# Ecological Appraisal
# Land to the North-east of Skimmingdish Lane, Bicester, Oxon

Report reference: BES-R-180-01.4

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| Report Title: | Ecological Appraisal<br>Land off Skimmingdish Lane, Bicester, Oxon |
| Report Reference: | BES-R-180-01.4 |
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## Summary Statement

Most of the site comprises of habitats of relatively low ecological value and their loss to development will likely have a negligible impact on the biodiversity of the area.

One hedgerow crossing the site is likely to be considered “important” under the Hedgerow Regulations and a hedgerow removal notice may be required for its removal.

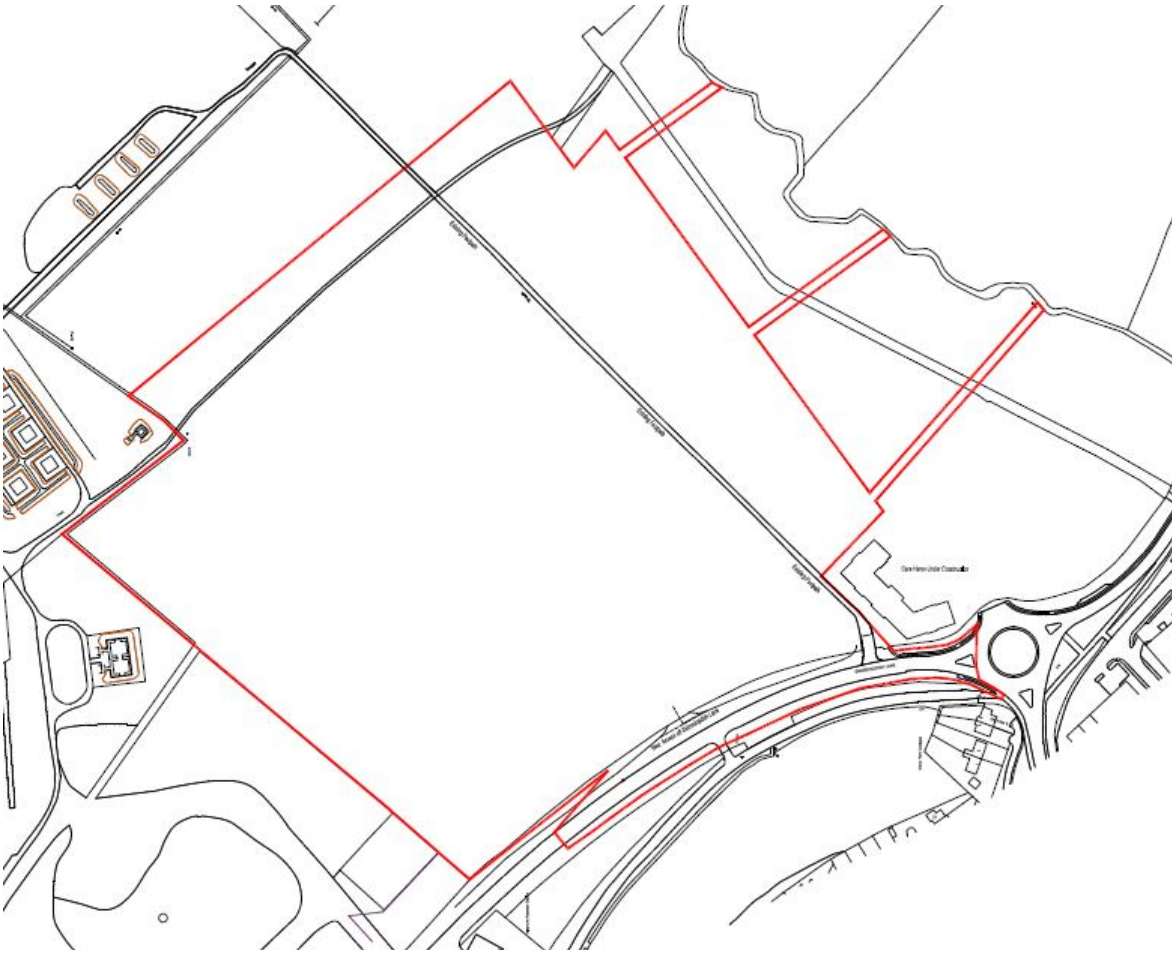
Bat activity and roosting surveys and reptile surveys are recommended along with an updating badger survey in order to identify the requirement and scope of any mitigation for these groups. However, the current master plan offers excellent opportunities to provide suitable mitigation for all groups and to provide enhancement for these and other fauna within the site.

