

### 3 Site Baseline Reports and Five-Year Enhancement Plans

#### 3.1 Introduction

3.1.1 This section of the report provides details of the existing habitats present at each of the 11 Sites and the current Biodiversity Net Gain value of those habitats, as quantified within the Statutory BNG Metric. Proposed biodiversity enhancements are then provided for each Site along with specifications for management actions, timing of management actions within a Five Year Biodiversity Enhancement Plan and finally an Annual Checklist for use by Community Asset Managers to ensure that the required management actions are undertaken at each Site.

#### 3.2 Site 1. Knyvett Green, Ashwellthorpe

##### Photos



##### Key Facts:

- Size of the Site: 0.72ha
- Habitats present: **Modified grassland; Individual trees; and Native hedgerow with trees.**
- Tree Preservation Orders, Conservation Areas, County Wildlife Sites (CWS), Roadside Nature Reserves, Priority Habitats, Statutory Designated Sites present on site? **Strategic Area within the LNRS.**
- Recommended habitat measures in LNRS: **None.**

### Baseline Habitat Description and BNG Calculation

- 3.2.1 The Site comprised mown modified grassland, a playground and scattered individual trees along the southern boundary. A native hedgerow with trees delineated the southern boundary.
- 3.2.2 The modified grassland was in **poor condition** due to its low botanical diversity. Perennial ryegrass *Lolium perenne* was dominant with abundant creeping cinquefoil *Potentilla reptans*, frequent creeping buttercup *Ranunculus repens*, occasional ribwort plantain *Plantago lanceolata*, dandelion *Taraxacum agg.* and cocksfoot *Dactylis glomerata* and rarely selfheal *Prunella vulgaris*.
- 3.2.3 A total of 12 semi and early-mature trees were present in the south of the Site including: Lawson cypress *Chamaecyparis lawsoniana*, sycamore *Acer pseudoplatanus*, horse chestnut *Aesculus hippocastanum* and beech *Fagus sylvatica*. The trees were in **moderate and good condition**.
- 3.2.4 A native hedgerow with trees in **poor condition** was present along the southern boundary. The hedgerow was comprised of hawthorn *Crataegus monogyna*, elder *Sambucus nigra*, ivy *Hedera helix* and bramble *Rubus fruticosus agg.* The hedgerow was approximately 4m in height and 1.5m width. It was observed to be tall but ‘leggy’ at the base with abundant ivy that could be better managed to allow the hedgerow to thicken. Grass adjacent to the hedge was mown short.
- 3.2.5 In total, the habitats on Site represent **5.53 Habitat Units and 0.62 Hedgerow Units** as shown in Tables 1 and 2 below.

**Table 1. Baseline BNG Calculation of Habitats**

| Habitat            | Area (hectares)               | Ecological Distinctiveness | Condition | Habitat Units (HU) |
|--------------------|-------------------------------|----------------------------|-----------|--------------------|
| Modified Grassland | 0.724                         | Low                        | Poor      | 1.45               |
| Individual trees   | 0.04885                       | Medium                     | Moderate  | 0.39               |
| Individual trees   | 0.3076                        | Medium                     | Good      | 3.69               |
| <b>Total</b>       | <b>0.72 (excluding trees)</b> |                            |           | <b>5.53</b>        |

**Table 2. Baseline BNG Calculation of Hedgerows**

| Habitat                    | Length (kilometres) | Ecological Distinctiveness | Condition | Hedgerow Units (HeU) |
|----------------------------|---------------------|----------------------------|-----------|----------------------|
| Native hedgerow with trees | 0.155               | Medium                     | Poor      | 0.62                 |
| <b>Total</b>               | <b>0.155</b>        |                            |           | <b>0.62</b>          |

3.2.6 A map of the baseline habitats is provided in Figure 1, Appendix 1.

### **Proposed Biodiversity Enhancements**

- Enhance the native hedgerow with trees by removing some of the ivy to allow hedgerow plants to thicken out. Prune the hedgerow to increase thickness and prevent the hedgerow from turning into a line of trees. Keep at least a 1m wide strip of grass long next to the hedgerow.
- Create a wildflower ‘arc’ along the northern boundary with an invertebrate bank/earth bund;
- Leave grass long around trees on the southern boundary;
- Plant two native trees; and
- Install two bird boxes and two bat boxes on trees.

