

# Land to the East of Tilletts Lane, Warnham

## Landscape and Ecology Management Plan



April 2025

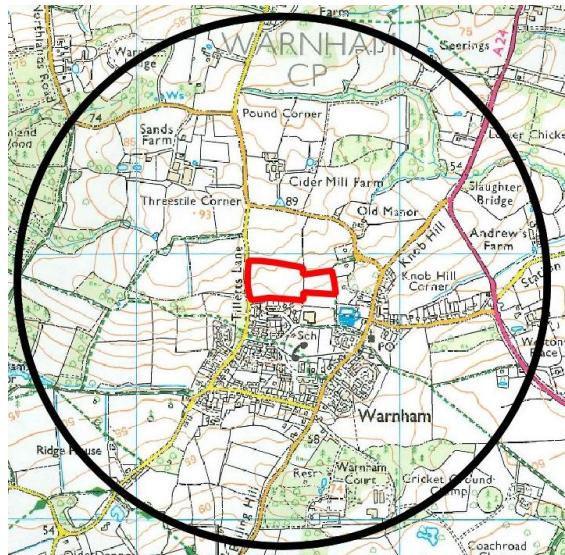
<b>Project reference:</b> 2325				
<b>Date</b>	<b>Rev</b>	<b>By</b>	<b>Chk</b>	<b>Comments</b>
03.04.25	01	NC	LF	Initial draft for ECOLOGY INPUT (see text in italics to amend or replace)

## Document background information

The **Landscape and Ecology Management Plan (LEMP)** has been prepared by **The terra firma Consultancy Ltd** to provide a comprehensive long-term strategy for the upkeep of the external environment of the new housing development on the Land to the East of Tilletts Lane, Warnham.

This incorporates specialist ecological advice from the team ecologist; **AEWC**.

The plan is produced as part of the application for planning consent for the development of the site that requires details on management for at least the first 10 years from implementation to include Biodiversity Net Gain and Sustainable Urban Drainage systems.



*View from the Northwest corner of the site, looking over and beyond the site, onto Warnham.*

The scheme will be delivered for the client by a building contractor with specialist landscape subcontractors with expertise in the ecological as well as ornamental elements of the proposals. Building contractors will take over the areas required for construction, including the protection and maintenance of existing landscape areas and installation of new landscape proposals within. Following practical completion and handover of the built elements, a 12 months' maintenance and defects liability period will ensue for the establishment of the landscape works under the control of the contractor's specialist landscape subcontractor (to be approved). It is anticipated that the new house owners will take over the maintenance of each area (phased if appropriate) following this and a handover to the satisfaction of all parties.

Year 1 of the LEMP programme commences with the contractor's 12 months maintenance and defects liability period and this document will therefore form part of the contract documents, monitored by the Contract Administration team and landscape consultants.

Thereafter, it will be undertaken by the residents with common parts by a communal management company. Residents will review work being undertaken and discuss and agree on-going programme and any changes to requirements with those carrying out the maintenance.

Each detailed guidance section has an accompanying table of maintenance activities to be used as a checklist during site visits for the first ten years, as well as an indicative programme to help plan resourcing. These may also be used as monitoring and review tools. Tables indicating long-term activities up to year 10 are also provided. All tables are found in the Appendices section.

It is intended that the document can extend well beyond this period but then at completion of that, would be the ability to extend this far further into the future with the benefit of what has been learned through the refurbishment and its initial establishment and management process.

### ***The Ecological Strategies***

**\*All texts in italics to be amended or replaced by the team ecologist – the example below in italics from a planting scheme.**

*The site currently consists of cereal crops and modified grassland, habitats of low distinctiveness and little potential for protected species. An area of neutral grassland ruderal habitat, adjacent the stream to the east is of moderate distinctiveness and some potential to species such as reptiles.*

*The majority of the habitats on the site would be lost to the proposals. The eastern portion of the site consists of an area of low lying floodplain which appears to flood seasonally and is not being developed. The strategy for ecology on the site is to enhance this area into a good condition grassland, dense with varied forbs providing a strong ecotonal edge to the stream. Ponds will be added to this area both to accept runoff and to provide slightly more permanent areas of water, with a differing vegetation type.*