# Introduction

1. Brooks Ecological Ltd was commissioned by Albion Land to carry out an Ecological Appraisal of land off Skimmingdish Lane, Bicester, Oxfordshire (SP 600 236).

2. The application site 'the site' encompasses sections of arable fields crossed by hedgerows/treelines to the north-east of Bicester.

**Figure 1** Approximate site boundary - (Red Line)



## Proposals

3. The proposals are for outline planning consent for a flexible mix of employment uses (Class B1c, B2 and B8 (including ancillary Class B1a office use)). The outline planning application is submitted with matters of scale (other than for the maximum amount of floorspace (set at 48,308 sq m) and maximum building

heights which are fixed), landscaping and appearance reserved for later approval.

4. The point of access into the site from the public highway is submitted for approval. Approval is also sought for the siting of the buildings on the southern portion of the site. The layout of development on the northern portion is reserved for latter approval.

5. Flexibility is sought within the outline planning consent in order to allow for the development to be marketed and 'tailored' to suit a particular operator(s). The subsequent reserved matters applications will be developed and submitted in response to these requirements.

6. However, in order to allow for a robust assessment to be carried out of the potential impact of the proposed development a series of development parameters have been set. This has allowed for a reasonable, worst case of potential environmental impacts to be determined.

7. This Ecological Survey has had regard to the development parameters and has helped to inform the landscape parameters in particular (see Figure 2).

**Figure 2** Landscape Parameter Drawing

8. The site has been accepted through the site's draft allocation under Policy Bicester 11 and this report deals with the specific impacts of this proposal in accordance with the development principles of this policy (see below) and saved policies of the adopted Local plan and NPPF.

Ecology DM principles of Draft Policy Bicester 11:

- The site lies adjacent to a designated Local Wildlife Site and a proposed Local Wildlife Site. Ecological surveys must be undertaken to identify habitats and species of value and any mitigation measures required. Features of value, including existing mature hedgerows and important trees, should where possible and appropriate be preserved, retained and enhanced. Where removal of vegetation is necessary as part of development, appropriate mitigation or replacements should be provided to and the proposals should result in a net gain in biodiversity.

- Development that respects the landscape setting, and that demonstrates the enhancement, restoration or creation of wildlife corridors, and contributes towards creation of a green infrastructure network for Bicester

**Site context**

9. Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains. We use Promap Street + scale maps for this purpose.

10. The site is located to the north-east of the town of Bicester. It is bordered to the south-west by the A4421, Skimmingdish Lane, to the north-west by Bicester Airfield, and to the north-east and south-east by other arable fields. The fields are typically bordered by hedgerows and tree lines with areas of semi-natural habitat such as non-arable grassland and woodland sparsely scattered throughout the landscape.

Wildlife corridors

11. The site is crossed by two linear features - a hedgerow, and hedge / tree line along a dismantled railway. The hedgerow has poor connections at its western end where it reaches the A4421 main road with broken vegetation along the verges in both

directions. The dismantled railway connects to other linear features to the south of the site and meets a hedgerow adjacent to Bicester Airfield at its northern end. The dismantled railway does include a c.15m wide break within the site boundary. The northern site boundary is also formed by a hedgerow with trees. All of these features form a moderately intact network of potential wildlife corridors across and around the site.

Water bodies

12. Mapping shows no ponds within 500m of the application site. A "spring" is located within a field boundary just north-east of the site, but this is entirely shaded by dense vegetation and is directly connected into the drain network meaning that no significant standing water body is present.

13. Within a section of the site, but outside of the likely development footprint, was a small ephemeral pool beneath a willow tree. Following recent rain several inches were present but a complete lack of aquatic vegetation indicates this pool does not hold water for any significant period.

14. The nearest pond shown on OS mapping is located over 650 south-east of the site and even this does not feature on other mapping of the area, such as on the MAGIC website.

Watercourses

15. The eastern boundary of the easternmost field (beyond the site boundary) includes a ditch connected to the spring mentioned above. At the time of survey and despite recent rain there was very little water in this ditch, particularly beyond c.20m of the spring. The nearest wet water course is a shallow running stream/ditch along the southern boundary of the field to the south of the site boundary. This stream would not face any significant impact from the proposed development.

Statutory Designations

16. A search of the MAGIC website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Special Scientific Interest [SSSI's]) as well as many non-statutory listed habitats (e.g. ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats. In addition information from the local record holders (Thames Valley Environmental Record Centre) has been requested on locally designated sites.

