

Biodiversity Strategy



Himley Village, Bicester
2nd November 2023



**Tyler
Grange**

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Summary

- S.1. This Biodiversity Strategy has been prepared by Tyler Grange Group Ltd. on behalf of Cala Homes in respect to the Land at Himley Village, Oxfordshire, OX26 1RT hereafter referred to as the 'site'.
- S.2. An outline planning application for the phased development of up to 1,700 residential dwellings (Class C3), flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2FE) (Class D1) was submitted to Cherwell District Council (Application Ref: 14/02121/OUT) in 2014.
- S.3. Outline planning permission was granted for the site in January 2020 with a number of conditions attached. Subsequently, the Reserved Matters (RM) application for all phases of the proposals is to be submitted to Cherwell District Council.
- S.4. This report uses previous survey work completed in 2010 and 2011 by Hyder Consulting and as detailed within an Environmental Statement chapter (chapter 7), and the update survey work completed by Tyler Grange in 2023, to set out the Biodiversity Strategy and biodiversity net gain measures to accompany the proposed development, to meet the requirements of Condition 10, and provide relevant supporting updated survey work pursuant to Condition 25 in respect to all phases of the development.
- S.5. Tyler Grange undertook an update Phase I habitat survey, badger survey and great crested newt (GCN) population assessment at the site 2023. The surveys were completed in January, March to May 2023. A total of four badger setts were recorded within the site, and GCN were recorded within Ponds 2 and 3.
- S.6. The majority of the proposed development will take place within the improved grassland and arable fields, which are of low ecological importance, and the loss of c. 180 m of hedgerow to allow for new access roads and paths. The remaining hedgerow lengths will be retained and buffered from development. All of the broadleaved parkland, deciduous woodland, vegetated ponds, scrub and wet ditches will be retained as part of the development.
- S.7. The habitats proposed to be created within the site include new hardstanding areas (including buildings, roads and pathways etc) amenity grassland planting, new species rich long grassland planting, new wet grassland planting within the SUDS, new wildflower meadow and flowering lawn planting, new wildlife meadow and bulb planting, new orchard creation, new native hedgerow creation, allotments, and new scrub and hedgerow buffer planting (see **Section 5** and **Appendix 2** for further detail). In addition, extensive new tree planting will take place across the site, and to include a mixture of native, feature and fruiting varieties.
- S.8. A GCN Mitigation Strategy report will be produced in order to meet the requirements of Condition 28 of the outline planning permission and will detail the mitigation and enhancement measures to be implemented for GCN at the site in ensuring that their favourable population status is maintained and the site remains suitable for GCN.
- S.9. Based on the current proposals it is anticipated that all of these setts will be retained and buffered, however, as construction works are proposed within 30 m of the likely active sett, it would



potentially be subject to disturbance during construction and a disturbance licence from Natural England will be required before construction can commence.

- S.10. A Biodiversity Net Gain (BNG) assessment of the site has been completed using Natural England's latest Biodiversity Net Gain Metric (The Biodiversity Metric 4.0) which should be looked at in conjunction with this note (ref: **15525_Biodiversity Metric 4.0_07082023**).
- S.11. The proposals in their current form would therefore result in a net gain in habitat units (+13.79%) and hedgerow units (+10.07%) within the site, the mitigation hierarchy has been followed, and opportunities for biodiversity have been maximised with the proposals through habitat creation and enhancement.
- S.12. With the implementation of the mitigation and enhancement strategy described within this report, the proposed development would be in conformity with relevant planning policy and legislation (see **Appendix 1**), and provides suitable detail required in discharging Conditions 10 and 25.



Section 1: Introduction

- 1.1. This report has been prepared by Tyler Grange Group Ltd. on behalf of Cala Homes in respect to the Land at Himley Village, Oxfordshire, OX26 1RT hereafter referred to as the 'site'. The site is centred on National Grid Reference SP 55436 23155.
- 1.2. An outline planning application for the phased development of up to 1,700 residential dwellings (Class C3), flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2FE) (Class D1) was submitted to Cherwell District Council (Application Ref: 14/02121/OUT) in 2014.
- 1.3. The outline application was accompanied by an Environmental Statement (ES) which was submitted in 2014. Chapter 7 of the ES provides details of the ecological surveys completed by Hyder Consulting in 2010 and 2011, along with an update Phase 1 Habitat survey undertaken in 2014 by Waterman. This survey work included a background data search with records obtained from the Thames Valley Environmental Records Centre (TVERC), habitat features survey and hedgerow assessment, with specific surveys carried out for great crested newt (GCN) *Triturus cristatus*, badger *Meles meles*, reptiles, breeding and overwintering birds, invertebrates, bat activity and roosts, dormice *Muscardinus avellanarius*, water vole *Arvicola amphibius* and otter *Lutra lutra*.
- 1.4. Outline planning permission was granted for the site in January 2020 with a number of conditions attached, including Conditions 10 and 25 which state:

Condition 10

"Prior to or alongside the submission of the first application for approval of reserved matters, a Biodiversity Strategy for the site shall be submitted to and approved in writing by the Local Planning Authority prior to the determination of the first reserved matters application. Each reserved matter application shall be accompanied by a statement setting out how the proposed development will contribute to achieving the Biodiversity Strategy and net biodiversity gain. The development shall be carried out in accordance with the approved Biodiversity Strategy."

Condition 25

"No development shall commence on any phase unless or until an up to date ecological survey has been undertaken to establish changes in the presence, abundance and impact on bio diversity within that phase. The survey results, together with an updated biodiversity mitigation plan and method statement shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the development of the phase shall be carried out in accordance with the approved Mitigation Plan and Method Statement."

- 1.5. Subsequently, the Reserved Matters (RM) application for all phases of the proposals is to be submitted to Cherwell District Council. This Biodiversity Strategy Report (BSR) has been completed by Tyler Grange in 2023 pursuant to Condition 25, to provide a summary of all previously completed survey works at the site, provide the results of update surveys



completed in 2023, and information on the detailed mitigation and enhancement strategies to be implemented at the site.

- 1.6. Tyler Grange produced a Biodiversity Strategy Report (BSR) in January 2023 pursuant to the requirements of Condition 10 of the granted outline permission (Application Ref: 22/02375/NMA, an amendment to application no. 14/02121/OUT). The BSR describes and evaluates the ecological features within the Phase 1 area of the site, and details the mitigation and enhancement strategies for habitats and protected species within the site, with reference to policy and legislation, along with a Biodiversity Net Gain (BNG) assessment for the Phase 1 area of the development. This report has been informed, in part, by the BSR, which should be read in conjunction with this report.
- 1.7. This report considers all phases of development and has been produced to supersede the previously submitted masterplan biodiversity strategy in light of updated surveys. Where suitable, reference is made to the completed works and methodologies included within the masterplan biodiversity strategy. The purpose of this report is therefore to:
 - Set out the Biodiversity Strategy and biodiversity net gain measures to accompany the proposed development and the first reserved matters application, to meet the requirements of Condition 10;
 - Provide relevant supporting up to date survey information pursuant to Condition 25 in respect to all phases of the development;
 - Summarise the ecological features at the site and establish if any significant changes have occurred since the time of the previous surveys;
 - Provide a summary of the ecological recommendations within the ES, submitted in support of the outline application and confirm whether these remain appropriate; and
 - Where appropriate, provide additional detail on the mitigation and enhancement measures required to ensure their delivery and conformity with relevant policy and legislation based on the reserved matters layout, pursuant to Condition 10.
- 1.8. In addition to the information provided within the ES as part of the outline application, this report has also been informed by the updated survey work undertaken in 2023 by Tyler Grange.

Context

- 1.9. The 'site' is defined by the application red-line boundary (see **Plan 15525/P03a**). The site is located immediately to the west of Bicester in Oxfordshire, adjacent to the B4030, and is surrounded by arable land. The M40 is located to the west and Bicester is located to the east of the site. The 'study area', as detailed in the 2014 ES, extends to a 10 km radius around the site for statutorily protected sites and non-statutorily protected sites, and a 10 km radius for protected and priority species records.



Section 2: Methodology

Previous Ecology Work

- 2.1. Full methodologies for the survey work completed in support of the outline application can be found in Chapter 7 of the ES.

2023 Survey Methodology

- 2.2. The methodology for survey work carried out by Tyler Grange in 2023 is provided below. The methodology for all other surveys carried out at the site can be found in the ES.

Habitat Survey

- 2.3. Update habitat surveys were completed at the site by Tyler Grange in January 2023, with a further update walkover of the whole site completed in March 2023. The purpose of these surveys was to establish if any changes has occurred since the time of the previous assessment, as well as to gather additional information in support of an update Biodiversity Net Gain (BNG) Assessment, which was completed as part of the RM application (see **Section 5**).
- 2.4. As part of the update surveys, habitats were assessed with reference to the UK Habitat Classification (UKHab, Butcher *et al.*, 2020) to conform with the requirements of BNG. Further detail is provided in the BNG assessment report and where necessary habitats are described with reference to UKHab below.
- 2.5. An updated hedgerow survey was also undertaken on all hedgerows within the site in March 2023 using the methodology detailed in 'The Hedgerow Survey Handbook. 2nd Edition' (DEFRA 2007), in order to determine their species-richness. Based on this survey methodology, 30m sections of each hedgerow were surveyed and if 5 or more native wooded species were recorded in that section, the hedge was classified as species-rich. If a hedge was less than 30m in length, the entire length of hedge was surveyed using this methodology.
- 2.6. As part of these habitat surveys, the site habitats were also assessed for their suitability to support protected and priority species and identify where any additional surveys could be required.

