

# Ascerta

Landscape, Arboricultural & Ecological Solutions  
for the Built Environment

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## Landscape and Ecological Management Plan

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Rossett Road,  
Wrexham

Ref: P.1416.20

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September 2021  
(See revision dates  
below)

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| Rev | Date       | Details                   |
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### Ascerta

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**P.1416.20**

**Landscape and Ecological Management Plan**

**of**

**Rossett Road, Wrexham**

**for**

**Castle Green Homes**

**14<sup>th</sup> September 2021**

|                                 |                               |
|---------------------------------|-------------------------------|
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## **1 Introduction**

Ascerta has been instructed by Castle Green Homes to carry out a landscape and ecological management plan for land at Rossett Road, Wrexham (hereafter referred to as the site). Our client seeks planning consent to develop the site for the erection of 132 residential units with associated access roads and public open space.

The detailed soft landscaping scheme is shown on the following drawing: P.1416.20.02 Planting Plan (5 sheets) Revision H.

This management plan covers a period of 25 years and it should be reviewed at the end of this period based on the condition of the site at that time to ensure the initial objectives are being achieved. The recommendations from the preliminary ecological report is included within the management prescriptions.

## **2 Site Description**

### **2.1 The Existing Site**

The site is made up of two parcels to the north and south of Rossett Road within Wrexham County. The site is located on the eastern urban fringe of the village called Rossett, and comprises agricultural fields largely bound by hedgerows and trees.

The northern parcel measures 2.9 ha comprising a field of improved grassland with a mature tree in the middle and bound by a mature tree group and trees long the north-eastern boundary and eastern boundary. The northern parcel is surrounded by a large playing field to the north-east, and neighbouring agricultural field to the east. Rossett Road runs parallel with the southern boundary, whilst residential properties along Trevalyn Hall View and Darland View back onto the western boundary of the northern parcel.

The southern parcel measures 3.4 ha and is part of a large-scale field containing arable crops bound by hedgerows and a few trees. Rossett Road runs parallel with the northern boundary of the southern parcel, whilst the hedgerow of a neighbouring isolated property and remaining part of the field are located to the east. The eastern boundary of the southern parcel is largely boundless. Harwood Lane runs parallel with the southern boundary, whilst residential properties along Trevalyn Way and Moss Green back onto the western boundary of the southern parcel.

The overall site is mainly bound by hedgerows (comprising hawthorn, laurel, holly, and elder), tree groups (comprising hawthorn, hazel, ash, elder, sycamore, oak, cherry, and Norway maple), and trees (comprising oak, ash, alder, and sycamore).

A public footpath runs near the eastern boundary of the northern parcel and parallel with the eastern boundary of the southern parcel as indicated by Figure 1.



**Figure 1** Satellite image showing the proposed development site (in red dashed lines) and nearby footpaths (in dashed green lines)

## 2.2 Site Ecology

The following reports were completed following a series of site surveys and the recommendations made for ecological mitigation and arboricultural enhancements have been included in both the design and management proposals.

- *P.1416.20 Ascerta Arboricultural Impact Assessment, Rossett Road (by Ascerta)*
- *Rossett Rd, Rossett, Preliminary Ecological Appraisal & Badger Survey, June 2021\_Rev1 (by Cheshire Ecological Services)*
- *Rossett Rd, Rossett, Biodiversity Action Plan, June 2021 (by Cheshire Ecological Services)*

The key habitats currently identified on site are listed below.

- Agricultural field,
- Improved Grassland,
- Intact species-poor hedge with trees,
- Intact species-poor hedge, and
- Scattered trees

The habitat composition of the site was considered to have potential to support legally protected wildlife species, including nesting birds, badger, brown hare, hedgehog, and polecat.

## 2.3 The Proposed Site Description

The residential development proposes the construction of 132 residential units with rear gardens, front gardens, and driveways. The development includes inner roads, tree planting, ornamental shrub and herbaceous planting beds, formal hedges, and perimeter open space with eco species rich lawn mix, native hedgerows and native shrub mix planting. Two small public open spaces, each with infiltration basins are located in the northern corner and centre of the northern parcel. While a large public open space is located in the southern part of the southern parcel.

Two new access roads will be created off Rossett Road that will require sections of existing native hedgerows to be removed (H1 (in part) and H6 (in part)) and will be compensated for along the roadside and around the perimeter of the whole site. The proposal will also require the removal of trees (T3, T4, T5 and G1 (in part)) and removal of small sections of hedgerow (H1 (in part), and H4 (in part)) within the site to accommodate the development proposal (See *P.1416.20B Ascerta Arboricultural Impact Assessment, Rossett Road*).

