CSA environmental

Parcel R, Kingsmere, Bicester

# Preliminary Ecological Appraisal

Prepared by
CSA Environmental

on behalf of
Preferred Homes Bicester Ltd &
Countryside (Bicester) Ltd

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urban design | ecology | landscape | heritage

This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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**Appendices**

# EXECUTIVE SUMMARY

Mixed use residential development is proposed at Parcel R, Kingsmere, Bicester within a hybrid application for within which outline and detailed planning permission will be sought.

CSA Environmental was instructed by Preferred Homes Bicester Ltd & Countryside (Bicester) Ltd to undertake a Preliminary Ecological Appraisal (PEA) of the Site to identify any ecological constraints to development, inform scheme design, highlight opportunities for ecological enhancement and determine the need for any additional investigation/survey. As part of this PEA, a desk study and field survey of the Site were undertaken in May and June 2023, including a UK Habitat Classification survey.

Habitats currently present within the Site are generally common and widespread, with the greatest ecological interest associated with the long, species-rich grassland located along the Sites northern boundary and south-east corner of the Site which has grown due to the lack of management on-site.

No overriding constraints to development of the Site have been identified. Recommendations have been provided for ecological enhancement measures that will be delivered as part of the proposed development.

# 1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf Preferred Homes Bicester Ltd & Countryside (Bicester) Ltd. It sets out the findings of a Preliminary Ecological Appraisal (PEA) of Parcel R, Kingsmere, Bicester (hereafter referred to as 'the Site'). This is a hybrid application comprising (i) in FULL, the construction of an 82 no. apartment affordable extra care home (class C2) with associated bistro, open space, landscaping, car/cycle parking, service infrastructure (drainage, highway, lighting), engineering operations, creation of new vehicular access and re-instatement of existing access to footpath, and (ii) in OUTLINE, the construction of a maximum of 14 market residential dwellings (class C3), on land known as Parcel R, Kingsmere, Bicester.

1.2 The scope of this appraisal has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017), and to the *Biodiversity: Code of practice for planning and development* (BS 42020:2013) published by the British Standards Institution (2013).

1.3 The Site occupies an area of c. 0.935ha and is located around central grid reference SP 564224, to the west of Bicester, Oxfordshire. It consists of land cleared for development, with temporary structures located centrally and hardstanding, including a bund of soil, with colonising vegetation and other neutral grassland. (see Habitats Plan in Appendix A). Before the Site was cleared for development in 2019, it comprised agricultural land.

1.4 Outline planning permission was granted in May 2017 under 13/00847/OUT. Reserved matters were brought forward for the strategic infrastructure including the primary streets/spine road & strategic open space and landscaping in 2018. With a few exceptions, these have now all been delivered by Countryside. Residential parcels have been sold to housebuilders which all have planning permission and will continue to deliver over the next few years. Work has also now started to deliver the proposed primary school on Phase 2 opposite Parcel R. Under the outline permission Parcel R was identified for/to be marketed for either a 60 bed extra care home or retirement living accommodation. If the marketing process did not lead to those uses, then the parcel could be brought forward for residential purposes

1.5 This PEA aims to:

- Characterise baseline ecological conditions of the Site and its wider context
- Identify any ecological constraints to development of the Site
- Inform scheme design

- Identify further ecological surveys and investigation necessary to inform a full Ecological Impact Assessment (EcIA) of the Site
- Highlight opportunities for ecological enhancement

1.6 To achieve these aims, an ecological desk study and field survey were undertaken of the Site, the findings of which are presented herein.

1.7 As set out in best practice guidelines (CIEEM, 2017) a PEA is typically only suitable for planning submission where there are no ecological constraints relating to the project. Where ecological constraints are identified, such as the presence of important ecological features, the effects of development on these features should be assessed within a separate EcIA report, which would supersede the PEA, however in this case a PEA is considered sufficient given the low ecological value of the Site.

# 2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

## Legislation

2.1 Legislation relating to wildlife and biodiversity of particular relevance to this PEA includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Protection of Badgers Act 1992
- The Environment Act 2021

2.2 This above legislation has been addressed, as appropriate, in the production of this report. Further information on the above legislation is provided in Appendix B.

## National Planning Policy

2.3 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021) sets out the government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.

2.4 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their effects within the planning system.

## Local Planning Policy

2.5 A number of local planning policies relate to ecology, biodiversity and/or nature conservation. These are summarised in Table 1 of Appendix B. These policies have been addressed, as appropriate, in the production of this report.

## Standing Advice

2.6 Natural England and Defra's Standing Advice (Natural England & Defra, 2014) regarding habitats and protected species aims to support local authorities and forms a material consideration in determining applications in the same way as any individual response received from Natural England following consultation. Standing advice has therefore been given due consideration, alongside other detailed guidance documents, in the production of this report.

# 3.0 METHODS

## Desk Study

3.1 An ecological desk study was undertaken in June 2023 comprising a review of online resources and biological records centre data as detailed below.

3.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed to identify nature conservation designations within the following search radii:

- Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
- Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR) within 3km of the Site
- Other relevant data e.g., Ancient Woodland Inventory within 1km of the Site

3.3 A review was undertaken of the location of any such designations, their distance from and connectivity with the Site, and the reasons for their designation. This information was used to determine whether they may be within the proposed development's Zone of Influence (ZoI).

3.4 Thames Valley Environmental Records Centre (TVERC) was contacted for details of any non-statutory nature conservation designations and records of protected/notable habitats and species. This information was requested for an area encompassing the Site and adjacent land within c. 2km of the Site boundary. This search area was selected to include the likely zone of influence upon non-statutory designations and protected or notable habitats and species.

3.5 Further online resources were reviewed for information which may aid the identification of important ecological features. The Woodland Trust's online Ancient Tree Inventory was reviewed for known ancient or veteran trees within the Site and adjacent land. Interactive online mapping provided by the charity 'Buglife' was used to determine whether the Site falls within an Important Invertebrate Area.

3.6 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography.

3.7 Where possible under the terms of the data provider, relevant desk study data are presented in Appendix C.

## Field Survey

3.8 A UK Habitat Classification ('UKHab') survey was carried out in fine and dry weather conditions on 24 May 2023 by Lucy Moorhouse, encompassing the Site and immediately adjacent habitats that could be viewed.

3.9 UKHab is a unified and comprehensive system for mapping and classifying habitats, designed to provide a simple and robust approach to surveying and monitoring, and replaces Phase 1 Habitat survey methods. The method allows for identification of important habitat types, including habitats of Principal Importance under Section 41 (S41) of the NERC Act (2006) and Habitats Directive Annex I habitats. This method also allows for direct translation of habitats into the current Biodiversity Metric (Natural England, version 4.0).