*The development itself will have bioswales to the northern edge as well as a continuous native hedge. The hedge will connect up the eastern and western hedges providing a connective feature outside the development. The existing eastern hedge will also be extended.*

*In addition to such habitat works, new log and brash piles are proposed, as well as reptile hibernacula in higher parts less subject to flooding. The proposals would greatly increase the potential for reptiles, invertebrates, birds, bats and potentially water voles.*

# Contents

<b>Document background information .....</b>	<b>1</b>
<b>1 Development design intent.....</b>	<b>5</b>
1.1 Existing site at conception of scheme .....	5
1.2 Design concept.....	5
<b>2 Ecology .....</b>	<b>5</b>
2.1 Ecological surveys and assessments undertaken:.....	5
<b>3 Management specification.....</b>	<b>8</b>
3.1 General actions: .....	8
<b>4 Hard surfaces, external fittings and furniture .....</b>	<b>9</b>
4.1 Management objectives.....	9
4.2 Management operations.....	9
<b>5 Fencing and gates .....</b>	<b>9</b>
5.1 Management objective .....	9
5.2 Management operations.....	9
<b>6 Surface water drainage system.....</b>	<b>10</b>
6.1 Stormwater Drainage.....	10
6.2 Ditches, Swales and Attenuation Basins.....	10
<b>7 Grass areas.....</b>	<b>11</b>
7.1 Lawns and amenity grass.....	11
7.2 Mixed Scrub Habitats .....	12
7.3 Neutral/Ruderal Grassland Habitats.....	13
<b>8 Planting .....</b>	<b>14</b>
8.1 Existing trees and vegetation .....	14
8.2 New specimen trees .....	14
8.3 Clipped hedges.....	15
8.4 Native hedges.....	16
8.5 Ornamental planting beds (including rain gardens).....	16
8.6 Perennials.....	17
8.7 Groundcover.....	17
8.8 Climbers .....	18
8.9 Bulbs.....	18
<b>9 Weed, pest and disease control.....</b>	<b>19</b>
<b>10 Reporting and review process .....</b>	<b>19</b>
<b>11 Maintenance activities (years one to ten).....</b>	<b>20</b>
<b>12 Health and Safety .....</b>	<b>20</b>
12.1 Safe working at night .....	20
12.2 Safe working in or near water .....	20
12.3 Chemical Use .....	20
12.4 First Aid .....	21
12.5 Procedures for external contractors .....	21
<b>Appendix B: Indicative Programme – Years 1 to 10 .....</b>	<b>1</b>

## List of Planting Plans

DRAWING NUMBER	DRAWING TITLE
2516-TFC-00-XX-DR-L-1001	Landscape Masterplan
2516-TFC-00-XX-DR-L-1002	Landscape Planting Proposal (Trees, Hedgerows, Climbers set out)
2516-TFC-00-XX-DR-L-1003	Landscape Planting Schedules
2516-TFC-00-XX-DR-L-2001	Hard Landscape Plan 1 of 4
2516-TFC-00-XX-DR-L-2002	Hard Landscape Plan 2 of 4
2516-TFC-00-XX-DR-L-2003	Hard Landscape Plan 3 of 4
2516-TFC-00-XX-DR-L-2004	Hard Landscape Plan 4 of 4
2516-TFC-00-XX-DR-L-2100	Levels Plan
2516-TFC-00-XX-DR-L-2101	Call out Diagrams
2516-TFC-00-XX-DR-L-2200	Coordinated Landscape and Utilities Plan
2516-TFC-00-XX-DR-L-3001	Soft Landscape Plan 1 of 2
2516-TFC-00-XX-DR-L-3002	Soft Landscape Plan 2 of 2
2516-TFC-00-XX-DR-L-4001	Soft Landscape Details Plan 1 of 3
2516-TFC-00-XX-DR-L-4002	Soft Landscape Details Plan 2 of 3
2516-TFC-00-XX-DR-L-4003	Soft Landscape Details Plan 3 of 3
2516-TFC-00-XX-DR-L-4004	Hard Landscape Details Plan 1 of 2
2516-TFC-00-XX-DR-L-4005	Hard Landscape Details Plan 2 of 2
2516-TFC-00-XX-DR-L-5001	Cross Sections
2516-TFC-00-XX-DR-L-5002	Cross Sections
2516-TFC-00-XX-DR-L-5003	Cross Sections
2516-TFC-00-XX-SP-L-7001	Landscape Specification
2516-TFC-00-ZZ-RE-L-8001	LVIA V1
2516-TFC-00-ZZ-RE-L-8002	LVIA V2
	Landscape Inputs to DAS

