

KEY:

- SITE BOUNDARY
- ROBIN
- BLUE TIT
- GREAT TIT
- DUNNOCK
- WREN
- GOLDFINCH
- CHAFFINCH
- GREENFINCH
- BULLFINCH
- SONG THRUSH
- BLACKBIRD
- WOODCOCK
- STARLING
- REDWING
- FIELDFARE
- MISTLE THRUSH
- CANADA GOOSE
- PHEASANT
- REED BUNTING
- LINNET
- RED LEGGED PARTRIDGE
- MEADOW PIPIT
- SKYLARK
- WOOD PIGEON
- MAGPIE
- CARRION CROW
- GREY PARTRIDGE
- BUZZARD
- KESTREL
- RED KITE
- SNIPE
- MOORHEN
- COOT
- MEADOW PIPIT
- PIED WAGTAIL
- MALLARD
- TUFTED DUCK
- GREEN WOODPECKER
- JACKDAW
- JAY
- GREAT SPOTTED WOODPECKER
- LAPWING
- ROOK
- PIED WAGTAIL
- LONG-TAILED TIT



ecology solutions ltd

7884: BICESTER HERITAGE,  
BICESTER

PLAN ECO6:  
WINTERING BIRD  
SURVEY PLAN



**APPENDIX 6**  
**Assessment, Evaluation and Mitigation**  
**Principles for Wider Site**

## Appendix 6: Site-wide Mitigation Principles in respect of Designated Site, Habitats and Fauna

### Designated sites

1. **Non-statutory Sites.** The wider site boundary incorporates the entirety of Stratton Audley Quarry Local Wildlife Site (LWS), as well as the vast majority of Bicester Airfield LWS. The presence of these sites has been given due regard as part of the emerging development proposals and a suite of avoidance, mitigation and enhancement measures will form an intrinsic element of the emerging scheme.

### Stratton Audley Quarry LWS

2. In regards Stratton Audley Quarry LWS, the site is designated on account of its diverse habitat mosaic which supports a wide range of notable plant and faunal species, not least GCN and notable invertebrate communities. The presence of the habitats and species for which the site is designated has been reaffirmed through the completion of ecological survey work by Ecology Solutions. It is further relevant to note that updated survey work was also undertaken in 2018 by the Thames Valley Ecological Records Centre (TVERC) and due regard has also been given to their findings.
3. The survey work undertaken in 2018 confirms that Stratton Audley Quarry LWS remains of value at the Local level. Notwithstanding this assessment, significant areas of the LWS were noted to support dense stands of scrub, with scrub encroachment (predominantly Bramble) noted to be continually reducing the extent of the significantly more valuable grassland mosaic within the site. In the absence of an appropriate management regime it is considered that scrub succession will result in a continued decline in the ecological value of this LWS.
4. It noted that the LWS is currently the subject of an enforcement notice seeking 'restoration' of the quarry to a Country Park. It is the view of Ecology Solutions, and one that appears to be shared by ecology officers at Oxfordshire County Council (OCC) that the restoration strategy currently being enforced is entirely inappropriate for the LWS, does not recognise the biodiversity interest of the LWS and would give rise to significant ecological harm if implemented. It is considered that adoption of an alternative, biodiversity led 'restoration scheme' would allow for such harmful impacts to be avoided whilst delivering the objectives desired by the LPA (public recreational opportunities).
5. It is pertinent to note that Ecology Solutions are currently advising on the delivery of alternative, biodiversity led restoration scheme in this regard. It is considered that the implementation of appropriate, sensitive development, such as the emerging masterplan proposals could come forward in compliance with the ethos of such a scheme. Indeed, such proposals would offer an opportunity for enhancement in the longer term through facilitating long-term biodiversity management of the site (something which would not be secured under the extant restoration scheme).
6. The emerging proposals within Stratton Audley Quarry LWS continue to be guided by the existing ecological interest of the site and the clear need to implement appropriate restoration alongside favourable, long-term habitat management at the site. The proposals in this regard, will facilitate delivery of a Nature Park as part of the scheme and will be led by the following principles:

- Any facilitating development to be low-key and to be targeted at the peripheries of the site, or otherwise in areas of reduced ecological interest. This to retain the vast majority of the site as a high-quality and naturalistic habitat mosaic;
  - The design of new structures to be ecologically sensitive, including for structures on stilts (retaining vegetation underneath) as well as integrated invertebrate nesting walls, bat and bird boxes and areas of living roofs;
  - Naturalistic recreational trails to guide users around the site and ensure passive avoidance of key / sensitive areas within the site;
  - Targeted, ecology led restoration scheme to include for an appropriate scrub clearance regime and the subsequent implementation of a suitable habitat management regime for the site in the long-term. This regime to target the retention of the diverse habitat mosaic within the site, thus retaining a high quality yet ephemeral resource which would be lost in the absence of management;
  - All works to be undertaken with due regard to the presence or potential presence of protected and notable species, with appropriate methodologies agreed and licensed obtained (where relevant). In particular the proposals will avoid a net loss of waterbodies and wetland (identified as some of the most valuable habitats for both GCN and invertebrate assemblages);
  - Adoption of an appropriate lighting strategy which will retain the vast majority of the site as a dark habitat and minimise light spill; and
  - Opportunities for educational facilities which will provide a resource by which users can learn about and engage with ecology, further ensuring that recreational use of the site is appropriate.
7. It is considered that, through adoption of the above mitigation and enhancement measures, the emerging proposals would ensure the retention and enhancement of the existing biodiversity value within the quarry and may fully comply with an alternative, ecology led restoration scheme for the LWS, should one be approved in due course.
8. Adoption of the above measures could further provide opportunities for the emerging masterplan to complement and contribute to local Habitat Action Plans (not least for 'Ponds' and 'Chalk and Limestone Grassland').

#### Bicester Airfield LWS

9. Bicester Airfield LWS is designated primarily on account of its 'lowland calcareous grassland', with reference also made to the presence of open habitat mosaic on hardstanding, alongside areas of scrub. Updated survey work undertaken at the site by Ecology Solutions in 2018 has reaffirmed the presence of these habitats, albeit with areas of dense scrub again considered to be detracting from the sites value in some areas. Indeed, comparison studies or aerial photography between 2004 and 2018 identify significant scrub encroachment in the south of the site.
10. In this regard, the site is considered to warrant its LWS status, albeit the site is considered to be of relatively reduced intrinsic value relative to the adjoining Stratton Audley Quarry LWS.
11. In this regard, it is important to note that true ecological value of a site, not simply its designation, should be afforded weight in the planning process. This matter has been made clear by the Planning Inspectorate (and subsequently confirmed by the Secretary of State) when considering a scheme at Hermitage Quarry (ref: APP/W2275/V/11/2158341). In this case it is stated by the Inspector that:



*“7.39 It would be equally inappropriate if, in the face of evidence to the contrary, the quality of all Local Wildlife Sites (LWS) were treated as identical, notwithstanding the absence of any explicit policy distinction between one LWS and another”*

12. The above has been given due regard as part of the emerging masterplan proposals for the site, ensuring that the quantum of facilitating development may be minimised within the Stratton Audley Quarry area.
13. Notwithstanding the above, the emerging proposals within Bicester Airfield LWS have again been guided by the existing ecological interest of the LWS. Whilst development in some areas will necessitate some losses to areas of the grassland mosaic (i.e. the habitat of greater value within the LWS), much of the emerging development is proposed within habitats of reduced interest (such as areas of dense scrub and young woodland in the south of the site), within the central airfield area or otherwise upon areas of existing hardstanding (development in this regard contributing to the restoration or reinstatement of high value heritage assets).
14. The avoidance of development upon habitats of comparatively greater value, where possible, is a key design principle for the emerging proposals and will ensure that the potential for adverse impacts to arise are minimised.
15. Additional design principles which further guide the emerging proposals within the airfield area include:
  - Adoption of a sensitive habitat management plan for the site, to include measures in relation to scrub management.
  - New structures to include for a range of designs which will incorporate biodiversity features including integrated features for bats, birds and invertebrates. This to include living roofs and bee banks incorporated into the design of partially sunken or ‘camouflaged’ structures such as bomb stores and motor vaults;
  - The majority of semi-natural to be retained and subject to an appropriate, ecology led management regime in the long-term.
  - Acoustic earth banks to be designed in a manner that will ensure they provide optimal nest banks for solitary insects;
  - All works to be undertaken with due regards to the presence or potential presence of protected and notable species, with appropriate methodologies agreed and licensed obtained (where relevant); and
  - Adoption of an appropriate lighting strategy which will retain the vast majority of the site as a dark habitat and minimise light spill.
16. It is considered that adoption of the mitigation and enhancement principles set out above, not least management to facilitate qualitative enhancements to existing habitats, would be sufficient to ensure that the biodiversity interest of both Stratton Audley Quarry and Bicester Airfield LWS to be retained in the long-term.
17. Given the nature of the scheme and the separation of the wider site from any other non-statutory designated sites, it is not considered that any adverse impacts would arise on any other designated sites as a result of the emerging proposals.

