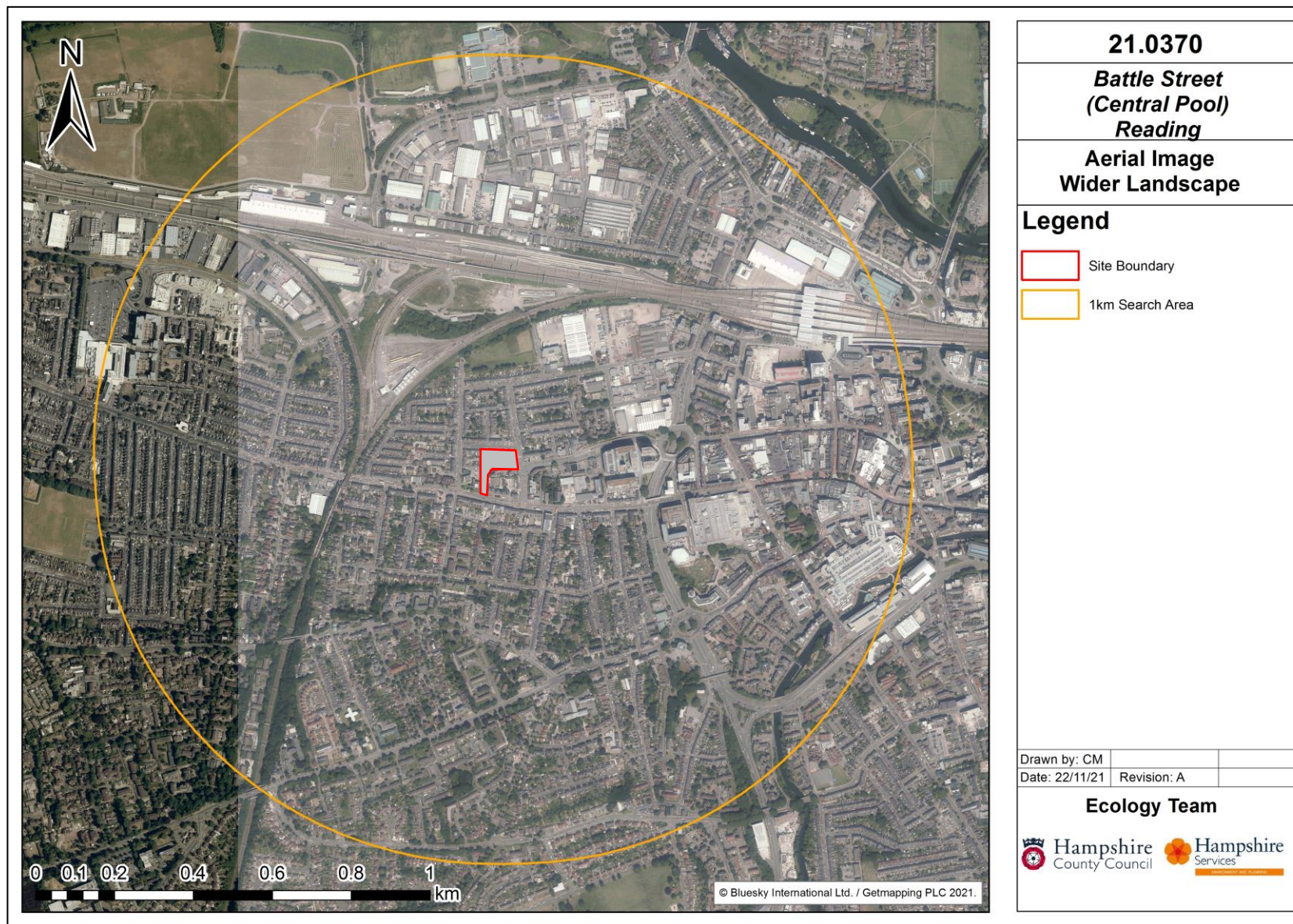


Figure A1.3 Aerial photo of surrounding landscape

Appendix 2 – Photos



Photo 1 Main part of old swimming pool site



Photo 2 Ephemeral vegetation to south-east corner



Photo 3 Ephemeral vegetation to north-east corner



Photo 4 Scattered buddleia scrub



Photo 5 Scrub along boundary