17. There are two statutorily designated sites within 2km of the site. One of these is Stratton Audley Quarries SSSI, this is designated for geological interest and would be unaffected by the proposed development. The second is Bure Park Local Nature

Reserve (LNR). This site is located over 1.7km west of the application site and is separated from it by large areas of urban development. There are no habitat links and no impacts would be expected to occur on the LNR from the proposed development.

Non-Statutory Designations

18. There are three Local Wildlife Sites (LWS) and one Woodland Trust reserve within 2km of the application site. The Local Wildlife Sites are:

- Bicester Airfield LWS. Located adjacent to the application sites western boundary this area is designated for its grassland and scrub habitats and includes areas of species-rich grassland, rough grassland and other species-poor habitat. In some areas the scrub and grassland mosaic is considered to meet the BAP criteria for "open mosaic on previously developed land". A large section comprising much of the northern and western areas of the airfield and an area of habitat south of the A4421 are currently being considered as extensions to the existing LWS along with a small spur of habitat extending into the application site boundary.

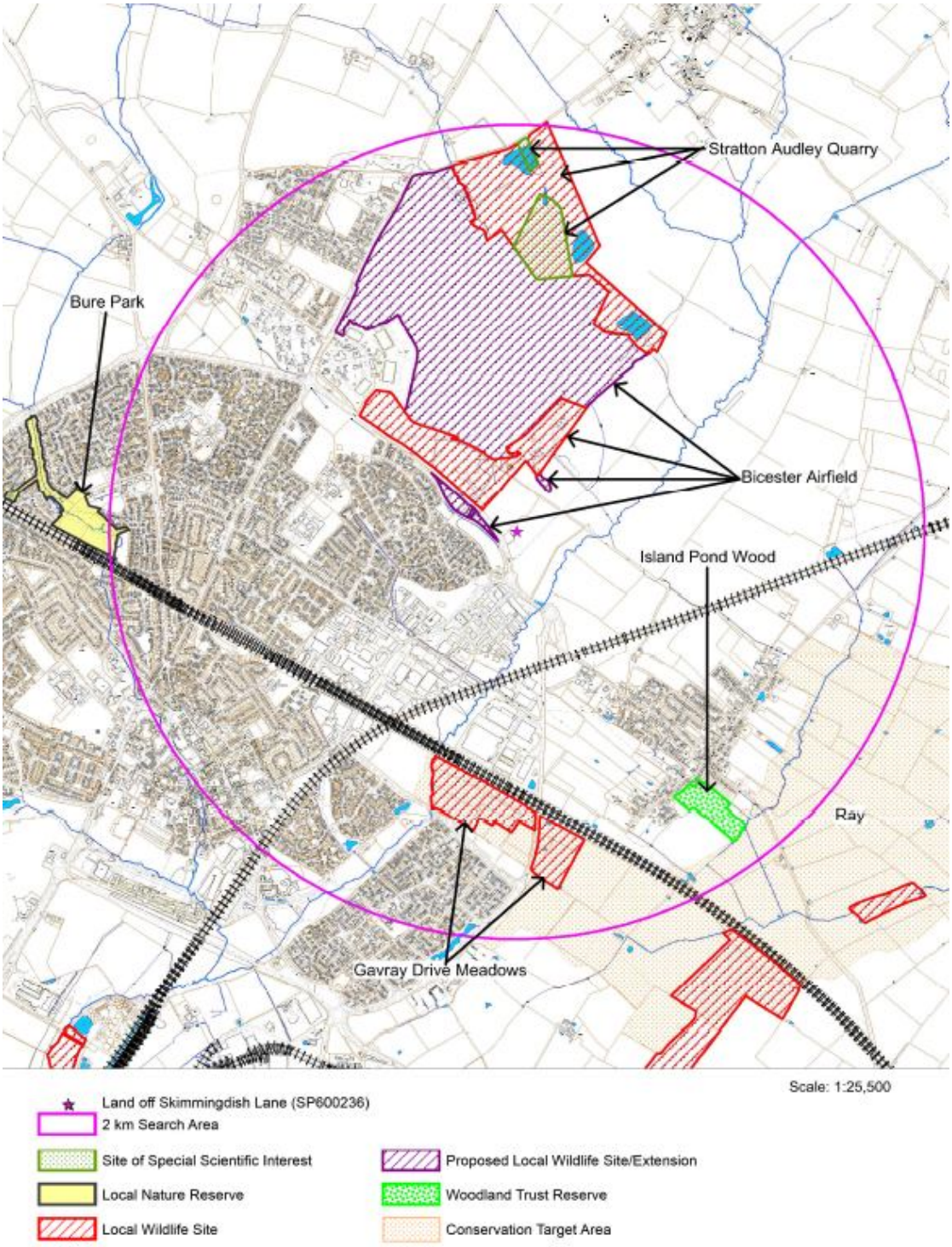
- Gavray Drive Meadows LWS. Located over 1km to the south and separated from the application site by the A4421, and industrial estate and a railway line. Designated for its ridge and furrow lowland meadow and other grassland along with damp grassland, hedgerows and ponds. Faunal groups include a range of bird and butterfly species and several species of bat have been recorded.

