# FPCR Environment and Design Ltd

# Land north of Wilderness Lane, Great Barr, Birmingham

- 1.0 TECHNICAL NOTE BIODIVERSITY NET GAIN METRIC 4.0 CALCULATIONS
- 1.1 FPCR Environment and Design Ltd. (FPCR) were commissioned by Wain Estates to complete an update biodiversity offsetting assessment of the Development Framework Plan (FPCR drawing ref: 09364-FPCR-XX-ZZ-DR-L-0010 P11) and Illustrative Masterplan (FPCR drawing ref: 09364-FPCR-XX-ZZ-DR-L-0012 P07) and for the proposed development on land located north of Wilderness Lane, Great Barr, Birmingham.
- 1.2 This Technical Note summarises the calculations and provides details regarding any assumptions made to inform this assessment.

Background

- 1.3 The site is approximately 27ha in size, located on the north-west edge of the town of Great Barr, Birmingham. Proposals are for an Outline planning application for up to 170 dwellings with associated access, surface water mitigation and green infrastructure including more formal landscaping and habitats designed to maximise their biodiversity value. Structural planting, including avenues of trees and grass verges will be included, in addition to the long-term retention and enhancement of the hedgerow network and extensive restoration of meadows within the west and south of the site.
- 1.4 The site was originally designated as a Site of Local Importance for Nature Conservation (SLINC) and following further survey work undertaken by the Wildlife Trust for Birmingham in the Black Country in 2018 was updated to SINC in August 2019.
- 1.5 It is possible to satisfy the requirements of the allocation avoidance as defined at Paragraph 180(a) of the NPPF (July 2021). The scheme design has sought to reduce unnecessary vegetation removal and provide appropriate mitigation within the site.

Methodology

- 1.1 Natural England's published biodiversity net gain metric is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the flat "habitats" and linear features "hedgerows" separately, and is based on pre-determined values, along with published written guidance, set by a Natural England-led team of experts. The BNG assessment was undertaken in accordance with the Defra Biodiversity Metric 4.0. This was the current metric at the time of survey, with Natural England (NE) guidance¹ stating 'You should use the most current published version of the Biodiversity Metric, unless specified otherwise by the consenting body'.
- 1.2 The site boundary, results of the habitat survey undertaken in June and July 2023, Development Framework Plan (FPCR drawing ref: 09364-FPCR-XX-ZZ-DR-L-0010 P11) and Illustrative Masterplan (FPCR drawing ref: 09364-FPCR-XX-ZZ-DR-L-0012 P07) were used to inform this assessment.

<sup>1</sup> Nash, M., Irvine R., and Panks S., (April 2022) Biodiversity Metric 3.1 Frequently Asked Question. Natural England [online] Available from: http://publications.naturalengland.org.uk/publication/6049804846366720 [Accessed 30/08/2023].

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- 1.3 The development site was mapped and divided into existing habitat criteria. Habitats were defined using the UK Habitat Classification, with further information providing habitat area, distinctiveness and condition, which are used to calculate the value of each habitat.
- 1.4 The condition assessments were undertaken using the relevant Condition Assessment Criteria within the DEFRA Biodiversity Metric 4.0 Technical Annex 1 Condition Assessment Sheets<sup>2</sup>.
- 1.5 Full details of the calculation methodology are provided in Biodiversity Metric 4.0 User Guide<sup>3</sup>.
- 1.6 The Natural England MAGIC database was consulted to identify any areas with statutory designations, and the eCountability (Birmingham data search) was consulted for locally designated sites.

#### 2.0 BASELINE CONDITIONS

**Baseline Habitats** 

- 2.1 As identified within the Ecological Impact Assessment, the site comprised 14 field compartments which predominantly comprised other neutral grassland, bound by native mature hedgerows and treelines. Smaller areas of dense bramble scrub and tall forbs were present in the north-eastern field compartments areas of mature mixed scrub around the two ponds.
- 2.2 Baseline habitats are provided within Table 1 below and are depicted on Figure 1: Biodiversity Net Gain Baseline Habitats. The full survey results and condition scores are detailed in the separate Designated Site and Habitat Survey Report. The metric valued the baseline habitats at 202.88 biodiversity units (BU) and hedgerow units (HU) at 46.89 HU. The metric summary is provided at Appendix A and the full metric is provided separately.

Desk Study and Ecological Strategic Significance

2.3 The whole of the site falls within the Peakhouse Farm SINC designation. The designation was updated from a partial SLINC based upon the extensive network of native hedgerows, moderate levels of structural and botanical diversity of the grassland and local faunal populations it supports, including breeding birds and bats. The site also lies within a core ecological area as identified by the Brimingham and Black Country Nature Improvement Area ecological network mapping. Therefore, all grassland, hedgerow and ponds habitats have been assigned a high strategic significance. The areas of scrub provided connectivity to habitats within the site that are covered by the designation and have been assigned a medium strategic significance. The remaining tall forbs and buildings have been assigned a low strategic significance multiplier.

<sup>&</sup>lt;sup>3</sup> Natural England (2023) The Biodiversity Metric 4.0 User Guide[Online] Available at: https://publications.naturalengland.org.uk/publication/6049804846366720 [Accessed 29/08/2023]

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Natural England (2023) The Biodiversity Metric 4.0 -Technical Annex 1 – Condition Assessment Sheets and Methodology [Online] Available at: https://publications.naturalengland.org.uk/publication/6049804846366720 [Accessed 29/08/2023]

**Table 1: Summary of Existing Baseline Habitat Value** 

| Habitat type                          | Area (ha) | Distinctiveness | Condition                   | Biodiversity units |  |
|---------------------------------------|-----------|-----------------|-----------------------------|--------------------|--|
| Grassland: Other neutral grassland    | 0.9273    | Medium          | Good                        | 12.80              |  |
| Grassland: Other neutral grassland    | 13.8686   | Medium          | Moderate                    | 127.59             |  |
| Grassland: Other neutral grassland    | 2.5372    | Medium          | Fairly Poor                 | 17.51              |  |
| Grassland: Other neutral grassland    | 8.6239    | Medium          | Poor                        | 39.67              |  |
| Grassland: Bracken                    | 0.0437    | Medium          | Condition<br>Assessment N/A | 0.10               |  |
| Lakes: Ponds (non-priority habitat)   | 0.079     | Medium          | Moderate                    | 0.64               |  |
| Heathland and shrub: Mixed scrub      | 0.1399    | Medium          | Moderate                    | 0.62               |  |
| Heathland and shrub: Mixed scrub      | 0.1482    | Medium          | Poor                        | 1.30               |  |
| Heathland and shrub: Bramble          | 0.3557    | Medium          | Condition<br>Assessment N/A | 1.42               |  |
| Sparsely vegetated land: Tall forbs   | 0.2758    | Medium          | Poor                        | 0.55               |  |
| Urban: Developed land; sealed surface | 0.0081    | Medium          | Moderate                    | 0.00               |  |
| Individual trees: Rural tree          | 0.0733    | Medium          | Moderate                    | 0.67               |  |
| Total                                 | 27.01     |                 |                             | 202.88             |  |

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator. The total provided also excludes individual trees.