Amphibians

Great Crested Newt (GCN) Population Assessment

- 2.7. Six population assessment surveys were undertaken between March and July 2023 and followed the national guidance detailed within the Great Crested Newt Mitigation Guidelines' (English Nature, 2001) and standing advice, were completed during suitable weather conditions, namely nights when the night-time air temperature is more than 5°C, with little or no wind and no rain.



2.8. The following methods were employed on each visit, in order to detect the population size of any GCN within the site:

- *Torch surveys*: The accessible margins of each water body were slowly walked once it was dark and a search made by torchlight (using torches with >one million candlepower) for newts. All newts observed were identified to species, counted and identified as males, females or juveniles where possible;
- *Refugia search*: Any suitable refugia surrounding each water body was inspected for any GCN through hand lifting;
- *Bottle traps*: Funnel traps (made from two litre clear plastic bottles) were submerged (with an air bubble retained) and secured with a cane approximately every two meters around the pond margins in the evening before dark, and left set overnight to be checked the following morning; and
- *Egg searches*: All suitable submerged vegetation was searched for GCN eggs. Newt eggs are characteristically wrapped individually in submerged the leaves of aquatic vegetation.

Badger Survey

2.9. Update badger surveys were undertaken in January and March 2023 in conjunction with the Phase 1 habitat surveys.

2.10. During the survey, any field signs of badger, within the site and within 30m of the boundary where access permitted, were recorded. Typical badger field signs include:

- Badger setts;
- Badger pathways;
- Push throughs (gaps made where badgers regularly push their way through fencing/hedgerows);
- Latrines and dung pits;
- Badger hairs;
- Badger prints; and
- Foraging Activity (e.g. snuffle holes).

2.11. Any sett found was examined and assigned to one of four categories of importance to the badger clan, as defined by Harris et al. (1989)¹. The number of holes comprising each sett was recorded and setts classified as disused, partially used or well-used. Sett descriptions and categories of use are set out in **Tables 2.1** and **2.2**.

¹ Harris, Cresswell and Jefferies (1989) Surveying Badgers. The Mammal Society – No 9



Table 2.1: Classification of badger setts

Type of Badger Sett	Description
Main Setts	These usually have a large number of holes with large spoil heaps, and the setts generally look well used. There will be well-used paths to and from the sett and between sett entrances. Although normally the breeding sett is in continuous use, it is possible to find a main sett that has become disused due to excessive digging or some other reason; it should be recorded as a disused main sett.
Annex Setts	These are often close to a main sett, usually less than 150m away, and are usually connected to the main sett by one or more obvious well-worn paths. They usually have several holes but may not be in use all the time even if the main sett is very active.
Subsidiary Setts	These often only have a few holes. They are usually at least 50m from a main sett, and do not have an obvious path connecting with another sett. They are not continuously active.
Outlier Setts	These usually have only one or two holes, often have little spoil outside the hole, with no obvious path connecting with another sett and are only used sporadically. When not in use by badgers, they are often taken over by foxes or even rabbits. However, they can still be recognised as badger setts by the shape of the tunnel (not the actual entrance hole), which is usually at least 250mm in diameter, and is rounded or a flattened oval shape. Fox and rabbit tunnels are smaller and often taller than broad.

Table 2.2: Indicators of Use of Badger Setts

Classification of Use	Description
Well-used	Clear of debris and vegetation, obviously in regular use.
Partially Used	Not in regular use, with leaves or twigs in entrance or moss and other plants growing around the entrance.
Disused	Partially or completely blocked entrances, unable to be used without a considerable amount of clearance.



Section 3: Ecological Baseline

Introduction

- 3.1. The ecological baseline at the site has been established from surveys undertaken by Hyder Consulting in 2011 and Tyler Grange in January and March 2023. The results of these surveys have been provided below.
- 3.2. A summary of the baseline has been provided here, further information is also provided in the ES chapter produced for the outline application.

Designated Sites

- 3.3. The data search completed in 2011 identified the presence of three statutory and three non-statutory designated sites within the study area.

Statutory Designated Sites

- 3.4. The closest statutory designated site is the Ardley Cutting and Quarry Site of Special Scientific Interest (SSSI), located 0.6 km north of the site at its closest point. No European designated sites are located within 10 km of the site, and no part of the site is covered by any statutory designation. Full details of statutory designated sites within 2 km of the site are provided in **Table 3.0**.

Table 3.0: Statutory Designated Sites Within 2 km of the site.

Site Name	Designation	Distance and Direction from Site (km – N/S/W/E)	Description/Summary of Reason for Designation
Ardley Cutting and Quarry	Site of Special Scientific Interest (SSSI)	0.6 km north	Designated for the presence of lowland calcareous grassland, dominated by upright brome <i>Bromopsis erectus</i> and tor-grass <i>Brachypodium pinnatum</i> with other flora including basil thyme <i>Acinos arvensis</i> and clustered bellflower <i>Campanula glomerata</i> , scrub, ancient woodland and wetland habitats. It is also of geological interest due to its exposures of Jurassic rocks.
Bure Park	Local Nature Reserve (LNR)	1.4 km east	Designated for due to the presence of grass meadow, young broad-leaved woodland, hedges and scrub. A small river (the River Bure) runs through the site, feeding a small pond which is home to GCN.



Ardley Tackways	SSSI	1.6 km northwest	A site of geological interest.
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Non-Statutory Designated Sites

3.8. Non-statutory designated sites within 2 km of the site are listed in **Table 2.1** below.

Table 3.1: Non-Statutory Designated Sites Within 2 km of the site.

Site Name	Designation	Distance and Direction from Site (km – N/S/W/E)	Description/Summary of Reason for Designation
Ardley and Heyford	Conservation Target Area (CTA)	1 km northwest	Designated for its limestone plateau which includes the Upper Heyford Airfield, several quarries near Ardley and the railway line and some trackways.
Trow Pool	Local Wildlife Site (LWS)	1.1 km northwest	Designated for its two shallow eutrophic ponds and associated vegetation, rich in emergent species including mare’s-tail <i>Equisetum arvense</i> and spiked water-milfoil <i>Myriophyllum spicatum</i> , and trees including alder <i>Alnus sp.</i> and crack willow <i>Salix × fragilis</i> .
Shakespeare Drive	King’s End Conservation Area	1.1 km east	Designated for its semi-improved grassland with lines of trees and marginal strips of plantation woodland and a hard surfaced water channel.

Habitats

3.9. The habitats present across the site in 2023 are summarised below, along with a description of the composition of the main plant species present and an assessment of their ecological importance. Any differences change in habitat type between the 2011 surveys and the 2023 surveys is noted. The locations of the habitats are shown on the Habitats Features Plan (15525/P03a).

Arable

3.10. The fields F1 – F3 and F9 – F11 comprise arable fields and are subject to frequent management, with minimal margins present. All arable fields are considered to be of **negligible ecological importance**. Only the field F8 was recorded as an arable field during the surveys carried out in 2010 and 2011.



Buildings

- 3.11. Three buildings (B1 – B3) were identified within the site boundary. B1 refers to a single storey house/barn conversion in the south of the site. B2 is a small garage next to B1.
- 3.12. B3 is located close to the centre of the site as part of Himley Farm. B3 comprises a metal barn structure with a corrugated roof and skylights throughout.
- 3.13. Buildings have no inherent ecological value and this habitat type is therefore considered to be of **negligible ecological importance**.

Broadleaved parkland

- 3.14. A wooded copse surrounds pond P1 comprising mainly alder and an area of broadleaved parkland surrounds pond P2. Trees have inherent ecological value, as they provide habitat opportunities for flora and fauna, and as such this habitat is considered to be of **local ecological importance**.

Deciduous plantation

- 3.15. Three areas of planted deciduous woodland are located to the east of fields F9-F11 and separated from the fields by a fence. Most trees within the woodland are semi-mature and these areas are considered to be of **local ecological importance**.

Garden

- 3.16. A vegetated garden surrounds building B1 in the south of the site. This habitat type is common in the wider landscape and is therefore considered to be of **negligible ecological importance**.

Hardstanding

- 3.17. An access track runs in a north to south direction through the centre of the site between fields F4 and F8, and F5 and F9 to provide access to the farm buildings at the centre of the site. Areas of hardstanding throughout the site provide no inherent ecological value and therefore this habitat type is of **negligible ecological importance**.

Improved grassland

- 3.18. The fields F4 – F8, and a section of F9 comprise improved grassland with a short sward height, with two fields showing evidence of recent use as arable. This habitat type is common in the wider area and is therefore considered to be of **negligible ecological importance**. All fields with the exception of F8 were recorded as improved grassland during the 2011 surveys.

Orchard

- 3.19. An orchard forms part of the garden to the south of building B1. This habitat provides habitat opportunities for flora and fauna and as such is considered to be of **local ecological importance**.