- Stratton Audley Quarry. Located along the northern boundary of Bicester Airfield c.750m north of the application site, this LWS is designated for its mosaic of habitats including water-bodies. It supports populations of great crested newt, little ringed plover and nationally scarce invertebrates, along with "local" dragonfly and damselfly species.

19. The application site does not support any significant area of high value habitat in common with any of these sites with the exception of the hedgerows which, whilst of similar composition to those described from Gavray Drive Meadows are not directly connected to these. The site's hedgerows value and their appraisal are detailed later in this report.

20. Whilst the site does share a boundary with Bicester Airfield all shared boundary features i.e. hedgerows and trees will be retained within the development and buffered from disturbance through landscaping and habitat management. No significant impacts would be expected on the airfields qualifying interests.

**Figure 3 -** Location of local designations within 2km radius, provided by TEVRC



**Method**

21. The survey was carried out on 12th November 2014 and followed Phase 1 habitat survey methodology (JNCC, 1993). This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). The survey method was "Extended" in that evidence of fauna and faunal habitat was also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2012).

**Results**

22. The following habitats, arranged in order of area can be described within the application site and on its boundaries:

- Arable land
- Hedgerow / Tree Line
- Tall herb / Scrub
- Secondary woodland

*Arable land*

23. The majority of the site consists of sections of 3 arable fields. These appear to be intensively managed and no evidence of significant weed flora was seen or is considered likely to occur. This habitat has low ecological value under it's current management regime.
24. The grass margins of the field are narrow, being less than 2m wide throughout (often less than 1m). The margins were dominated by very common species typical of the heavily disturbed and nutrient rich environment around arable fields. Species present included: cock's-foot (*Dactylis glomerata*), false oat grass (*Arrhenatherum elatius*), nettle (*Urtica dioica*), white dead-nettle (*Lamium album*), cleavers (*Galium aparine*) and less frequently wild parsnip (*Pastinica sativa*). Their small size, low species-diversity and lack of sympathetic management means they have low ecological value.

**Figure 4**

General view of the site (north-western field).

**Figure 5**

General view of the eastern field within site. Note typical narrow margin right of picture.

*Hedgerow / Tree Lines*

25. Three hedgerows / tree lines cross or border the site.

26. The first of these is a hedgerow along the northern boundary of the site, shared with Bicester Airfield. The hedge is dominated by hawthorn (*Crataegus monogyna*) with frequent elder (*Sambucus nigra*) and crab apple (*Malus sylvestris*) and occasional wild privet (*Ligustrum vulgare*) and dogwood (*Cornus sanguinea*).

27. Several semi-mature ash (*Fraxinus excelsior*) standards occur along the hedgerow. Several of the more mature examples have fairly dense ivy (*Hedera helix*) cover on their trunks but the trees appear to be in good condition.

28. The ground flora beneath this hedgerow is largely dominated by the species described in the field margins above, along with abundant ivy, particularly beneath the denser vegetation.

29. This hedgerow will be retained as the boundary of the proposed development.

**Figure 6**

Northern site boundary (looking east).

30. The dismantled railway crosses the site c. north to south. It is approximately 10m in width and is marked by an overgrown double hedgerow dominated by hawthorn and elder and occasional semi-mature ash and field maple (*Acer campestre*). The ash trees here within the site boundary appear to be in good condition with no notable cracks, rot holes or deadwood noted.

31. The substrate in this area comprises partially buried rubble and it's ground flora is dominated by nettle with lesser amounts of dock (*Rumex* spp.), herb robert (*Geranium robertianum*), hogweed (*Heracleum sphondyllium*), wild parsnip and garlic mustard (*Alliaria petiolata*).