# 1 Development design intent

## 1.1 Existing site at conception of scheme

- 1.1.1 The development area comprises of 3.55 hectares and sits adjacent to the existing built-up area boundary and is allocated for unit housing.
- 1.1.2 The current use is agricultural fields.

## 1.2 Design concept

- 1.2.1 The new development aims to add to the new building stock of the village with a respectful approach of traditional vernacular architecture complemented by its landscape scheme.  
Ecological recommendations form an inherent part of the proposals and management of this landscape.

# 2 Ecology

## 2.1 Ecological surveys and assessments undertaken:

*\*All texts in italics to be amended or replaced by the team ecologist – the example below in italics from a planting scheme.*

### 2.1.1 Extended Phase 1 habitat survey

*A Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment was carried out on the 2nd of August by George Sayer (BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MARborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist).*

*The proposal area consists of a section of arable field surrounded by hedges and scrub, and an area of ruderal vegetation abutting a stream.*

*The proposals are for a residential development of 5no. dwellings on the site; the eastern ruderal land is proposed for attenuation ponds and ecological enhancement to create a floodplain wetland mosaic habitat.*

*The proposals are not anticipated to have any significant impact upon ecology; the proposal site offers no significant potential for any protected species. There is a known badger sett c.200.0 m from the site. With basic mitigation measures there would be no risk of harm to badgers.*

*The ruderal habitat to the east offers some potential for reptiles. A method statement is provided to ensure no harm to reptiles. The enhancements of the land would result in a gain for reptiles.*

*No evidence of water voles was found on the stream or the adjacent ruderal land but some potential remains for them to be present.*

*No further surveys are currently recommended at the site for these proposals.*

### 2.1.2 Biodiversity Net Gain (BNG) Assessment

*A biodiversity net gain assessment was undertaken by South Downs Ecology (2024). This sets out enhancements made to the eastern area and landscaping on site for biodiversity. The management plan prescriptions will need to have regard to the following habitat areas, and provision of measures to meet criteria set out in the BNG assessment:*

- Creation of new areas of vegetated gardens – including ornamental planting to the frontages;
- Planting of new native mixed-species hedges;
- Enhancement of the existing grassland/ruderal habitat to the east through cutting and seeding with a wetland wildflower mix;
- Planting of 11 trees, of which all are proposed to be native species;
- Creation of shallow ponds and a soakaway ditch/bioswale.

*Ecological recommendations and constraints:*

### **2.1.3 Introduction to ecological assessment**

The ecological assessment for the site has recommended a number of measures to ensure that the ecology features on site are not impacted during the construction of the proposed new scheme, and enhancements are provided in new habitats and gardens created during operation.

### **2.1.4 Ecological Impact Assessment**

The project is subject to recommendations within the Ecological Impact Assessment (GS084.TheForge.EcIA.v3 – see South Downs Ecology, 2024). This sets out all measures required to ensure that the ecology features are not adversely impacted during works, having regard to constraints and risks from construction and operation:

- Trees – protection of retained trees and habitats that are not being impacted by the proposals. Trees should be subject to protection using the British Standard BS5837:2012. All boundary vegetation to be retained and protected;
- Bats – provision of new wetland planting habitats of value to foraging and commuting bats, and consideration of lighting impacts from the new development. Provision of bat boxes for new roosting opportunities, and protection of boundary vegetation from construction activities;
- Hedgehog – measures to ensure that works do not impact individual animals, and provision of new garden habitats, plus movements through the site with gaps in any fencing;
- Nesting birds – measures to ensure that nesting bird habitat is removed outside the nesting bird season. Provision of bird boxes to provide new nesting opportunities, and new habitats in the form of hedges;
- Reptiles and Amphibians – a method statement for the cutting of the suitable reptile and amphibian habitat on the east, prior to enhancement to ensure that reptiles are not harmed as a part of the scheme. Enhancement of this habitat for reptiles with log piles and hibernacula;
- Reptiles and Amphibians – a method statement for the cutting of the suitable reptile and amphibian habitat on the east, prior to enhancement to ensure that reptiles are not harmed as a part of the scheme. Enhancement of this habitat for reptiles with log piles and hibernacula.