Replacement trees and shrub planting including species will reference the RHS *Perfect for Pollinators* plant lists. The landscaping design is shown on P.1416.20.02 Planting Plan (5 sheets) Revision H which provides:

- Proposed ornamental shrub and herbaceous planting (Total area: 547 m<sup>2</sup>)
- Proposed tree planting (Total: 118 .no trees)
- Proposed mixed native hedgerow (Total length: 219 lin.m)
- Proposed hawthorn hedgerow (Total length: 99 lin.m)
- Proposed formal hedge (Total length: 940 lin.m)
- Front and side gardens turfed (Total area: 4660 m<sup>2</sup>)
- Wildflower seeding Germinal AberSustain mix (Total: 6365m<sup>2</sup>)
- Wildflower seeding Germinal WFG20 Eco Species Rich Lawn mix (Total: 2921m<sup>2</sup>)
- Wildflower seeding, Germinal WF19 Pollinators Paradise (Total: 423m<sup>2</sup>)
- Wildflower seeding, Germinal RE3 River Floodplain / Water Meadow - MG8 Grassland (Total: 745m<sup>2</sup>)
- Native shrub mix planting as whip planting, for additional wildlife habitat (Total: 576m<sup>2</sup>)

The proposed formal hedges will include single ornamental species of Cherry Laurel 'Otto Luyken'.

The proposed single native hedge will be hawthorn and the native hedgerow mix includes Hazel, Hawthorn, Holly, Blackthorn and Guelder Rose to provide a food or shelter resource to wildlife and to be in keeping with the ecology report recommendation of proposing hedgerows with at least 5 different native species.

The proposed native shrub mix planting will include Field Maple, Hazel, Hawthorn, Holly, Blackthorn, and Dog Rose. These species will also provide a food or shelter resource to wildlife.

This landscape and ecological management plan details management of the landscape following development only.

This landscape and ecological management plan should be implemented in its entirety by a suitable management agent who will be responsible for achieving long term objectives.

A management agent will be confirmed and appointed by the developer once the main development works have commenced on site.

### **3 Landscape Design Objectives**

The overall design objectives are as follows:

1. Carry out tree planting, formal hedges, ornamental shrub and herbaceous planting, and turfed grass around the housing plots to soften the development and provide an attractive setting;
2. To include the recommendations of the Arboricultural Impact Assessment report including:
  - a. The planting of trees, shrubs, and where applicable hedges as part of a comprehensive landscape scheme to replace any vegetation lost and to integrate the development into the wider landscape; and
  - b. The use of a mixture of native and ornamental species within planting schemes, where those species are suited to the site and local landscape.
3. To include the recommendations of the preliminary ecological report including:
  - a. Crevice bat boxes should be integrated into the residential development.
  - b. Bird boxes should be erected across the site, to compensate for the potential loss of hedgerows and the trees.
  - c. Fence gaps for hedgehogs should be at ground level, approximately 13cm by 13cm, and in each garden.
  - d. The landscape plan should include the creation of additional hedgerows to compensate for the loss of hedgerows on site. These hedgerows should derive from a minimum of five woody species.
  - e. Grassland on site should be kept low (<10cm) to deter brown hare from breeding on site.
  - f. Where possible, all woody/scrub vegetation to be affected should be removed by hand prior to potentially disturbing works taking place.
  - g. Tree TN5 & TN6 to only be removed under RAMs as detailed and under the watching brief of a licensed bat ecologist. Site lighting to avoid illumination of suitable features for bats such as trees and hedgerows.
  - h. Vegetation removal works should take place outside of the bird breeding season (i.e. October – February). A survey will not be required if potentially disturbing works are undertaken during this period although due diligence is required of site workers.
4. To carry out tree, shrub, and hedgerow planting to provide screening where required;
5. Habitat enhancement to include planting of native species and a variety of ornamental species at suitable locations to attract pollinators;
6. To retain natural buffers and other site features and enhance them by good management and species diversification; and
7. Implementation of new native hedgerows, grassland that is eco species rich, and shrub areas to benefit wildlife habitats.

## **4 Management Proposals**

This management plan covers detailed maintenance operations for an initial maintenance period of two years, followed by an establishment period covering years three-five. During this period, the operations proposed will ensure new planting and grass is establishing well and showing healthy growth, and that groundcover planting is provided as per the attached planting plans (See Appendix 1).

Long term management proposals are included for years six to twenty-five (the maturing phase) and this period will involve less intensive management of planting, although ongoing monitoring will be essential to ensure the character of the public open space is maintained and replacement planting is accomplished when necessary to ensure good species diversification. Long term, any felled trees are to be replaced with a suitable species to retain the character of the previous tree.