32. The railway line is broken toward the north where an access track cuts through the arable fields from west to east. This gap is c.15m in width.

**Figure 7**

Western aspect of section of dismantled railway (looking south).

**Figure 8**

Typical interior of tree line along dismantled railway.

33. Crossing the site from west to east is a mature hedgeline with several standard trees. It separates fields to the north and south. This hedgeline includes: hawthorn, elder, ash and blackthorn (*Prunus spinosa*) with occasional crab apple, elm (*Ulmus procera*), field maple (*Acer campestre*), dogwood (*Cornus sanguinea*) and oak (*Quercus robur*). It varies in width from 1m toward its eastern end to 3-4m in other sections. At its western end it joins and borders a small block of semi-natural woodland, described below. The ground flora appears unremarkable being dominated by the rough grassland species mentioned previously along with ivy, bramble and dog rose (*Rosa canina*).

34. Within this hedge line are a few standard trees. These include ash and oak trees. One of the smaller standards had a relatively fresh woodpecker hole c.2.5m above the ground on its northern side. A semi-mature oak tree is present nearer the western end which has an ivy covered trunk.

**Figure 9**

Hedgerow running west to east (looking east along southern aspect).

*Tall herb/Scrub*

35. A spur of land protrudes into the site from toward the eastern end of the northern boundary measuring c.100m long and 50m wide. This area is dominated by dense and tall stands of nettle, hemlock (*Conium maculatum*), burdock (*Arctium minus*) and bramble scrub. Also within this area are scattered hawthorn and elder along with a few multi-stemmed willow (*Salix* sp.) trees. Beneath the scrub the substrate is dominated by large rocks and broken concrete and is damp in some areas. One depression beneath a willow held a small amount of water during the survey (following recent heavy rain). However, no aquatic vegetation was present in this area and no signs of anything other than infrequent standing water was found.

36. The combination of small areas of bare substrate, damp patches and successional vegetation means this area is considered to be close to meeting criteria of the UKBAP habitat; open mosaic of habitats on previously developed land. However, the current dominance by scrub and tall herb, rather than early successional communities means it now most likely falls outside of this category and is increasingly likely to do so in the future without management.

37. At the northern end of this spur, a single mature ash tree stands proud of the adjacent hedge line. One of the main branches has been broken and become twisted and oozing was noted from a branch scar indicating poor condition.

**Figure 10**

View of spur of land dominated by tall/herb and scrub.

*Secondary woodland*

38. At the western end of the hedge passing west to east through the site is a small square block of willow dominated woodland, c.50m x 50m. In addition to the willow a few elder and hawthorn shrubs are present. The ground flora is dominated by nettle but with scattered wood avens (*Geum urbanum*) and hedge woundwort (*Stachys sylvaticus*) in drier areas, water mint (*Mentha aquatica*) and bittersweet (*Solanum dulcamara*) in depressions beneath the willow canopy. No standing water was present within the area but it is considered most likely that this area used to support wetter conditions which have been dried out through succession and establishment by trees and scrub. Given the standing water noted elsewhere and the recent heavy rain it is considered unlikely that standing water occurs in this area except in exceptional circumstances.

**Figure 11**

Small secondary woodland block against western.

39. This section first looks at the types of habitat found on site or within the sphere of influence of potential development, then considers whether these could support protected , UKBAP or Local BAP (LBAP) priority species (referred to collectively as 'notable species').

40. Records of notable species supplied from a 2km area of search by Thames Valley Environmental Record Centre (TVERC) along with records from Banbury Ornithological Society and Oxfordshire Badger Group and are used to inform this appraisal.

*Bats*

Roosting

41. Very few records of bats have been returned by TVERC, these relating to field records of pipistrelle and brown long-eared bats and a single pipistrelle roost in a house 1.3km south east of the site.

42. There are no buildings on the site. There are a few trees on the site which have some potential to support roosting bats. Of these, the only ones which would be removed as part of the proposed works are along the central hedge line. In particular the tree with the woodpecker hole highlighted as target note 1 on plan BES-D-180-01.1. The hole itself appears to have been in recent use by birds i.e. during the past season, and therefore it is unlikely that bats would have been roosting in it in recent times. However, the hole does offer opportunities for future roosting. It is assed as supporting moderate roost potential in relation to the categories set out in table 1 below.

43. The ivy covered oak in this hedge line highlighted as target note 2 on plan BES-D-180-01.1 may also offer roosting potential in holes or cracks not visible from the ground. It is assessed as providing limited roost potential in relation to the categories set out in table 1 below.