### **Habitats within the Site**

18. As identified in the baseline section above, the wider site supports a wide range of semi-natural habitats, including extensive areas of grassland, scrub, woodland, wetland and re-colonising ground.

19. In assessing and evaluating the biodiversity value of these habitats, consideration has been given to the intrinsic value of the habitats in isolation, as well as their value as a component of a wider habitat mosaic. In regards the latter, it is noted that many of the habitats on site would together be considered to comprise Open Mosaic Habitat on Previously Developed Land (OMH). With this in mind, it is important to also consider the holistic impacts of the development proposals on this OMH. Such an assessment has been undertaken below.
20. As well as being of intrinsic value, OMH is of particular importance to many of the faunal species / assemblages within the site, as is discussed further in the faunal section below.

#### *Species-poor Semi-improved Calcareous Grassland*

21. Areas of species-poor semi-improved calcareous grassland are to be largely retained as part of the development proposals, with only minor losses to facilitate built form (vehicle tracks).
22. Given the minor losses and the low intrinsic value of this habitat, it is not considered that any specific mitigation would be required. The establishment of an appropriate management regime for retained grassland within the wider site will more than account for any minor losses in this regard.
23. Moreover, and as an enhancement, a significant area of grassland to be retained within the proposed '*Demonstration / Drivers Experiences*' would also be bought under a sensitive management regime allowing new areas of grassland to become botanically enhanced post development.
24. As detailed above, and noted within the Bicester Airfield LWS citation, the existing value of this grassland is greatly tempered by an intensive cut and leave management regime. Through implementing a reduced cutting regime, which allows for a proportion of wildflowers to flower and set seed each year and moreover removes the arisings to prevent nutrient build-up, it is considered that the value of this habitat may be significantly enhanced in the short to medium term.
25. Further enhancements, such as completion of a green hay translocation from adjacent (species-rich) grassland areas would further expediate the establishment of a botanically diverse sward in this area.
26. The implementation of an appropriate regime, as set out above, offers opportunities for the value of the grassland to be enhanced such that it may reach LWS condition in the short to medium term, ensuring new areas of species-rich grassland within the site. Such management would complement targets set within the Oxfordshire Local Biodiversity Action Plan (LBAP) for Calcareous Grassland as well as for the nearby Ray CTA, which include for the management, restoration and creation of lowland meadows.

#### *Semi-improved Neutral and Calcareous Grassland Mosaic*

27. Areas of semi-improved neutral and calcareous grassland mosaic are again to be largely retained as part of the development proposals, particularly within Stratton Quarry LWS, where losses are largely confined to the east of this LWS (i.e. where the habitats are recorded to be of reduced botanical interest).

28. The vast majority of grassland/ephemeral mosaic within the central area of the quarry, which represents the most biodiverse example of this habitat within the site and is considered to be of value at the local level, is to be retained.
29. Losses to this habitat type elsewhere within the wider site are largely limited to the southern boundary where the grassland is notably less species-rich, significant scrub encroachment is apparent and where grassland grades into areas of recolonising hardstanding.
30. Where losses are envisaged, it is considered that these impacts may be appropriately mitigated through the adoption of an appropriate management regime across the wider site. In particular, areas of the neutral and calcareous mosaic would benefit from the commencement of a scrub management regime, to include the grubbing out of dense scrub stands (retaining scattered scrub pockets) and ensuring an appropriate meadow cutting regime. These measures would reverse a longer-term trend of adverse scrub succession, as well as the gradual succession of calcareous grassland to coarser, neutral grassland habitats of reduced botanical interest.
31. Again, the instigation of appropriate grassland and scrub management would complement the ambitions of the nearby Ray CTA, as well as the Oxfordshire LBAPs for *Calcareous Grassland* and for *Neutral Grassland and Grazing Marsh*.

#### *Semi-improved Calcareous Grassland*

32. Notwithstanding the variation in quality within this habitat type on Site, areas of semi-improved calcareous grassland remain of greater value within the context of the wider site and are considered to be of value at the local level.
33. Whilst much of the calcareous grassland will be retained as part of the scheme, approximately a third of the grassland is envisaged to be lost to the emerging proposals.
34. As above, the implementation of an appropriate management regime for grassland habitats across the wider site would offer opportunities to mitigate for losses in this regard.
35. Indeed, it is pertinent to note that management of the grassland on site would ensure qualitative enhancements to retained habitats in the short to medium-term, with this including the restoration of some areas of currently close mown and species-poor grassland (within the proposed Drivers Experience track).
36. Securing appropriate management for retained grassland habitats will in turn allow for long-term qualitative enhancements to be delivered in line with local CTA and LBAP targets, the emerging proposals (in line with the measures set out above) may ensure qualitative gains to further mitigate any losses to existing grassland habitats.

#### *Broad-leaved Semi-natural Woodland*

37. The majority of the woodland lacks significant maturity, supporting an unremarkable range and composition of semi-mature trees and shrubs and a ground flora of a largely ruderal nature. On this basis, the woodland habitats are considered to be of comparatively reduced value relative to other habitats on site (such as much of the grassland mosaic).
38. Nonetheless, woodland is considered to be of some value at the site level. As such, emerging proposals seek to retain an area of woodland surrounding P12, as well as to



retain much of the woodland located at the boundaries of the wider site. However, there will be losses to areas of scrubby woodland in the south-west of the Site (in proximity to B22 – B24), as well as minor losses in the north of the wider site at the interface between Bicester Airfield LWS and Stratton Audley Quarry LWS.

39. Where losses are proposed, these will be mitigated for through new woodland planting elsewhere within the wider site. New woodland planting will comprise a wide range of native, wildlife beneficial species appropriate for the local area, ensuring qualitative and quantitative enhancements in this habitat type relative to the existing situation.
40. Further enhancements to areas of woodland will be secured in the long-term through the implementation of a sensitive management regime for the wider site. At this stage, it is considered that woodland management will be governed by the following principles:
  - Control / removal of non-native, undesirable and overly dominant species;
  - Rotational management to seek a diverse woodland structure with a gradation of habitats from mature woodland/trees to shrub and open areas with an established, shade tolerant ground flora, maximising the value of edge habitats; and
  - Retention of standing and fallen dead-wood.

*Dense and Scattered Scrub, Dense Scrub / Grassland Mosaic, Scattered Scrub*

41. Areas of dense scrub are present within the quarry, with scrub pockets of varying density also present within the south of the wider site. Whilst some areas of scrub support a moderate range of woody species, extensive areas are dominated by just one or two species, frequently Bramble.
42. Scrub of varying density is also noted elsewhere across the wider site, frequently being a dominant component in a grassland / scrub mosaic.
43. Areas of scrub are of low intrinsic ecological value in the context of the wider site, typically being species poor and often including for non-native species. Moreover, existing areas of scrub within the site are outcompeting relatively richer ecological habitats such as areas of neutral and calcareous grassland. As such, in the absence of appropriate management, scrub encroachment will continue to result in a decline in the ecological value of the wider site overall.
44. The emerging development proposals will result in the loss of significant areas of scrub within the Site, both to facilitate areas of built form, as well as to facilitate sensitive habitat management in the long-term (i.e. to reverse the trend of ecological succession within grassland / OMH areas).
45. Notwithstanding the above, the retention of pockets of scrub will be an important principle governing long-term management, ensuring the structural and botanical diversity of retained habitats (particularly within the quarry) are maximised.

*Reedbed*

46. As is typical for this habitat type, the reedbed habitat within the wider site is of limited botanical diversity. The functional value of this habitat (i.e. as refuge for faunal species) is moreover tempered by its relatively small extent, with much of the habitat located away from areas of open water.

47. Whilst minor losses to reedbed habitat will be necessitated by the proposals, these are considered to be of negligible ecological significance. In any event, it is noted that emerging proposals seek to retain a diverse habitat mosaic within the quarry, of which reed-bed habitat will form an important component.

*Marginal Vegetation / Marshy Grassland*

48. Areas of marginal vegetation and marshy grassland are present within the quarry area of the wider site. These areas support a moderate range of wetland flora and are relatively small in their extent. Whilst this habitat is a valuable component of the OMH within the site (not least on account of its value to faunal species), the habitat is of reduced intrinsic value when considered in isolation.
49. Areas of marginal vegetation / marshy grassland are envisaged to be retained as part of the emerging proposals. Indeed, emerging restoration proposals, alongside long-term management which would be facilitated as part of the emerging masterplan, will give specific regards to retaining and enhancing this habitat as part of the emerging scheme.
50. Where SuDS are required to facilitate drainage proposals, these features will be designed to deliver additional ecological enhancements within the Site, seeking to replicate the wetland habitats of ecological value (either intrinsically or functionally) within the quarry area.