Although this management plan covers a twenty-five-year period, it should be reviewed at a minimum of five-year intervals to ensure the initial objectives are being achieved. Additional monitoring of the different habitat areas is essential as natural changes are likely to occur and there could be future changes in legislation, both of which could have an impact on the future management of the site.

## **4.1 Management Proposals Objectives**

Residential Development Management: To ensure good establishment of ornamental planting and the maintenance of communal planting areas. To retain and enhance the existing trees and hedgerows to maintain a range of different types and sizes of species, to support a wide variety of wildlife and provide a corridor to allow movement of wildlife. The hedgerows should have a continuous, dense base and adjacent perennial grass margin, although gaps created by badgers for access should be left.

Public Open Space Management: To ensure the existing vegetation and the new planting are managed to retain the character and diversity of the area and there is good protection of existing habitats. Monitor and enhance biodiversity of the existing habitats to ensure flora and fauna continue to thrive.

Sustainable Drainage Systems (SuDS) Management: To ensure the infiltration basins provide attractive surroundings for the community and creates opportunities for wildlife. To ensure the correct water flow is managed to retain the character and diversity of the area whilst preventing pollution by intercepting silt and cleaning runoff from hard surfaces.

## 4.2 Detailed Management Proposals

### 4.2.1 Maintenance Phase (Years 1-2)

| Feature                                                               | Description and specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existing Vegetation                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Existing trees to be retained</b>                                  | Re-inspect once and specify any applicable management / and any on-going monitoring to ensure trees are safe and to improve / maintain health where necessary. Preliminary recommendations made at the time of the Tree Survey can be found within P.1416.20B Ascerta Arboricultural Impact Assessment, Rossett Road.                                                                                                                                                                                                                            |
| <b>Existing Hedgerow</b>                                              | Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting, if required.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| New Planting                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>New tree planting</b>                                              | Water to ensure good establishment. Undertake formative pruning. Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary. Hand weed around the base of tree to ensure weed free and top up mulch annually.                                                                                                                                                                                                                                                                                         |
| <b>New native shrub mix planting:</b>                                 | Weed control by hand to ensure planting area is weed free. Check stakes and shelter guards are in place and replace where necessary. Replace dead / dying stock in winter.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>New formal hedge</b>                                               | Weed control by hand to ensure planting area is weed free. Check stakes and shelter guards are in place and replace where necessary. Application of compost / fertiliser twice yearly. Replace dead / dying stock in winter. Prune if required, to encourage good establishment and water when necessary.                                                                                                                                                                                                                                        |
| <b>Native mixed hedgerow and hawthorn hedgerow planting</b>           | Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ornamental shrub and herbaceous planting</b>                       | Weed control by hand to maintain weed free area around planting during the growing period. Apply fertiliser twice yearly and top up mulch annually. Prune as necessary to ensure health growth and natural shape of the plant.                                                                                                                                                                                                                                                                                                                   |
| Turf and Seeding Areas                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Amenity grass (Germinal AberSustain mix)</b>                       | Mow every two weeks during the growing season to a height of 30mm. Apply fertiliser annually and spot treat pernicious weeds.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Informal grass areas (Germinal Eco Species Rich Lawn mix)</b>      | Cut twice a year, once during the late spring and once after the flowering season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                                                                                                                                                                                                                                                               |
| <b>Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)</b> | Autumn Sown: during the first year: first cut shall be early July, then monthly during August, September, and October to maintain a sward of 70mm.<br>Thereafter: shall be cut 2 times a year mid-July to early September to maintain a sward of 70mm.<br>Spring Sown: during the first year: first cut shall be mid-September, then again during October to maintain a sward of 70mm.<br>Thereafter: shall be cut 1 time a year mid-July to early September or as required leaving at least fortnight between cuts to maintain a sward of 70mm. |