44. The twisted branch of the ash highlighted as target note 4 on plan BES-D-180-01.1 has some limited potential to offer roosting spaces for low numbers of bats, although no such evidence was found. This tree would be retained within the current proposals but is likely to present limited roost potential in relation to the categories set out in table 1 below.

45. Bat roosting potential of the building and trees was classified according to the following criteria set out in Tables 2 and 3, developed with reference to the Bat

Mitigation Guidelines (2004), Bat Workers Manual (2004) and the Bat Conservation Trust Good Practice Guidelines (2012).

**Table 1** Bat roosting potential in trees

| Roosting potential | Criteria |
|---|---|
| *Good* | Trees that have many areas suitable for roosting with a large number of potential roosting features such as fissures, holes and flaking bark. These are normally in areas of good habitat such as close to water or in a landscape with well connected linear features. Trees with good potential could be used for a whole range of roosts including maternity and hibernation roosts. |
| *Moderate* | Trees with a smaller range of features suited to roosting in less valuable habitat, but still supporting features that could be attractive to bats and potentially support maternity roosts. |
| *Limited* | Trees with limited range or quality of roosting features in poor habitat. They could be used as occasional or transient roosts, but are unsuitable for maternity roosts. |
| *Very Limited* | Trees that have few places for bats to roost located in poor foraging habitat, but due to superficial features such as flaked bark etc. could be used on an occasional basis for solitary or small groups of bats. |
| *None* | Trees which appear unsuitable for roosting bats due to clear lack of roosting spaces such as voids etc and/or absence of suitable access points. |

Commuting and Foraging

46. The vast majority of the site is of low value to bats due to the dominance of arable land. The hedgerows and dismantled railway line offer potential foraging / commuting routes for bats. Along with the tall herb / scrub area to the east. The importance of the hedge / railway line crossing the site is likely to be limited however by the lack of good connectivity to any features likely to be valued by bats to the west, and the presence of other intact hedgerows and tree lines in all directions. These alternative routes make it unlikely that the existing linear features are particularly important in this regard. A bat activity survey has been scheduled to confirm this appraisal.

*Amphibians*

47. No potential breeding ponds are present on mapping within a 500m radius of the site and no waterbodies likely to support breeding amphibian populations are present within the site. The site supports relatively small amounts of higher value terrestrial habitat but given the distance from the nearest ponds no important populations are likely to occur.

48. Eighteen records have been returned of Great Crested Newt (GCN) within 2km of the application site from 4 sites. These are Stratton Audley Quarry (1.4km north), a site near Bicester, (c.1km south), Gavray Drive Meadows (c.1.2km south) and Launton (c.1.6km east). These are well beyond the 500m distance from which GCN are thought to regularly travel from breeding ponds in the terrestrial phase of their

lifecycle and therefore the species is considered likely to be absent from the application site.

*Birds*

49. A range of common farmland birds are likely to be found utilising hedgerows and woodland around the site. The site is frequently disturbed by agricultural activity and ground nesting species are thought likely to occur in only low numbers, particularly given the lack of significant grassy field margins. These poor margins also make it unlikely that the site would be of significant value to barn owl and no nesting habitat for the species occurs on site.

50. Desk study records reflect this assessment with breeding schedule 1 (W&C Act 1981) species records being limited to low numbers of red kite, little ringed plover, kingfisher and hobby. None of which would be likely to breed at, or otherwise be dependent on the site.

*Reptiles*

51. Two records of grass snake at Stratton Audley Quarry and three of slow-worm from Gavray Drive Meadows were returned.

52. Suitable habitat for this group is limited to the disused railway line and area of tall herb/scrub to the north. Whilst it is possible that these species could occur on site, the limited amount of available habitat means populations of importance to the conservation status of reptiles would not be expected to occur. The connectivity between Bicester Airfield and habitat to the south of the site provided by the railway line is replicated by other boundary features in the area.

*Badger*

53. Within the disused railway are numerous mammal holes. Whilst most of these are attributable to rabbits at least two appeared to have potentially been created by badgers. Mounds of spoil and past nesting material was found at the entrance and whilst no hair or latrines were seen, the size of holes and the spoil indicate use by this species. The entrances were largely clear but had some leaves in the hole and spoil was not very recently dug and these apparent low levels of activity, and lack of any larger sett within the site boundary (or proximity of the site) suggest that this may be an outlier sett used occasionally by small numbers or individual badgers.