3.10 The following parameters were adopted for the UKHab survey undertaken for this PEA:

- UKHab Professional edition (Butcher *et al*., 2020, commercial End User Licence Agreement (EULA))
- Minimum Mappable Unit (MMU):
    - 10m$^2$/0.001ha (polygons)
    - 5m (linear)
- Primary Habitats recorded to a minimum of Level 2 (see below) with UKHab codes provided
- Mandatory secondary codes used
- Base-mapping comprising a combination of aerial imagery and topographic information

3.11 Primary Habitats are recorded to a minimum of Level 2. Where the survey is conducted at an appropriate time of year (e.g. May to July for grassland) habitats may be recorded to Level 3, 4 or 5, only if conditions and the experience of the surveyor allow.

3.12 To assist with classification of grassland habitats quadrat samples were taken during the UKHab survey. Representative sample locations were identified within each grassland parcel, spread evenly to avoid habitat transitions or ecotones. Both average (mean) species count per m$^2$ and peak species counts are reported for comparison.

3.13 Identification of habitat stands were made arbitrarily by the surveyor based upon obvious habitat structure, composition or other delineating feature (e.g. field or enclosure).

3.14 Quadrats of 1m x 1m were used, repeated four times in each sample location (i.e. 2m x 2m or 4m$^2$). This technique assists, for example, with distinguishing between modified (g4) and other neutral (g3c) grasslands (using the threshold of nine species per m$^2$, reporting an average of the

four samples) and of lowland meadows (g3a) (using the threshold of 35 species per 2m x 2m samples).

3.15 Alongside the UKHab survey, additional field survey information was collected, comprising:

- Detailed floral species lists recorded for each identified habitat/parcel
- Further habitat condition information based upon current Biodiversity Metric (Natural England, version 4.0) condition assessment guidance
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates)
- Evidence of, or potential for, other notable species (including S41 Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates)
- Any other survey information relevant to ecological matters

3.16 Results of the UKHab survey are presented on the Habitats Plan in Appendix A. Appendix D provides photographs of the habitats at the Site and Appendix E provides a list of floral species recorded in each habitat parcel. Nomenclature for higher plants within this report is consistent with the fourth edition of The New Flora of the British Isles (Stace, 2019).

### Limitations

3.17 There were no specific limitations to the desk study or field survey, which was conducted at an optimum time of year and in good conditions.

### Evaluation and Assessment

3.18 The evaluation and assessment of ecological features is beyond the scope of a PEA and has therefore not been undertaken here. Formal evaluation and assessment of any identified important ecological features should be undertaken as part of either a full EcIA, or receptor-specific survey and assessment in accordance with the published CIEEM method (CIEEM, 2018).

# 4.0 BASELINE ECOLOGICAL CONDITIONS

## Nature Conservation Designations

Statutory

4.1 There are no statutory designations covering any part of the Site.

4.2 No international statutory designations were identified within 10km of the Site.

4.3 Two national statutory designations were identified within 3km of the Site. This was the Ardley Cutting and Quarry SSSI (c. 2.5km north-west of the Site) and Ardley Trackways SSSI (c. 3km north-west of the Site). Bure Park LNR is also a local statutory designation (c. 1.6km north-east of the Site). These statutory designations are described in Table 1 below.

4.4 Based on the distance between the Site and national and local statutory designations, it is considered that development of the Site is unlikely to cause significant effects on these designations.

Non-Statutory

4.5 Four non-statutory designations were identified within 2km of the Site. These include two Cherwell District Wildlife Sites, comprised of Kings End Conservation Area (c. 500m north-east of the Site) and Bowlers Copse DWS (c. 2km south), one proposed Cherwell District Wildlife Site - Promised Land Farm Meadows (c. 1.5km south-east) and one Oxfordshire Local Wildlife Site - Bicester Wetland Reserve (c. 1.8km south-east). These designations have all been described in Table 1, below.

**Table 1.** Statutory and Non-Statutory Designations within search radii

| **Site Name & Designation** | **Distance & Direction from Survey Area** | **Special Interests or Qualifying Features** |
|---|---|---|
| International Designations within 10km | | |
| - | - | - |
| National Designations within 3km | | |
| Ardley Cutting and Quarry SSSI | c. 2.5km north-west | A series of working quarries containing historic dinosaur trackways from the middle Jurassic. |
| Ardley Trackways SSSI | c. 3km north-west | The site consists of geological interest of Jurassic rocks as well as areas of limestone grassland, ancient woodland and wetland habitats. |
| Local Designations within 2km | | |
| Bure Park LNR | c. 1.6km north-east | Area of grass meadow and young broad-leaved woodland. The river Bure runs through, feeding a small pond with known records of great crested newts. |

| Non-Statutory Designations within 2km | | |
|---|---|---|
| Kings End Conservation Area DWS | c. 500m north-east | Semi-improved grassland with marginal strips of plantation woodland, areas of lowland meadow plant species. |
| Promised Land Farm Meadows pDWS | c. 1.5km south-east | Grass dominated field with additional species characteristic of ancient hay meadows. A brook, ditches, and a pond present. |
| Bicester Wetland Reserve LWS | c. 1.8km south-east | Wet grassland comprising a reedbed, open water with marginal swamp vegetation, wet ditches, and dry grassland areas. The Site is managed by Banbury Ornithological Society. The area is important for over-wintering wildfowl and wetland bird species. |
| Bowlers Copse DWS | c. 2km south | Semi-natural woodland managed by a local group. |

Ancient Woodland

4.6 There is no ancient woodland, as shown on the ancient woodland inventory, covering any part of the Site or immediately adjacent land.

4.7 No trees on or adjacent to Site are listed on the Ancient Tree Inventory.

## Habitats and Flora

4.8 Habitats recorded on-site are illustrated in Appendix A with detailed species lists provided in Appendix E. Relevant UKHab codes are provided within parentheses for each habitat type recorded [e.g. Other Neutral Grassland (g3c)].

Notable Flora Records

4.9 The TVERC provided 51 records of 20 notable plant species from within the search area. Those of potential relevance to the Site include the invasive butterfly-bush *Buddleja davidii* (closest record c. 0.6km south-west of the Site) and Italian alder *Alnus cordata* (closest record c. 0.6km south-west) which is considered to have an invasive tree root system. A record of Japanese Knotweed *Fallopia japonica,* listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), also exists c. 1.5km south-east of the Site.

Pre-clearance Site Conditions

4.10 Before the Site was cleared to make way for construction traffic, storage and Site offices the Site was comprised entirely of arable land, cultivated for cereal crops with no vegetated boundaries. The Site was cleared in 2019 to make way for development, leading to the habitats assessed on the day of survey, as detailed below.

Post-clearance Site Conditions

*Artificial, unsealed, unvegetated surface (u1c)*

4.11 The Site is dominated by artificial, unsealed, unvegetated hardstanding, mainly forming of gravel access tracks around the Site offices and to other areas of development which back onto the Site, as well as the car park.

4.12 Some areas of vegetated artificial hardstanding are located around the edges of this habitat, between the hardstanding and other neutral grassland. Species recorded include annual meadow-grass *Poa annua*, bristly oxtongue *Helminthotheca echioides*, red clover *Trifolium pratense*, willowherb *Epilobium sp.* and mugwort *Artemisia vulgaris*.