Ponds

- 3.20. There are three ponds within the site boundary (P1, P2 and P3). These ponds provide habitat suitable for foraging and dispersal of fauna and as such are considered to be of **local ecological importance**.

Scattered broadleaved trees

- 3.21. Scattered mature trees are located within the site boundary, including field maple *Acer campestre*, English elm *Ulmus procera* and alder *Alnus glutinosa*. These trees have inherent ecological value, as they provide habitat opportunities for flora and fauna, and as such are considered to be of **local ecological importance**.

Wet ditches

- 3.22. A network of wet ditches run through the southern half of the site. These ditches provide habitat suitable for foraging and dispersal of fauna and as such are considered to be of **local ecological importance**.

Hedgerows

- 3.23. A total of 28 hedgerows are present within the site. Hedgerows have inherent ecological value, as they provide a range of habitat opportunities for flora and fauna, and as such are considered to be of **local ecological importance**. Further details are provided in **Table 3.2** below.

Table 3.2: Hedgerow Descriptions

Hedgerow	Hedgerow Number	Description
Ancient Species Rich Hedge with Trees	H1, H3, H4 and H6	Intact and unmanaged hedgerows. Comprising elm, blackthorn <i>Prunus spinosa</i> , elder <i>Sambucus nigra</i> , hawthorn <i>Crataegus monogyna</i> , <i>Rosa</i> sp., crab apple <i>Malus sylvestris</i> , ash <i>Fraxinus excelsior</i> , willow <i>Salix</i> sp., sycamore <i>Acer pseudoplatanus</i> and field maple.
Species Rich Hedge with Trees	H5, H9, H15, H17, H22-H26	Intact and unmanaged. Comprising oak <i>Quercus robur</i> , elder, elm, bramble <i>Rubus fruticosus</i> , <i>Rosa</i> sp., hawthorn and beech <i>Fagus sylvatica</i> .
Species Poor Hedge with Trees	H2, H28	Largely intact and unmanaged. Dominated by hawthorn, bramble, occasional sycamore and hazel <i>Corylus avellana</i> , <i>Rosa</i> sp., patches of blackthorn, and ash standards.
Species Rich Hedge with	H18	Historically laid ash trees, with hawthorn, elm, bramble and <i>Rosa</i> sp.



Trees and Wet Ditch		
Species Poor Hedge with Trees and Wet Ditch	H16	Unmanaged and elm dominated. Comprising, hawthorn, bramble ash and elder.
Species Rich Hedgerows	H11-H14, H20	Comprising elm, blackthorn, bramble, <i>Rosa</i> sp., elder and ash.
Species Poor Hedgerows	H19, H21, H27	Comprising elm, ash and blackthorn, with occasional bramble.

Protected Species

- 3.26. Habitats on the site remain largely the same as what has been recorded in the ES. The suitability of these habitats for protected species has therefore remained the same, as have the importance of the species assemblages present or likely present on the site. Further details are provided in this section.

Amphibians

- 3.27. Population surveys for GCN recorded a 'medium population' within ponds **P2** and **P3** on site in 2011, however the terrestrial habitat surrounding the pond was considered to be largely unsuitable for GCN due to its intensive management.
- 3.28. Update population surveys for GCN undertaken by Tyler Grange in 2023 recorded both 'small' populations of GCN within pond **P2** (peak count 2) and **P3** (peak count 5) (see **15525/P04** and **Appendix 3**). In addition, smooth newt *Lissotriton vulgaris* were also recorded within **P3**. No GCN or other newts were recorded in **P1**.
- 3.29. The update 2023 habitat surveys confirmed that the majority of habitats at the site, namely the arable and improved grassland fields, remained largely unsuitable for GCN and other amphibians owing to the regular and intensive management of these habitats.
- 3.30. The hedgerows, scrub and woodland provide suitable terrestrial habitat for foraging and sheltering amphibians, including GCN.
- 3.31. All ditches within the site were recorded as dry during the population surveys undertaken in 2023.
- 3.32. The site is therefore considered to be of **local ecological importance** for GCN.



Badgers

- 3.33. No badger setts were identified on the site during surveys completed in 2010 or 2014 to inform the ES. Whilst mammal runs and mammal snuffle marks were noted, no definitive badger signs were identified within the site, however setts were recorded within the wider area outside of the site.
- 3.34. The 2023 walkover survey recorded a total of four setts within the site boundary, comprising one likely active sett, three likely inactive setts, as well as three holes that could be used by badger. **Badger sett locations are confidential, however Plan 15525/P06 provides the indicative locations of the setts on site.**
- 3.35. Badger is not a species of conservation concern and its legal status is primarily to protect them from persecution. As such, any badger population utilising the site is considered to be of **site ecological importance**.

Bats

- 3.36. Bat activity and static surveys undertaken (May to July 2010) recorded seven species/species groups of bat using the site for commuting and foraging. These included:
- Common pipistrelle *Pipistrellus pipistrellus*;
 - Soprano pipistrelle *Pipistrellus pygmaeus*;
 - Brown long eared *Plecotus auritus*;
 - Noctule *Nyctalus noctula*;
 - Leisler's bat *Nyctalus leisleri*;
 - Serotine *Eptesicus serotinus*; and
 - Myotis *Spp.*
- 3.37. Activity levels recorded during each of the surveys in 2010 were relatively low with most activity concentrated around the hedgerows and ponds throughout the site.
- 3.38. In addition to the activity and static surveys, dusk emergence and dawn re-entry surveys were undertaken for a number of trees and the buildings at Himley Farm, and a common pipistrelle roost was confirmed within the farmhouse in 2011 which is outside of the site redline.
- 3.39. It was considered that the site is part of a wider foraging resource, and given the assemblage recorded, they are not considered to be part of a population of more than **local ecological importance**.

Breeding birds

- 3.40. Surveys for breeding birds were carried out in 2011. The species recorded include song thrush *Turdus philomelos*, dunnock *Prunella modularis*, house sparrow *Passer domesticus*, linnet *Carduelis cannabina subsp. autochthonal cannabina*, starling *Sturnus vulgaris*, common bullfinch *Pyrrhula pyrrhula* whitethroat *Sylvia communis* and marsh tit *Poecile palustris*.



- 3.41. In addition, wintering bird surveys were undertaken within the winter of 2011, and recorded flocks of yellowhammer *Emberiza citrinella*, redwing *Turdus iliacus* and fieldfare *Turdus pilaris*.
- 3.42. The bird assemblage recorded within the site includes some Birds of Conservation Concern and Cherwell BAP Important Species, however the habitats on site are considered to be of low importance for these species. The assemblage recorded is considered to be of at least **local ecological importance**.

Dormouse

- 3.43. Surveys for dormouse in 2011, comprising nest tube surveys and a nut search, recorded no evidence of dormouse within the site and no records of dormouse were returned by TVERC. As such, it was considered that dormouse are absent from the habitats within the site, and the site is considered to be of **negligible ecological importance** for dormice.

Invertebrates

- 3.44. The 2011 surveys concluded that the majority of habitats on the site were considered unlikely to support more than a common invertebrate assemblages, however individuals of brown hairstreak *Thecla betulae* and white-letter hairstreak butterflies *Satyrion album* (UK BAP and Cherwell BAP species) were recorded within the hedgerows on site.
- 3.45. No further detailed surveys have been carried out for invertebrates and the site is considered to be of **site ecological importance**.

Otter and Water Vole

- 3.46. An assessment of habitats for both water vole *Arvicola amphibious* and otter *Lutra lutra* was carried out in 2011. The only suitable habitat for either of these species is within the wet ditches within the site.
- 3.47. No evidence of either species was recorded during the surveys and it was considered that these species are absent from the site, and the site is considered to be of **negligible ecological importance** for otter and water vole.

Reptiles

- 3.48. Reptile surveys undertaken in 2011 recorded low numbers of common lizard *Zootoca vivipara* within areas of suitable habitat within the site, comprising field margins and hedgerows. The data search also revealed historic records of grass snake *Natrix helvetica* within the site, although no individuals of this species were observed during the 2011 surveys.
- 3.49. No additional reptile surveys have been undertaken by Tyler Grange in 2023 as their presence is assumed within the suitable habitats and those in the wider area. Overall, the site is considered to be of **site ecological importance** for reptiles.



Western European Hedgehog

- 3.50. Hedgehog is a priority species known to be present within the area in 2011. The site habitats, namely the hedgerows and woodland, are considered to be suitable to support this species in low numbers. An assessment carried out in 2023 confirmed that there has been no change in the suitability of habitats on site to support this species.
- 3.51. If present, the population would not be of more than **site ecological importance**.



Section 4: Discussion, Mitigation and Enhancement

Proposed Development

- 4.1. The proposed development comprises the provision of up to 1,700 residential dwellings (Class C3), flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2FE) (Class D1). Outline planning permission was granted in January 2020.
- 4.2. The impacts of the proposed development on ecological features will be discussed in this section. Designated sites are considered in terms of the whole site, whilst other ecological features are considered separately relative to their location and or presence within the area covered by the development.
- 4.3. The below mitigation and enhancement strategies have been informed by the mitigation measures set out within the ES.