*Water-bodies and Wet Ditches*

51. The wetland habitats within the site vary considerably in their size, composition and value, ranging from larger lakes (such as P1, P10 and P12) to small flooded areas of hardstanding (such as D3).
52. Where larger lakes are present, these generally supported steeper banks, with a much reduced marginal vegetation and were moreover of reduced interest to invertebrates (see faunal section below).
53. Despite considerable variability between individual features, and the comparatively lower botanical interest of the larger waterbodies (P1, P10, P12) the wetland network overall is considered to be of higher ecological value in the context of the wider site (not least given its value to faunal species).
54. A key principle of the emerging development proposals is to avoid a net loss of waterbodies within the wider site. Indeed, emerging proposals for the quarry area (where all but one of the waterbodies – D3 – are located) will target a net gain of wetland habitats, with future management to maximise the diversity of these features, from large open and permanent pools to smaller, ephemeral features.
55. Where a degree of development is proposed adjacent to ponds, this is limited to within a proximity of P10 and P12, waterbodies supporting a reduced botanical assemblage at the margins and moreover of limited interest for protected and notable faunal groups (see faunal section below).
56. In light of the above, it is considered that the retention, creation and management of wetland habitats within the quarry area will ensure that the wetland interest of the wider site is fully retained and indeed enhanced as part of the emerging masterplan.

### Hedgerows / Treelines

57. Hedgerows and/or treelines are present along much of the wider site perimeter, as well as at the boundary between the quarry and the airfield. These habitats support a typical range of woody species and frequently lack a true hedge structure, with an absence of management meaning that they have invariably developed into tree lines, scrub belts or have a gappy structure. The hedgerows / treelines are considered to be of ecological value in the context of the site only.
58. The emerging proposals seek to retain these habitats as part of the proposals and bring them under appropriate management in the long-term. The bolster planting or infilling of gappy areas of hedge will moreover serve to enhance the structural and botanical value of the hedgerows within the site, providing betterment relative to the existing situation.

### Re-colonising Bare Ground

59. Areas of re-colonising bare ground are present within the quarry area of the site support a good range of plant species, albeit with the habitat overall being sparsely vegetated with large areas comprising bare ground. This habitat is therefore considered to be of intrinsic value in the context of the Site only. Its value to protected and notable species as part of a wider open habitat mosaic is further considered in the OMH and faunal sections below.
60. It is envisaged that any minor losses to bare ground areas will be more than mitigated through the implementation of an appropriate restoration scheme for the quarry (delivering a Nature Park) and, importantly, the implementation of an appropriate management regime for the quarry site in the long-term.
61. The adoption of such management is essential to the retention of a diverse OMH in the short-medium term, noting that many of the component habitats (including re-colonising bare ground) are ephemeral in nature and would be lost to ecological succession in the absence of any intervention.

### Hardstanding / Bare Ground

62. Areas of hardstanding and bare ground which lack any significant colonisation by floral species are considered to be extremely limited ecological value (notwithstanding the rare presence of Basil Thyme).
63. Whilst no specific mitigation would be required for losses to these habitats, it is noted that emerging proposals will include for the provision of 'ecology car park' areas. These areas will seek to deliver semi-natural surfacing which may comprise unsealed hardstanding (such as gravels), re-enforced grass or bare ground areas within which a range of early ephemeral floral species can colonise. Further opportunities for the establishment of early successional habitats will be delivered through incorporating living roofs on the bomb stores, motor vaults and cabins as part of the emerging scheme.

### Re-colonising Hardstanding

64. In some areas, hardstanding has become colonised by a modest range of early successional species. Given the greater degree of re-colonisation (and noting that the habitat type is noted in the Bicester Airfield LWS citation), these areas are considered to be of improved ecological interest in the context of the wider site.



65. Areas of re-colonising hardstanding are to be lost to the emerging proposals (not least to facilitate the preservation / restoration of heritage assets). Where losses are required, it is considered that these may be more than mitigated for through the delivery of new ecology car park habitats and living roofs as part of the emerging proposals (see above).

#### Buildings

66. The buildings within the site are of negligible intrinsic ecological value and no mitigation would be required for any losses / impacts.

#### Open Habitat Mosaic

67. As identified above, many of the individual habitats present within the wider site form integral components of a wider open mosaic of habitats (OMH). Combined together, these habitats support a wide and varied floral community, alongside a diverse habitat structure and are resultantly of enhanced (local) value.
68. The emerging proposals for the wider site have been specifically informed by the OMH present and indeed the retention of a diverse habitat mosaic form a key element of the scheme. As set out above, Ecology Solutions are currently advising on the preparation of an alternative restoration scheme for the quarry which recognises this valuable mosaic and ensures its retention as part of a biodiversity led approach to restoration. The emerging masterplan proposals seek to build upon the emerging restoration proposals and would facilitate the implementation of a dedicated biodiversity management regime for the quarry site in the long-term. This management would, amongst other matters, seek to control ecological succession within the site.
69. The emerging proposals would also secure appropriate management for habitats in the wider site, including the grassland and scrub mosaic present towards the periphery of the airfield.
70. In the absence of appropriate management (i.e. retention of the status quo), ecological succession will continue within areas of the wider site, resulting in on-going declines in the ecological value of habitats and, ultimately, the loss of many open habitats and a reduction in the overall habitat mosaic. Appropriate management interventions are therefore essential to ensure that the structural and botanical diversity of habitats are retained and enhanced in the long-term.

#### Summary

71. In summary, the wider site supports a varied mosaic of habitats ranging from bare and recolonising ground to semi-mature woodland and lakes.
72. Of greatest ecological interest within the site are the wetland and open habitats, particularly within the quarry where diverse OMH is present. The emerging masterplan proposals for the wider site give due regard to the presence of these habitats and indeed the retention of the mosaic is an essential design element guiding the overall proposals. To this end, a suite of avoidance, mitigation and enhancement principles are set out above. It is considered that the adoption of these measures, which would include for the implementation of appropriate habitat management in the long-term (to be secured by way of a suitably worded condition) would ensure that the emerging masterplan proposals will retain the ecological interest of the wider site and ensure that the scheme may fully accord with legislation and planning policy of relevance to nature conservation.

## **Faunal Evaluation**

### **Bats**

- 73. Legislation:** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (“the Habitats Regulations”; as amended). These include provisions making it an offence to:
- Deliberately to kill, injure or take (capture) bats;
  - Deliberately to disturb bats in such a way as to:-
    - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
    - (ii) affect significantly the local distribution or abundance of the species to which they belong;
  - damage or destroy any breeding or resting place used by bats;
  - Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).
- 74.** The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that were not the primary purpose of activity. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 75.** European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 76. Site Usage.** None of the buildings within the site offer potential opportunities for roosting bats and moreover no evidence of roosting was recorded during the completion of internal and external survey work. Moreover, the trees within the wider site do not offer potential roosting opportunities bats due to them being generally semi-mature in nature, with an absence of any potential roost features.
- 77.** Bat activity surveys in the form of static and transect surveys confirmed the Site to be subject to generally low levels of bat activity, with activity unsurprisingly higher in close proximity to linear vegetation, waterbodies and wooded belts (particularly near P12). Whilst a good range of bat species were recorded during the course of surveys, activity was found to be dominated by *Pipistrelle* bat species, with only a low level of registrations pertaining to other species.
- 78. Avoidance, Mitigation and Enhancement Opportunities.** The vast majority of features identified to be utilised by foraging and commuting bats are envisaged to be retained as part of the proposals, with the quarry in particular to be retained as a Nature Park. Retained habitats will include existing waterbodies (notably the larger lakes), much of the woodland within the proximity of P12 and linear shrub and hedge planting towards the peripheries of the site. Moreover, extensive areas of grassland will be retained as part of the emerging scheme. The retention of these habitats will allow for continued commuting opportunities for bats both within the wider site and the local area, avoiding any potential habitat fragmentation.