## **2.2 Operational Recommendations and Constraints**

This management plan considers the creation of new habitats and landscaping in the gardens and open spaces around the site and will provide the details and management prescriptions for new habitats for landscaping and wildlife, having regard to the ecological features above and benefits such habitats can provide to the features. It takes into account the recommendations in the ecological assessment on site to date (GS084.TheForge. EcIA.v3 – see South Downs Ecology, 2024).

These include:

- Trees– Planting and establishment of 11 trees.
- Invasive Species – removal of any invasive species discovered;
- Creation and management of new garden habitats set out on the Landscape Planting Plan;
- Bats – enhancement of hedges and water meadow habitats, of value to foraging and commuting bats; Bat boxes provided at various locations on the on the facades of the new buildings. Any maintenance would need to be carried out in the winter months when the bats and birds are absent from the boxes (Nov-Feb).
- Hedgehog – provision of new garden habitats and allowing movements through the site with gaps in any fencing; Hedgehog holes will be provided between gardens.
- Nesting birds – provision new habitats in the form of hedges; Swift bricks and house sparrow boxes to be provided at various locations on the facades of each new building.
- Reptiles – provision of new habitats to the east of site, including enhanced grassland, wood piles and hibernacula; Log piles can be found at various locations on the site.
- Invertebrates – provision of dead wood and wood piles in gardens on site. Provision of suitable nectar rich species. Log piles can be found at various locations on the site.

## **2.2.4 Monitoring and maintenance prescriptions**

### **2.2.4.1. Bird/ bat/Insect boxes-**

*Description and evaluation of features to be managed:*

*The following bird/bat/insect boxes will be affixed to the building at various locations. The make of them would be as follows:*

- 5 x AfS S-Brick or BirdBrickHouses Integrated Swift Boxes
- 5 x BirdBrickHouses Integrated Bird Boxes
- 5 x BirdBrickHouses Integrated Bat Boxes
- 5 x Green and Blue Bee Bricks

*This will provide additional nesting/roosting opportunities for birds, bats and insects in the local area.*

*Prescriptions for appropriate management options:*

*Any maintenance would need to be carried out in the winter months when bats and birds will absent from the boxes (November-February). Any maintenance required to bat boxes to be undertaken only by a suitably licensed individual.*

*Annual maintenance checks of bird/bat boxes, to include:*

- Check of screw/fixtures to ensure boxes are secure, re-affixing if necessary.
- Check for old nests/bat droppings to confirm previous occupancy.
- Clean out old nests and other material from bird boxes with still brush, to remove potential parasites.

### **2.2.4.2 Log Piles and Reptile Hibernacula-**

*Description and evaluation of features to be managed:*

*Three log piles will be established towards the boundaries of the grassland, two on the bank adjacent the development and one near the stream, as show on the Reptile Mitigation Plan within the Ecological Impact Assessment. Log piles to be c.1m in all directions, formed of native wood in varying sizes including vertically driven timbers.*

*Two hibernacula are proposed on the western edge of the grassland, on higher ground less prone to flooding. These shall be formed of bricks, tiles or stones with logs, in a pile 1.0m by 1.0m by 0.5 m high buried c.30.0cm into the ground and covered over with turfs for approximately 70% of the area.*

*These will provide a valuable habitat for invertebrates and refuge from small vertebrates.*

*Prescriptions for appropriate management options:*

- Once established, no management is required.
- Leave undisturbed.