*Buildings (u1b5)*

4.13 Multiple storage containers are located on-site, used as Site offices and for storage.

*Other neutral grassland (g3c)*

4.14 Multiple areas of other neutral grassland are located on the Site, which have been assessed as three distinct habitat parcels due to the differences in species and habitat management. Full species for each area of grassland are included within Appendix E.

4.15 An area of other neutral grassland is present to the north of the Site, which has succeeded from colonising vegetation around the edges of the hardstanding. This grassland is on an artificial surface and appears to have been largely unmanaged in the last 3/4 years. The sward was c. 70cm high on the day of survey and is dominated by false oat-grass *Arrhenatherum elatius*, Cock's-foot *Dactylis glomerata*, hedge mustard *Sisymbrium officinale*, dandelion *Taraxacum agg.* and red clover. Other species indicating the grassland to be of a good quality other neutral grassland include common mouse-ear *Cerastium fontanum,* wild carrot *Daucus carota,* oxeye daisy *Leucanthemum vulgare* and lesser trefoil *Trifolium dubium.*

4.16 Within the centre of G1 lies a bund of soil which has been piled since the clearance of the Site from arable land. The bund is c. 2m tall, and the sward is taller than that of G1 at c. 1m high. This grassland is similar to G1 in composition, however has large stands of plants indicative of suboptimal condition, including common nettle *Urtica dioica*, bramble *Rubus fruticosus agg.* and cow parsley *Anthriscus sylvestris*. Some species not recorded in G1 were found within this parcel, including common knapweed *Centaurea nigra,* greater burdock *Arctium lappa,* field madder *Sherardia arvensis* and red campion *Silene dioica,* some of which are likely to descend from the Sites arable past.

4.17 To the south of the Site, some scattered areas of other neutral grassland are present in between areas of hardstanding which similarly to G1 are

on an artificial, unsealed substrate. These areas are c. 1m tall with species including cow parsley, false oat-grass, Cock's-foot, cut-leaved crane's-bill *Geranium dissectum,* bristly oxtongue*,* long-headed poppy *Papaver dubium* and common comfrey *Symphytum officinale*.

4.18 The above habitat was considered in respect of its potential to comprise Open Mosaic Habitat on Previously Developed Land (OMH) Habitat of Principal Importance as set out in Section 41 of the NERC Act (2006). Table 2 below sets out criteria which were considered.

**Table 2.** Open Mosaic Habitat on Previously Developed Land (OMH) Criteria1

| Criterion | Site | Criteria Passed? |
|---|---|---|
| 1. The area of open mosaic habitat is at least 0.25ha in size. | c. 0.6ha comprising ephemeral/short perennial vegetation, open grassland, and bare ground. | Yes |
| 2. Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added. | The Site was previously arable land, which was cleared for development in 2019, creating areas of gravel, bare ground and a bund of previously agricultural soil in the north. Nevertheless, all history of disturbance at the Site is within the last four years, meaning there is no real longstanding history of disturbance at the Site. | Possible |
| 3. The site contains some vegetation. This will comprise early successional communities consisting mainly of stress-tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of (a) annuals, or (b) mosses/liverworts, or (c) lichens, or (d) ruderals, or (e) inundation species, or (f) open grassland, or (g) flower-rich grassland, or (h) heathland. | Contains early successional communities including annuals and open grassland | Yes |
| 4. The site contains unvegetated, loose bare substrate and pools may be present. | The vast majority of substrates are well compacted but remain suitable for colonising by vegetation (i.e. not concrete or macadam). No pools or loose substrate are present on-site. | Possible |

[1] UK Biodiversity Action Plan Priority Habitat Descriptions Open Mosaic Habitats on Previously Developed Land (Updated July 2010) From:UK Biodiversity Action Plan; Priority Habitat Descriptions. BRIG (ed. Ant Maddock) 2008.

| | | |
|---|---|---|
| 5. The site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)–(h) above (criterion 3) plus bare substrate, within 0.25ha. | Limited spatial variation, with loosely forming mosaic/ecotone to either side of grassland | No |

4.19 In review of the criteria above, the grassland and vegetated hardstanding within the Site are concluded not to be Open Mosaic Habitat on Previously Developed Land and has been classified as other neutral grassland.

## Fauna

Bats

4.20 A total of 21 bat records were identified within the search area, dating from 1995 to 2021. These include the following species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, noctule *Nyctalus noctule* and brown long-eared bat *Plecotus auratus*. The closest records are of a soprano pipistrelle, common pipistrelle and a noctule bat from 2013 (c. 0.7km south-east of the Site). A record from 2014 documents a common pipistrelle roost, c. 800m south-west of the Site.

4.21 As the Site is dominated by hardstanding, surrounded by newly built residential development and with no vegetated boundaries, the Site is considered to be of highly limited value to foraging and commuting bats, with only occasional bats passing through the Site. Therefore, bats are not considered to pose a constraint to development at the Site.

[redacted]

Dormouse

4.24 No records of dormouse *Muscardinus avellanarius* were identified within the search area.

4.25 No habitats suitable for dormice have been identified on-Site, with no vegetated boundaries or patches of scrub. Populations of hazel dormice are very scarce within Oxfordshire, with only three woodlands

with confirmed presence in 2016. Therefore, hazel dormice are considered to be absent from the Site.

Water Vole

4.26 A total of six records of water vole *Arvicola amphibius* were identified within the search area, dating from 1995 to 2003. The closest record is c. 1.5km east of the Site.

4.27 No watercourses are present on-site to support water vole. The closest watercourse is the Gagle Brook c. 1.2km south-west of the Site, with no vegetated corridors leading from the brook to the Site. Therefore, the presence of water vole on-site is highly unlikely.

Otter

4.28 A total of five records of otter *Lutra lutra* were identified within the search area, all from 2009. The closest record is c. 1.8km west of the Site. No watercourses are located close to the site, meaning the presence of otter is unlikely.

Other Mammals

*Hedgehog*

4.29 TVERC provided 44 records of hedgehog *Erinaceus europaeus* were identified within the search area, dating from 2012 to 2021. The closest record is c. 300m north-west of the Site of one individual from 2020.

4.30 Hedgehogs are known to utilise urban areas and vegetated gardens. Therefore, although the majority of the Site is formed of hardstanding and is surrounded by new development, hedgehogs could utilise the areas of other neutral grassland on-site for foraging.

*Brown Hare and Harvest Mouse*

4.31 A single record of brown hare *Lepus europaeus* was identified within the search area, dating from 2000 and is c. 2km west of the Site. No records of harvest mouse *Micromys minutus* were identified within the search area. No habitat suitability for either of these species were recorded on-site, with their presence deemed as unlikely.