#### Hedgerows

- 1.7 A network of 33 hedgerows and five tree lines border the field compartments. These were largely unmanaged at the time of the survey, comprising tall outgrown hedgerows of varying species composition. All hedgerows were considered to be habitats of principle importance (HPIs) (Natural Environment and Rural Communities Act (2006) Section 41) on account of them supporting >80% native species and were considered to be mostly of moderate to high nature conservation value. Typical of most Midlands hedges, hawthorn *Crataegus monogyna* represented the main shrub with blackthorn, hazel *Corylus avellana*, ash *Fraxinus excelsior*, field maple *Acer campestre* and elder *Sambucus nigra* also well represented.
- 1.8 The vast majority of the network is to be retained, except for minor losses of H22, H29, H30, H31, TL1 and TL4 to facilitate the access. The hedgerow type and associated details plus the biodiversity units for each hedgerow on site have been calculated and are presented in Table 2 below. Hedgerow references are indicated on Figure 1.

Table 2: Existing On-Site Hedgerows Biodiversity Units

| Habitat  | Length (km) | Condition | Biodiversity<br>Units |
|--|-------------|-----------|-----------------------|
| H1 Native hedgerow   | 0.184       | Good      | 1.27                  |
| H2 Native hedgerow   | 0.12        | Good      | 0.83                  |
| H3 Native hedgerow - associated with bank or ditch                         | 0.096       | Moderate  | 0.88                  |
| H4 Native hedgerow with trees  | 0.062       | Good      | 0.86                  |
| H5 Native hedgerow - associated with bank or ditch                         | 0.12        | Good      | 1.66                  |
| H6 Native hedgerow   | 0.123       | Good      | 0.85                  |
| H7 Species-rich native hedgerow with trees - associated with bank or ditch | 0.129       | Good      | 3.56                  |
| H8 Native hedgerow   | 0.051       | Good      | 0.35                  |
| H9 Native hedgerow - associated with bank or ditch                         | 0.056       | Good      | 0.77                  |

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| H10 Native hedgerow with trees - associated with bank or ditch              | 0.165 | Good     | 3.42  |
|---|-------|----------|-------|
| H11 Native hedgerow with trees - associated with bank or ditch              | 0.119 | Good     | 2.46  |
| H12 Species-rich native hedgerow with trees - associated with bank or ditch | 0.147 | Moderate | 2.70  |
| H13 Native hedgerow with trees - associated with bank or ditch              | 0.149 | Good     | 3.08  |
| H14 Native hedgerow   | 0.081 | Good     | 0.56  |
| H15 Native hedgerow with trees  | 0.178 | Moderate | 1.64  |
| H16 Native hedgerow with trees - associated with bank or ditch              | 0.214 | Good     | 4.43  |
| H17 Native hedgerow   | 0.165 | Good     | 1.14  |
| H18 Species-rich native hedgerow  | 0.052 | Good     | 0.72  |
| H19 Native hedgerow   | 0.043 | Good     | 0.30  |
| H20 Native hedgerow   | 0.06  | Moderate | 0.28  |
| H21 Native hedgerow   | 0.138 | Good     | 0.95  |
| H22 Native hedgerow   | 0.069 | Good     | 0.48  |
| H23 Native hedgerow with trees  | 0.087 | Moderate | 0.80  |
| H24 Native hedgerow with trees  | 0.053 | Good     | 0.73  |
| H25 Native hedgerow with trees  | 0.071 | Good     | 0.98  |
| H26 Native hedgerow   | 0.122 | Good     | 0.84  |
| H27 Native hedgerow with trees  | 0.097 | Good     | 1.34  |
| H28 Native hedgerow   | 0.025 | Moderate | 0.12  |
| H29 Native hedgerow   | 0.099 | Good     | 0.68  |
| H30 Native hedgerow   | 0.036 | Good     | 0.25  |
| H31 Native hedgerow with trees  | 0.083 | Good     | 1.15  |
| H32 Native hedgerow   | 0.196 | Good     | 1.35  |
| H33 Non-native and ornamental hedgerow                                      | 0.046 | Poor     | 0.05  |
| TL1 Line of trees - associated with bank or ditch                           | 0.42  | Moderate | 1.93  |
| TL2 Line of trees   | 0.074 | Moderate | 0.34  |
| TL3 Line of trees   | 0.16  | Poor     | 0.37  |
| TL4 Line of trees   | 0.097 | Moderate | 0.45  |
| TL5 Line of trees   | 0.339 | Good     | 2.34  |
| Totals  | 4.53  |          | 46.89 |

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

#### 3.0 PROPOSED DESIGN

Habitats

#### **Retention and Enhanced**

3.1 Habitat retention and enhancement is illustrated in Figure 3. The proposed development has been carefully designed with a sensitive landscape design to retain the habitats of highest distinctiveness and condition where possible, including the fields with the highest botanical interest in the south of the site. The development parcels have been located within the fields which comprised grassland of poor quality, particularly within the north-eastern field compartments (F6 & F11) where swards have

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become rank and are being encroached by bramble scrub and tall forbs. Smaller losses of moderate condition grassland within field F5 will result from the creation of the LEAP and attenuation basins, however the surrounding grassland is to be restored. To provide compensation for these losses the field compartments within the south and west of the site which were also considered to be in decline will be brought under appropriate management and restored. These include field compartments F1-F4, F9 and F12. Areas adjacent to the informal footpaths around the perimeter of the site are to be retained.