**Figure 12**

Probable outlier sett entrance. Highlighted as target note 3 on plan BES-180-01.1

54. Given the evidence of a likely outlier sett within the disused railway and five desk study records from the surrounding area (including one from Bicester Airfield) mitigation may need to be implemented during construction to ensure offences under the Protection of Badgers Act (1992) are avoided. An updating survey would be required prior to construction commencing and in time to enact licensed sett closure should this be required.

55. The proposals would result in negligible loss of habitat for the species and any routes vital to the movement of badgers through the local landscape would be retained and potentially enhanced through the proposed landscaping scheme. Sufficient suitable areas for translocation would be present within the development boundary to provide adequate replacement setts should this be required.

*Dormouse*

56. No desk study records were received from TVERC for this species. NBN indicates the nearest records are several kilometres from the site.

57. The hedgerows and tree lines around the site do not include a significant proportion of hazel, are generally narrow, lacking dense cover and are not connected to any sizeable area of higher value woodland in the vicinity of the site. It is considered highly unlikely that the species would be present and if it were, it would likely be restricted to the western boundary which will not face any significant impacts.

*Invasive Species*

58. No species listed on Schedule 9 (W&C Act 1981) were recorded during field survey.

## Evaluation and Recommendations

59. In evaluating the site, the ecologist will take into account a number of factors in combination, such as;

- the baseline presented above,
- the site's position in the local landscape,
- its current management and
- its size, rarity or threats to its integrity.

60. There are a number of tools available to aid this consideration, including established frameworks such as Ratcliffe Criteria or concepts such as Favourable Conservation Status. Also of help is reference to Biodiversity Action Plans in the form of the Local BAP (Appendix 2) and UK BAP to determine if the site supports any Priority habitats or presents any opportunities in this respect.

61. The assessment of impacts considers the proposed development shown in figure 2 in light of :

- Site preparation including vegetation and habitat removal
- Direct effects on significant faunal groups or protected species
- Effects on adjacent habitats or species such as disturbance, pollution and severance
- Operation effects on wildlife such as noise and light disturbance

62. The timings and methods of additional protected species surveys have been discussed and agreed through conversation with Cherwell District Council's Ecologist; Charlotte Watkins.

**On site habitats**

63. The site supports a typical range of species poor habitats arising on largely agricultural land.

64. The exception to this is the north-south hedgerow which is likely to be considered as "important" under the Hedgerow Regulations and falls within the UKBAP Hedgerow category. Therefore a hedgerow removal notice is likely to be required for the removal of this section and mitigation will be required for its loss along with vegetation along the disused railway.

65. A total of c.630m of such vegetation would not be retained within the site boundary to allow the construction of the proposed development. Landscape parameters however indicate that native tree and shrub planting will provide in the region of 900m of replacement habitat surrounding the development.

66. Use of a wide range of native, woody species in this new planting, replicating those currently present and including regular standard trees, should not only provide long-term mitigation but would also improve current connectivity of habitat, particularly along the boundary with the A4421.

67. The spur of land to the north, which forms part of the proposed extension to Bicester Airfield LWS, would be retained within the development and would not be subject to any additional planting. This will ensure it retains its existing habitat composition and should retain it's current value. Management of this area through occasional scrub control would retain and enhance its value as 'open mosaic of habitat on previously developed land' providing a gain in this BAP habitat type and contributing to the extent of the adjacent LWS.

68. The removal of the substrate beneath the disused railway may cause localised impacts upon reptile and small mammals populations. Therefore, it is recommended that the broken stone substrate is not removed from site but rather used to extend the spur of land discussed above eastwards by its translocation. This would result in a corridor with similar characteristics to the abandoned railway line only a short distance to its north east. A hedgerow can still be planted alongside the translocated material for screening and the corridor could be managed alongside, or as part of the 'open mosaic' discussed above.

69. The small block of secondary woodland adjacent to the southern boundary would not be retained within the development. In addition to hedgerow planting in some sections the buffer between built areas and site boundaries is wide enough (up to 23m along the southern boundary) that wider hedgerows/woodland strips can be planted. This will entirely mitigate for the area lost and by utilising willow in the planting scheme, will replace species not retained within the development.

70. The remainder of the site is considered to be of low ecological value and no mitigation is considered necessary.

**On site fauna**

*Bats*

71. Whilst some trees with potential for roosting would not be retained within the development, most mature trees would be retained in boundary features and numerous alternative potential roost sites could be created on retained features and new buildings. This, along with the lack of existing evidence of roosting means it can be expected that impacts on the conservation status of bats would not occur, once appropriate mitigation was implemented.