Birds

4.32 A total of 8189 records of 81 bird species were identified within the search area, dating from 1995 to 2021. The majority of these records (7132) are from Bicester Wetland Reserve and refer to wetland bird species which are unlikely to be seen on-site. The remaining records are for a number of common and widespread species, as well as some red-listed birds on the UK Birds of Conservation Concern 5, including swift *Apus apus* (c. 650m south-east), starling *Sturnus vulgaris* (c. 730m north-west) and Fieldfare *Turdus pilaris* (c. 2km south-east).

4.33 Due to the lack of vegetated boundaries and scrub on-site, the habitat for nesting birds is limited to the small number of young saplings, with no signs of nesting birds on the day of survey. The areas of other neutral grassland could provide some limited foraging for some birds nesting in nearby trees or houses. Due to the amount of disturbance on-site and lack of vegetation, breeding birds are not considered to be present in any large numbers.

Reptiles

4.34 TVERC provided nine records of three reptile species were identified within the search area including seven records of grass snake *Natrix Helvetica* (the closest record dating from 2000 c. 850m south-east), two records of common lizard *Zootoca vivipara*, the closest from 2002 c 1.1km north-west of the Site and one record of slow worm *anguis fragilis* from 2003 c. 1.2km south-west.

4.35 Although some of the Site is now other neutral grassland with a long, unmanaged sward on the day of the survey, this grassland has only recently colonised the area, meaning it lacks the thatching which reptiles require. The Site is also surrounded by hardstanding, with development encompassing the Site, meaning no connecting habitats are present where reptiles could colonise the Site from.

Amphibians

4.36 TVERC provided 38 records of four amphibian species were identified within the search area, including 12 records of common frog *Rana temporaria,* two records of common toad *Bufo bufo*, four records of smooth newt *Lissotriton vulgaris*, and 20 records of great crested newts *Titurus cristatus*. The closest record is c. 830m south-west of the Site pertaining to a common frog from 2002.

4.37 A more detailed appraisal of the Site in respect of great crested newt is provided below.

*Great Crested Newt*

4.38 A total of 20 records of great crested newts were identified within the search area, dating from 2011 to 2014. The closest record to the Site is for a positive eDNA result from 2021 c. 830m north-west of the Site.

4.39 Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist. No potential breeding ponds were identified on-site during the site survey, or within a 250m dispersible range of the Site, based on OS mapping. A single pond was identified c. 400m south-west of the Site.

4.40 Although great crested newts use areas of other neutral grassland for commuting, the lack of ponds in the local area, vegetated features

linking the Site to other habitats and records of great crested newts within 500m of the Site means the presence of great crested newts is considered to be highly unlikely.

Invertebrates

4.41 A total of 59 records of nine invertebrate species were identified within the search area. The closest record is of a small heath butterfly *Coenonympha pamphilus* c. 220m south-west of the Site, which is known to occur in a range of habitat types, particularly grassland, which can be found on the Site. The Site is located within the Oxford Important Invertebrate Area (IIA).

4.42 The Site is dominated by hardstanding, whilst there are small areas of other neutral grassland and colonising vegetation which could potentially offer limited opportunities for invertebrates to forage and shelter, it is not considered that connectivity to other areas of more diverse invertebrate habitat is adequate for an important invertebrate assemblage to colonise and breed on-site.

# 5.0 DISCUSSION AND RECOMMENDATIONS

## Nature Conservation Designations

Non-Statutory Designations

*Kings End Conservation Area DWS*

5.1 Kings End Conservation Area is located c. 500m north-east and is easy to access from the Site, either by car or by foot using road and pedestrian links. The Site itself is open to the public, with multiple footpaths running through the DWS and pathways to nearby sports fields and housing developments. Despite this, proposals for the Site are for a small number of housing units and extra care apartments. Maintained gardens are included within the proposals for the extra care apartments, while Alchester Park Play is located directly adjacent to the Site. Therefore, due to closer and more local amenities it is not expected that a significant increase in footfall and associated impacts, such as trampling or littering will be present at the DWS.

Habitats and Flora

5.2 The NPPF states that planning decisions should provide net gains for biodiversity.

5.3 The Site is dominated by habitats of limited ecological interest and before clearance of the site for use as a construction compound and location for site offices it was comprised of cultivated arable land. Therefore, it is considered that the baseline for the Site is its pre-clearance state as use for arable cultivation.

5.4 Once the Site was cleared it was dominated by un-sealed hardstanding, with a bund of topsoil from the Sites agricultural past along the north of the Site. Whilst there is now some limited presence of other neutral grassland on the Site, it is likely that this is predominantly a result of seedling spill associated with its use as a site construction compound, rather than as a result of natural succession.

5.5 The Site was designed as part of the wider Phase 2 development (granted outline planning permission in May 2017), with greenspace and green infrastructure being planned comprehensively as part of that. This includes Alchester Park directly east of the Site, and a new tree-lined public footpath directly north of the Site. The now separate development of Parcel R does not therefore, have any greater ecological impact than it did prior to the Phase 2 permission being granted. In this context, Biodiversity offsetting/gain in accordance with adopted planning policy has already been accounted for.

5.6 However, the development of the Site does present some opportunities to deliver ecological enhancement as part of its own green infrastructure provision.

## Flora

Other neutral grassland

5.7 Although the other neutral grassland on-site is not considered to be locally significant due to its small area, its recent establishment and lack of structure within the grassland to support invertebrates, the creation of other neutral grassland will be incorporated into the design of the open space associated with the Extra Care proposal.

## Fauna

Bats

5.8 As there are currently no vegetated boundaries at the Site and no mature or semi-mature trees, the Site offers very limited opportunities for dispersing and foraging bat species. Therefore, due to the small size of the Site, high levels of nearby disturbance and the nature of the habitats, it is anticipated that bat activity on-site will not be significant. New hedgerow and tree planting along the northern boundary of the Site will provide enhanced commuting corridors for bats. Ecological input has been given into the external lighting strategy for the Site, in line with recommendations from the Institute of Lighting Professionals (2018) Bats and Artificial Lighting in the UK Guidance Note, so as to reduce potential adverse effects on nocturnal wildlife.

Nesting birds

5.9 All wild birds are protected from killing and injury, and their nests and eggs are protected from damage and destruction, under the Wildlife and Countryside Act 1981 (as amended). Therefore, any clearance of nesting habitat or features required to facilitate the development should avoid the period between March and August (inclusive) when nesting birds are most likely to be present. If this is not possible, habitat will need to be checked for nesting birds by a suitably qualified ecologist prior to clearance with works only proceeding if no nesting evidence or behaviour are observed.

## Summary of Recommendations

5.10 Based on the ecological constraints identified above, no recommendations for further survey work have been made for the Site, with ecological enhancement measures to be implemented identified below.

5.11 The creation of an area of other neutral grassland, to be incorporated into the private gardens of the extra care apartments has been advised

in order to mitigate for any potential effects due to the destruction of the current on-site grassland.