|                                                                        |                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                        | <p>The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.</p> <p>An area of up to one third should be left uncut when cutting in late summer, until the following spring for overwintering invertebrates. This operation should rotate areas each year.</p> |
| <b>Remaining wildflower areas (Germinal WF19 Pollinators Paradise)</b> | Wildflower areas shall be cut 2 times a year during the late spring and after the flower season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                   |
| <b>Other Features</b>                                                  |                                                                                                                                                                                                                                                                                                                    |
| <b>Hard surfacing</b>                                                  | Check annually and repair any defects. Remove encroaching moss/ grass annually on paths and pavements to keep edging exposed.                                                                                                                                                                                      |
| <b>Fencing/ boundary treatments</b>                                    | Check annually, repair any defects, and replace when necessary.                                                                                                                                                                                                                                                    |
| <b>Bat / Bird Boxes</b>                                                | Bird boxes to be checked annually. Bat boxes to be checked annually by a licensed bat ecologist. Repair any defects and replace when necessary. The bat box, if damaged, should only be replaced by a licensed bat ecologist.                                                                                      |
| <b>Inlet structures</b>                                                | Check monthly for obstructions and remove as necessary, to allow free water flow into the infiltration basins.                                                                                                                                                                                                     |
| <b>Silt management</b>                                                 | Check twice a year for silt accumulation and remove as necessary.                                                                                                                                                                                                                                                  |
| <b>Litter Management</b>                                               |                                                                                                                                                                                                                                                                                                                    |
| <b>Litter</b>                                                          | Check monthly for litter or other debris and remove as necessary.                                                                                                                                                                                                                                                  |
| <b>Suds litter</b>                                                     | Check monthly for litter or other debris and remove as necessary.                                                                                                                                                                                                                                                  |
| <b>Weed Control</b>                                                    |                                                                                                                                                                                                                                                                                                                    |
| <b>Weed control within Suds areas</b>                                  | Occasionally remove pond vegetation if it spreads across the basins by hand clearing or raking.<br>Monitor for invasive weeds such as Japanese Knotweed and control if found.                                                                                                                                      |
| <b>Hard surfacing weed control</b>                                     | Check pavements and curbs annually for weeds and spray affected areas with herbicide to keep weed free.                                                                                                                                                                                                            |
| <b>Paths</b>                                                           | Remove encroaching moss/ grass from paths and pavements annually to keep edging exposed. Spray with herbicide if necessary.                                                                                                                                                                                        |

#### 4.2.2 Establishment Phase (Years 3-5)

| Feature                                                               | Description and specification                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Existing Vegetation</u>                                            |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Existing trees to be retained</b>                                  | Re-inspect as advised in Maintenance Phase (Years 1-2) and specify any applicable management / and any on-going monitoring to ensure trees are safe and to improve / maintain health where necessary.                                                                                                                                                                                                                      |
| <b>Existing Hedgerow</b>                                              | Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required.                                                                                                                                                                                                                                                                                                            |
| <u>New Planting</u>                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>New tree planting</b>                                              | <p>Undertake formative pruning if necessary. Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary. Hand weed around the base of tree to ensure weed free and top up mulch annually.</p> <p>Year 3 and 4 – Adjust tree ties where necessary.</p> <p>Year 5 – Remove tree stakes and ties. Leave any tree stakes and ties where trees appears to be on weak rootstocks.</p> |
| <b>New native shrub mix planting:</b>                                 | <p>Replace any dead stock in winter. Weed control to maintain weed free area around planting during the growing period. Apply fertiliser twice yearly and top up mulch annually.</p> <p>Year 3 - Remove the shelters and stakes. Prune the shrub mix as necessary to ensure healthy growth and create a natural shape.</p>                                                                                                 |
| <b>New formal hedge</b>                                               | Weed control by hand to ensure planting area is weed free. Check stakes and shelter guards are in place and replace where necessary remove stakes and shelter guards by the end of year 5. Prune to encourage good establishment and a neat appearance at maximum height of 1.0m.                                                                                                                                          |
| <b>Native mixed hedgerow and hawthorn hedgerow planting</b>           | Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required. Check stakes and shelter guards are in place and replace where necessary remove stakes by the end of year 5. Prune to encourage good establishment and a neat appearance at maximum height of 2.0m.                                                                                                        |
| <b>Ornamental shrub and herbaceous planting</b>                       | Weed control by hand to maintain weed free area around planting during the growing period. Apply fertiliser twice yearly and top up mulch annually. Prune as necessary to ensure health growth and natural shape of the plant. Replace any dead stock in winter.                                                                                                                                                           |
| <u>Turf and Seeding Areas</u>                                         |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Amenity grass (Germinal AberSustain mix)</b>                       | Mow every two weeks during the growing season to a height of 30mm. Apply fertiliser annually and spot treat pernicious weeds.                                                                                                                                                                                                                                                                                              |
| <b>Informal grass areas (Germinal Eco Species Rich Lawn mix)</b>      | Cut twice a year, once during the late spring and once after the flowering season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                                                                                                                                         |
| <b>Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)</b> | Cut twice a year, once during the late spring and one after the flowering season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                                                                                                                                          |