### **2.2.4.3 Hedgehog holes along boundary fences-**

*Description and evaluation of features to be managed:*

*Hedgehog holes will be provided along the proposed timber fencing at the southern and south-western boundary, in front of the flat lawn area on site. (Please refer to terra firma detail, 2441-TFC-00-00-DR-L-4003 for more information.)*

*Prescriptions for appropriate management options:*

*Once fencing installed, make sure to leave the holes free of any blockages (debris, dirt, etc.).*

*Maintenance checks may be carried out on a monthly basis.*

## 3 Management specification

A summary of the regular maintenance activities has been produced as a guide (see Appendix C).

### 3.1 General actions:

- 3.1.1 The operational team is expected to adopt a pro-active approach to management and maintenance generally and bring any issues requiring attention and action to the notice of the Management Team.
- 3.1.2 All materials and workmanship are to be to the highest possible standards in accordance with relevant good practice, as described by British Standards or other relevant laws, policy or guidance.
- 3.1.3 All operatives must be appropriately skilled and experienced for the type and quality of work, especially where COSHH is applicable.
- 3.1.4 Work is only to be carried out while soil and weather conditions are suitable, or as appropriate to any ecological constraints (e.g. bird nesting seasons etc.).
- 3.1.5 Only machinery and tools suitable for site conditions and the work carried out are to be used. Hand tools should be used around existing trees and in confined places. Nylon filament rotary cutters or other mechanical tools shall not be used closer than 100mm to the stem of any tree or plant.
- 3.1.6 All grass cutting machinery to be well maintained and correctly adjusted to give a clean and even cut. Each machine is to be appropriate to the management plan requirements.
- 3.1.7 Any ground disturbed during maintenance operations must be made good.
- 3.1.8 All woody arisings are to be disposed of offsite. All grass cuttings may be let fly as appropriate.
- 3.1.9 Soil and other arisings are to be removed from hard surfaces and all areas left in a clean and tidy condition after maintenance operations are complete.
- 3.1.10 All litter is to be collected from all soft landscape areas and disposed of offsite. No burning on site will be allowed.
- 3.1.11 Prior to handover, all newly planted beds and grass areas shall be watered to ensure their successful establishment and vigorous growth, particularly during dry periods.
- 3.1.12 After handover, watering of planted areas shall not generally be carried out, with the exception of any newly planted beds or new grass, which shall be watered to ensure their successful establishment and vigorous growth, particularly during dry periods.
- 3.1.13 The operational team is responsible for ensuring availability of water, and transportation to planting areas (by hose or bowser). Water shall be kept free from any impurities at all times.
- 3.1.14 All plants and planting areas shall be maintained as weed free. Planting beds shall be kept clear of all weeds, including roots, by hand using hoes, trowels or forks, taking care to remove not more than a minimum quantity of soil and causing minimum disturbance to trees, plants and mulched surfaces, leaving the area in a neat, raked, clean condition. All mulch spilling onto adjacent areas shall be swept up and if not contaminated with weeds or rubbish, returned to planted/mulched areas. Remove weeds growing on or in mulch by hand weeding or use of herbicide.
- 3.1.15 All plants and planting areas shall be maintained as pest and disease free at all times. The operational team is expected to adopt a pro-active approach to pests and diseases and treat accordingly. Any plant losses as a result of pest and disease infestation shall be reported to the Management Team and replacement planting discussed.
- 3.1.16 The operational team will ensure feeding of all grass, plants and trees using a suitable and approved slow-release fertilizer, used at appropriate times of year.
- 3.1.17 All vegetation shall be pruned as necessary and when requested to avoid the following: obstruction of pedestrians or vehicles; obstruction of signage or lighting; obstruction of sight lines.
- 3.1.18 Dead plants shall be removed and where approved, by the Management Team and deemed appropriate to the design of the landscape or required for functional purposes (i.e. screening), gaps should be filled during the next planting season using an appropriate sized replacement. Dead foliage, wood and flowers shall be removed as far as is practical, with priority given to areas subject to closest and heaviest pedestrian and vehicular traffic.

## 4 Hard surfaces, external fittings and furniture

### 4.1 Management objectives

- 4.1.1 To ensure that all hard-surfaced areas, including paving, roads and access points, are kept in a neat and tidy condition (in both planned and reactive manners), including hard surfaced areas in and around delivery, refuse and storage areas and parking bays.
- 4.1.2 To ensure that all fittings and furniture, including signage and lighting, are kept in a clean condition and in good repair.