### Opportunities for Ecological Enhancement

5.12 To promote adherence to the NPPF and the Cherwell Local plan the following opportunities for ecological enhancement have been identified to be delivered across the residential development and extra-care Site:

- Incorporation of native plant species and plant varieties of known wildlife value within the landscaping scheme
- Improved connectivity of green infrastructure with new hedgerow planting along the northern boundary of the Site as well as around the private gardens and car park of the extra care apartments.
- Provision of three new bat roosting opportunities within new buildings (e.g. Schwegler 1FF), ideally over 3m high with a clear entry (i.e. uncluttered by vegetation) and a southerly/westerly aspect.
- Provision of four bird boxes for cavity-nesting species (e.g. Schwegler 1BB or similar) on new buildings. Boxes should be located at least 2.5m off the ground with a northerly/easterly aspect.
- Provision of two integrated sparrow nest boxes on new buildings (e.g. Schwegler 1SP or similar). Bird boxes should be placed on north or east elevations out of strong sunlight and prevailing winds, as is favoured by birds. These will be positioned on unobstructed walls at a range of heights to offer different opportunities. In-built features are beneficial as they cannot be removed and secures nesting spaces for the long-term.
- Provision of hedgehog gaps within all new boundary fences to promote habitat connectivity across and within the Site.

# 6.0 CONCLUSIONS

6.1 Confirmed ecological constraints to development at the Site have been identified as the presence of:

- Nesting birds
- Other neutral grassland

6.2 No overriding constraints to development have been identified on-site. Therefore as set out in best practice guidelines (CIEEM, 2017) this PEA is acceptable for the submission to planning, alongside the BNG report to be produced for the Site.

6.3 Ecological enhancements to be implemented at the Site include the provision of bat and bird boxes, low level lighting around new vegetated boundaries and native shrub and hedgerow planting. These ecological enhancement measures will aid accordance with the Cherwell Local Plan.

# 7.0 REFERENCES


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

Buglife, no date. *Important Invertebrate Areas*. [online] Available at: <https://www.buglife.org.uk/our-work/important-invertebrate-areas/> [Accessed June 2023].

Butcher, B., Carey, P., Edmonds, R., Norton, L., and Treweek, J., 2020. *The UK Habitat Classification User Manual.* Version 1.1 [pdf] UKHab Ltd. <Available at http://www.ukhab.org/> [Accessed June 2023].

Chartered Institute of Ecology and Environmental Management, 2016. *Guidelines for Assessing and Using Biodiversity Data*. Winchester: CIEEM.

Chartered Institute of Ecology and Environmental Management, 2017. *Guidelines for Ecological Report Writing.* Winchester: CIEEM.

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

Chartered Institute of Ecology and Environmental Management, 2018. *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Winchester: CIEEM.

Cherwell District Council, 2015. *The Cherwell Local Plan 2011 – 2031.* [pdf] Available at: <https://www.cherwell.gov.uk/info/83/local-plans/376/adopted-cherwell-local-plan-2011-2031-part-1> [Accessed June 2023].

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

Defra, 2011. *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. London: Defra.

English Nature, 2001. *Great Crested Newt Mitigation Guidelines*. Peterborough: EN.

JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), 2012. *UK Post-2010 Biodiversity Framework*. [pdf] Peterborough: JNCC.

Available at: <http://jncc.defra.gov.uk/page-6189> [Accessed June 2023].

Ministry of Housing, Communities and Local Government, 2021. *National Planning Policy Framework (NPPF)*. London: Ministry of Housing, Communities and Local Government.

Multi-Agency Geographic Information for the Countryside (MAGIC), 2013. *Interactive Map*. [online] Available at: <http://www.magic.gov.uk/MagicMap.aspx> [Accessed June 2023].

Natural England and Department for Environment, Food & Rural Affairs, 2014. *Protected species and development: advice for local planning authorities*. [online, last updated September 2022] Available at: <https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals> [Accessed June 2023].

Stace, C. A., 2019. *New Flora of the British Isles*. 4th ed. Suffolk: C & M Floristics.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I., 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds*, 114, pp.723-747.

The Woodland Trust, no date. *Ancient Tree Inventory*. [online] Available at: <https://ati.woodlandtrust.org.uk/> [Accessed June 2023].

## Appendix A

Habitats Plan


N

- Site boundary
- Other neutral grassland (g3c)
- Developed land, sealed surface (u1b)
- Buildings (u1b5)
- Gate
- Fence
- Field reference
- Individual trees (indicative location)

0 25 50 m

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| | | | |
|---|---|---|---|
| Project | Parcel R, Kingsmere, Bicester | Date June 2023 | Drawing No. CSA/6236/101 |
| Drawing Title | Habitats Plan | Scale Refer to scale | Rev C |
| Client | Preferred Homes Bicester Ltd & Countryside (Bicester) Ltd | Drawn BK | Checked LM |

# Appendix B

Legislation and Planning Policy

1.1. The **Conservation of Habitats and Species Regulations 2017** (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.

1.2. The **Wildlife and Countryside Act 1981** (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. Additionally, badgers are protected under the **Protection of Badgers Act 1992**.

1.3. The **Environment Act 2021** received Royal Assent in November 2021. Through an amendment to the Town and Country Planning Act 1990 the Environment Act will introduce a mandatory requirement for all planning permissions to be conditional upon the submission of a Biodiversity Gain Plan for approval by the Local Planning Authority. The Plan will need to demonstrate a net gain of at least 10% in the biodiversity value of the development site. These provisions are not yet in force, pending their enactment through secondary legislation (expected November 2023).

1.4. Section 40(1) of the **Natural Environment and Rural Communities (NERC) Act 2006** states that each public authority, "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications, with particular regard to the Section 41 (S41) lists of 56 habitats and 943 species of principal importance. The UK Biodiversity Action Plan (BAP) has been superseded by the Biodiversity 2020 Strategy, however Local BAPs continue to influence biodiversity management and conservation effort, including through the spatial planning system, at the local scale.

1.5. The **National Planning Policy Framework (2021)** (NPPF) sets out government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 174, states that the planning system and planning policies should minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

1.6. Paragraph 180 sets out the principles that local planning authorities should apply 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.
- 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.
- 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.

1.7. Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular, the PPG promotes the delivery of measurable Biodiversity Net Gain through the creation and enhancement of habitats alongside development.

1.8. The **Government Circular 06/2005**, which is referred to within the NPPF, defines statutory nature conservation sites and protected species as a material consideration in the planning process.