#### **Habitat Creation**

- 3.2 Habitat creation is shown in Figure 4. Due to the high-level, conceptual nature of the design layout at this stage, in order to carry out a Biodiversity Impact Assessment, the following assumptions/recommendations have been made:
  - Assumed a 70:30 split for the residential areas (hardstanding/buildings:garden/planting);
  - Retained corridors around the residential areas to comprise modified grassland that could achieve 'moderate' condition;
  - LEAP assumed to be hardstanding;
  - SuDS basins assumed to be dry with small areas of permanent water and wetland vegetation
    near to the basin outfall to potential to achieve 'moderate' condition, surrounded by speciesrich grassland such as EM8 that could also achieve 'moderate' condition;
  - That the majority of the enhanced grassland can achieve 'good' condition;
  - New areas of mixed scrub could achieve 'moderate' condition;
  - That all retained hedgerows in 'moderate' condition could be enhanced to 'good' condition;
     and
  - Urban trees planted within the residential areas will comprise a native, small sized standards that could achieve 'moderate' condition.
- 3.3 The biodiversity units for each habitat on the Site have been calculated and are presented in Table 3, along with a description of the management recommendations which will be employed to achieve the target conditions for each habitat type.

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|                 |                            |



**Table 3: Summary of Proposed Habitat Creation and Enhancement** 

| Habitat<br>(UKHab Type)                  | Targets for Creation/Management   | Area (ha)   | Target<br>Condition | Distinctiveness | Biodiversity Units      |
|--|---|---|---------------------|-----------------|-------------------------|
| Other neutral<br>grassland<br>(Enhanced) | <ul> <li>The areas of retained existing grassland within the south of the eastern compartment will be enhanced through favourable management to target good condition grassland through the adoption of the following management practices: <ul> <li>Overseeding with a Species-rich Meadow Seed Mix as per the Landscape Strategy Plan, to include introduction of yellow rattle to reduce vigour of grasses and allow less competitive species to spread;</li> <li>Creation of colonization gaps through raking or chain harrowing to break up the sward and expose some bare ground without substantial disturbance of soils to allow new seed to germinate;</li> <li>Management will be reduced to create a varied sward height, taking a late hay cut to allow plants to set seed;</li> <li>The seed mix will contain a sufficient number of species to encourage the establishment of grassland with a minimum of 10 species per m²; and</li> <li>Removal of any bracken, bramble, or scrub clumps.</li> </ul> </li></ul> | 11.684<br>(Moderate)<br>0.5639<br>(Fairly Poor)<br>3.5433<br>(Poor) | Good<br>Good        | Medium          | 145.13<br>6.43<br>34.82 |
| Modified<br>grassland                    | The flowering grassland areas will in part be managed as amenity grasslands, but this should include addition management prescriptions to focus on achieving good condition through the following measures:  • Using Naturescape N14 'Flowering Lawn Mixture' or similar containing 12 species to encourage at least 6-8 species per m <sup>2</sup> ;  • Ensuring management encourages a varied sward height, particularly during the spring/summer;  • Regular management to prevent scrub/bracken encroachment;  • Reseeding any areas of failed establishment.  | 1.619   | Moderate            | Low             | 5.70                    |
| Other neutral grassland                  | Areas of other neutral grassland will be restored around the attenuation basins. Management will focus on maximizing their biodiversity to create a diverse sward by employing the following management measures:  Using a native species rich seed mix to achieve a diverse sward;  Management will be reduced to create a varied sward height, following the suppliers' specifications with one cut per year following establishment;   | 0.7011  | Moderate            | Medium          | 5.84                    |

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|                   | The seed mix will contain a sufficient number of species to encourage the establishment     of greenland with a minimum of 0 appeals per m²; |                 |          |        |      |
|-------------------|--|-----------------|----------|--------|------|
|                   | of grassland with a minimum of 9 species per m <sup>2</sup> ;  |                 |          |        |      |
|                   | Reseeding any areas of failed establishment; and   |                 |          |        |      |
|                   | Removal of any bracken, bramble, or scrub clumps.  |                 |          |        |      |
|                   | Areas of native scrub planting will be incorporated around the attenuation basin to contribute to  |                 |          |        |      |
|                   | a mosaic of habitats and promote a diversity of plants and structure within the Site. These will be  |                 |          |        | 2.5  |
|                   | managed to achieve moderate condition through the following measures:  |                 |          |        |      |
|                   | Planting will ensure a diversity of species with within blocks of scrub with no one species  |                 |          |        |      |
| Mixed scrub       | comprising more than 75% cover;  | 0.3391          | Moderate | Medium |      |
|                   | The borders of scrub will be subject to relaxed management extended at least 2m from   |                 |          |        |      |
|                   | the scrub edge to encourage a diverse interface between habitats;  |                 |          |        |      |
|                   | Replacement planting of failed specimens during establishment period; and  |                 |          |        |      |
|                   | Additional planting after 10 years where natural regeneration has not been successful.   |                 |          |        |      |
|                   | The attenuation features will be designed to hold a degree of standing water throughout the  |                 |          |        |      |
|                   | year to create ponds that will be planted with marginal vegetation to create diverse features.   | 0.5169 Moderate |          |        | 4.27 |
|                   | The following management prescriptions will be employed to reach the target condition:   |                 |          |        |      |
|                   | The features will be designed to allow water levels to fluctuate naturally through the year.   |                 |          |        |      |
| Danda (nan        | The ponds will not be stocked with fish and they will be monitored to ensure that fish are not   |                 |          | Medium |      |
| Ponds (non-       | introduced   |                 | Moderate |        |      |
| priority habitat) | Management of nearby habitats will be free from fertilizer input to prevent eutrophication of  |                 |          |        |      |
|                   | the ponds. The ponds will be monitored for the establishment of duckweed and this will be  |                 |          |        |      |
|                   | removed where it becomes prevalent   |                 |          |        |      |
|                   | Marginal vegetation will be introduced and allow to establish such that it covers at least 50% of  |                 |          |        |      |
|                   | the ponds area that is less than 3m deep.  |                 |          |        |      |
| Vegetated         |  |                 |          |        |      |
| garden /          | Private garden areas and classified in poor condition. Estimated at 30% of the development   | 1.3992          | Poor     | Low    | 2.64 |
| planting          | parcels.   |                 |          |        |      |
|                   | A minimum of 70 small standards total are to be planted across the Site within the development   |                 |          |        |      |
|                   | footprint. Each individual tree will be targeted to moderate condition via the management  |                 | Moderate | Medium | 0.87 |
|                   | prescriptions below:   |                 |          |        |      |
| Urban trees       | All trees should be native species or native cultivars;  | 0.285           |          |        |      |
|                   | If planted in groups, the distance between centres should be set such that the expected  |                 |          |        |      |
|                   | canopies should be less than 5m apart;   |                 |          |        |      |
|                   | 1  | l               | l        | l .    |      |