### 4.2 Management operations

- 4.2.1 Remove litter, fallen leaves, cigarette ends, chewing gum etc. from all paving to maintain neat appearance. Particular attention should be paid to areas where leaves collect (e.g. to corners).
- 4.2.2 All fittings and furniture should be maintained in a clean state at all times and shall be regularly checked.
- 4.2.3 Report any deterioration and damage to hard surfacing, fittings and furniture to the Main Contractor or the Management Team immediately to allow repair or replacement as soon as possible.

## 5 Fencing and gates

### 5.1 Management objective

- 5.1.1 To ensure that all fencing and gates are kept in a well maintained, neat and tidy condition in order to ensure all gates and fittings are operational and in good working order.

### 5.2 Management operations

- 5.2.1 Remove litter and fallen leaves to maintain neat appearance on face and at base of fencing. Particular attention should be paid to areas where leaves gather, and these should be removed regularly to prevent a build-up.
- 5.2.2 Maintenance of locks and hinges (e.g. regular lubrication) is not anticipated to form part of this management plan.
- 5.2.3 All posts shall be periodically checked for stability and damage to ensure that the integrity of fencing is not compromised. All cross members shall be similarly checked, as shall the tautness of wires where applicable.
- 5.2.4 Report any damage or deterioration in condition to the Main Contractor or the Management Team immediately to allow consideration of repair or replacement as soon as possible.
- 5.2.5 Ensure that there are no sections without hedgehog friendly corridors (a small gap at the base of the fencing to allow access on and off site).

## 6 Surface water drainage system

### 6.1 Stormwater Drainage

#### 6.1.1 Management objective

- 6.1.1.1 To ensure that drainage system is kept in good working condition.

#### 6.1.2 Management operations

- 6.1.2.1 Ensure that all above ground area of drains are kept free from litter and leaves at all times.
- 6.1.2.2 Any suspected blocked drains should be reported to the Management Team as soon as they are identified so that arrangements, with the operations team or specialist contractor can be made for their clearance.
- 6.1.2.3 All surface drains to be cleared out regularly by jet-washing or manually extracting debris, dependent upon drain type.
- 6.1.2.4 Report any blocked drains, deterioration or damage to the Management Team and repair or replace as soon as possible.

### 6.2 Ditches, Swales and Attenuation Basins

#### Management objectives

- 6.2.1 To ensure that swales are maintained to allow free flow of water at all times whilst providing areas of damp grassland habitat.

**\*All texts in italics to be amended or replaced by the team ecologist – example below.**

- 6.2.2 *Vegetation shall be managed in accordance with ecological objectives allowing for at least two visits per year in spring and autumn to monitor condition and clear/cut back unwanted or overgrown species. See also 6.2 for water meadow context.*

#### Management operations

- 6.2.3 Swales shall be regularly checked, and any debris, leaves, litter or undesirable plant species shall be removed.
- 6.2.4 Pipes, inlets, outflows and overflows shall be monitored on a monthly basis (or more frequently if required) and cleared of blockages as necessary.
- 6.2.5 Infiltration surfaces shall be monitored on a monthly basis (or more frequently if required) for ponding, compaction and silt accumulation. Ponding for a period greater than 48 hours shall be recorded and appropriate remedial measures taken if further monitoring reveals this to be necessary.
- 6.2.6 Mowing to defined pathways and hard surface boundary edges shall be carried out using approved machinery to maintain the vegetation length within the limits of 50 mm and 70 mm during March to October inclusive and between 70 mm and 100 mm during the rest of the year. (As a guide, this will normally require mowing at up to once a fortnight in the peak of the season). The clippings shall be removed from site or to an agreed compost pile location. Mowing shall be carried out without rutting or compaction of the surface, especially when ground conditions are soft. Do not cut during periods of drought, or when ground conditions or grass are wet, without the prior agreement of the Management Team. All machinery is to be fitted with appropriate guarding to prevent damage to adjacent planting, structures, fittings or surfaces.
- 6.2.7 Mowing within and around swales, ditches and attenuation basins/ponds should be restricted to one strim per year shall be carried out to remove vegetation comprising 25% of the edge treatment on rotation. 15% of the edge shall be maintained as bare accessible ground through regular mowing and 60% shall remain under cover of rough/marginal vegetation. Strimming shall only take place during winter months.
- 6.2.8 All material removed shall be left adjacent to swales etc (without compromising use of site) for two days to allow for migration of animals and insects back to channel, prior to removal off site. Areas adjacent to the swales used for clearance operations should be limited to avoid damage to grassed areas.
- 6.2.9 As required, the following remedial actions shall be carried out: Repairs to erosion or other damage by re-turfing or reseeding; Re-levelling of uneven surfaces and reinstatement of design levels; Scarification and spiking of topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction; Removal of sediment build-up where appropriate; Removal of harmful or polluting residues by safe means.