Design Evolution

- 4.4. The design of the Development has been iterative, and in accordance with best practice guidance, following the 'mitigation hierarchy' and policy, including the Cherwell Local Plan² and the North West Bicester Supplementary Planning Document³. As such, the Development has been designed to avoid and retain the most important ecological features to ensure they can be managed in the long-term to enhance their importance for biodiversity. Where this is not possible, new habitats have been proposed to compensate for habitat losses with the aim of maximising the overall ecological value of the habitats proposed on site as part of a wider landscape ecology strategy.

Designated Sites

- 4.5. Given the distances from both the statutory and non-statutory sites from the site, no pathways for direct or indirect effects (such as pollution from surface water run-off or dust deposition) during the construction phase have been identified and therefore adverse effects are not likely.
- 4.6. Nonetheless, standard construction safeguards will take place, such as those in relation to noise, vibration, dust and contaminated run-off, with further detail to be provided within a Construction Environmental Management Plan (CEMP) (BS42020:2013). These measures will

² The Cherwell Local Plan 2011 – 2031 (adopted 2016) Cherwell District Council [Online] Available at: <https://www.cherwell.gov.uk/downloads/download/45/adopted-cherwell-local-plan-2011-2031-part-1-incorporating-policy-bicester-13-re-adopted-on-19-december-2016> [Accessed 17/01/23]

³ North West Bicester Supplementary Planning Document – February 2016. Available at: <https://www.cherwell.gov.uk/downloads/download/281/north-west-bicester-spd-february-2016> [Accessed 17/01/23]



ensure no impacts occur to any adjacent habitats, protected sites in the study area or other off-site receptors.

- 4.7. Whilst no direct hydrological links are present between the site and any protected sites, construction would be undertaken in accordance with CIRIA good practice guidance (Charles, 2015), to protect adjacent habitats. Where appropriate, method statements would also be produced for high-risk activities, such as refuelling and use of concrete.
- 4.8. Dust created during construction is generally considered to have a significant impact within 20 metres where heavy soiling of vegetation can occur (Holman *et al.*, 2014) and as such given the distances involved, dust is not considered to be a significant issue with regards any of the protected sites within the study area. In addition, the measures detailed above with regards to run-off will also help to minimise airborne dust levels.
- 4.9. Any potential adverse effects from noise and vibration will be mitigated through standard engineering practice, adhering to current guidance and legislation, and given the distances involved no impacts as a result of noise or vibration will occur at any of these sites.

Habitats

Habitat Impacts

- 4.10. The majority of the proposed development will take place within the improved grassland and arable fields, which are of low ecological importance, and the loss of c. 180 m of hedgerow to allow for new access roads and paths. The remaining hedgerow lengths will be retained and buffered from development.
- 4.11. All of the broadleaved parkland, deciduous woodland, vegetated ponds, scrub and wet ditches will be retained as part of the development.

Habitat Creation

- 4.12. The habitats proposed to be created within the site include new hardstanding areas (including buildings, roads and pathways etc) amenity grassland planting, new species rich long grassland planting, new wet grassland planting within the SUDS, new wildflower meadow and flowering lawn planting, new wildlife meadow and bulb planting, new orchard creation, new native hedgerow creation, allotments, and new scrub and hedgerow buffer planting (see **Section 5** and **Appendix 2** for further detail). In addition, extensive new tree planting will take place across the site, and to include a mixture of native, feature and fruiting varieties.

Protected Species

Amphibians

- 4.13. The proposals include the retention of all ponds, ditches and hedgerows within the site, with c. 180m of hedgerow loss proposed. Proposed works are located within the arable and improved grassland fields which are considered of limited use to terrestrial GCN being regularly modified through cutting throughout the yearly life cycle of this protected species.



- 4.14. GCN were recorded in both ponds **P2** and **P3** during population assessments undertaken in both 2011 and 2023. Given GCN have been confirmed on site in both 2011 and 2023, any works that could cause an impact to these ponds or surrounding area would require a Natural England licence before any works can take place.
- 4.15. A GCN Mitigation Strategy report will be produced in order to meet the requirements of Condition 28 of the outline planning permission and will detail the mitigation and enhancement measures to be implemented for GCN at the site in ensuring that their favourable population status is maintained and the site remains suitable for GCN.
- 4.16. Management and maintenance of the ponds and other suitable amphibian habitat, with further details provided in the Mitigation Strategy and LEMP, will ensure that the existing habitats within the site remain suitable for amphibians in perpetuity.
- 4.17. The planting of c. 1.7km of new hedgerow within the site will provide additional habitat of importance for amphibians, and increase connectivity throughout the site and to the wider area. Furthermore, the provision of purpose-built hibernacula in conjunction with existing suitable habitat, will provide amphibians and other species with additional areas of undisturbed refugia post-development.

Badgers

- 4.18. Four badger setts, including one likely active sett, and three other holes that could be used by badger were recorded at the site during the surveys in 2023. Based on the current proposals it is anticipated that all of these setts will be retained and buffered, however, as construction works are proposed within 30 m of the likely active sett, it would potentially be subject to disturbance during construction and a disturbance licence from Natural England will be required before construction can commence. **Badger sett locations are confidential, however Plan 15525/P06 provides the indicative locations of the setts on site.**
- 4.19. The other setts that were considered potentially inactive, along with the three other holes could be closed during construction, following a pre-commencement check that confirms inactivity. In the event these or any other setts are recorded as active and could be impacted upon by the proposals, either directly or indirectly, a mitigation strategy would be devised prior to the commencement of works, and if necessary, a licence obtained from Natural England. It should be noted that licences are not generally granted between the 30th November and 1st July inclusive to avoid disruption to the badger breeding cycle.
- 4.20. The sett within the site was assessed at the time of the surveys as comprising an outlier sett which was regularly used. As these are to be retained and buffered these features would not likely have any significant impacts on the local badger population.
- 4.21. As badgers are present within the site, general protection measures for badger will be detailed in a CEMP. Protection measures will include briefing all contractors working on the site regarding the potential presence of badgers and any trenches or deep pits that are to be left open overnight will be covered or provided with a means of escape should a badger enter, such as a roughened plank of wood placed in the trench as a ramp to the surface. This will also avoid impacts to any other small or medium sized mammals.



- 4.22. The storage of topsoil or other 'soft' building materials on site should be given careful consideration. Badgers will readily adopt such mounds as setts, which would then be afforded the same protection as established setts. Such mounds will be regularly inspected to check for use by badgers throughout the construction period.
- 4.23. Overall, opportunities for badger will be retained and improved within the site through the new hedgerow and scrub creation, improving foraging habitat connectivity to suitable habitat in the wider area.

Bats

- 4.24. No bat roosts will be affected by the proposals either during the construction or post development, with all suitable trees being retained and buffered during construction.
- 4.25. Although bats forage and commute along the hedgerows the majority are to be retained and protected as part of the proposed development scheme. The hedgerows to be retained will be buffered through new scrub planting to improve connectivity and foraging opportunities across the site and to the wider area for bats. New native scrub planting along retained hedgerows will further buffer these habitats reducing light spill and minimising disturbance to bats using these habitats.
- 4.26. The new planting of c. 1.7km of hedgerow will create an overall gain in hedgerows across the site post development enhancing commuting and foraging opportunities for this species post development.
- 4.27. The new SUDS features will provide additional foraging habitats with improved connectivity to the other habitats present on site creating additional opportunities for bats.
- 4.28. To provide additional roosting opportunities for bats, Vivara Pro Build-in Woodstone Bat Box (or similar) are to be installed onto the new buildings throughout the site. Bat boxes/bricks are to be provisioned such that there is one bat or bird box provided per dwelling.
- 4.29. Overall, the landscaping proposals within the site, including retained and new sections of hedgerow, the creation of SUDS and wildflower planting will maintain and enhance foraging and commuting opportunities for bats within the site post-development. Furthermore, the new planting will ensure connectivity is maintained to suitable foraging/commuting habitat in the wider area. It is considered that the measures detailed will maintain and improve existing opportunities for bats and create an enhancement for bats post-development.

Lighting Scheme

- 4.30. A sensitive lighting scheme will be implemented to avoid any lighting being directed at the habitats of most importance for bats, such as hedgerows and the watercourse. Lighting within the site should be designed to minimise disturbance of bats and to maintain dark corridors. This would be achieved by using the following design measures to reduce light spill where appropriate (ILP, 2023):
- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.



- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires can be recessed (as opposed to using a pendant fitting - See Figure 5) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

Breeding birds

- 4.31. All of the existing habitat suitable for breeding birds within the site, namely the hedgerows, trees, broadleaved parkland and plantation woodland are all to be retained as part of the proposals. The only losses of suitable breeding bird habitat comprise c. 180 m of hedgerow. The removal of the hedgerow should be undertaken between November to February to avoid breeding bird season. If necessary within this period, management can proceed following checks by an ecologist to confirm the absence of nesting birds.