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| • | Relaxed management removing only branches that pose a risk to traffic/pedestrians such that trees retain more than 75% of the expected canopy size for the corresponding age; |  |  |
|---|---|--|--|
|   | and   |  |  |
| • | Planted with verges or green infrastructure such that at least 20% of the ground beneath  |  |  |
|   | each tree is vegetated.   |  |  |

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#### Retained / Enhanced Hedgerows

- 3.4 The vast majority of the hedgerows and treelines are to be retained in their entirety and maintained through a commitment towards their long-term management with the aim of maximising their biodiversity value. The following measures will be employed within the Site Boundary to enhance the existing hedgerows:
  - Hedgerows will be subjected to reduced management to encourage the establishment of tall, bushy hedgerows;
  - Additional planting of a range of native hedgerow species will be carried out within retained hedgerows to close up gaps where they develop and create more continuously dense and bushy features;
  - Fertiliser use will be prohibited within grasslands adjacent to hedgerows to prevent nutrient enrichment as a result of the Site management operations; and
  - A minimum of 1m adjacent the hedgerows will be managed as 'undisturbed' ground where possible within the Site boundary. Management of grasslands within these areas adjacent to hedgerows will be in line with the management of meadow grasslands.

#### **Hedgerow Creation**

- 3.5 The proposals include the creation of three new lengths of native species-rich hedgerows to reinstate historical hedgerow boundaries that have been removed. These will enhance the retained hedgerow network and provide additional connectivity around the site.
- 3.6 Native species-rich hedgerows will be planted to ensure they provide a diverse range of species along their length. In particular, these will target the southern boundary to link the existing retained hedgerows and provide a continuous feature linking the treeline along the western boundary and area of offsite woodland.
- 3.7 Altogether, 0.31km of native hedgerow planting will be carried out which will be managed a target condition of moderate, generating a total of 2.75 hedgerow units. Management will include the following measures:
  - Failed specimens will be replaced during establishment on a like-for-like basis;
  - · Hedgerows will be managed to encourage tall, wide and bushy features with only one side of hedgerows cut each year;
  - Fertiliser use will be prohibited within grasslands in the Site Boundary that are adjacent to hedgerows to reduce nutrient enrichment; and
  - A minimum of 1m adjacent to the hedgerows will be managed as 'undisturbed' ground where possible. Management of grasslands within these areas adjacent to hedgerows will be in line with the management of meadow grasslands.

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#### 4.0 RESULTS AND CONCLUSION

4.1 The habitat retention, enhancement and creation proposals highlighted within this report have all been inputted into the Biodiversity Metric 4.0. Table 7 provides a summary of the headline results of the biodiversity metric 4.0 assessment completed for the proposals. The full metric has been provided separately.

**Table 4: Biodiversity Metric 4.0 Headline Results** 

| Baseline                    | Habitat Units  | 202.96 |
|-----------------------------|----------------|--------|
|                             | Hedgerow Units | 46.61  |
| Post-Intervention           | Habitat Units  | 239.94 |
|                             | Hedgerow Units | 51.75  |
| Total Net Unit Change       | Habitat Units  | +37.07 |
|                             | Hedgerow Units | +4.85  |
| Total Net Percentage Change | Habitat Units  | 18.27% |
|                             | Hedgerow Units | 10.35% |

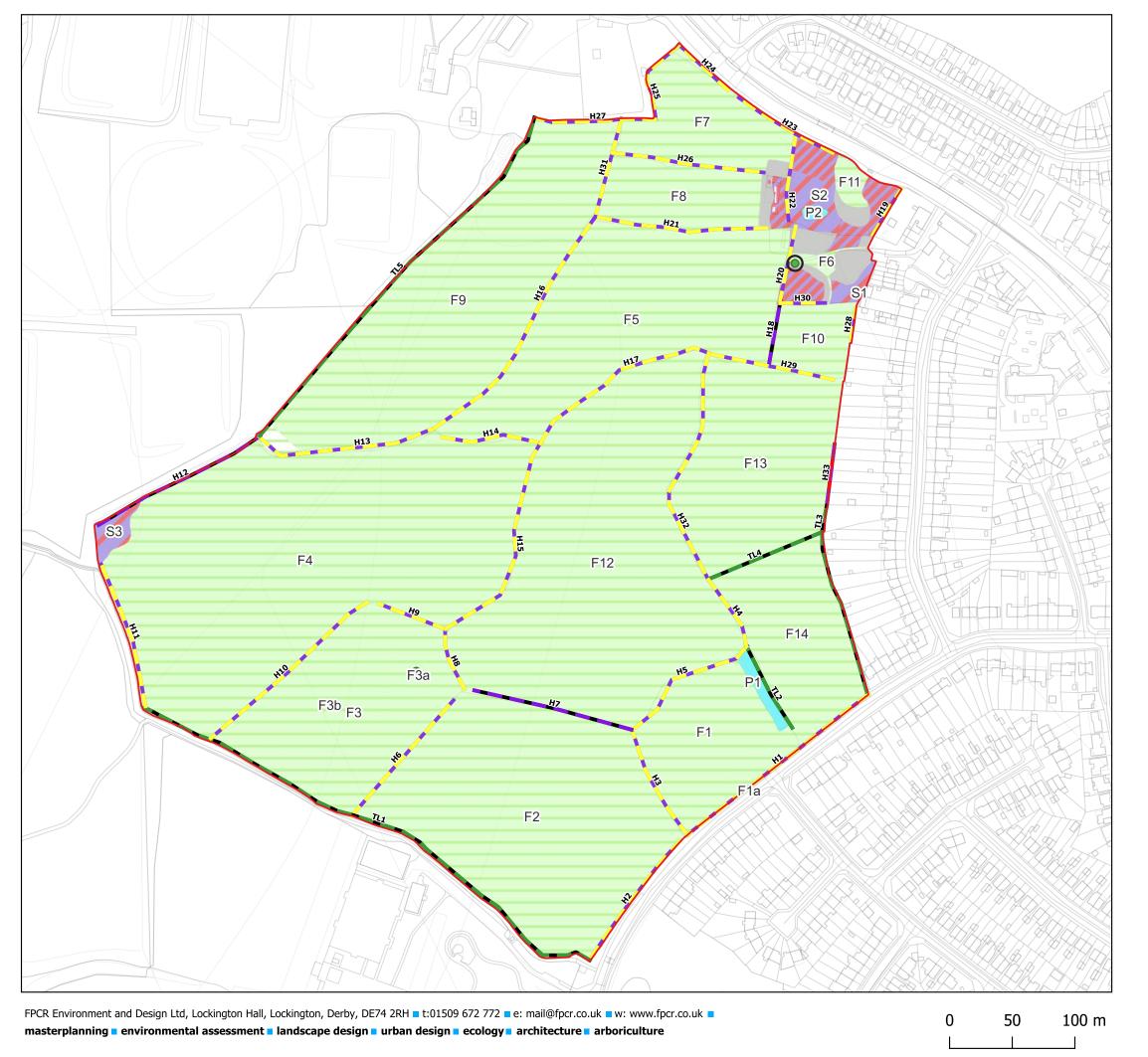
- 1.9 As shown in Table 7, assessment has demonstrated proposals will lead to a net gain of 37.07 habitat units, representing a 18.27% gain through the retention of habitats of high value and the habitat enhancement and creation measures outlined above.
- 1.10 The proposed development retains most of these hedgerows although 0.16km will be lost to facilitate access roads/footpaths. The enhancement of retained hedgerows and additional habitat creation and enhancements proposals will lead to an additional 4.85 hedgerow units equating to a 10.35% gain in the Site's hedgerow resource.