72. Trees with roost potential have been highlighted on plan BES-D-180-01.1, if these trees are to be removed surveys of these trees will be required in order to establish

their roost status prior to development. Surveys would take the form of an emergence survey carried out during bats main active season (May - September). A survey has been scheduled for the last week of May 2015 with the report to be completed and submitted, shortly afterwards; during the determination period of the outline application.

73. As shown in Figure 2 above, the new development will include landscape planting which retains and enhances connectivity around the site meaning significant negative impacts on foraging or commuting populations would not be expected. As there is a likely trade-off between the provision of 'open mosaic' type habitat and the more structured habitat required by commuting bats, the level and nature of connectivity provided for this group should be informed by activity surveys directed at the site's hedgerow boundaries. This would be carried out by combined static monitoring and walked transects within the bat activity period, to be included in the surveys scheduled for the end May 2015.

74. Sympathetic lighting of the site i.e. directed away from any boundary features, as detailed in the External Lighting Layout drawing accompanying the application, should further ensure a lack of long term impacts.

*Reptiles*

75. Valuable habitat for this group is largely limited to the area of scrub/tall herb to the north and possibly along the disused railway line. The hedgerow (north-south) has very limited margins and is not particularly wide along it's length. The retention of the habitat on the spur and creation of linear planting and ponds around the site will ensure the site will likely have greater value to this group post development.

76. Mitigation preventing the killing and injury of individuals may need to be implemented if they are present within any habitat to be lost. A reptile survey is recommended of potential habitat at an appropriate time (March-May / September - October) to inform the requirement and extent of mitigation. Given that mitigation could be easily implemented and the developed site will be enhanced for this group it is felt that reptile survey could be delivered as an appropriately worded condition of planning.

*Badger*

77. Whilst activity at the time of survey seemed to be low, the presence of a likely outlier sett within the disused railway means mitigation may be required. An update survey several months prior to construction commencing should be carried out and the findings of this used to determine the need for a license and the extent of mitigation required. Given the lack of importance of this sett and the scope to provide mitigation (should it be required) within the site, it can be expected that a license would be granted for the closure of this sett.

**Off site**

78. The proposed development is not thought likely to have any significant impact upon nearby designated sites or any higher value habitat given the parameters of the development site and the proposed landscaping parameters of the development. The measures set out above are felt to be sufficient in mitigating any loss of connectivity between Bicester Airfield and habitat to the south and east resulting from the loss of the abandoned railway line.

**General precautions**

*Nesting birds*

79. To prevent the proposed works impacting on nesting birds any clearance of vegetation will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance that is required during the breeding bird season should be preceded by a nesting bird survey to ensure that the Wildlife and Countryside Act (1981) is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.

**Enhancement**

80. In line with planning guidance outlined in the National Planning Policy Framework (NPPF) development should take account of the value of ecosystem services and enhance ecological networks.

81. The results of this survey and evaluation have been inputted into landscape planning of the site to provide high value habitat features with potential to increase the site's existing biodiversity and ecological function e.g. connectivity of habitat across the landscape (see Figure 2 above).

82. In addition to the hedgerow and tree planting and the translocation of substrate to extend the spur of habitat in the north of the site, the proposed development could also include a number of swales providing additional habitat. Swales can provide excellent habitat for a wide range of faunal groups and no such habitat currently occurs on or in close proximity to the site. The design and planting of the swales, if utilised, should be undertaken using native species and they should be managed to provide long term habitat of good ecological value.

83. The extent of planting also provides opportunities for artificial habitats e.g. bird and bat boxes, log piles etc. to be strategically located around and within the site providing additional opportunities for faunal groups to utilise this currently, largely barren area.

84. In order to ensure long-term enhancement of the site an Ecological management Plan covering the entire development should be produced which will detail management of all semi-natural habitat as well as informing planting regimes to maximise benefits to local wildlife. Any such EMP can be produced as a condition of planning.

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N

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A Arable land

Tall herb / Scrub

Semi-natural woodland

Species rich hedgerow

Hedgerow

Hard standing

Target notes:

1. Semi mature oak with BRP
2. Tree with single woodpecker hole
3. Potential badger sett
4. Declining ash tree with broken limb

Project: Skimmingdish Lane, Oxen

Title: Ecological Features Plan

Drawing Number: BES-D-180-01.1

Scale: Do not scale Date: December 2014

Revision:

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