79. Management of new and retained habitats will give due regard to bats. In the proposed Nature Park for example, a diverse habitat mosaic will be retained, including for areas of woodland and mature scrub, species-rich grassland, herb-rich short perennial and ephemeral habitat and a mosaic of waterbodies, with this providing optimal bat foraging habitat. Elsewhere, such as at the site boundaries, management will seek to optimise the structure of linear features, maximising their value as commuting corridors.
80. The adoption of a sensitive lighting scheme during the construction phase, to include the avoidance of after dark lighting wherever possible, would be sufficient to ensure that adverse impacts on foraging and commuting bats may be avoided.
81. Where lighting is proposed during the operational phase, the emerging proposals seek a design approach which minimises adverse impacts on light sensitive species. The siting of individual lighting columns (to comprise LED lighting with no UV content) will be considered such that the lighting requirements for areas of built form can be met with minimal spill onto semi-natural habitats. Where necessary, screening vegetation will be provided to minimise light spill into wider semi-natural areas. Additionally, accessories (such as baffles, hoods or louvres) will be utilised to further minimise light spillage and direct light below the horizontal plane to where it is required (limiting light to an angle of 70 degrees or below wherever possible). It is proposed for new lighting to comprise warm white LED with a colour temperature of 3000K or below.
82. It is moreover considered that the emerging masterplan proposals offer significant opportunities to realise enhancements for roosting bats. Such enhancements will include for the provision of integrated roosting features within new and/or retained buildings, in addition to the provision of roosting boxes on suitable retained trees within the site. These measures will ensure a range of new roosting opportunities within the Site, benefiting many species noted on the national BAPs including Soprano Pipistrelle, Brown Long-eared Bats, Barbastelle and Noctule.
83. In summary, the retention and enhancement of extensive areas of semi-natural habitat and the strengthening of boundary vegetation would ensure continued and indeed enhanced foraging and commuting opportunities for bats within the local area. The adoption of a sensitive lighting strategy would further ensure that light spill is avoided onto new and retained habitats. The provision of extensive new roosting opportunities, integrated roosting features and the provision of bat boxes upon retained trees would ensure a significant increase in roosting opportunities for bats.

#### Badgers

84. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the south.
85. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as “any structure or place which displays signs indicating current use by a Badger”.
86. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’ of a Badger.
87. Previous guidelines were issued by Natural England on the types of activity that it considers should be licensed within certain distances of sett entrances. They stated that



works that may require a licence include using heavy machinery within 30m of any entrance to an active sett, using lighter machinery within 20m, and light work such as hand digging within 10m. However, guidance issued by Natural England in September 2007 specifically stated that:

*“It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no Badger is disturbed and the sett is not damaged or obstructed.”*

88. More recent guidance produced by Natural England in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts. However, Natural England’s guidance continues by stating that any activity that will, or is likely to cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.
89. This guidance no longer makes reference to any 30m/20m/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires / chemicals within 20m of a sett should specifically be avoided.
90. This interim guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30m-exclusion zone to the north.
91. **Site Usage.** Several Badger setts were recorded within the east of the site (see confidential Plan ECO5), although none of these were considered to comprise a main sett.
92. The habitats within the Site provide a range of foraging opportunities for Badger, however only relatively low levels of foraging were recorded.
93. **Avoidance, Mitigation and Enhancement Opportunities.** At this stage it is considered likely that one inactive sett (S1) would be lost to the emerging masterplan proposals given its proximity to existing built form (to be subject to restoration or demolition). The remaining 5 setts are envisaged to be retained and safeguarded as part of the proposals and as such it is not considered that a Natural England Badger licence would be required.
94. In regards foraging opportunities, it is noted that extensive areas of optimal foraging habitat are to be retained as part of the emerging proposals, with new landscaping (to include the provision of native fruiting species) to provide continued opportunities for this faunal group within the Site.
95. In light of the above, it is considered that the emerging masterplan proposals will ensure foraging and sett building opportunities for Badgers will be retained as part of the proposals.
96. Notwithstanding the above and given the mobile nature of Badgers, further update survey work would be undertaken at a detailed stage of planning to further inform the proposals, as well as prior to any construction works on site.

97. Subject to the findings of updated surveys in due course, forthcoming works may require a Natural England licence will be required to facilitate elements of the emerging masterplan. The emerging development proposals would easily be able to accommodate any mitigation measures which may be required as part of this licence process (including an artificial sett in the unlikely scenario that this is required).

### Amphibians

98. **Legislation:** All British amphibian species receive a degree of protection under the 1981 Wildlife and Countryside Act (as amended). The level of protection varies from protection from sale or trade only, as is the case with species such as Smooth Newt and Common Toad, to the more rigorous protection afforded to Great Crested Newts, which is protected at the European level.
99. Although Great Crested Newts are regularly encountered locally and throughout much of England, the UK holds a large percentage of the world population of the species. As such the UK has an international obligation to conserve the species and they receive full protection under domestic and European legislation and are a material consideration under NPPF.
100. Great Crested Newts are also listed in Annex IV(a) of the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. The Habitats Directive was transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (as amended), which lists Great Crested Newts under Schedule 2.
101. The legislation includes provisions making it an offence to:
- Deliberately to kill, injure or take (capture) Great Crested Newts;
  - Deliberately to disturb Great Crested Newts in such a way as to:-
    1. Be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
    2. Affect significantly the local distribution or abundance of the species to which they belong;
  - Deliberately takes or destroys the Great Crested Newts eggs;
  - To damage or destroy any breeding or resting place used by Great Crested Newts;
  - Intentionally or recklessly to obstruct access to any place used by Great Crested Newts for shelter or protection (even if individuals are not in residence).
102. Licences can be granted that would permit otherwise unlawful activities. In every case, a licence cannot be granted unless:
- i. There is no satisfactory alternative; and
  - ii. The action authorised would not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
103. It should be noted that a licence could only be granted following the receipt of a full valid planning permission.
104. **Site Use:** Specific surveys have confirmed the site to support a medium population size class of GCN (peak count of 89), with this population largely limited to six of the ponds within the quarry part of the wider site.

- 105.** A small subset of the Site's GCN population was recorded in waterbody D3 (peak count of 3), located in the south of the Site. Given the separation of this waterbody from any other breeding ponds (and indeed non-breeding ponds), this population is likely to comprise a remnant, isolated population, which potentially benefits from infrequent migration from the GCN meta-population within the quarry area of the site.
- 106. Avoidance, Mitigation and Enhancement Opportunities.** The presence of GCN within the wider site is a material consideration in the planning process and a mitigation and enhancement strategy for this faunal group will underpin the emerging masterplan proposals for the wider site.
- 107.** The following principles will be integral to the emerging masterplan proposals for the wider site:
- To manage the quarry area as a Nature Park and ensure appropriate habitat creation and management which will retain and enhance the value of the site to GCN in the long-term;
  - To deliver a net gain of ponds suitable for breeding GCN within the site (this to be focused within the quarry area).
  - Habitat creation and management across the wider site (as detailed in habitats section above) to be sensitive to the presence of GCN and to seek enhancements for this faunal group;
  - To minimise built form within core GCN habitat zones, seeking only small-scale and/or raised infrastructure in these areas;
  - Any proposed infrastructure to be designed with due regard to minimising impacts on GCN with measures such as permanent exclusion features, dropped kerbs and amphibian friendly drainage feature to be utilised as required to ensure adverse impacts are avoided; and
  - Provision of educational facilities and signage for future users which provide information on GCN ecology.
- 108.** Whilst a detailed mitigation strategy would need to be agreed with Natural England as part of a European Protected Species Licence, careful consideration has been given to an appropriate strategy at this stage which would allow the existing population to be safeguarded at a Favourable Conservation Status (FCS) within the site post-development.
- 109.** At this stage it is considered that a GCN translocation exercise will be required within the wider site, with this facilitating capture of GCN within the known breeding ponds, as well as surrounding terrestrial habitats.
- 110.** Prior to any translocation commencing, it is anticipated that an appropriate area (or areas) within the quarry would be identified as temporary 'holding area(s)' for GCN. The holding area(s), which would include for breeding ponds as well as high quality terrestrial habitats, would be subject to sensitive enhancements as required to maximise their holding capacity prior to any translocation commencing. Following these enhancements, the holding area(s) would be enclosed by perimeter herpetofauna fencing and GCN would be translocated to them from the wider site (where necessary). Only following the completion of a sufficient trapping exercise (at this stage anticipated to be a minimum 60 days based on the population size class) would habitats in the wider site be declared 'trapped out' and construction works allowed to commence.



111. GCN would be retained within the holding area until the completion of habitat creation and enhancement across the wider quarry (this envisaged to be undertaken as the first stage of works), at which time fencing would be removed and GCN allowed to repopulate the wider quarry site. GCN exclusion fencing would remain, as required, around the wider site to prevent GCN from accessing active construction areas, until the completion of relevant works.
112. In complying with the above principles, it is considered that the emerging masterplan proposals, in accordance with any forthcoming restoration of the quarry, would allow GCN to be retained within the site at a FCS in the long-term.

### Reptiles

113. **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
114. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 as well as protection under The Conservation of Habitats and Species Regulations 2010, which transposed into UK law the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. Species that are fully protected include Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:
- killing, injuring, taking;
  - possession or control (of live or dead animals, their parts or derivatives);
  - damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;
  - disturbance of any animal occupying such a structure or place; and
  - selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).
115. Due to their abundance in Britain, Common Lizard *Zootoca vivipara*, Slow-worm *Anguis fragilis*, Grass Snake *Natrix natrix* and Adder *Vipera berus* are only 'partially protected' under the Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:
- deliberate killing and injuring;
  - being sold or other forms of trading.
116. **Site Use:** Two species of common reptile were recorded during the course of the surveys undertaken, Common Lizard and Grass Snake. In line with guidance on population size set by HGBI, it is considered that the site supports a low to medium population of Common Lizard (around 36/ha) and a low population of Grass Snake (<2/ha).
117. Higher populations of were recorded within the quarry area of the site, whilst the large central area of close mown grassland is considered to be unsuitable to support reptiles.
118. **Avoidance, Mitigation and Enhancement Opportunities:** The majority of suitable grassland habitats within the wider site, including those habitats identified to be of relatively higher value to reptiles (such as within the quarry) are envisaged to be retained as part of the emerging masterplan and will ensure continued foraging, breeding and resting opportunities for common reptiles.