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### APPENDIX A: SUMMARY BIODIVERSITY METRIC 4.0 CALCULATIONS

| Headline Results   | 5                                       | results menu         |   |              |  |
|--|---|----------------------|---|--------------|--|
| Scroll down for final re-  | sults A                                 |                      |   |              |  |
|  | All of the same                         |                      | Habitut units                             | 202.88       | 1  |
| On-site baseline   |   | Hodgarow units       | 46.89                                     |              |  |
|  |   | Watercourse units    | 0.00                                      |              |  |
| And the contract of the contra |   |                      | Habitat unite                             | 239 94       |  |
|  | oost-interve                            |                      | Hadganow units                            | 51.75        |  |
| (Indurling histotra venetion, creation & enhancement)  |   |                      | Watercourse units                         | 0.00         |  |
| 1500000000000  |   |                      | Habitat units                             | 27.07        | 18.27%   |
| On-sit   | te net chance                           | re                   | Hedgerow units                            | 4.85         | 10.35%   |
| but  | nits & percentage)                      |                      | Watercourse units                         | 0.00         | 0.00%  |
|  |   |                      | S. C. | 5            |  |
|  |   |                      | Habitat units                             | 0.00         | 1  |
| Off-s  | site baseline                           | 5                    | Hodronow units                            | 0.00         |  |
| OII-2  | are basenin                             |                      | Wintercourse units                        | 0.00         |  |
|  |   |                      | Habitat units                             | 0.00         |  |
| Off-site r   | oost-interve                            | ntion                | Hedgerow units                            | 0.00         |  |
| (Including habiter)  | reneution, creation & en                | hascement)           | Watercourse units                         | 0.00         |  |
|  |   |                      |   | 0.00         |  |
| Off-sit  | te net chanc                            | te                   | Habitat units                             | 0.00         | 0.00%  |
|  | mus& percentage)                        | 9~                   | Hedgerow units  Watercourse units         | 0.00         | 0.00%  |
|  | ACCUSED NO.                             |                      | FF MED COLUMN MEMORY                      |              | 0.00.0   |
|  |   |                      |   |              |  |
| 144  | 400000000000000000000000000000000000000 | S. D. S. S. C.       | Habitat units                             | 37.07        | ]  |
|  | d net unit cl                           |                      | Hedgerow units                            | 4.85         |  |
| (Including all on-site & off-site  | e habitat resentino, con                | ation & exhanormum() | Watercourse units                         | 0.00         |  |
|  |   |                      | Habitat units                             | 0.00         | i  |
| Spatial risk mu  | dtiplier (SRM) d                        | eductions            | Hedgerow units                            | 0.00         |  |
|  |   |                      | Watercourse units                         | 0.00         |  |
|  |   |                      |   |              | t  |
|  | -                                       | TEL DEGLETING        |   | - 2          | 1  |
|  | FII                                     | NAL RESULTS          |   | -            |  |
| A455110 HE   | VA-10881W1-11                           |                      | Habitat units                             | 27.07        | 1  |
| Total net unit change<br>(Including all cu-see & off-see Indictor resention, creation & enhancement)   |   | Hedgerow units       | 4.85                                      |              |  |
|  |   | Watercourse units    | 0.00                                      |              |  |
|  |   |                      |   |              |  |
| Total net % change (Raduding 40 on-title & off-title highling retrients), creation & enhancement)  |   | Habitat units        | 18,27%                                    |              |  |
|  |   | Hedgerow units       | 0.00%                                     |              |  |
|  |   |                      | Watercourse units                         | 0.00%        |  |
| Trading rules satisfied?   |   | Yes                  | 1   |              |  |
|  |   | All Sales            | 100                                       | -            |  |
|  | Target                                  | Baseline Units       | Units Required                            | Unit Deficit | 1  |
| Dait Tune  | 1400040                                 |                      |   |              | THE REAL PROPERTY OF THE PERSON OF THE PERSO |
| Unit Type Habitat units  | 10.00%                                  | 202.88               | 223.17                                    | 0.00         | Unit requirement met or surpassed  |

| Doc No:         | 9364          |  |  |
|-----------------|---------------|--|--|
| Author/Approval | HEH / KDG     |  |  |
| Revision:       | -             |  |  |
| Date:           | 26.10.23      |  |  |
| Page:           | Page 11 of 11 |  |  |
|                 |               |  |  |



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## Key

**Red Line Boundary** 

#### **Baseline Habitats**

**Bracken** 

Bramble scrub

**Developed land; sealed surface** 

**Mixed scrub** 

Other neutral grassland

**Ponds (non-priority habitat)** 

Tall forbs

#### **Baseline Hedgerows**

- Non-native and ornamental hedgerow H33
- Line of trees TL2, TL3, TL4, TL5
- Line of trees associated with bank or ditch TL1
- Native hedgerow H1, H2, H6, H8, H14, H17, H19, H20, H21, H22, H26,H28, H29, H30, H32
- Native hedgerow associated with bank or ditch -H3, H5, H9
- Native hedgerow with trees H4, H15, H23, H24, H25, H27, H31
- Native hedgerow with trees associated wit bank or ditch - H10, H11, H13, H16
- Species-rich native hedgerow H18
- Species-rich native hedgerow with trees associated with bank or ditch - H7, H12