|                                                                        |                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Remaining wildflower areas (Germinal WF19 Pollinators Paradise)</b> | Wildflower areas shall be cut 2 times a year during the late spring and after the flower season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up. |
| <b>Other Features</b>                                                  |                                                                                                                                                                                                                                                                  |
| <b>Hard surfacing</b>                                                  | Check annually and repair any defects. Remove encroaching moss/ grass annually on paths and pavements to keep edging exposed.                                                                                                                                    |
| <b>Fencing/ boundary treatments</b>                                    | Check annually, repair any defects, and replace when necessary.                                                                                                                                                                                                  |
| <b>Bat / Bird Boxes</b>                                                | Bird boxes to be checked annually. Bat boxes to be checked annually by a licensed bat ecologist. Repair any defects and replace when necessary. The bat box, if damaged, should only be replaced by a licensed bat ecologist.                                    |
| <b>Inlet structures</b>                                                | Check monthly for obstructions and remove as necessary, to allow free water flow into the infiltration basins.                                                                                                                                                   |
| <b>Silt management</b>                                                 | Check twice a year for silt accumulation and remove as necessary.                                                                                                                                                                                                |
| <b>Litter Management</b>                                               |                                                                                                                                                                                                                                                                  |
| <b>Litter</b>                                                          | Check monthly for litter or other debris and remove as necessary.                                                                                                                                                                                                |
| <b>Suds litter</b>                                                     | Check monthly for litter or other debris and remove as necessary.                                                                                                                                                                                                |
| <b>Weed Control</b>                                                    |                                                                                                                                                                                                                                                                  |
| <b>Weed control within Suds areas</b>                                  | Occasionally remove pond vegetation if it spreads across the basins by hand clearing or raking.<br>Monitor for invasive weeds such as Japanese Knotweed and control if found.                                                                                    |
| <b>Hard surfacing weed control</b>                                     | Check pavements and curbs annually for weeds and spray affected areas with herbicide to keep weed free.                                                                                                                                                          |
| <b>Paths</b>                                                           | Remove encroaching moss/ grass from paths and pavements annually to keep edging exposed. Spray with herbicide if necessary.                                                                                                                                      |

#### 4.2.3 Maturing Phase (Years 6-25)

| Feature                                                                | Description and specification                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Existing Vegetation</u>                                             |                                                                                                                                                                                                                                                                                                                                                |
| <b>Existing trees to be retained</b>                                   | Re-inspect as advised in Maintenance Phase (Years 1-2) and specify any applicable management / and any on-going monitoring to ensure trees are safe and to improve / maintain health where necessary.                                                                                                                                          |
| <b>Existing Hedgerow</b>                                               | Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required.                                                                                                                                                                                                                                |
| <u>New Planting</u>                                                    |                                                                                                                                                                                                                                                                                                                                                |
| <b>New tree planting</b>                                               | <p>Year 10 - Formative pruning of established trees to remove crossing/rubbing branches and any other defects. Removal of competing leaders if considered appropriate.</p> <p>Year 15- carry out inspections on a 5-year rotation to advise on any works to improve quality of trees and maintain safety / prevent any developing hazards.</p> |
| <b>New native shrub mix planting:</b>                                  | Prune back the shrub mix as necessary to ensure healthy growth and create a tidy natural shape. Carry out replacement of dead plants in winter. Weed control by hand to maintain weed free area around planting during the growing period.                                                                                                     |
| <b>New formal hedge</b>                                                | Weed control by hand to ensure planting area is weed free. Prune to encourage good establishment and a neat appearance at maximum height of 1.0m.                                                                                                                                                                                              |
| <b>Native mixed hedgerow and hawthorn hedgerow planting</b>            | Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required. Prune to encourage good establishment and a neat appearance at maximum height of 2.0m.                                                                                                                                         |
| <b>Ornamental shrub and herbaceous planting</b>                        | Weed control by hand to maintain weed free area around planting during the growing period. Apply fertiliser twice yearly and top up mulch annually. Prune as necessary to ensure health growth and natural shape of the plant. Carry out replacement of dead plants in winter.                                                                 |
| <u>Turf and Seeding Areas</u>                                          |                                                                                                                                                                                                                                                                                                                                                |
| <b>Amenity grass (Germinal AberSustain mix)</b>                        | Mow every two weeks during the growing season to a height of 30mm. Apply fertiliser annually and spot treat pernicious weeds.                                                                                                                                                                                                                  |
| <b>Informal grass areas (Germinal Eco Species Rich Lawn mix)</b>       | Cut twice a year, once during the late spring and once after the flowering season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                                                             |
| <b>Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)</b>  | Cut twice a year, once during the late spring and one after the flowering season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                                                              |
| <b>Remaining wildflower areas (Germinal WF19 Pollinators Paradise)</b> | Wildflower areas shall be cut 2 times a year during the late spring and after the flower season (September / October) to maintain a sward of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.                                                                               |
| <u>Other Features</u>                                                  |                                                                                                                                                                                                                                                                                                                                                |
| <b>Hard surfacing</b>                                                  | Check annually and repair any defects. Remove encroaching moss/ grass annually on paths and pavements to keep edging exposed.                                                                                                                                                                                                                  |