119. Moreover, the removal of significant areas of dense scrub and young woodland in favour of meadow grassland creation / restoration, as well as the implementation of a scrub management regime in the long-term will mitigate for losses of suitable habitat to built form and ensure that suitable reptile habitat is retained within the site in the long-term. This contrasts with a no development situation within which unchecked scrub succession would continue to reduce the extent of reptile habitat within the wider site, not least within the quarry area and along the southern edge of the airfield.
120. As for GCN above, construction works in some areas may necessitate the completion of a translocation exercise, with reptiles relocated to temporary holding area(s) for the duration of the construction phase. It is noted that in many instances it is likely to be more appropriate for reptiles to be displaced by way of a sensitive habitat manipulation exercise rather than a translocation exercise, given that proposed built form will be located adjacent to extensive areas of retained grassland areas.
121. In summary, it is considered that the implementation of a suitable reptile avoidance strategy during the construction phase, alongside the retention and enhancement of vast areas of grassland within the site (not least within the quarry area) will ensure that reptiles are not only safeguarded within the site during construction, but that opportunities for this faunal group may be significantly enhanced in the long-term as part of the emerging masterplan.

#### Breeding Birds

122. **Legislation.** Section 1 of the Wildlife & Countryside Act is concerned with the protection of wild birds. With certain exceptions all wild birds and their eggs are protected from intentional killing, injuring and taking; and their nests, whilst being built or in use, cannot be taken, damaged or destroyed.
123. Schedule 1 of the Wildlife & Countryside Act 1981 is a list of the nationally rarer and uncommon breeding birds for which all offences carry special (i.e. greater) penalties. These species also enjoy additional protection whilst breeding, as it is also an offence to disturb adults or their dependant young when at the nest.
124. **Site Usage.** Breeding bird surveys of the wider site have confirmed the site to be of moderate interest to breeding birds, with this interest largely associated with the scrub habitats within the wider site, as well as open habitats which support a good number of territories for ground nesting species such as Skylark and Meadow Pipit. Of additional note was the presence of a breeding Lapwing pair within the quarry.
125. The majority of interest was found to be associated with the quarry area of the site, with slightly reduced breeding interest associated with the scrub and grassland areas which form part of Bicester Airfield LWS. The large central area of grassland was found to be of very limited interest to breeding birds.
126. Given the sensitivity of Lapwing to even low levels of anthropogenic disturbance, and notwithstanding the retention of suitable habitat within the proposed Nature Park, it is considered likely that this species would be lost as a breeding species within the site. It is important to note that this same outcome would be likely whatever the nature of the restoration works within the quarry (with the scheme being enforced by the County Council seeking delivery of a country park designed to support intensive recreation) and the impact, whilst unfortunate, should be viewed in this context.

127. Notwithstanding some losses to grassland and scrub within the wider site, extensive suitable habitat will be retained for scrub and ground nesting birds and impacts on the breeding assemblage overall are not considered to be significant.
128. **Avoidance, Mitigation and Enhancement Opportunities.** Any vegetation removal (including grassland) required by the emerging masterplan would be undertaken outside of the main nesting season (March to August inclusive) unless prior checks of potential nesting areas are undertaken by an ecologist to ensure no nesting birds are present. Should nests be present, they will be protected until it can be confirmed that fledglings have left the nest.
129. Where losses to existing nesting habitats are envisaged, these will be appropriately mitigated for through the provision of new shrub, scrub and tree planting at the boundaries of the site, with this to comprise native thicket and berry bearing species which provide foraging habitat, as well as high quality nesting opportunities for scrub nesting species such as Whitethroat, Linnet and Dunnock. It should be noted that extensive areas of scrub and grassland mosaic will also be retained within the proposed Nature Park on Site, albeit with the extent of scrub to be reduced and kept in check through appropriate long-term management. The retention of scattered scrub within the wider site, will further ensure continued opportunities for scrub nesting species. Moreover, the adoption of a sensitive management regime for grassland within the Site will ensure a net gain in suitable habitat for ground nesting birds.
130. To realise an enhancement for a range of species, the emerging proposals will include for the provision of a range of nesting features within the site, with this to include integrated features within buildings, as well as the provision of boxes upon retained trees. The design of bird boxes will be tailored to those species recorded within the site (targeting species such as Tawny Owl, House Sparrow and Swift), as well as species likely to be present in the local area.
131. In summary, the establishment of an extensive mosaic of habitats, all of which will be subject to ecologically sensitive management in the long-term, as well as the provision of new nesting features, will realise significant enhancements for nesting birds over the existing situation, ensuring that the qualitative value of foraging and nesting habitat is retained and enhanced going forward.

#### Wintering Birds

132. **Site usage.** The wintering bird surveys undertaken in 2019 found the site to support a modest assemblage of wintering birds, reaffirming the limited opportunities the site provides for this faunal group. Whilst notable farmland bird species (Skylark and Grey Partridge), were recorded in grassland areas of the airfield, these were only in tiny numbers, with the quarry area being of relatively greater interest.
133. **Avoidance, Mitigation and Enhancement Opportunities.** Given the limited interest of the site, it is not considered that any specific mitigation would be required as part of the emerging proposals.
134. Notwithstanding this position, it is noted that the emerging proposals will retain extensive areas of green space within the scheme, including the varied habitat mosaic within the quarry site and extensive areas of grassland and scrub within the wider airfield.
135. Through retaining these habitats, it is considered that existing opportunities for wintering birds can be maintained as part of the emerging proposals. In particular, it is noted that the three large waterbodies are to be retained as part of the proposals, with the northern

feature to be managed specifically for the benefit of waterfowl (with no built form proposed within a close proximity).

### Invertebrates

136. **Site Usage:** The wider site supports a notable population of invertebrates, with a total of 556 species recorded. No species afforded direct legal protection under any UK or European legislation were recorded during the surveys.
137. The majority of the recorded assemblage was associated with the more species-rich grasslands, marshland and short sward / bare ground habitats within the site, with the wetland habitats within the quarry supporting the highest proportion of species of conservation interest.
138. The surveys undertaken to date indicate that the wider site is of at least local interest to invertebrates, with this interest largely supported within the quarry site, as well as the grassland and scrub mosaic present towards the margins of the airfield (beyond the perimeter track).
139. Whilst emerging masterplan proposals would result in the loss of some areas of OMH, extensive areas of OMH would be retained and enhanced as part of the emerging proposals.
140. It is however noted that the timings of surveys in 2018, combined with the 'advanced spring' may have prevented some early spring species from being recorded. With this in mind, and to further ascertain the value of the site to invertebrates, further surveys are underway in Spring 2019. Whilst the completion of additional spring surveys would further inform appropriate mitigation and enhancement measures as part of the emerging masterplan proposals (and indeed the restoration scheme coming forward separately), it is considered that the baseline information collected to date provides an appropriate evidence base upon which the relative value of habitats within the site can be assessed, likely impacts identified and initial mitigation principles proposed.
141. **Avoidance, Mitigation and Enhancement Opportunities.** The retention of a diverse area of OMH within a Nature Park setting (quarry), alongside the retention of extensive areas of OMH and grassland within the airfield area, and the potential to for development to facilitate a sensitive management regime for these habitats in the long-term, offers significant opportunities for the invertebrate interest of the site to be retained and enhanced post-development.
142. Indeed, the presence of a notable invertebrate assemblage is one of the key considerations guiding both the emerging masterplan proposals and indeed a revised restoration scheme (the latter envisaged to come forward separately).
143. The emerging masterplan has adopted the following core principles and measures which seek to safeguard the sites invertebrate interest:
  - To retain extensive areas of OMH, in particular within the quarry area but also within the airfield area of the wider site.
  - To ensure that emerging proposals are complementary to restoration of the quarry and facilitate an appropriate long-term management regime (for both the quarry and the wider site) which may retain and enhance the OMH in the long-term;

- Retention of a diverse topography, particularly within the quarry where spoil mounds and wet depressions offer a range of micro-habitats for invertebrate assemblages;
- Retained areas of scrub to include a high proportion of early flowering species such as Blackthorn and Goat Willow which provide a valuable early foraging resource for nectar feeding insects;
- Areas of built form to be sensitive to invertebrates, minimise ground impacts and to incorporate features of value to invertebrates including:
  - Development in the quarry to be largely restricted to low impact buildings and structures with small development footprints, integrated nesting walls and living roofs. Raised (stilted development) will further minimise losses to OMH.
  - Areas to be utilised for car-parking and/or vehicle movement to be constructed from appropriate materials upon which early successional habitat and ephemeral vegetation can establish. Surfaces in this regard to be unmetalled, with materials such as compacted soils, gravels and reinforced grass (comprising bespoke seed mixes) to be considered as appropriate.
  - Bomb stores and Motor Vaults to be encapsulated by earth banks. These banks to be designed as 'bee banks' with species rich grassland and OMH.
    - Bunding and banks elsewhere within the wider site, such as acoustic bunding (if required) around the track to further be designed so as to provide optimal nesting opportunities.
    - Bomb stores and Motor Vaults to further seek opportunities for living roof provision.
  - Educational facility to inform potential users of the value of the site to invertebrates, identifying the importance of these often cryptic or hidden assemblages.