#### **Baseline Trees**

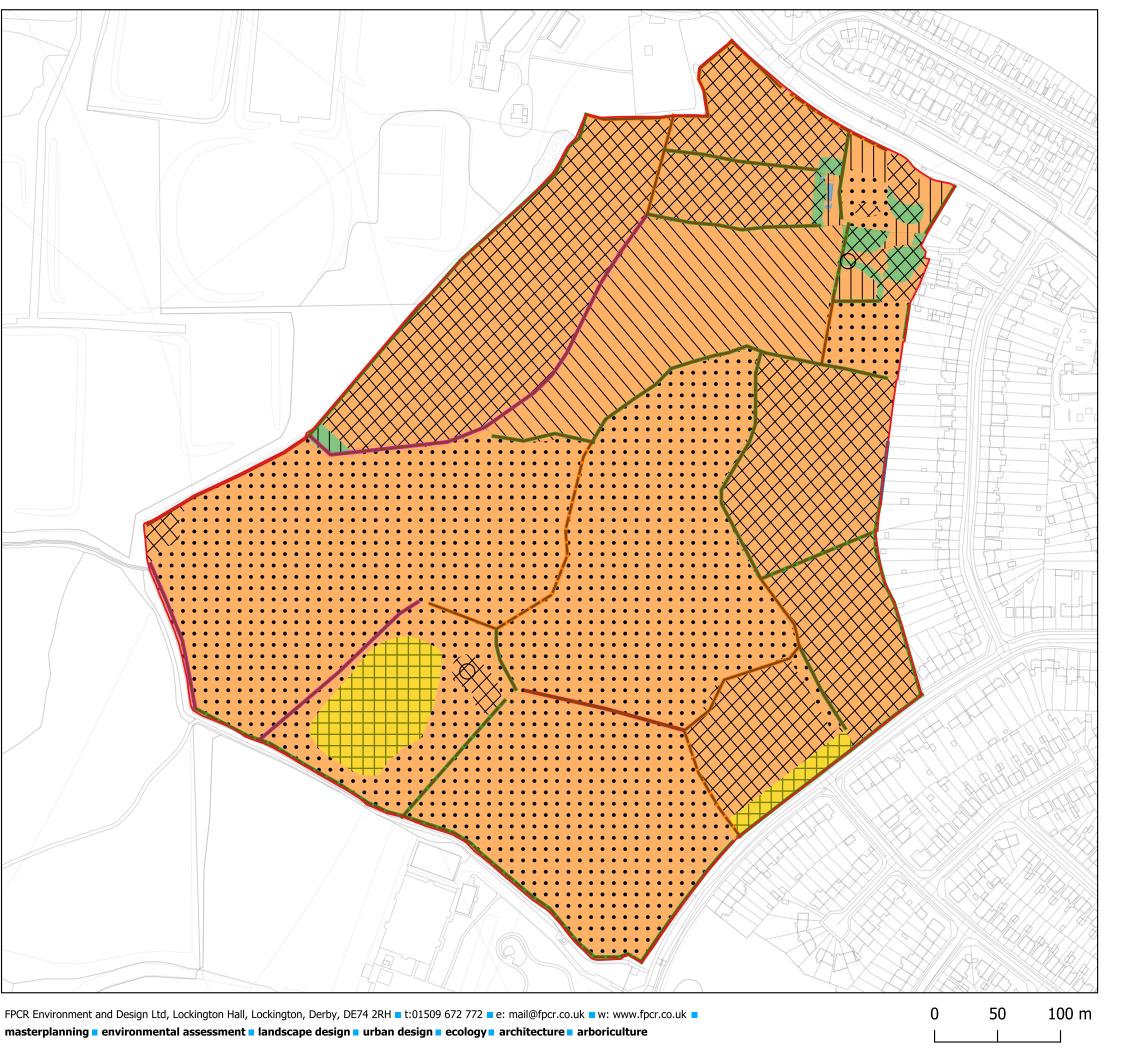
- **Existing Large Rural Tree**
- Existing Medium Rural Tree



Wain Estates

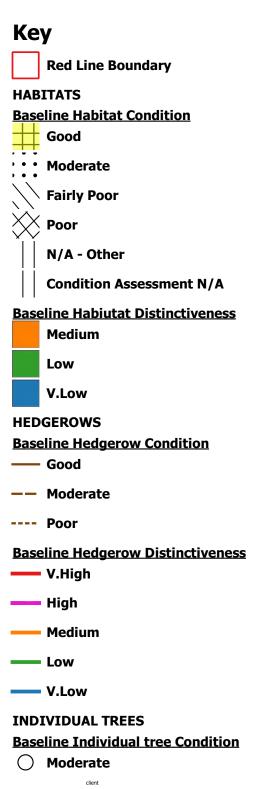
Land north of Wilderness Lane, Great Barr, Birmingham BASELINE HABITAT PLAN