1.9. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

**Table 1.** Summary of regional and local planning policy relating to ecology

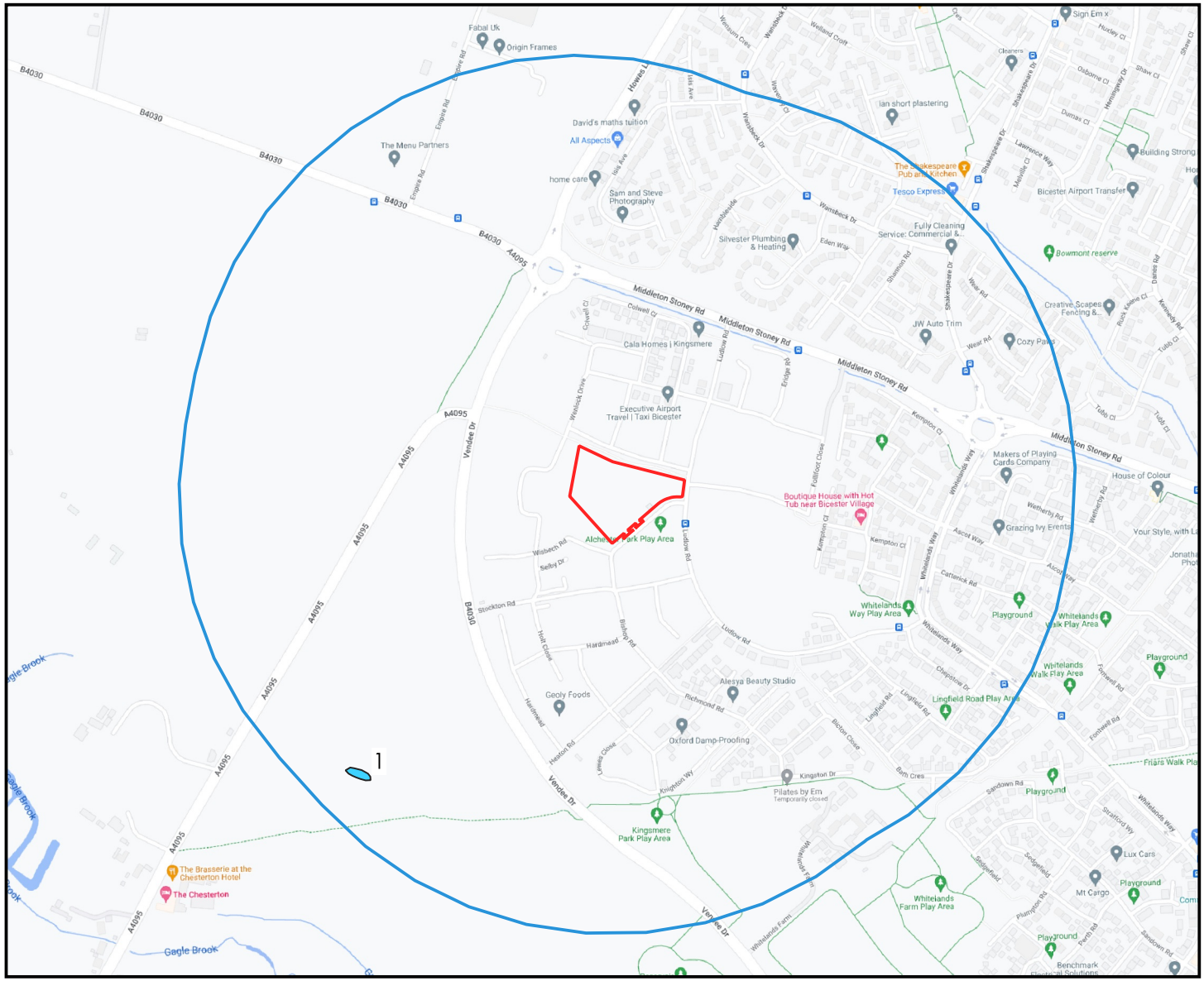
| Policy | Summary |
|---|---|
| **The Cherwell Local Plan 2011 - 2031** | |
| Policy ESD 10: Protection and | Protection and enhancement of biodiversity and the natural environment will be achieved by the following: |

| Policy | Summary |
|---|---|
| Enhancement of Biodiversity and the Natural Environment | • In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources, and by creating new resources.<br>• The protection of trees will be encouraged, with an aim to increase the number of trees in the District.<br>• The reuse of soils will be sought.<br>• 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 development will not be permitted.<br>• Development which would result in damage. to or loss of a site of international value will be subject to the Habitats Regulations Assessment process and will not be permitted unless it can be demonstrated that there will be no likely significant effects on the international site or that effects can be mitigated.<br>• Development which would result in damage to or loss of a site of biodiversity or geological value of national importance will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site and the wider national network of SSSI's, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity.<br>• Development which would result in damage to or loss of a site of biodiversity or geological value of regional or local importance including habitats of species of principal importance for biodiversity will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity.<br>• Development proposals will be expected to incorporate features to encourage biodiversity and retain and where possible enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity.<br>• Relevant habitat and species surveys and associated reports will be required to accompany planning applications which may affect a site, habitat, or species of known or potential ecological value.<br>• Air quality assessments will also be required for development proposals that would be likely to have a significantly adverse impact on biodiversity by generating an increase in air pollution.<br>• Planning conditions/obligations will be used to secure net gains in biodiversity by helping to deliver Biodiversity Action Plan targets and/or meeting the aims of Conservation Target Areas. Developments for which these are the principal ais will be viewed favourably. |

| Policy | Summary |
| --- | --- |
| | • A monitoring and management plan will be required for biodiversity features on siter to ensure their long-term suitable management. |

## Appendix C

Desk Study Information




| | | | |
|---|---|---|---|
| Project | Plot R, Kingsmere, Bicester | Date June 2023 | Drawing No. CSA/6236/100 |
| Drawing Title | Pond Plan | Scale Refer to scale | Rev B |
| Client | Preferred Homes Bicester Ltd & Countryside (Bicester) Ltd | Drawn RJC | Checked LM |