|                                       |                                                                                                                                                                                                                               |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fencing/ boundary treatments</b>   | Check annually, repair any defects, and replace when necessary.                                                                                                                                                               |
| <b>Bat / Bird Boxes</b>               | Bird boxes to be checked annually. Bat boxes to be checked annually by a licensed bat ecologist. Repair any defects and replace when necessary. The bat box, if damaged, should only be replaced by a licensed bat ecologist. |
| <b>Inlet structures</b>               | Check monthly for obstructions and remove as necessary, to allow free water flow into the infiltration basins.                                                                                                                |
| <b>Silt management</b>                | Check twice a year for silt accumulation and remove as necessary.                                                                                                                                                             |
| <b>Litter Management</b>              |                                                                                                                                                                                                                               |
| <b>Litter</b>                         | Check monthly for litter or other debris and remove as necessary.                                                                                                                                                             |
| <b>Suds litter</b>                    | Check monthly for litter or other debris and remove as necessary.                                                                                                                                                             |
| <b>Weed Control</b>                   |                                                                                                                                                                                                                               |
| <b>Weed control within Suds areas</b> | Occasionally remove pond vegetation if it spreads across the basins by hand clearing or raking. Monitor for invasive weeds such as Japanese Knotweed and control if found.                                                    |
| <b>Hard surfacing weed control</b>    | Check pavements and curbs annually for weeds and spray affected areas with herbicide to keep weed free.                                                                                                                       |
| <b>Paths</b>                          | Remove encroaching moss/ grass from paths and pavements annually to keep edging exposed. Spray with herbicide if necessary.                                                                                                   |

## 5 Annual Maintenance Schedule

The annual schedule summarises the maintenance operations required for a one year period, to be repeated for the first five years and should be reviewed on an annually to allow for any changes that may be required as the site develops and matures.

| MONTH                                                                                                                   | J                                                                                 | F | M | A | M | J | J | A | S | O | N | D |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|
| <b>OPERATION</b>                                                                                                        |                                                                                   |   |   |   |   |   |   |   |   |   |   |   |
| Management of Existing Trees                                                                                            |                                                                                   |   |   |   |   |   |   |   |   |   |   |   |
| Inspect for hazards and deteriorations in health and/ or structural integrity                                           |                                                                                   |   |   |   |   |   |   | X |   |   |   |   |
| Pruning/ Crown lift / thin existing trees above footpaths, paths, and near buildings                                    | In accordance with recommendation made during inspection / identification of work |   |   |   |   |   |   |   |   |   |   |   |
| Other tree works                                                                                                        | In accordance with recommendation made during inspection / identification of work |   |   |   |   |   |   |   |   |   |   |   |
| Management of Existing Hedgerow                                                                                         |                                                                                   |   |   |   |   |   |   |   |   |   |   |   |
| Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required.         | X                                                                                 | X |   |   |   |   |   |   |   |   |   |   |
| New Tree Planting                                                                                                       |                                                                                   |   |   |   |   |   |   |   |   |   |   |   |
| Water as required to ensure good establishment                                                                          |                                                                                   |   |   | X | X | X | X | X | X |   |   |   |
| Basic formative pruning                                                                                                 | X                                                                                 |   |   |   |   |   |   |   |   |   |   |   |
| Check stakes and tree ties and adjust / replace (years 1 to 4, remove at year 5) if necessary and hand weed around base | X                                                                                 |   |   |   | X |   |   |   | X |   |   |   |
| Top up mulch                                                                                                            |                                                                                   |   |   |   |   |   |   |   |   |   | X |   |
| Carry out replacement of dead or dying stock                                                                            |                                                                                   |   |   |   |   |   |   |   |   |   | X |   |
| New Native Shrub Mix Planting                                                                                           |                                                                                   |   |   |   |   |   |   |   |   |   |   |   |
| Weed control                                                                                                            |                                                                                   |   |   |   | X |   | X |   | X |   |   |   |
| Water as required to ensure establishment                                                                               |                                                                                   |   |   | X | X | X | X | X | X |   |   |   |
| Apply fertiliser                                                                                                        |                                                                                   |   |   | X |   |   |   | X |   |   |   |   |
| Top up mulch                                                                                                            |                                                                                   |   |   |   |   |   |   |   |   |   | X |   |
| Replacement planting of dead or dying stock                                                                             |                                                                                   |   |   |   |   |   |   |   |   |   | X |   |
| Check shelters and stakes (years 1 to 2, remove at year 3)                                                              | X                                                                                 |   |   |   | X |   |   |   | X |   |   |   |
| Prune the shrub mix to ensure healthy growth and create a natural shape.                                                | X                                                                                 | X |   |   |   |   |   |   |   |   |   |   |
| Management of Native Mixed Hedgerow and Hawthorn Hedgerow Planting                                                      |                                                                                   |   |   |   |   |   |   |   |   |   |   |   |
| Trim on a three-year rotation                                                                                           | X                                                                                 |   |   |   |   |   |   |   |   |   |   |   |
| Formative pruning to new hedgerow                                                                                       | X                                                                                 |   |   |   |   |   |   |   |   |   |   |   |
| Monitor and weed around new planting and check and adjust stakes, ties, and shelter guards                              | X                                                                                 |   |   |   | X |   |   |   | X |   |   |   |
| Carry out planting to fill any gaps in hedgerow                                                                         |                                                                                   |   |   |   |   |   |   |   |   |   | X |   |
| Apply compost or fertiliser to new planting                                                                             |                                                                                   |   |   | X |   |   |   | X |   |   |   |   |