**144.** It is considered that the adoption of the above measures, to be fine-tuned as necessary following completion of further invertebrate survey work, would allow for the invertebrate interest of the Site to be safeguarded and indeed enhanced post-development.

## **APPENDIX 7**

### **Aerial Photos Shoeing Scrub Enhancement**



# Bicester Airfield

2004 Aerial



Beverley Gardens

Sunbeck Road

Fulmar

A4421



300 m

Google Earth

© 2019 Infoterra Ltd & Bluesky



# Bicester Airfield

2018 Aerial



Beverley Gardens

Sunderland Dr

A4421

Google Earth

Boston, Pa

Fulzar

300 m





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7884M: INNOVATION QUARTER, BICESTER MOTION,  
BICESTER, OXFORDSHIRE

## **ECOLOGY BRIEFING NOTE: CONSIDERATION OF PROPOSED S73 SCHEME AMENDMENTS**

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### Introduction

1. Ecology Solutions (Manchester) Limited have been asked to consider a revised scheme layout for the consented Innovation Quarter (IQ) Site Proposals (19/02708/OUT).
2. The IQ Site has been subject to extensive ecological assessment work by Ecology Solutions over multiple years, with a comprehensive ecological avoidance, mitigation, and enhancement strategy included within the approved Ecological Assessment (2019).
3. This Ecology Briefing Note serves to consider the revised scheme and summarise and assess the pertinent alterations (insofar as these relate to biodiversity matters).
4. In summary, relative to the consented scheme, the revised Proposals offer opportunities for a marginally increased extent of semi-natural habitat and marginal reductions in built form and hardstanding, whilst remaining compliant with the ecological principles identified within the submitted Ecological Assessment (2019). As such, the S73 Proposals would secure identical (if not marginally improved) biodiversity opportunities post-development. They are therefore deemed to remain appropriate in nature, and compliant with planning policy and legislation of relevance to nature conservation.

### Planning Context and Comparative Assessment of S73 Proposals

5. As detailed in the Introduction above, the Application Site is in receipt of Outline Planning Permission (planning ref: 19/02708/OUT) to deliver mixed employment use development.
6. The S73 Proposals seek to retain the proposed use types and broad scale of development, with changes limited to the precise footprint of built form. For clarity, the revised extent of built form (inclusive of hardstanding), allows for a consolidated and focused scheme layout. It retains the full quantum of open space

identified as part of the previously submitted Ecological Assessment (November 2019) and indeed permits minor betterment (+0.01ha) in this regard.

7. Importantly, the S73 Proposals seek to adhere to the ecological principles secured within the Ecological Assessment (inclusive of the *Ecological Mitigation & Enhancement Plan* submitted as part of the ecological information). Crucially, this includes the continued retention of a 2.85ha dedicated ecology area, amongst other semi-natural habitat provision, and a commitment for long-term, biodiversity led management.
8. In order to allow for a clear, quantifiable comparison between the extant consent and the S73 Proposals, a post-development comparison table is provided below.

| Habitat Type/Grouping                              | Extent Proposed as part of the Consented Scheme (19/02708/OUT) | Extent Proposed as part of S73 Proposals | Notes  |
|--|--|--|--|
| Combined built form and hardstanding               | 3.01ha   | 2.66ha                                   | A reduction in built form reflects a reduction in hardstanding, and an increase in unmetalled surfacing (e.g. ecology car parks).          |
| Semi-natural habitats (Grassland, Scrub, Woodland) | 6.18ha   | 6.19ha                                   | The net quantum of semi-natural habitat provision is to remain effectively unchanged (minor increase in S73 Proposals), inclusive of SuDS. |
| Ephemeral/perennial                                | 0.82ha   | 1.16ha                                   | Increase in the S73 application reflects an increased extent of unmetalled surfacing (e.g. ecology car parks) relative to hardstanding.    |
| <b>Total Site Area</b>                             | <b>10.01ha</b>   | <b>10.01ha</b>                           |  |

**Table 1.** Quantitative comparison in post-development habitat provision between consented (19/02708/OUT) scheme and S73 Proposals.

9. Complementary to Table 1, an updated *Ecological Mitigation & Enhancement Plan* (Plan ECO3a) is included at Appendix 1. This revised plan retains the full suite of mitigation and enhancement identified previously, and simply serves to identify the revised scheme layout.
10. On the basis the Proposals retain a comparable quantum of post-development habitats, whilst adhering to the ecological principles previously approved for the Application Site (19/02708/OUT), the revised scheme layout proposed through the S73 submission are not assessed to give rise to any additional ecological impacts, nor require additional assessment in this regard.
11. Indeed, the Proposals are assessed to permit a marginally improved biodiversity outcome, with reductions in built form and minor increases in semi-natural habitat provision. Given the minor scale of changes, these positive impacts are considered non-significant.

12. Given the above, the ecological implications of the S73 Proposals are assessed as non-significant. The ecological safeguards identified within the previously submitted Ecological Assessment (November 2019), in addition to the ecological conditions attached to the planning permission (see Conditions 22 to 25) remain appropriate and sufficient to safeguard and enhance the ecological interest of the Site.

#### Summary and Conclusion

13. In summary, the S73 Proposals seek to secure a comparable scale of development, albeit with a minor reduction in built form (inclusive of hardstanding) relative to semi-natural habitat provision.
14. The ecological implications of the S73 Proposals are assessed as positive but non-significant, noting the minor increases in habitat provision.
15. On the basis of the ecological safeguards previously secured through the Ecological Assessment (November 2019) and ecological planning conditions associated with the consented scheme (all of which remain relevant and should remain), it is considered the S73 Proposals remain equally appropriate in ecology terms. The S73 Proposals can therefore be safely granted, in accordance with relevant planning policy and legislation.

## **APPENDIX 1**

Plan Eco3a: Ecological Mitigation & Management  
Plan (S73)



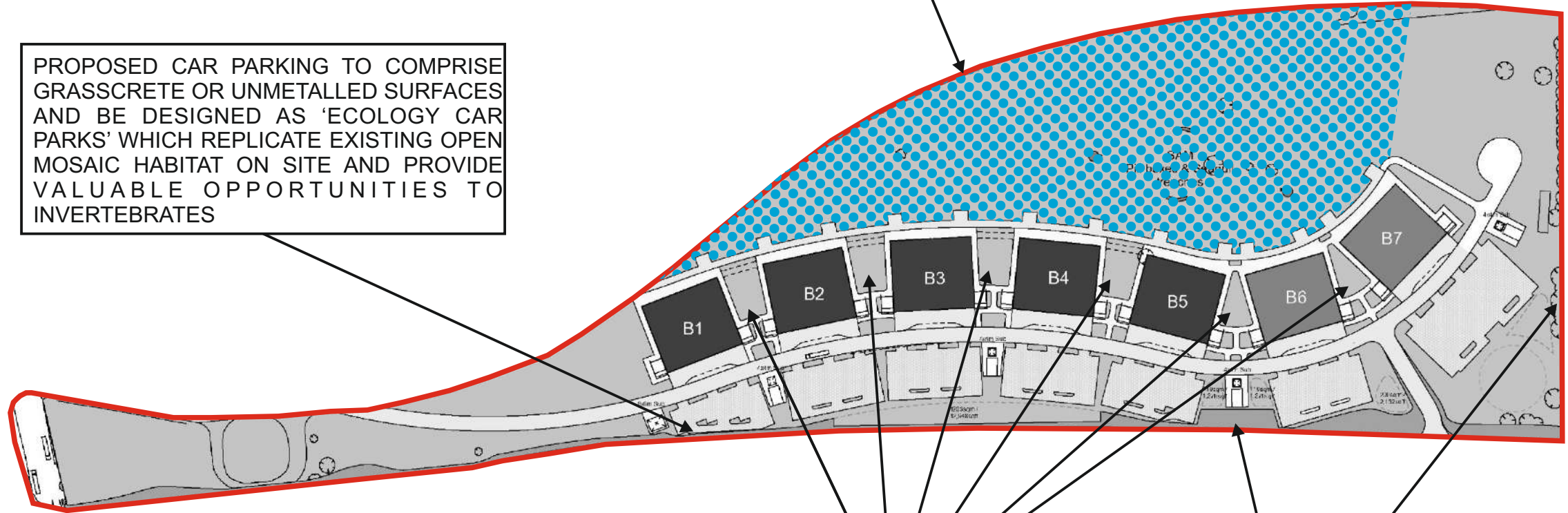
Based upon the Ordnance Survey map with permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright. Ecology Solutions Ltd, Farncombe House, Farncombe Estate, Broadway, Worcestershire, WR12 7LJ. CEM20130000228

PROPOSALS TO SEEK A NET GAIN IN THE EXTENT OF EARLY SUCCESSIONAL HABITATS INCLUDING GRASSLAND AND OPEN HABITAT MOSAIC. THESE HABITATS ARE THE PRIMARY INTEREST FEATURE FOR WHICH BICESTER AIRFIELD LWS IS DESIGNATED.