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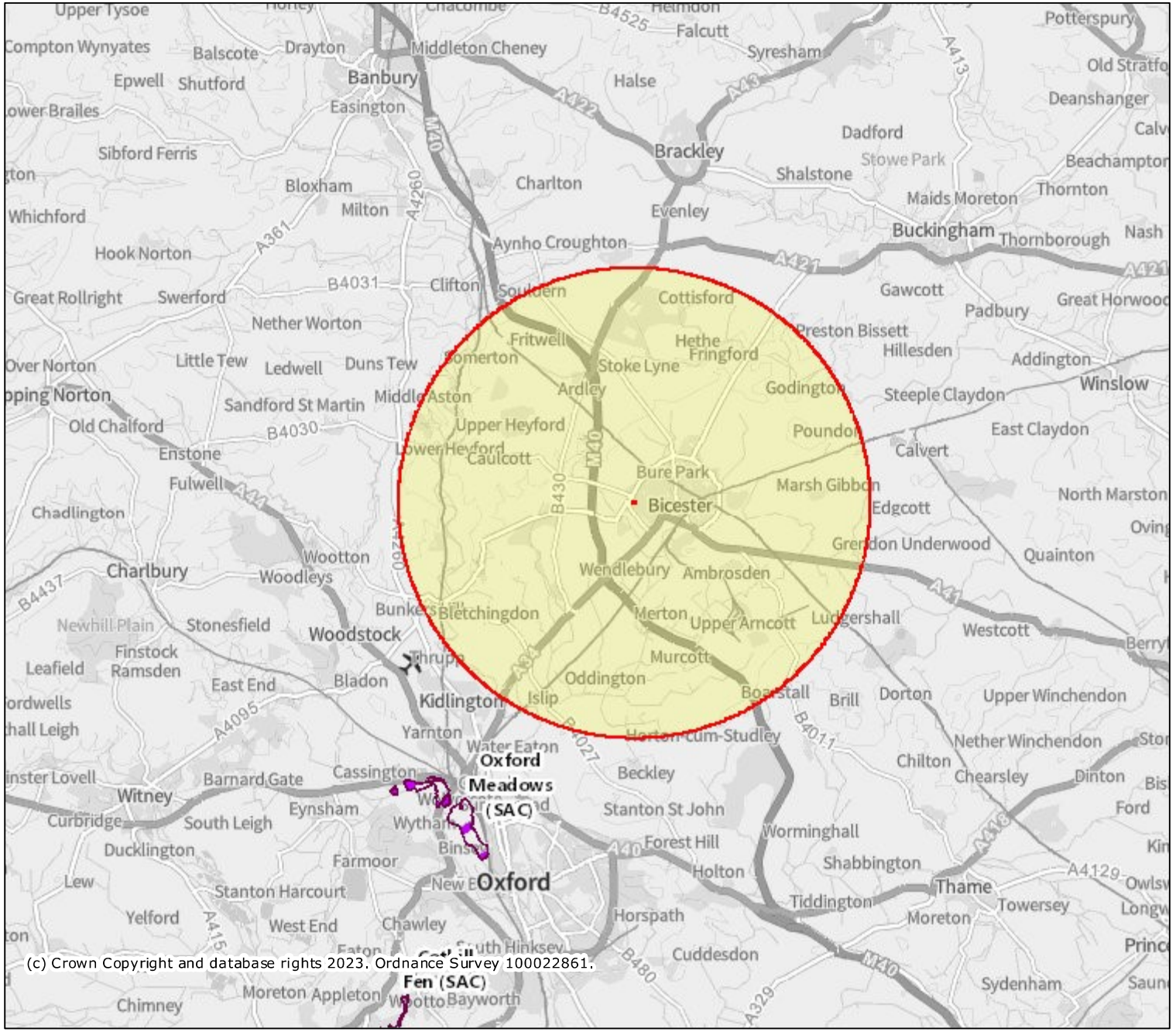
Site Check Report Report generated on Mon Jun 05 2023
**You selected the location:** Centroid Grid Ref: SP56502245
The following features have been found in your search area:
Ramsar Sites (England)
No Features found
Proposed Ramsar Sites (England)
No Features found
Special Areas of Conservation (England)
No Features found
Possible Special Areas of Conservation (England)
No Features found
Special Protection Areas (England)
No Features found
Potential Special Protection Areas (England)
No Features found

# 6236 10km Site Search




## Legend

- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)

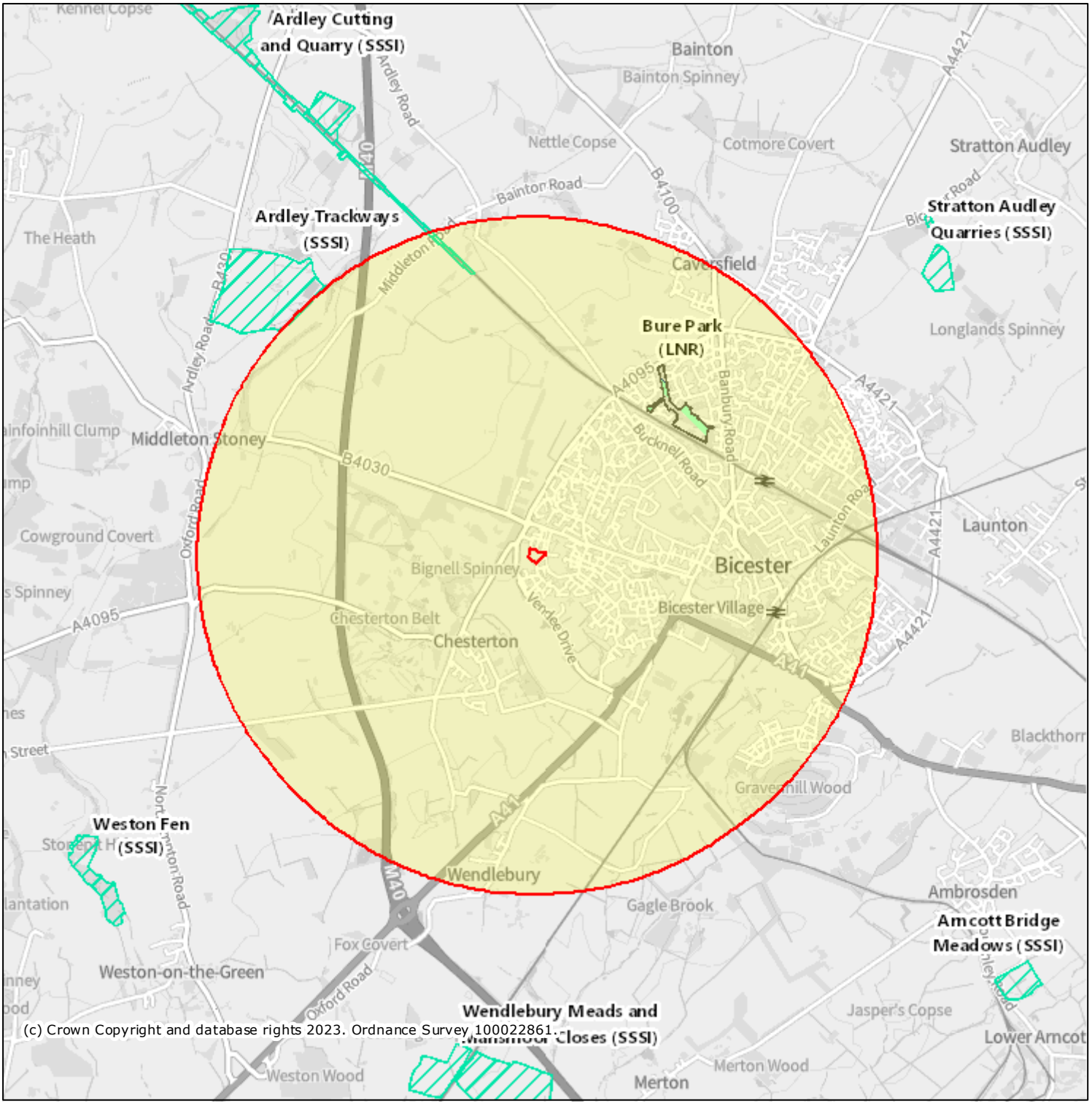
Projection = OSGB36
xmin = 391000
ymin = 190600
xmax = 518000
ymax = 253200

0 5 10
km

Map produced by MAGIC on 5 June, 2023.