- 4.32. Management of suitable nesting bird habitat within the site will be designed to minimise disturbance and provision birds with food sources at different times of the year, with further details provided in the LEMP.
- 4.33. To compensate for the losses of suitable habitat, new habitat in the form of new native tree planting, new scrub, new hedgerow, and SUDS creation will provide new opportunities for nesting and foraging birds across the site.
- 4.34. Furthermore, to compensate for the loss of suitable farmland bird habitat within the site, suitable habitat for farmland birds will be provisioned off-site from the proposed development.
- 4.35. To provide additional nesting opportunities for birds within the site, Vivara Pro Seville 32mm woodstone bird boxes (or similar) and Vivara Pro Woodstone build in swift bricks (or similar) are to be installed onto the new buildings throughout the site. Bird boxes/bricks are to be provisioned such that there is one bat or bird box provided per dwelling.

Hedgehog

- 4.36. The presence of hedgehog has been assumed within the site and whilst these species would be temporarily disturbed during the construction phase of the proposals, once works are complete there would be no residual adverse impact on either species and they would continue to have access to suitable habitat.
- 4.37. Prior to any site clearance work, any obvious piles of leaves or brash will be cleared by hand and should any hedgehogs be found, they will be carefully moved to other areas of suitable habitat, away from the proposed development.
- 4.38. New habitat in the form of new scrub and new hedgerow planting will provide additional habitats of importance for hedgehog post-development.
- 4.39. Furthermore, to ensure that hedgehogs (and other small mammals) are able to move across the site post-development, hedgehog passes are to be provided at ground level within the of garden fences and some walls throughout the site to create a "hedgehog highway" free from obstruction.

Reptiles

- 4.40. The majority of the site does not comprise suitable reptile habitat, although the hedgerows do provide some suitable habitat, with these features being largely retained by the proposals and protected during construction by fencing, to retain existing opportunities.
- 4.41. All reptiles are afforded protection under the WCA 1981 (as amended) although it is important to note that this legislation protects the species and not their habitat. As such, to ensure no offence takes place, the removal of suitable reptile habitat will be completed under precautionary working methods. Habitat manipulation would be used to remove areas of suitable reptile habitat prior to construction works commencing within the site to encourage reptiles to move out of the working area and into suitable, connected habitat.



- 4.42. The proposals include a range of retained and new habitats that will be of benefit to reptiles, such as SUDS, hedgerows, scrub and wildflower grassland that provides extensive new habitat for reptiles, creating new opportunities for this species group post-development. These areas will be managed appropriately which will be detailed within a LEMP for the benefit of reptiles.

Other Species

- 4.43. To provision invertebrates with new features of importance bee/insect bricks will be provisioned within every other new dwelling.



Section 5: Biodiversity Net Gain

- 5.1. The Biodiversity Net Gain (BNG) assessment of the site has been completed using Natural England's latest Biodiversity Net Gain (BNG) Metric (The Biodiversity Metric 4.0) which should be looked at in conjunction with this note (ref: **15525_Biodiversity Metric 4.0_07082023**).
- 5.2. The metric was firstly used to assign numerical values to allow biodiversity units to be calculated for each habitat type based on various attributes. Calculations of biodiversity units for area-based habitats and for linear habitats were carried out separately in separate tabs of the metric. The number of biodiversity units was then compared for pre- and post-development to give an indication of the change in value.
- 5.3. Pre-development biodiversity units represent existing baseline conditions of habitats within the site and were calculated by inputting the following information in the metric:
 - Habitat type – taken from UKHab field surveys;
 - Habitat area/length – area (ha) and/or length (km) of each habitat was measured on QGIS digital mapping, the BNG metric "Tree Helper" Tool was used to quantify individual trees;
 - Habitat distinctiveness – a score based on type of habitat present linked to habitat type and automated in the metric;
 - Habitat condition – a score based on specific condition assessment criteria for each habitat type;
 - Strategic significance – whether the site is in an area in local strategy, an ecologically desirable location or not (see above).
- 5.4. The landscaping plans (see **Appendix 2**) were used to determine attributes of post-development habitats. Post-development biodiversity units represent the completed development and landscaped habitats within the site, including habitats retained, enhanced and created. These were calculated using the same inputs as for pre-development biodiversity units as listed above with the addition of risk multipliers to take into account the likely scale of impact and potential for success of a post-development habitat to be established including:
 - Difficulty risk – difficulty of creating or enhancing a given habitat; and
 - Temporal risk – time required for newly created or enhanced habitats to establish.
- 5.5. Habitat survey metric calculations were undertaken by Joseph Small, an experienced Ecologist at Tyler Grange who is a suitably qualified person under the definition of the BS8683:2020.
- 5.6. This BNG Assessment has been informed by the extended Phase I habitat survey undertaken by Hyder Consulting in 2011 (see **Plan 15525/P04**).



Existing Baseline

- 5.7. While the existing habitats present at the site are described and evaluated above in **Section 3**, they are evaluated again below to define their observed condition when assessed using the UKHab condition assessment criteria:

Arable

- 5.8. The field F8 comprised an arable field in 2011. Arable fields fall under the broad habitat of Cropland – Non-Cereal Crops within the BNG metric and is automatically assigned N/A for the condition assessment.

Buildings

- 5.9. A number of buildings are present at the site. In accordance with the UKHab (Butcher *et al.*, 2020) these buildings comprise urban built form and as such no condition assessment is required.

Hardstanding

- 5.10. The existing driveway to the farm buildings at the centre of the track comprises a gravel track. In accordance with the UKHab (Butcher *et al.*, 2020), this habitat comprises urban built form and as such no condition assessment is required.

Hedgerows

- 5.11. A network of native hedgerows are present within the site, comprising a mixture of species poor and species rich hedgerows, both with and without trees, along with several associated with ditches. The ditches were not assessed as separate watercourse features due to their close association with the hedgerows on site and observed inability to hold water at all times of the year.
- 5.12. Most hedgerows are intact, however several have become gappy, with holes in the canopy structure. Each hedgerow is approximately 1-2m wide and with an average height of between 1-2m. All margins within the site were minimal and generally considered <1m in width.
- 5.13. Ground flora is mainly dominated by undesirable perennial vegetation including hemlock *Conium maculatum*, common nettle *Urtica dioica* and creeping thistle *Cirsium arvense* which makes up over 20% of the ground cover. The hedgerows are assessed as being in a moderate condition. All hedgerows within the site were considered to be of 'moderate condition'.

Modified Grassland

- 5.14. All improved grassland fields (F1-F7, F9-F11) were similar in species composition and subject to regular management. These fields have been defined as 'modified grassland' fields within this assessment.



- 5.15. The modified grassland present within fields F1-F7, F9-F11 is considered to be of 'poor condition' due to not meeting the criterion of 6-8 species per m², which is a requirement to achieve greater than any condition greater than poor⁴.
- 5.16. A small section of rough grassland is present within the north-western corner of F9 and was subject to less regular management when compared to other modified grassland fields on site. This area of modified grassland is considered to be of 'moderate condition', meeting the criteria of 6-8 vascular plant species per m², Cover of bracken *Pteridium aquilinum* is less than 20%, and sward height is varied, with at least 20% longer and 20% shorter than 7 cm.

Orchard

- 5.17. A small orchard area is located south of B1. In accordance with the biodiversity metric technical supplement (Panks *et al.*, 2022) this orchard is assessed as being of 'moderate condition'. Whilst no ancient or veteran trees are present, the grassland sward lacks structural diversity and species indicative of suboptimal condition, including common nettle and creeping thistle, were abundant.

Ponds

- 5.18. Three ponds are present within the site. Ponds **P1** and **P2** are located in association with a hedgerow and scrub and are both shaded by adjacent vegetation. Pond **P3** is located within a grassland field and is unshaded.
- 5.19. All three waterbodies are anticipated to hold water for the majority of the time and as such are all classified as ponds, although lacking the associated important features to be classified as 'priority habitat' (Butcher *et al.*, 2020).
- 5.20. All ponds are assessed as being of 'moderate condition' as less than 10% of the water surface is covered with duckweed *Lemna* spp. or filamentous algae, the ponds are not connected to any other waterbodies, the water levels can fluctuate naturally and no daps or pumps are present, there is an absence of non-native plant species, and none are artificially stocked with fish.

Scrub

- 5.21. A small area of scrub was present adjacent to the area of woodland surrounding **P2**. This habitat was dominated by hawthorn, blackthorn, bramble and elder and is considered to be of moderate condition.

Woodland

- 5.22. The following **Table 5.1** provides a summary of the condition assessment undertaken on the woodland habitat within the site, which includes the broadleaved woodland along the east of the site, and the woodland surrounding P2. This table includes a summary of information for each of the 13 indicators set out in the Biodiversity metric technical supplement that are used to determine condition (Panks *et al.*, 2022).