30 BAT ROOSTING FEATURES AND 30 BIRD NESTING FEATURES TO BE PROVIDED UPON NEW BUILDINGS OR RETAINED TREES WITHIN THE FAST SITE

A 2.85HA AREA OF LAND TO BE RESTORED AS OPEN GRASSLAND AND OPEN MOSAIC HABITAT AND BOUGHT UNDER APPROPRIATE MANAGEMENT AS PART OF THE PROPOSALS. TREE AND SCRUB HABITAT WILL BE RETAINED AS A MINORITY COMPONENT.

PROPOSED CAR PARKING TO COMPRISE GRASSCRETE OR UNMETALLED SURFACES AND BE DESIGNED AS 'ECOLOGY CAR PARKS' WHICH REPLICATE EXISTING OPEN MOSAIC HABITAT ON SITE AND PROVIDE VALUABLE OPPORTUNITIES TO INVERTEBRATES



OPPORTUNITIES FOR 'LIVING ROOF' HABITAT TO BE SOUGHT ON FLAT ROOFED STRUCTURES WITHIN FAST



LANDSCAPING BLOCKS WITHIN MAIN DEVELOPMENT FOOTPRINT TO BE DESIGNED TO ENSURE A RANGE OF OPEN AND EARLY SUCCESSIONAL HABITATS, CONTRIBUTING TO THE SITE WIDE OPEN HABITAT MOSAIC. THESE AREAS TO COMPRISE A MIXTURE OF SPECIES RICH CALCAREOUS GRASSLAND, BARE GROUND AND EARLY EPHEMERAL HABITAT AND BOTANICALLY DIVERSE SUDS

BOUNDARY VEGETATION TO BE STRENGTHENED AND WITH NEW NATIVE PLUG PLANTING TO PROVIDE ENHANCED FORAGING, COMMUTING AND NESTING HABITAT FOR FAUNAL SPECIES

ALL RETAINED AND NEWLY CREATED HABITATS TO BE BOUGHT UNDER ECOLOGICALLY SENSITIVE MANAGEMENT POST-DEVELOPMENT TO ENSURE LONG TERM ECOLOGICAL ENHANCEMENTS.

A SENSITIVE LIGHTING STRATEGY TO BE SECURED FOR THE FAST PROPOSALS, UTILISING WARM WHITE LED LIGHTING WITH NO UV CONTENT. LIGHTING DESIGN WILL AVOID LIGHT SPILL ONTO LINEAR HABITATS

**KEY:**

-  FAST SITE BOUNDARY
-  ECOLOGY ENHANCEMENT AREA BOUNDARY (IQ)



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PLAN ECO3a: ECOLOGICAL  
MITIGATION & ENHANCEMENT  
PLAN (S73) Rev: A  
June 2023

## **Appendix G: Arboricultural Report**

**Arboricultural Consultant:** Brian Higginson Tree Consultancy:

Refer to the following documents:

Arboricultural Implications Assessment April 2019

Tree protection Plan April 2019

Pre development Tree Survey April 2019



ON CENTRE  
**SURVEYS**

## **PROJECT RADIAL**

### **FAST 2A**

# **Arboricultural Implications Assessment**

**Prepared on instruction by**

**Brian Higginson**

**April 2019**

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## **Drawings**

Tree Constraints & Protection Plan

## **Appendices**

A Pre-Development Tree Survey

## 1.0 Introduction

- 1.1 This Arboricultural Implications Assessment and Arboricultural Method Statement is aimed at identifying and addressing those matters concerning the successful retention of suitable trees within and adjacent to the proposed Project Radial – FAST 2A development at Bicester Heritage Centre.
- 1.2 The trees were re-inspected during January 2019 by Brian Higginson who holds the RFS Professional Diploma in Arboriculture and is a professional member of the Arboricultural Association. The report follows the guidelines given in BS5837 : 2012.
- 1.3 All trees have been inspected from ground level only. Should further more detailed inspection be deemed appropriate, this will be covered under 'Recommendations'. Trees are dynamic living organisms, whose health and condition can be subject to rapid change, depending on a number of external and internal factors. The conclusions and recommendations contained in this report relate to the trees at the time of inspection.

## 2.0 Impact of Proposed Development

- 2.1 The proposed development has been carefully designed to ensure a successful juxtaposition between the existing trees and the proposed development.
- 2.2 The construction of the proposed development will involve the removal of the following trees.

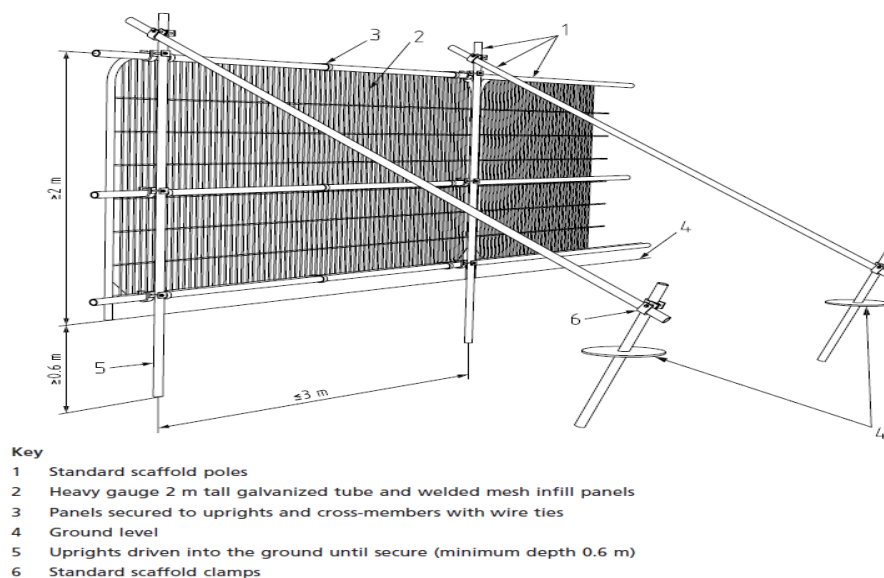
| BS 5837 Cat         | A   | B   | C   | U   |
|---------------------|-----|-----|---|-----|
| Trees to be removed | N/A | N/A | G245(part of)<br>G246(part of)<br>G247(part of)<br>G248(part of)<br>G286(part of)<br>G287(part of)<br>T261, T262,<br>T263, T282,<br>T283, T285, | N/A |

The vegetation to be removed is predominantly invasive scrub, of mixed broadleaved species. This scrub is generally low quality. Where possible, boundary vegetation has been retained to retain an effective screen that can be improved with careful soft landscaping.

- 2.3 The proposed development will **NOT** fall within the root protection area of any retained tree.
- 2.4 The proposed development will **NOT** require any facilitation pruning to any retained trees.
- 2.5 Tree shading is **NOT** considered an issue, taking into account the orientation and location of the proposed building.