Site Check Report Report generated on Wed Jun 07 2023
**You selected the location:** Centroid Grid Ref: SP56492245
The following features have been found in your search area:
Local Nature Reserves (England)
Reference
1134227
Name
BURE PARK
Hectares
8.4
Hyperlink
https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1134227
Sites of Special Scientific Interest (England)
Name
Ardley Trackways SSSI
Reference
1460482
Natural England Contact
Daniel Burgess
Natural England Phone Number
0845 600 3078
Hectares
63.6
Citation
2000672
Hyperlink
http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000672
Name
Ardley Cutting and Quarry SSSI
Reference
1000717
Natural England Contact
Daniel Burgess
Natural England Phone Number
0845 600 3078
Hectares
40.12
Citation
1000903
Hyperlink
http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000903
National Nature Reserves (England)
No Features found

# 3km Map






## Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Sites of Special Scientific Interest (England)

0 1.5 3
km

Projection = OSGB36
xmin = 447000
ymin = 217400
xmax = 466100
ymax = 227600

Map produced by MAGIC on 30 June, 2023.

## Appendix D

Photographs

Photograph 1. Typical view of the Site, photograph facing south.

Photograph 2. View of the Site facing east.

Photograph 3. Typical view of the Site facing west.

Photograph 4. View along the northern boundary, towards G1. Photograph facing north-west.

Photograph 5. Typical view of G2 along the bund in the north of the Site.

Photograph 6. Typical view of the grassland within G1.

# Appendix E

Habitats and Flora Species List

**Table 1.** Habitat Polygons

| **Site Name** | Parcel R, Kingsmere, Bicester | | | |
|---|---|---|---|---|
| **Survey Date and Surveyor(s)** | 24/05/2023, LM | | | |
| | | **Habitat Parcel Number/Habitat** | | |
| **Scientific Name** | **Common Name** | G1 | G2 | G3 |
| **Herb Species** | | | | |
| *Achillea millefolium* | Yarrow | | x | |
| *Aegopodium podagraria* | Ground-elder | x | | |
| *Alliaria petiolata* | Garlic mustard | x | x | |
| *Anthriscus sylvestris* | Cow parsley | | x | x |
| *Aquilegia sp.* | Columbine | x | | |
| *Arctium lappa* | Greater burdock | | x | |
| *Artemisia vulgaris* | Mugwort | x | x | x |
| *Bellis perennis* | Daisy | x | x | |
| *Calystegia sp.* | Bindweed | | x | |
| *Capsella bursa-pastoris* | Shepherd's-purse | | | x |
| *Cardamine flexuosa* | Wavy bitter-cress | x | x | x |
| *Centaurea nigra* | Common knapweed | | x | |
| *Cerastium fontanum* | Common mouse-ear | x | x | x |
| *Cirsium arvense* | Creeping thistle | x | x | x |
| *Cirsium vulgare* | Spear thistle | | x | |
| *Crepis biennis* | Rough hawk's-beard | x | x | x |
| *Crepis vesicaria* | Beaked hawk's-beard | x | x | |
| *Daucus carota* | Wild carrot | x | x | |
| *Epilobium sp.* | Willowherb | x | x | x |
| *Fumaria sp.* | Fumitory sp. | | | x |
| *Galium aparine* | Cleavers | x | x | |
| *Geranium dissectum* | Cut-leaved crane's-bill | x | x | x |
| *Geranium magnificum* | Purple crane's-bill | | | x |
| *Geranium molle* | Dove's-foot crane's-bill | x | x | x |
| *Geranium robertianum* | Herb Robert | x | | |
| *Geranium rotundifolium* | Round-leaved crane's-bill | x | | x |
| *Helminthotheca echioides* | Bristly oxtongue | x | x | x |
| *Hypericum perforatum* | Perforate St John's-wort | x | x | x |
| *Leucanthemum vulgare* | Oxeye daisy | x | x | x |
| *Linaria purpurea* | Purple toadflax | x | x | |
| *Lotus corniculatus* | Common bird's-foot-trefoil | x | x | x |
| *Malva neglecta* | Dwarf mallow | | | x |
| *Melilotus albus* | White melilot | x | | x |
| *Myosotis sp.* | Forget-me-not | x | x | |
| *Papaver dubium* | Long-headed poppy | | | x |
| *Papaver sp.* | Poppy | x | x | |
| *Petasites sp.* | Butterbur | x | x | x |
| *Plantago lanceolata* | Ribwort plantain | x | x | x |
| *Potentilla reptans* | Creeping cinquefoil | x | x | |
| *Ranunculus acris* | Meadow buttercup | | x | |
| *Ranunculus repens* | Creeping buttercup | x | x | x |
| *Rumex crispus* | Curled dock | x | | x |
| *Rumex obtusifolius* | Broad-leaved dock | x | x | x |
| *Senecio jacobaea* | Common ragwort | x | x | x |
| *Sherardia arvensis* | Field madder | | x | |
| *Silene dioica* | Red campion | | x | |
| *Sisymbrium officinale* | Hedge mustard | x | x | x |
| *Sonchus oleraceus* | Smooth sowthistle | x | x | x |
| *Symphytum officinale* | Common comfrey | x | x | x |
| *Taraxacum agg.* | Dandelion | x | x | x |
| *Trifolium dubium* | Lesser trefoil | x | x | x |
| *Trifolium pratense* | Red clover | x | x | |
| *Umbilicus rupestris* | Navelwort | | | x |
| *Urtica dioica* | Common nettle | x | x | x |
| *Veronica hederifolia* | Ivy-leaved speedwell | x | x | x |
| *Veronica persica* | Common field-speedwell | x | x | x |
| *Vicia hirsuta* | Hairy tare | x | x | x |
| *Vicia sativa* | Common vetch | x | x | x |
| **Sedges and Rushes** | | | | |
| *Carex flacca* | Glaucous sedge | | | x |
| *Carex pendula* | Pendulous sedge | | | x |
| *Juncus inflexus* | Hard rush | | | x |
| **Grasses** | | | | |
| *Agrostis sp.* | Bent grass | | x | |
| *Alopecurus pratensis* | Meadow foxtail | x | x | x |
| *Anisantha sterilis* | Barren brome | x | x | x |
| *Arrhenatherum elatius* | False oat-grass | x | x | x |
| *Bromus hordeaceus* | Soft-brome | | | x |
| *Dactylis glomerata* | Cock's-foot | x | x | x |
| *Festuca rubra* | Red fescue | x | x | x |
| *Holcus lanatus* | Yorkshire-fog | x | x | |
| *Hordeum secalinum* | Meadow barley | x | x | |
| *Lolium perenne* | Perennial rye-grass | x | x | x |
| *Poa annua* | Annual meadow-grass | x | | x |
| **Broadleaved** | | | | |
| *Acer pseudoplatanus* | Sycamore | x | | x |
| *Rosa sp.* | Rose sp. | | x | |
| *Rubus fruticosus agg.* | Bramble | x | | |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