### **Specification of Management Actions**

3.2.7 A map of the proposed enhancements is shown in Figure 1, Appendix 2.

3.2.8 Native hedgerow with trees:

- Some of the large patches of ivy will be removed from the hedgerow. Some ivy should be retained as ivy is an excellent late autumn/early winter food source for birds. The creation of gaps following the removal of the ivy will encourage existing hawthorn plants to thicken out and fill the space to reduce the horizontal gappiness of the hedgerow.
- Prune the hedgerow once every three years to maintain tight bushy growth. Maintain height and spread of hedgerow generally. Pruning should try to achieve a hedgerow with an overall ‘A’ shape with a flat top. Prune from September-February inclusive to avoid the bird nesting season.
- A 1m wide strip of grassland next to the hedgerow will be left long. The grass will be cut twice per year – once in late February/early March and again in late August/early September. The long grass will create enhanced microclimates for invertebrates and produce seed for birds and small mammals. The long grass will be cut with a scythe/trimmer/mower to 50mm height twice a year and kept short over the winter with regular mowing as required. All cuttings will be removed from the Site to avoid re-enrichment of the soil and encourage greater abundance and diversity of native wildflowers.

3.2.9 Wildflower grassland and invertebrate earth bund:

- A 3m wide arc of wildflower grassland will be created in the north of the Site as shown by the other neutral grassland area in Figure 1, Appendix 2. To prepare the ground, the ground will be rotavated to create bare ground of a medium tilth. An



earth bund measuring at least 1m height will be created within the wildflower arc using nutrient-poor subsoil. Once the ground has been prepared, British origin native wildflower seed mix will be oversown into the prepared ground (including the earth bund) at the density advised by the manufacturer (an example of a suitable seed mix would be Emorsgate General Purpose Meadow Mixture EM1<sup>8</sup>).

- The seed mix should be spread in the autumn or spring (when there is regular rain and the ground is not frozen). The seed can be broadcast by hand and treaded lightly by foot to ensure good contact between the seed and the soil. Do not cover the seed with new soil or compact heavily.
- In the first year after sowing, a flush of annual weeds may appear which can be retained to help shelter the emerging perennial wildflowers of the seed mix. Undertake the first cut in late August/early September with a scythe/strimmer/mower to a height of 50mm. Remove arisings offsite or to a dedicated compost heap.
- For the second cut, timing is very important. The second cut will be undertaken once wildflowers have flowered and set seed (it typically takes 6-8 weeks from flowering to seed set). Setting of the seed is crucial to encourage a greater abundance of wildflowers. The second cut timing will likely vary slightly from year to year, but it should generally be undertaken in late August/early September when conditions are dry. The cut should be undertaken with a scythe, strimmer or other suitable mowing equipment that can cut vegetation to a height of 50mm. Cuttings must be left in situ for 1-7 days to allow seed to shed. The cuttings must then be removed offsite or to a designated compost heap.
- Small random areas of the long sward (10-20%) may be left long over winter to provide shelter for invertebrates.
- Following the second cut, the sward must be kept short throughout the winter, particularly given the milder winters and increased growing season lengths so further ‘cut and collect’ mowing is likely to be required from late September – November.
- No herbicides, fertilisers or commercially bought grass seed will be applied to the grassland at any time.

### 3.2.10 Long Grass around Trees:

- The grass in the south of the Site as shown in Figure 1, Appendix 2 will be left long.
- The grass around the trees will be cut twice per year – once in late February/early March and again in late August/early September. The long grass will create enhanced microclimates for invertebrates and produce seed for birds and small

<sup>8</sup> <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/basic-general-purpose-meadow-mixture/>

mammals. The long grass will be cut with a scythe/trimmer/mower to 50mm height twice a year and kept short over the winter with regular mowing as required. All cuttings will be removed from the Site to avoid re-enrichment of the soil and encourage greater abundance and diversity of native wildflowers.

- No fertiliser, herbicide or commercial grass mix will be applied at any time.

### 3.2.11 Tree planting:

- Two native trees will be planted in the south of the Site. Trees should be planted from November to March inclusive in non-frozen ground. Trees should be a minimum of standards (8-10cm stem girth) either as containerised or bare root individuals. A square planting pit the depth of the rootball and 75cm wider than the rootball must be excavated with the top-soil and sub-soil separated into discrete piles. The tree (with its rootball pre-watered) will be placed in the planting pit and the subsoil and topsoil replaced in the correct order, with regular 'healing in' of the layers of soil to ensure stability of the tree. The final layer of backfill will not be consolidated. A 50-100 woodchip mulch later will be applied at a minimum radius of 0.5m from the tree stem and not touching the tree stem. A double stake and tie support system and vole/deer guard will be installed and the tree watered generously. Trees will be spaced a minimum of 10m apart.
- Trees will need to be watered generously and regularly in hot dry summer spells for the first three years post planting.
- Check trees annually and top up mulch/clear weeds to limit competing vegetation.
- At Year 3, remove canes, guards and ties if trees are established. Remove and replace any dead trees.

### 3.2.12 Bird and bat boxes:

- Install two bird boxes and two bat boxes on suitable trees as suggested in as shown in Figure 1, Appendix 2. Guidance on suitable boxes for trees is provided in Appendix 3 along with specifications for installation heights and aspects.