⁴ Biodiversity Metric 4.0 - Technical Annex 1 – Condition Assessment Sheets and Methodology. Available at: <https://publications.naturalengland.org.uk/publication/6049804846366720>



Table 5.1: Woodland condition assessment summary

Indicator	Other woodland broadleaved	
	Criteria	Score
A – Age distribution of trees	Moderate – two age classes present	2
B – Browsing damage	Good – no significant browsing damage	3
C – Invasive species	Good – no invasive species present	3
D – Number of native species	Good – 5+ native species recorded	3
E – Cover of native species	Good - >80% of trees and understorey shrubs are native	3
F – Open space	Good – 10-20% of woodland has temporary areas of open space	3
G – Woodland regeneration	Moderate – two age classes present – some natural regeneration recorded	2
H – Tree health	Moderate – tree mortality 11-25%	2
I – Vegetation and ground flora	Poor - no recognised NVC ground flora community present with ground flora comprising ruderal species.	1
J – Vertical structure	Moderate - Two canopy storeys present (canopy and understorey).	2
K – Veteran trees	Moderate – few veteran trees recorded.	2
L – Deadwood	Poor – limited standing deadwood recorded.	1
M – Disturbance	Moderate – evidence of enrichment present in >1ha.	2
Total Score	28	
Assessment result	Total score >32 – Good Total score 26 to 32 – Moderate Total score <26 – Poor	

- 5.23. The following **Tables 5.2 and 5.3** lists the existing baseline habitats and hedgerows and their conditions in accordance with UKHab definitions (Butcher *et al.*, 2020), along with their habitat value as calculated within the BNG metric.

Table 5.2 Existing baseline habitat types and conditions

BNG ref.	Habitat Type	Distinctiveness	Condition	BNG unit value
1	Developed land; sealed surface	V. Low	N/A – Other	0



2	Non-cereal crops	Low	Condition Assessment N/A	19.88
3	Modified Grassland	Low	Poor	148.02
4	Modified Grassland	Low	Moderate	2.06
5	Traditional Orchards	High	Moderate	2.16
6	Vegetated Garden	Low	Condition Assessment N/A	0.16
7	Other woodland; broadleaved	Medium	Moderate	32.56
8	Mixed scrub	Medium	Moderate	0.16
9	Other woodland; mixed	Medium	Moderate	1.20
10	Ponds (non-priority habitat)	Medium	Moderate	0.64
Total site Baseline Habitat value (BNG units)				207.38

Table 5.3 Existing baseline hedgerow types and conditions

BNG ref.	Habitat Type	Distinctiveness	Condition	BNG unit value
1	Species-rich Native Hedgerow	Medium	Moderate	15.20
2	Native Hedgerow	Low	Moderate	1.80
3	Species rich Native Hedgerow with Trees	High	Moderate	28.80
4	Native Hedgerow with Trees	Medium	Moderate	5.60
5	Species-rich Native Hedgerow with Trees - Associated with Bank or Ditch	V. High	Moderate	2.40
6	Native Hedgerow with Trees – Associated with Bank or Ditch	High	Moderate	2.88
Total site Baseline Hedgerow value (BNG units)				56.68



Proposals

- 5.81. The proposals for the site have been designed to avoid ecological impacts where possible, with the proposals positioned within an area of low ecological value habitat, namely modified grassland and arable fields. Nonetheless, the proposals will require the loss of modified grassland arable fields, hedgerow, vegetated garden, orchard and hardstanding.
- 5.82. To help compensate for these losses of habitat, new amenity grassland planting, new species rich long grassland planting, new wet grassland planting, new wildflower meadow and flowering lawn planting, new wildlife meadow and bulb planting, new orchard creation, new native hedgerow creation, new scrub and hedgerow buffer planting, and extensive new tree planting occur across the proposed development creating new habitats that are not currently present within the site.
- 5.83. The creation of these new habitats will also increase the floristic diversity at the site, increasing opportunities available to wildlife such as bats, birds and invertebrates, potentially attracting a more diverse species assemblage to the site post-development.
- 5.84. Additional detail on the habitat management measures required to ensure that newly created habitats reach their target condition will be detailed within a Landscape and Ecological Management Plan (LEMP).

Habitat Creation

- 5.85. The proposals require the loss of c. 180m existing hedgerow, modified grassland and arable land. The new habitats that present at the site post-development will include urban-developed land (comprising roads, buildings and hardstanding), modified grassland, other neutral grassland, mixed scrub, vegetated gardens, allotments, orchards and trees (see **Appendix 2**).
- 5.86. The new development area will comprise buildings, roads and other areas of hardstanding (Urban – developed land, sealed surface) along with extensive private gardens (Urban – vegetated gardens). These habitats will achieve none and poor condition respectively with these values predetermined by the BNG metric (Natural England, 2023) (see **Appendix 2**).
- 5.87. Areas of amenity grassland (modified grassland) will also be created within areas of open space, along with the provision of several new sports pitches. This grassland will be managed regularly and subject to intensive use and would achieve poor condition (see **Appendix 2**).
- 5.88. Extensive new areas of wildflower/other neutral grassland of moderate condition will be created throughout the site, comprising the new areas of species rich long grassland, wildflower meadow, flowering lawns, bulb planting and wildlife meadows. These areas will be managed appropriately to maximize the biodiversity importance of this habitat (see **Appendix 2**).
- 5.89. New native scrub planting is to provide a buffer for the retained hedgerows and woodland. The scrub creation will comprise a mix of native species (at least three species) and will be



managed to have a diverse age range and transitional edge to adjacent habitats, therefore achieving moderate condition (see **Appendix 2**).

- 5.90. Some areas of new native scrub planting will be surrounded by new hardstanding features. In these areas the new mixed scrub will achieve a poor condition.
- 5.91. Two new areas of orchard will be created within the site. This habitat will comprise a traditional orchard, as in accordance with the UK Habitat Classification (Butcher *et al.*, 2020), and will be managed to achieve at least poor condition with the grassland managed to have a diverse sward height and with coverage of species indicative of sub-optimal condition maintained below 10%. The new trees will also be managed to maximise longevity and maintained free of damage.
- 5.92. Extensive new urban tree planting will occur at the site achieving a gain in trees post-development. These trees will comprise a mix of native species and fruiting varieties and of known value to wildlife. Post-development these trees will achieve 'poor condition', with trees sensitively managed to encourage wildlife and minimise adverse management impacts and with >20% of canopy oversailing ground vegetation.
- 5.93. Approximately 1.13 km of new native hedgerow will be planted throughout the site along with c. 560 m of ornamental hedgerow, providing a net gain in hedgerow length post-development.
- 5.94. The new native hedgerow will be managed to achieve moderate condition being >1.5 m high and wide, with no gaps between the ground and base of canopy, no canopy gaps, although lacking undisturbed ground.
- 5.95. The new ornamental hedgerow will achieve at least a 'poor condition', with >90% of the hedgerow free from damage caused by human activity, and undesirable perennial vegetation and invasive neophyte species at the base of the hedge are kept to a minimum.
- 5.96. New allotment areas are to be created within the site. These will be managed for amenity purposes and subject to regular usage and as such would not achieve more than poor condition.

Management

- 5.97. Management measures will be implemented at the site to ensure that the required habitat conditions are achieved, biodiversity is increased and opportunities for wildlife maximised. These measures will be detailed in a LEMP.

Results

Table 5.4: Summary of habitat biodiversity unit change pre-and post-development.

Baseline Impacts				Post Development			
Habitat	Cond.	Value	Biodiversity Units		Habitat	Condition	Biodiversity Units
			Lost	Ret.			New



Developed Land	N/A	0.00	0.00	0.00	Developed Land	N/A	0.00
Cropland	N/A	19.88	19.88	0.00	-	-	-
Modified Grassland	Poor	148.02	148.02	0.00	Modified Grassland	Poor	15.54
Modified Grassland	Mod.	2.60	2.60	0.00	-	-	-
Orchard	Mod.	2.16	2.16	0.00	Orchard	Poor	2.56
Veg. Garden	N/A	0.16	0.16	0.00	Vegetated Garden	N/A	23.26
Broadleaved Woodland	Mod.	32.56	0.00	32.56	-	-	-
Mixed Scrub	Mod.	0.16	0.00	0.16	Mixed Scrub	Moderate	31.93
Mixed Woodland	Mod	1.20	0.00	1.20	-	-	-
					Other Neutral Grassland	Moderate	111.47
					Mixed Scrub	Poor	3.59
					Urban Tree	Poor	10.92
					Allotments	Poor	2.14
Ponds	Mod.	0.64	0.00	0.64			
Totals		207.38	172.82	34.56			235.97
Pre vs. Post		207.38					235.97
Unit Change							28.59
Percentage Change							+13.79%

Table 5.5 Summary of hedgerow biodiversity unit change pre-and post -development.

Baseline Impacts					Post Development		
Habitat	Con.	Value	Biodiversity Units		Habitat	Con.	Biodiversity Units
			Lost	Ret.			New
Species-rich Native Hedgerow	Mod.	15.20	0.80	14.40	-	-	-



Native Hedgerow	Mod.	1.80	0.16	1.64	Native Hedgerow	Mod.	7.56
Species rich Native Hedgerow with Trees	Mod.	28.80	1.20	27.60	-	-	-
Native Hedgerow with Trees	Mod.	5.60	0.24	5.36	-	-	-
Species-rich Native Hedgerow with Trees - Associated with Bank or Ditch	Mod.	2.40	0.00	2.40	-	-	-
Native Hedgerow with Trees – Associated with Bank or Ditch	Mod.	2.88	0.00	2.80	-	-	-
					Ornamental Hedgerow	Poor	0.54
Totals		56.68	2.40	54.28			62.39
Pre vs. Post		56.68					62.39
Unit Change							5.71
Percentage Change							+10.07%

BNG Score

5.98. Based on the above measures the following BNG score will be achieved:

- **+13.79%** in Habitat Units (**+38.59** units); and
- **+10.07%** in Hedgerow Units (**+5.71** units).