|                                                                                                                                                     |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Replace dead or dying plant stock                                                                                                                   |   |   |   |   |   |   |   |   |   |   | X |   |
| Ornamental and Herbaceous Shrub Planting                                                                                                            |   |   |   |   |   |   |   |   |   |   |   |   |
| Weed control                                                                                                                                        |   |   |   |   | X |   | X |   | X |   |   |   |
| Water as required to ensure establishment                                                                                                           |   |   |   | X | X | X | X | X | X |   |   |   |
| Apply fertiliser                                                                                                                                    |   |   |   | X |   |   |   | X |   |   |   |   |
| Top up mulch                                                                                                                                        |   |   |   |   |   |   |   |   |   |   | X |   |
| Replacement planting of dead or dying stock                                                                                                         |   |   |   |   |   |   |   |   |   |   | X |   |
| Management of Amenity Grass (Germinal AberSustain mix)                                                                                              |   |   |   |   |   |   |   |   |   |   |   |   |
| Mow every two weeks during spring / summer to a height of 30mm                                                                                      |   |   |   | X | X | X | X | X | X | X |   |   |
| Spot treat pernicious weeds                                                                                                                         |   |   |   |   | X |   |   | X |   |   |   |   |
| Apply fertiliser                                                                                                                                    |   |   | X |   |   |   |   |   |   |   |   |   |
| Wildflower and Informal Grass Areas (Germinal Eco Species Rich Lawn mix)                                                                            |   |   |   |   |   |   |   |   |   |   |   |   |
| Mow twice a year to a height of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up. |   |   |   | X |   |   |   |   | X |   |   |   |
| Spot treat pernicious weeds                                                                                                                         |   |   |   |   | X |   |   | X |   |   |   |   |
| Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)                                                                                      |   |   |   |   |   |   |   |   |   |   |   |   |
| Mow twice a year to a height of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up. |   |   |   | X |   |   |   |   | X |   |   |   |
| Spot treat pernicious weeds                                                                                                                         |   |   |   |   | X |   |   | X |   |   |   |   |
| Remaining wildflower areas (Germinal WF19 Pollinators Paradise)                                                                                     |   |   |   |   |   |   |   |   |   |   |   |   |
| Mow twice a year to a height of 40mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up. |   |   |   | X |   |   |   |   | X |   |   |   |
| Spot treat pernicious weeds                                                                                                                         |   |   |   |   | X |   |   | X |   |   |   |   |
| Management of Other Site Features                                                                                                                   |   |   |   |   |   |   |   |   |   |   |   |   |
| Check and repair fencing, surfacing and street furniture and repair when required                                                                   |   |   |   |   | X |   |   |   |   |   | X |   |
| Visually inspect bird and bat boxes and replace if damaged by suitably licenced ecologist.                                                          |   |   |   |   |   |   |   |   |   | X |   |   |
| Crown lift trees above footpaths and pavements                                                                                                      | X |   |   |   |   |   |   |   |   |   |   |   |
| Check monthly for litter or other debris and remove as necessary.                                                                                   | X | X | X | X | X | X | X | X | X | X | X | X |
| Check monthly for suds litter or other debris and remove as necessary.                                                                              | X | X | X | X | X | X | X | X | X | X | X | X |
| Check pavements and curbs annually for weeds and spray affected areas with herbicide to keep weed free.                                             |   |   |   |   |   |   |   |   |   | X |   |   |
| Remove encroaching moss/ grass from paths and pavements annually to keep edging exposed. Spray with herbicide if necessary.                         |   |   |   |   |   |   |   |   |   | X |   |   |