### Five Year Biodiversity Enhancement Plan

3.2.13 Following the management specification and guidance above, the Table below provides the timing of management actions over five years.

| Habitat                        | Management Action and Timing                                                                                                                                                                                      |                                                                                                                                                  |                                                          |                                                                                                                                                                                        |                                                    |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
|                                | 2025/2026                                                                                                                                                                                                         | 2027                                                                                                                                             | 2028                                                     | 2029                                                                                                                                                                                   | 2030                                               |
| <b>Hedgerow</b>                | Remove large ivy sections. Prune hedgerow into 'A' shape.<br><br>Leave minimum 1m width of grass next to hedgerow long, cut in late February/early March and late August/early September, keep short over winter. | Leave minimum 1m width of grass next to hedgerow long, cut in late February/early March and late August/early September, keep short over winter. | Same as 2027.                                            | Prune hedgerow into 'A' shape.<br><br>Leave minimum 1m width of grass next to hedgerow long, cut in late February/early March and late August/early September, keep short over winter. | Same as 2027.                                      |
| <b>Grassland</b>               | Prepare ground and create earth bund. Sow wildflower seed. Undertake first cut in late August/early September.                                                                                                    | First cut and collect in late February/ early March. Second cut in late August/early September. Remove arisings after 1-7 days. Mow over winter. | Same as 2027.                                            | Same as 2027.                                                                                                                                                                          | Same as 2027.                                      |
| <b>Long grass around trees</b> | First cut and collect in late February/ early March. Second cut in late August/early September. Remove arisings offsite.                                                                                          | Same as 2025/2026.                                                                                                                               | Same as 2025/2026.                                       | Same as 2025/2026.                                                                                                                                                                     | Same as 2025/2026.                                 |
| <b>Trees</b>                   | Plant trees from November-March. Mulch and water.                                                                                                                                                                 | Water regularly in hot dry spells. Keep mulch topped up.                                                                                         | Water regularly in hot dry spells. Keep mulch topped up. | Remove canes/guards/ties in the winter. Replace any dead/dying individuals.                                                                                                            | N/A                                                |
| <b>Bird and bat boxes</b>      | Install bird and bat boxes on suitable trees                                                                                                                                                                      | Check bird and bat boxes remain securely attached.                                                                                               | Check bird and bat boxes remain securely attached.       | Check bird and bat boxes remain securely attached.                                                                                                                                     | Check bird and bat boxes remain securely attached. |

### Annual Monitoring Checklist

3.2.14 The checklist below is devised as a quick annual check to be carried out and completed by the responsible Community Asset Manager, to ensure that the recommended enhancements measures above have taken place. The items in the checklist below have been replicated in a separate Annual Monitoring excel spreadsheet for ease of completion.



**Annual Monitoring Checklist for Knyvett Green, Ashwellthorpe**

| Habitat                        | Management Action                                                     | Tick relevant column if/when completed |      |      |      |      |
|--------------------------------|-----------------------------------------------------------------------|----------------------------------------|------|------|------|------|
|                                |                                                                       | 2025/2026                              | 2027 | 2028 | 2029 | 2030 |
| <b>Hedgerow</b>                | Large ivy patches cleared?                                            |                                        |      |      |      |      |
|                                | Hedgerow pruned in years 2025/2026 and 2029?                          |                                        |      |      |      |      |
|                                | 1m strip of grassland next to hedgerow left long?                     |                                        |      |      |      |      |
| <b>Grassland</b>               | Earth bund created and ground prepared and sown with wildflower seed? |                                        |      |      |      |      |
|                                | First cut undertaken?                                                 |                                        |      |      |      |      |
|                                | Second cut undertaken?                                                |                                        |      |      |      |      |
|                                | Winter cutting undertaken?                                            |                                        |      |      |      |      |
| <b>Long grass around trees</b> | First cut undertaken?                                                 |                                        |      |      |      |      |
|                                | Second cut undertaken?                                                |                                        |      |      |      |      |
|                                | Winter mowing undertaken?                                             |                                        |      |      |      |      |
| <b>Trees</b>                   | Trees planted                                                         |                                        |      |      |      |      |
|                                | Tree watered and mulch topped up?                                     |                                        |      |      |      |      |
|                                | Tree stakes/ties/guards adjusted or removed?                          |                                        |      |      |      |      |
| <b>Bird and bat boxes</b>      | Installed?                                                            |                                        |      |      |      |      |
|                                | Annually checked to make sure still safely secured to tree?           |                                        |      |      |      |      |

**Post-enhancement BNG Calculation**

- 3.2.19 The proposed enhancements to the grassland and hedgerow will generate a BNG uplift of Habitat Units of **5.28%** and a BNG uplift of Hedgerow Units of **80.75%** over **27 years**.
- 3.2.20 The uplift in Habitat Units derives from the creation of a wildflower arc ‘other neutral grassland’ in moderate condition in the north of the Site and the planting of two new trees. The uplift in Hedgerow Units derives from enhancing the condition of the hedgerow from poor condition to moderate condition.