5.99. The proposals in their current form would therefore result in a net gain in habitat units and hedgerow within the site, the mitigation hierarchy has been followed, and opportunities for biodiversity have been maximised with the proposals through habitat creation and enhancement.

5.100. If any of the proposed habitat and hedgerow creation within the site should significantly change throughout the Reserved Matters application process or it is found that the proposed habitat conditions cannot reasonably be achieved, resulting in a net gain of less than 10%, then the inclusion of off-site habitat units should be considered.



Section 6: Conclusion

- 6.1. The update ecological surveys undertaken in 2023 have not shown any significant change from the results of surveys previously undertaken in 2010 and 2011 as detailed within the ES. Therefore, the importance of ecological features, the potential impacts on protected species outlined in the ES, the mitigation and enhancements outlined within the ES chapter remain applicable for the Reserved Matters application.
- 6.2. This Biodiversity Strategy report has been produced to discharge Condition 10, and includes an up-to-date account of the ecological survey work completed at the site to date, pursuant to Condition 25, along with details of the completed biodiversity net gain assessment and enhancement measures.
- 6.3. The proposed habitat creation and enhancement will deliver a net gain in habitat and hedgerow units within the site post-development, and other species targeted enhancements, such as the installation of hibernacula, bird and bat boxes will provide additional benefits for wildlife within the site and improve biodiversity.
- 6.4. With the implementation of the mitigation and enhancement strategy described above, the proposed development would be in conformity with relevant planning policy and legislation (see **Appendix 1**).



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Appendix 1: Planning Policy and Legislation

- A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
 - The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Countryside and Rights of Way (CRoW) Act 2000;
 - The Natural Environment and Rural Communities Act (NERC) 2006;
 - The Hedgerows Regulations 1997; and
 - The Protection of Badgers Act 1992.
- A1.2. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2018 (as amended).
- A1.3. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.
- A1.4. The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

- A1.5. ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF.
- A1.6. ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).
- A1.7. Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.



A1.8. Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

National Planning Policy

National Planning Policy Framework (NPPF), September 2023

A1.9. The National Planning Policy Framework (NPPF) was updated in September 2023 and sets out the Government's planning policies for England and how these should be applied. It replaces the National Planning Policy Framework published in July 2021.

A1.10. Paragraph 11 states that:

A1.11. "Plans and decisions should apply a presumption in favour of sustainable development."

A1.12. Section 15 of the NPPF (paragraphs 174 to 182) considers the conservation and enhancement of the natural environment including habitats and biodiversity (paragraphs 179-182)

A1.13. Paragraph 174 states that planning and decisions should contribute to and enhance the natural and local environment by:

- "protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".

A1.14. Paragraph 175 states that plans should distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

A1.15. Paragraph 179 states that in order to protect and enhance biodiversity and geodiversity, plans should:

- "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and



- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

A1.16. When determining planning applications, Paragraph 180 states that local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- “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; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”

A1.17. As state in paragraph 181 the following should be given the same protection as habitats sites:

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

A1.18. Paragraph 182 states that the presumption in favour of sustainable development does not apply where the planned project is likely to have a significant effect on a habitat site (alone or in combination with other plans or projects) unless an appropriate assessment has concluded the plan or project will not adversely affect the integrity of the habitats site.

Local Planning Policy

The Cherwell Local Plan 2011 – 2031

A1.19. Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment

“Protection and enhancement of biodiversity and the natural environment will be achieved by the following:

- *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;*



- *The protection of trees will be encouraged, with an aim to increase the number of trees in the District;*
- *The reuse of soils will be sought;*
- *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;*
- *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;*
- *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 SSSIs, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity;*
- *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;*
- *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;*
- *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 106 Cherwell Local Plan 2011-2031 Part 1 Section B - Policies for Development in Cherwell;*
- *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;*
- *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 aims will be viewed favourably;*
- *A monitoring and management plan will be required for biodiversity features on site to ensure their long term suitable management."*

A1.20. Policy ESD 11: Conservation Target Areas

"Where development is proposed within or adjacent to a Conservation Target Area biodiversity surveys and a report will be required to identify constraints and opportunities for biodiversity enhancement. Development which would prevent the aims of a Conservation Target Area being



achieved will not be permitted. Where there is potential for development, the design and layout of the development, planning conditions or obligations will be used to secure biodiversity enhancement to help achieve the aims of the Conservation Target Area.”



Appendix 2: Landscaping Plans



Appendix 3: GCN Survey Results

- A3.1. The results of the GCN population assessment surveys conducted at the site in 2023 are provided in **Table A3.1** below.
- A3.2. Further information regarding the surveys for GCN will be detailed within the GCN Method Statement.

Table A3.1 GCN Survey Results

Pond	Visit	Newt Species		Total
		GCN	Smooth Newt	
P1	V1	0	0	0
	V2	0	0	0
	V3	0	0	0
	V4	0	0	0
	V5	0	0	0
	V6	0	0	0
P2	V1	2	0	2
	V2	2	0	2
	V3	1	0	1
	V4	0	0	0
	V5	0	0	0
	V6	0	0	0
P3	V1	0	0	0
	V2	1	0	1
	V3	1	1	2
	V4	5	1	6
	V5	3	0	3
	V6	3	0	3
Totals		18	2	20



Plans:

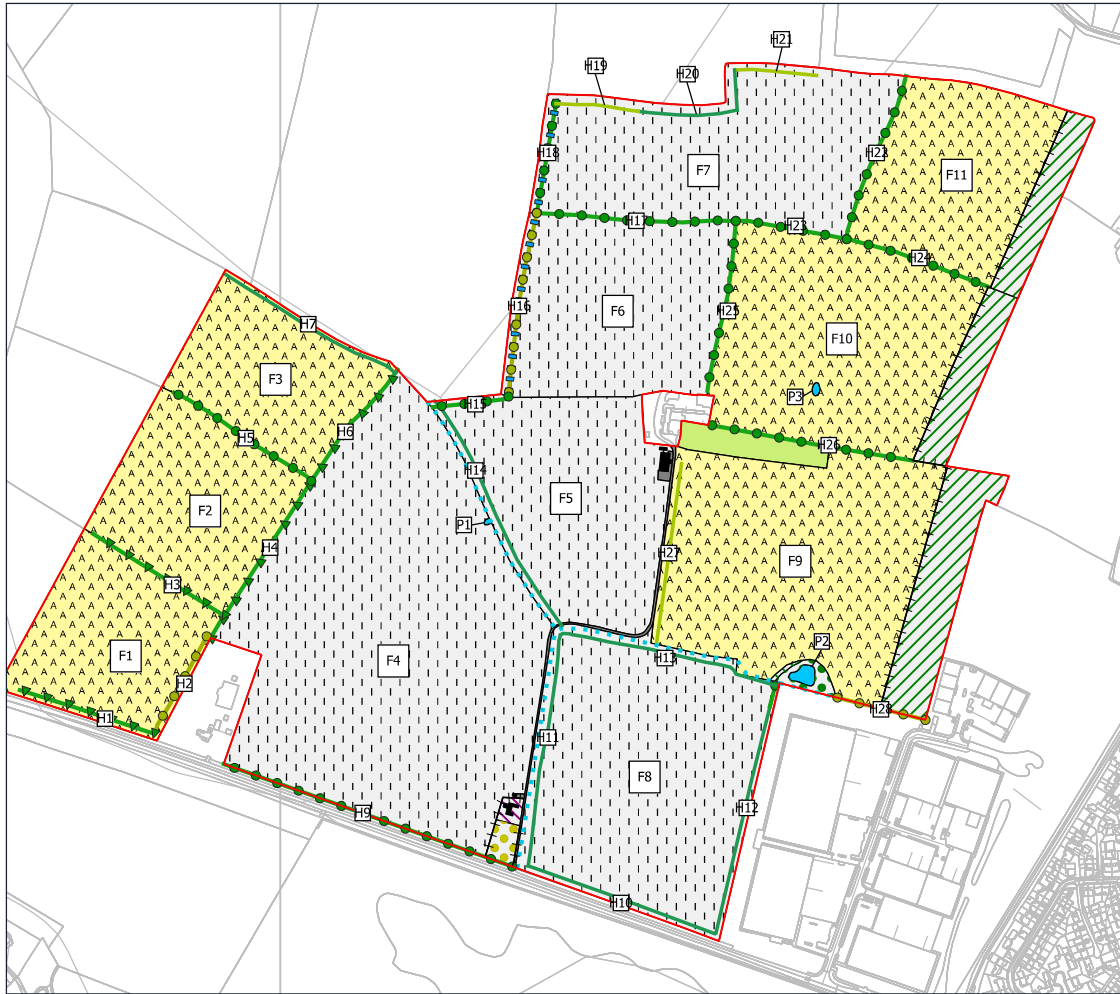
Plan 1: **15525/P03a 2023 Habitat Features**