## 6 Long Term Maintenance Schedule (Years 6-25)

The long-term management plan is a guideline for the maturing phase of the site. As mentioned earlier this should be reviewed every 5 years as a minimum to take account of site based ecological changes and amendments to legislation.

| YEAR                                                                        | 6                       | 7 | 8                                                                                            | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17                                                                         | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|-----------------------------------------------------------------------------|-------------------------|---|----------------------------------------------------------------------------------------------|---|----|----|----|----|----|----|----|----------------------------------------------------------------------------|----|----|----|----|----|----|----|----|
| OPERATION                                                                   | 6                       | 7 | 8                                                                                            | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17                                                                         | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| Management of Trees                                                         |                         |   |                                                                                              |   |    |    |    |    |    |    |    |                                                                            |    |    |    |    |    |    |    |    |
| Monitor and manage standard trees                                           | Annually if appropriate |   |                                                                                              |   | x  |    |    |    |    | x  |    |                                                                            |    |    | x  |    |    |    |    | x  |
| Remove stakes / ties as required                                            | x                       | x | x                                                                                            | x | x  |    |    |    |    |    |    |                                                                            |    |    |    |    |    |    |    |    |
| Crown lift / thin existing trees above footpaths, paths, and near buildings |                         |   |                                                                                              |   | x  |    |    |    |    | x  |    |                                                                            |    |    | x  |    |    |    |    | x  |
| Monitor for invasive species                                                | x                       | x | x                                                                                            | x | x  | x  | x  | x  | x  | x  | x  | x                                                                          | x  | x  | x  | x  | x  | x  | x  | x  |
| Management of Native Hedgerows                                              |                         |   |                                                                                              |   |    |    |    |    |    |    |    |                                                                            |    |    |    |    |    |    |    |    |
| Manage hedgerows by trimming 1/3 each year                                  | x                       | x | x                                                                                            | x | x  | x  | x  | x  | x  | x  | x  | x                                                                          | x  | x  | x  | x  | x  | x  | x  | x  |
| Manage hedgerows by laying or coppicing,                                    |                         |   | Lay or coppice hedgerow initially between 8 to 15 years when condition of the hedge is poor. |   |    |    |    |    |    |    |    | Lay or coppice hedgerow a second time after 8 to 12 years after first cut. |    |    |    |    |    |    |    |    |
| Manage hedgerows by planting in gaps                                        | x                       |   |                                                                                              |   | x  |    |    |    |    | x  |    |                                                                            |    |    | x  |    |    |    |    | x  |
| Formal Hedgerow                                                             |                         |   |                                                                                              |   |    |    |    |    |    |    |    |                                                                            |    |    |    |    |    |    |    |    |
| Prune as necessary to maintain a neat appearance                            | x                       | x | x                                                                                            | x | x  | x  | x  | x  | x  | x  | x  | x                                                                          | x  | x  | x  | x  | x  | x  | x  | x  |
| Ornamental Shrub and Herbaceous Planting                                    |                         |   |                                                                                              |   |    |    |    |    |    |    |    |                                                                            |    |    |    |    |    |    |    |    |

|                                                                                                                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Continue to carry out annual pruning and weed control                                                                       | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Other Site Features                                                                                                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Monitor and repair fencing, surfacing and street furniture and repair when required                                         | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Visually inspect bird and bat boxes and replace if damaged by suitably licenced ecologist.                                  | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Check monthly for litter or other debris and remove as necessary.                                                           | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Check monthly for suds litter or other debris and remove as necessary.                                                      | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Check pavements and curbs annually for weeds and spray affected areas with herbicide to keep weed free.                     | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Remove encroaching moss/ grass from paths and pavements annually to keep edging exposed. Spray with herbicide if necessary. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

## 7 Summary

This report described the proposed development, the landscape design objectives and set out detailed management proposals to ensure a high-quality environment within the development.

This report provides:

- Public Open Space management proposals to ensure the existing vegetation and new planting are managed to retain and enhance the character and diversity of the area. To ensure there is good protection of the existing habitats. To monitor and enhance biodiversity of the existing habitats to certify that flora and fauna continue to thrive, providing attractive surroundings for the community and create opportunities for wildlife.
- Provide a detailed description of the maintenance operations required for Maintenance Phase (Years 1-2), Establishment Phase (Years 3-5) and Long-Term Management Guidelines (Years 6-25).
- Provide an annual schedule that summarises the maintenance operations required for a one-year period to be repeated for the first five years and a Long-Term Maintenance Schedule (Years 6-25).