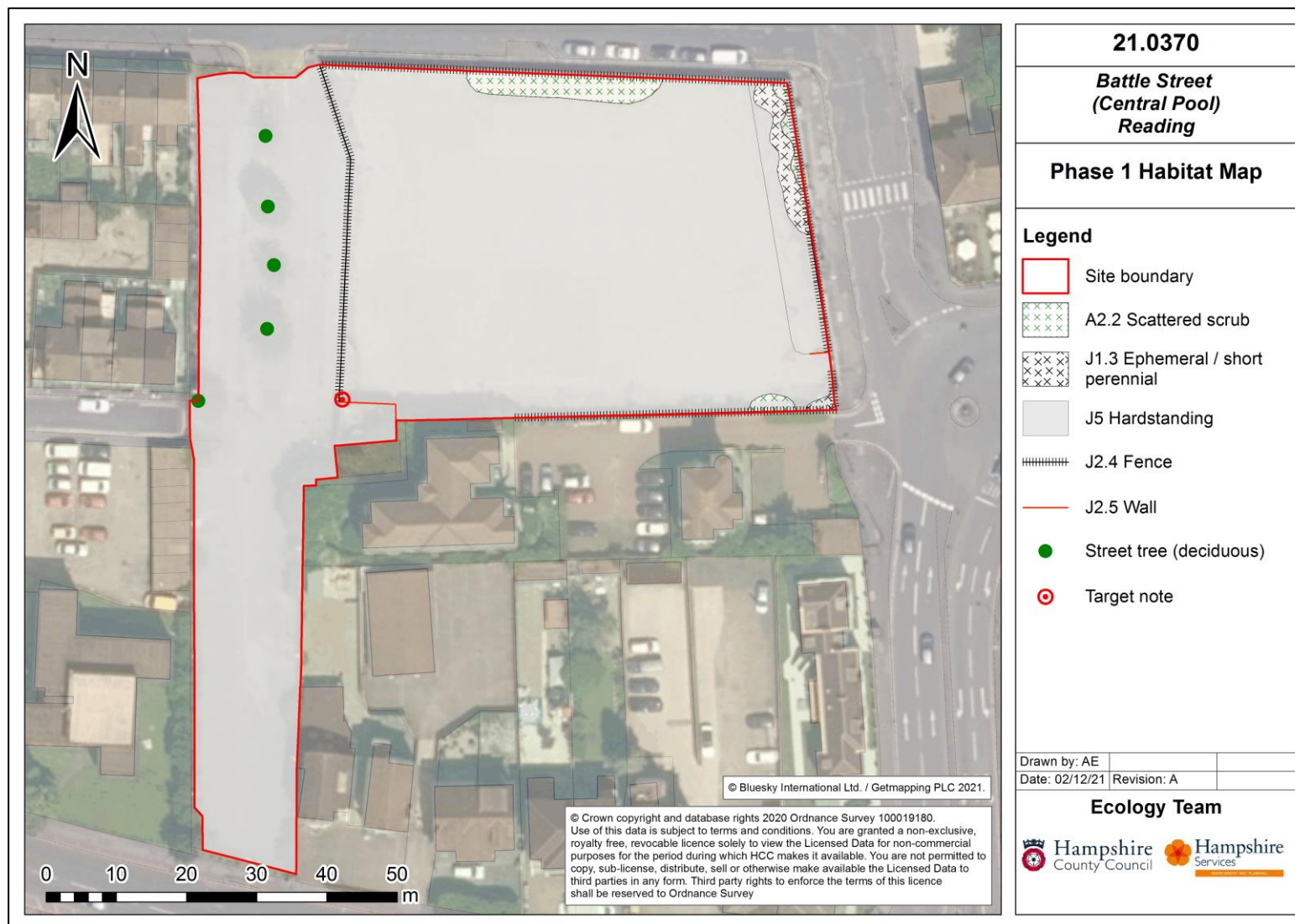


Photo 6 Scrub at TN1 that supports house sparrows

Appendix 3 – Plans

Please refer to Planning Application drawings

Appendix 4 – Phase 1 Habitat Map



Appendix 5 – Roost and activity habitat suitability criteria

Table A5.1 Roost and activity habitat suitability criteria

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