issue date 31/8/2023



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Wain Estates

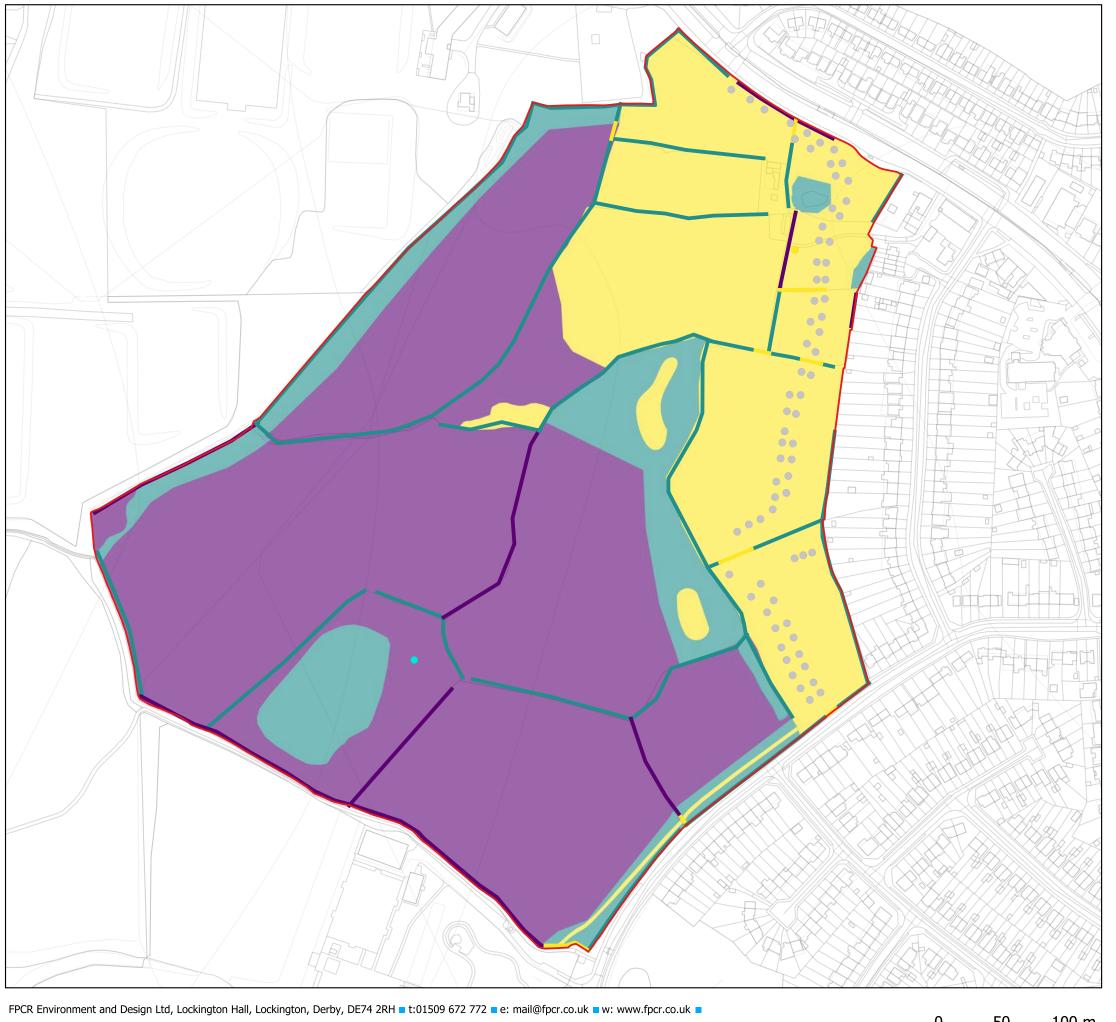
Land north of Wilderness Lane, Great Barr, Birmingham

BASELINE HABITAT CONDITION / DISTINCTIVENESS



drawn HEH

issue date 30/10/2023



masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

100 m 0 50

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## Key

**Red Line Boundary** 

#### **Habitat Retention**

**Enhanced** 

Retained

Lost

### **Hedgerow Retention**

Enhanced

Retained

Lost

#### **Individual Tree Retention**

- Created
- Retained
- Proposed Lost

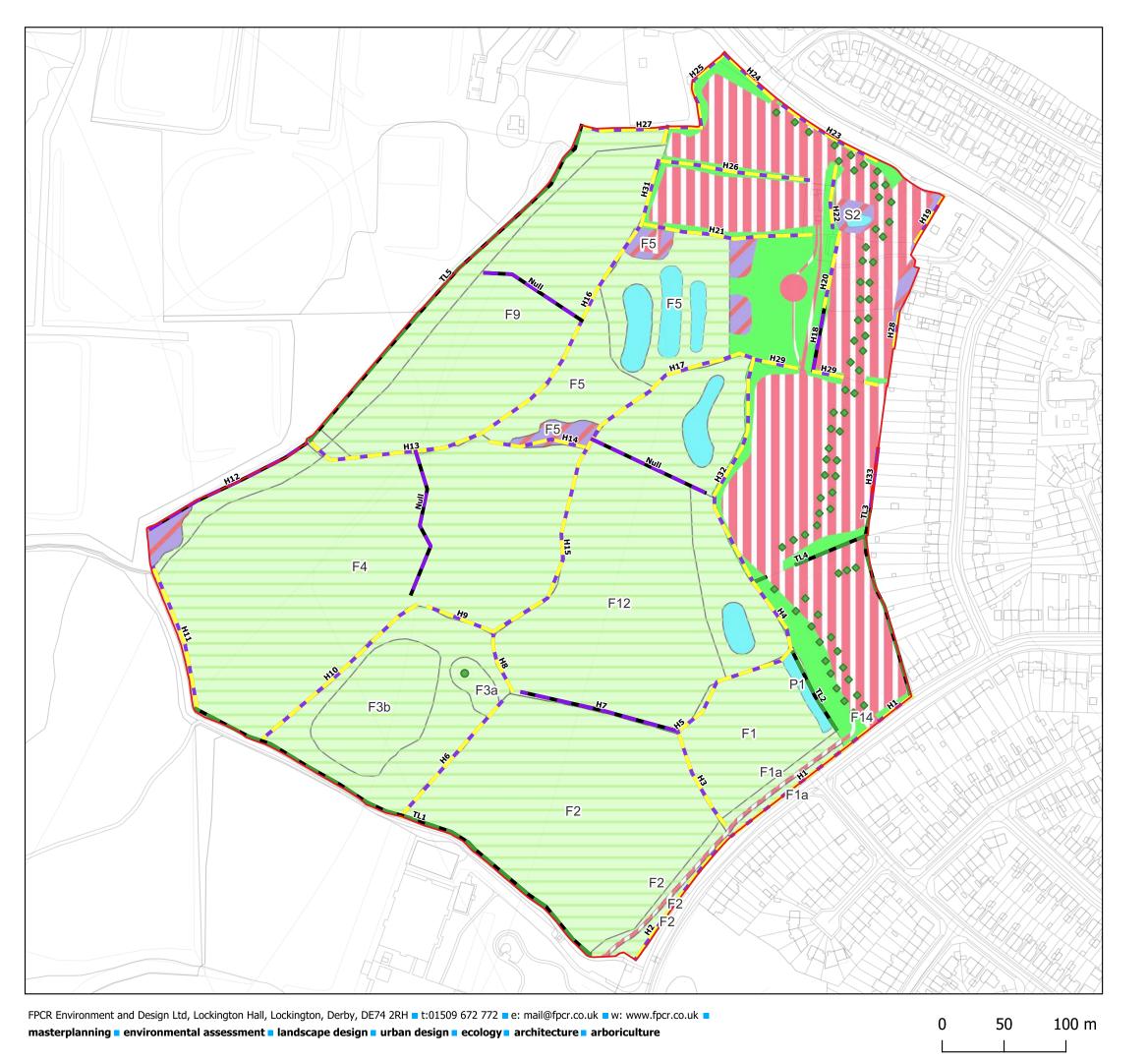


Wain Estates

Land north of Wilderness Lane, Great Barr, Birmingham

HABITAT RETENTION

30/10/2023



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## Key

**Red Line Boundary** 

#### **Proposed Habitats**

70:30 split built development: gardens/planting

Mixed scrub

**Modified grassland** 

Other neutral grassland

Ponds (non-priority habitat)