Plan 2: **15525/P04 2011 Habitat Features**

Plan 3: **15525/P05 GCN Surveys 2023**

Plan 4: **15525/P06 Badger Surveys 2023**





- Redline Boundary
- Baseline Habitats 2023
- Arable
- Buildings
- Broadleaved parkland
- Broadleaved woodland plantation
- Hardstanding
- Modified grassland
- Orchard
- Ponds (P1 – P3)
- Modified grassland
- Scattered scrub
- Vegetated garden
- Ancient species rich hedge with trees
- Species poor hedge with trees and wet ditch
- Species rich hedge with trees and wet ditch
- Species poor hedge with trees
- Species rich hedge with trees
- Species poor hedge
- Species rich hedge
- Dry ditch
- Fence

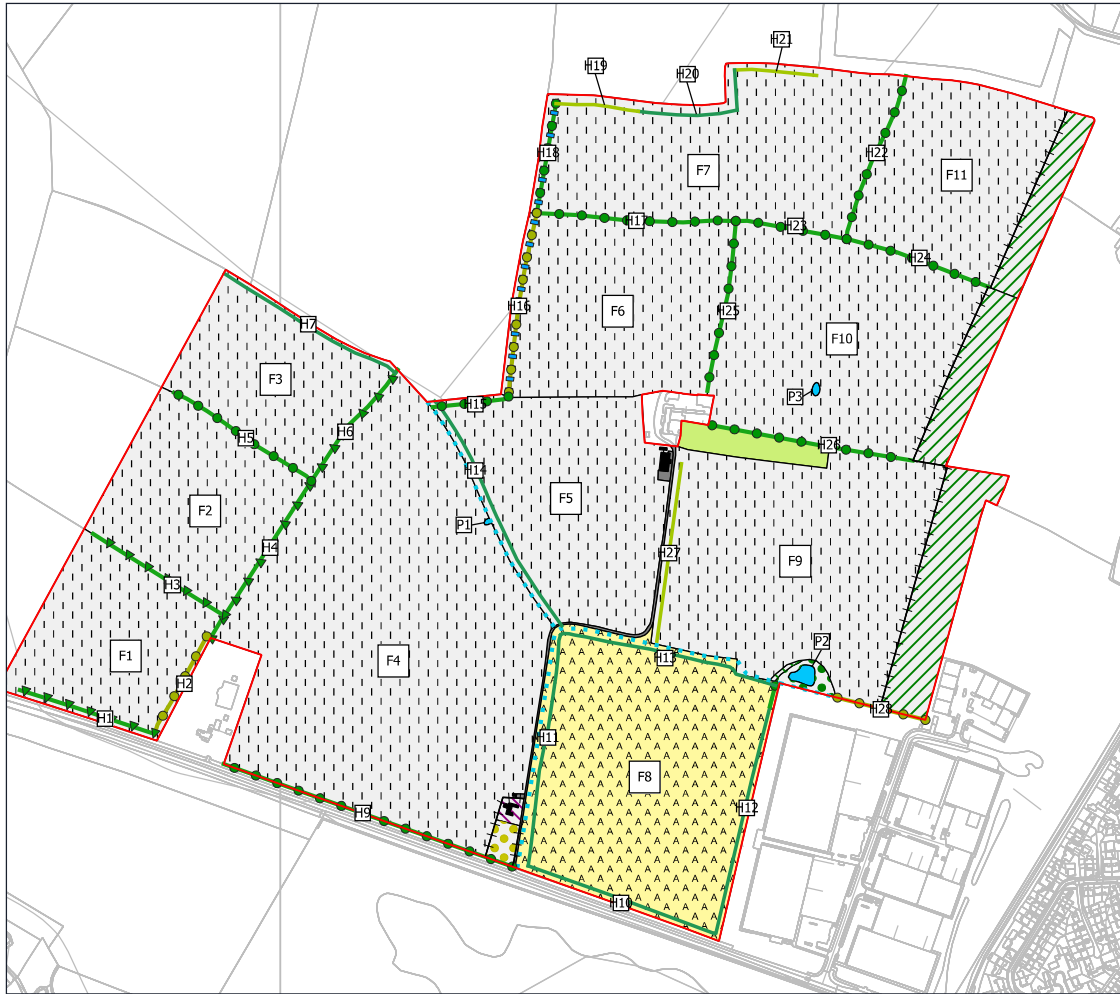


Project Himley Village, Bicester
 Drawing Title Habitat Features 2023
 Scale As Shown (Approximate)
 Drawing No. 15525/P03a
 Date August 2023
 Checked JS/RC



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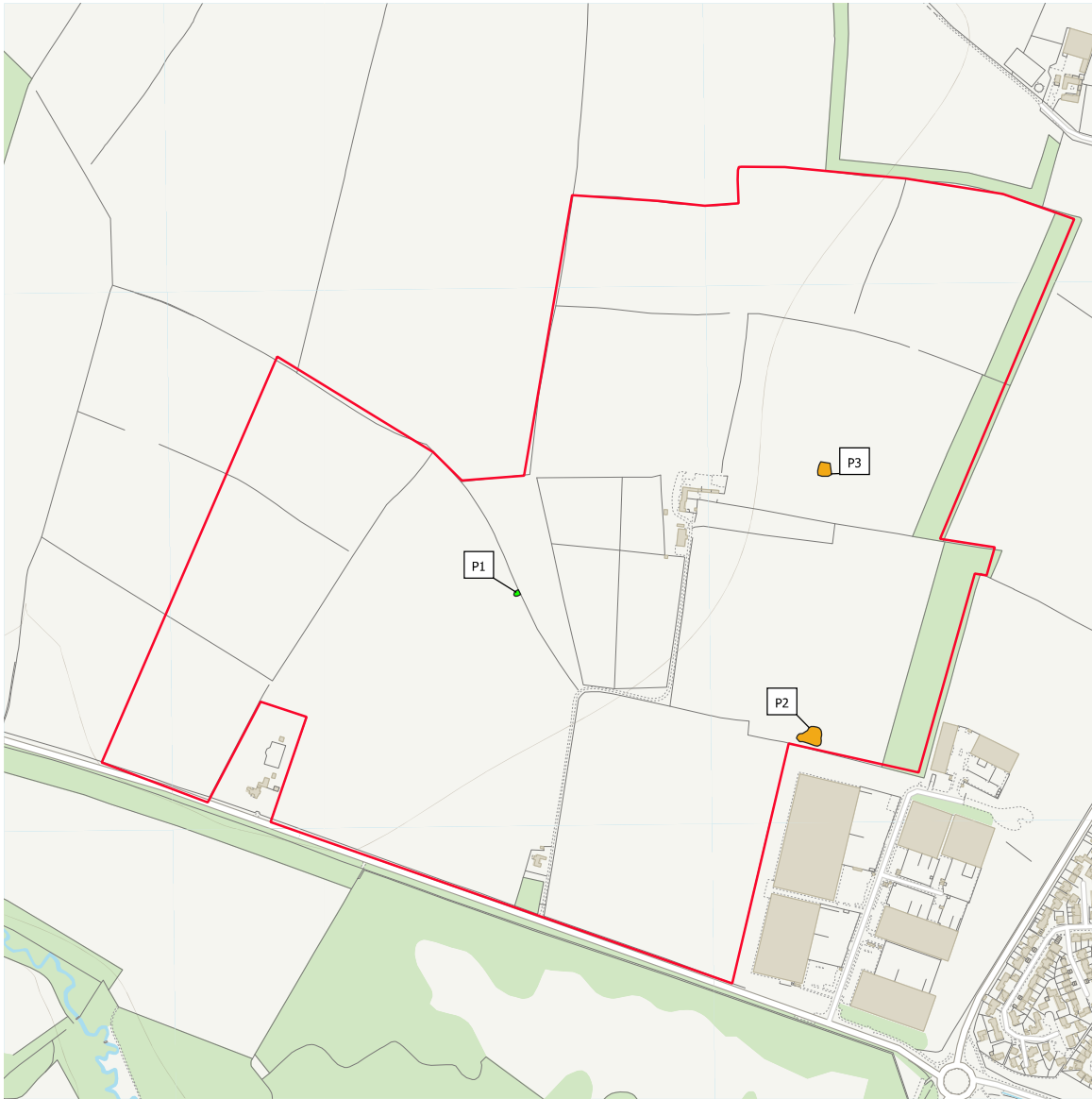


- Redline Boundary
- Baseline Habitats 2011
- Arable
- Broadleaved parkland
- Buildings
- HS
- Mod grassland
- Orchard
- Ponds
- Rough grassland
- Scrub
- Veg garden
- Woodland
- Ancient species rich hedge with trees
- Species poor hedge with trees and wet ditch
- Species rich hedge with trees and wet ditch
- Species poor hedge with trees
- Species rich hedge with trees
- Species rich hedge
- Dry ditch
- Fence



Project Himley Village, Bicester
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 Scale As Shown (Approximate)
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Legend

- Indicative Redline Boundary
- Great Crested Newt Survey Results 2023
- No GCN Recorded in 2011 and 2023
- Small Population Recorded in 2023 (Medium in 2011)



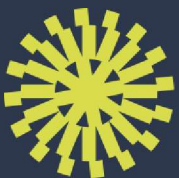
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