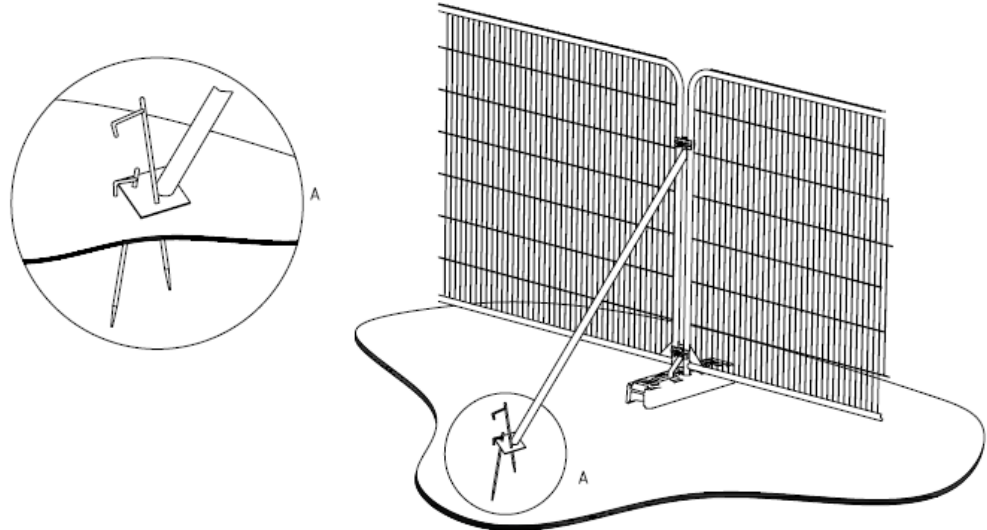
### 3.0 Tree Protection

- 3.1 All trees that are to be retained on or in close proximity to the site will be protected by the use of stout fencing erected at specified distances from the base of the trees. This fencing will be constructed with weld mesh on a framework of scaffolding, or similarly sturdy material (Herras type fencing), driven into the ground to a suitable depth to ensure its stability all in line with BS5837:2012 figure 2 (shown below)

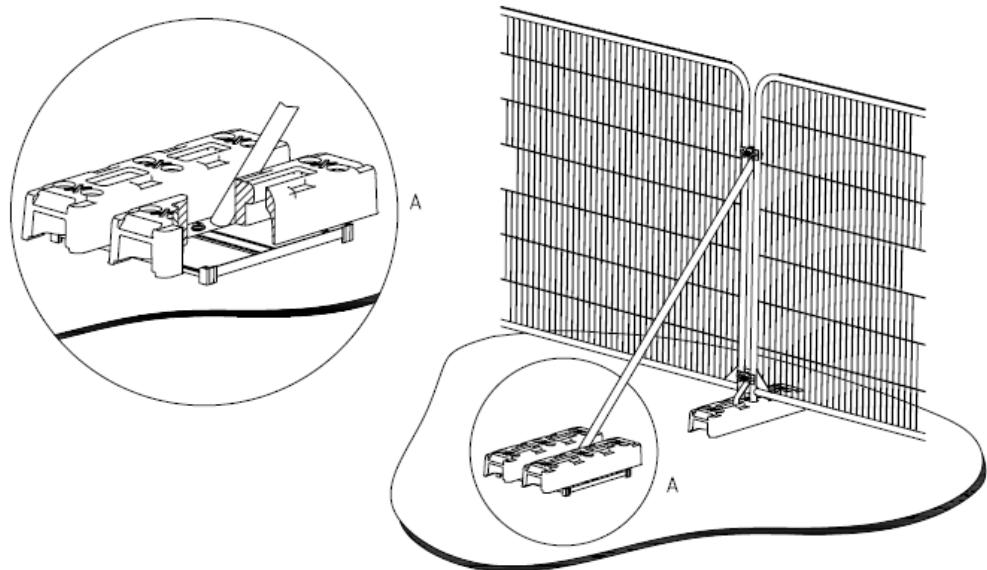




Alternatively, the herras fencing may be supported as shown below, and in line with BS5837 :2012 figure 3



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

3.2 All tree protection fencing will be erected prior to the commencement of the development so that trees are protected from the outset. This fencing will be regarded as inviolate. Once erected the fencing will remain in situ and will not be removed or altered without the prior consent of the Local Planning Authority Arboricultural Officer in consultation with the named arboriculturalist.

- 3.3 The protective fencing will be erected on the line shown on the Tree Protection Plan drawing.

#### **4.0 On Site Storage of Spoil and Building Materials**

- 4.1 Prior to and during construction works on site no spoil or construction materials will be stored within the crown-spread of any tree on, or adjacent to the site, even if the proposed development is to be within the crown-spread. This is to reduce to a minimum the compaction of tree roots. Any encroachment within this protected area will only be with the prior agreement of the Local Planning Authority Arboricultural Officer.

#### **5.0 Location of Site Office**

- 5.1 The location of the site office will not be within the crown spread of the trees on or adjacent to the site. Any re-siting of the office through the various stages of development will be agreed prior to the re-siting with the Local Planning Authority Arboricultural Officer.

#### **6.0 Programme of Works**

- 6.1 All tree surgery works and felling works approved by the Local Planning Authority Arboricultural Officer will be carried out prior to any other site works. Once completed, the proposed protective fencing will be erected along the lines indicated above.
- 6.2 This work will be carried out prior to commencement of any construction or demolition works on the site.
- 6.3 During the construction works on site the protective fencing will be maintained and every effort will be made to prevent unnecessary damage to the trees. The Arboricultural Officer will be notified immediately of any unforeseen damage. The necessary remedial tree surgery will be carried out at the earliest opportunity to the approval of the Arboricultural Officer. The site

should be inspected on a regular basis by a competent and qualified arboriculturalist.

- 6.4 On completion of the development works on site it would be advisable to carry out a further tree survey to identify any remedial tree surgery necessary as a result of the development works, and suggest details for future management of trees,

## **7.0 Remedial Tree Surgery**

- 7.1 Any proposed tree surgery works identified and agreed with the Local Planning Authority will be carried out in accordance with BS3998:2010 (Tree Work - Recommendations). A competent arboricultural contractor will carry out the work. Any alterations to the proposed schedule of works will be agreed with the Arboricultural Officer prior to the commencement of the works.

- 7.2 Accidental damage to trees during the construction phase of the development will be noted and reported as per paragraph 11.2 of this document.

## **8.0 Levels**

- 8.1 No changes or alterations to levels have been identified on this site. It is recommended that existing site levels are retained in order to minimise the potential for adverse impact on the frontage trees.

- 8.2 Should levels need to be changed in areas adjacent to the trees or within the minimum distance recommended, then appropriate measures will be taken to minimise the detrimental effects to the tree(s) in question, subject to prior approval.

- 8.3 If excavations have to be so close to the tree(s) that roots greater than 25mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacement of any soil or other material in the vicinity.

## **9.0 Services**

- 9.1 It is proposed that all service runs will be placed outside the crown spread of the trees on or adjacent to the site. Where it is not possible to achieve this, the section of service run, which passes within the tree protection area around a retained tree, will be hand dug in accordance with 'broken trenches' (NJUG 4). This will ensure that tree roots are not damaged during the installation of the service. All root pruning will be agreed before hand with the named arboriculturalist in consultation with the Local Planning Authority Arboricultural Officer. All root pruning will be in accordance with BS3998:2010. All routes for overhead services will aim to avoid the trees. Where this is unavoidable any tree work will be agreed prior to commencement with the Arboricultural Officer.
- 9.2 All service runs to be agreed with the Local Planning Authority prior to the commencement of works.

## **10.0 Construction Within The Tree Protection Area**

- 10.1 The proposed buildings have been carefully sited to fall outside the RPA of any retained tree, with only poorer quality specimens being removed to facilitate this.
- 10.2 No specific mitigation measures are required, apart from the regular monitoring of the tree protection fence during the development process..

## **11.0 Reporting Procedure**

- 11.1 For the period of the development a qualified arboriculturalist should be named as the contact so that arboricultural issues that arise during the period of the development can be dealt with effectively.

- 11.2 When an inspection occurs, planned or otherwise, a report will be written and provided to the client. If appropriate the report will be copied to the Local authority Arboricultural Officer.
- 11.3 The site and associated development will be monitored/inspected regularly by the named arboriculturalist to ensure that the arboricultural aspects of the planning permission are enforced and to deal with and advise upon any problems that may arise during the development process. Should any problems arise during the development the site manager will contact the named arboriculturalist. The Local Planning Authority will be notified of any arboricultural issues that arise and appropriate action taken with the prior permission of the client.

## **12.0 Tree Protection Plan**

- 12.1 The Tree Protection Plan drawing indicates the trees marked for retention and identified with a continuous canopy outline.
- 12.2 The drawing also indicates the location for the erection of the tree protection barriers, based upon the calculations of Root Protection Areas (RPA) as part of the Tree Constraints Plan. This drawing shows the actual position of the tree protection barriers.

## **Drawings**

Tree Constraints & Protection Plan



**Legend:**

- Tree Number
- Root Protection Area
- Crown Spread

**Category Legend:**

- Category III (Green circle)
- Category II (Blue circle)
- Category I (Grey circle)
- Category IV (Red circle)

**Scale:** 0 to 50m

**PROJECT RADIAL  
FAST - 2A**

**TREE CONSTRAINTS PLAN**

|   |                      |  |
|---|----------------------|--|
| SCALE :<br>1 : 500 @ A1                                       | DATE :<br>12/02/2019 |  |
| MAP FILENAME :<br>FAST 2A Tree Constraints Plan               |                      |  |
| Higginson Associates<br>Arboricultural & Woodland Consultants |                      |  |