**LEAP** developed land; selaed surface

#### **Proposed Hedgerows**

Non-native and ornamental hedgerow

Line of trees - TL2, TL3, TL4, TL5

Line of trees - associated with bank or ditch - TL1

Native hedgerow - H1, H2, H6, H8, H14, H17, H19, H20, H21, H22, H26,H28, H29, H30, H32

Native hedgerow - associated with bank or ditch -H3, H5, H9

Native hedgerow with trees - H4, H15, H23, H24, H25, H27, H31

Native hedgerow with trees - associated wit bank or ditch - H10, H11, H13, H16

**Species-rich native hedgerow - H18** and new hedgerows

Species-rich native hedgerow with trees associated with bank or ditch - H7, H12

#### **Proposed Trees**

- Proposed Medium Rural Tree
- **Proposed Small Urban Tree**

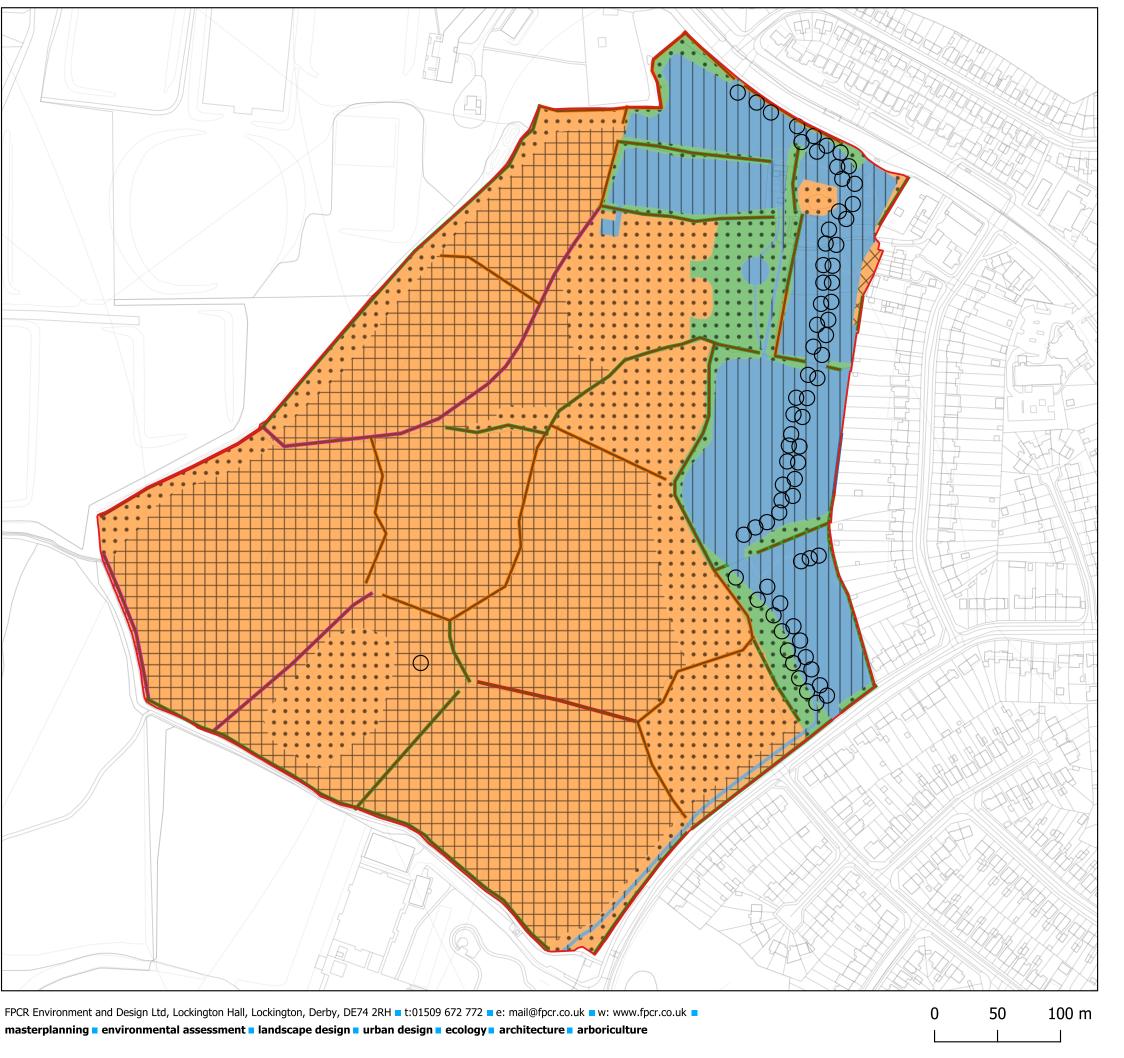


Wain Estates

Land north of Wilderness Lane, Great Barr, Birmingham

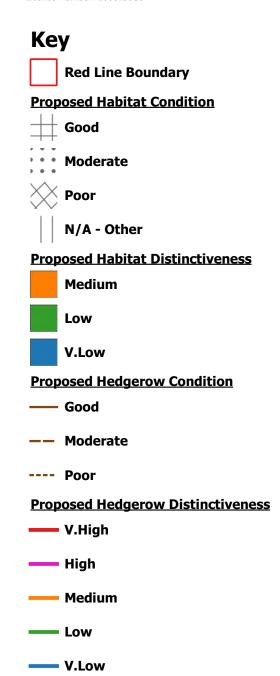
PROPOSED HABITATS

issue date 30/10/2023



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### **Proposed Individual Tree Condition**

Moderate