- 6.2.10 Accessible edges shall be checked to ensure good ground stability and adequate surfacing to prevent slips, trips and falls. Any shortfalls shall be reported to the Management Team and access to the edge of the swale restricted until appropriate corrective measures have been undertaken.
- 6.2.11 Rain gardens are dealt with under planting beds but will additionally be required to be checked for fulfilling their function for drainage attenuation as points 6.2.4 and 6.2.5

## 7 Grass areas

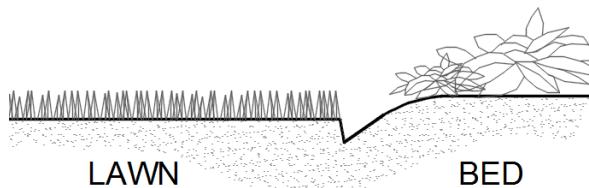
### 7.1 Lawns and amenity grass

#### 7.1.1 Management objective

- 7.1.1.1 To provide an even stand of vegetation of uniform height and colour comprising predominantly grass species.

#### 7.1.2 Management operations

- 7.1.2.1 All litter, large amounts of fallen leaves, twigs and branches shall be removed to maintain a neat appearance (and before mowing).
- 7.1.2.2 Mowing is to be carried out using approved machinery to maintain the vegetation length within the limits of 30 mm and 50 mm during April to August inclusive and between 50 mm and 70 mm during the rest of the year. (As a guide, this will normally require mowing at up to once a fortnight in the peak of the season). The clippings may be let fly but must be distributed evenly over the surface and at no time shall the layer of clippings be of such a depth that will affect the growth of vegetation. Clippings are not to be left on paths or roads.
- 7.1.2.3 Nylon filament rotary cutters or other mechanical tools are not to be used closer than 100mm to the stem of any tree or plant.
- 7.1.2.4 Mowing shall be carried out without rutting or compaction of the surface, especially when ground conditions are soft. Do not cut during periods of drought, or when ground conditions or grass are wet, without the prior agreement of the Management Team.
- 7.1.2.5 All edges of grass areas, against footpaths, roadways, trees, posts, shrub borders and any other obstruction are to be kept trimmed neat and tidy at each mow.
- 7.1.2.6 Clippings are not to be left on paths or roads – all hard areas shall be swept clear of arisings.
- 7.1.2.7 Re-form edges abutting paths, borders, manhole covers and the like once a year, with a suitable edging tool, to clean straight lines or smooth flowing curves. A clean edge shall be formed, sloping slightly back from vertical (refer to diagram below). Soil shall be drawn back from edges to permit the use of edging shears and arisings removed.



- 7.1.2.8 Spot weeding of isolated weed infestation is to be carried out, with spraying of areas with a suitable approved selective herbicide in accordance with the manufacturer's instructions as necessary.
- 7.1.2.9 Spring Renovation - all close mown grass areas are to be scarified, verti-drained (or spiked with hand fork where access is restricted) and over seeded where necessary.
- 7.1.2.10 Any areas damaged by trampling, abrasion or scalping during mowing shall be re-seeded or repaired. Reinstate worn areas as follows:
  - (a) Remove the damaged turf to a depth of 50mm, cultivate to a fine tilth and either:
    - i. Re-turf using turf of a quality and appearance to match existing, or;

- ii. Fill with fine topsoil to BS 3882 premium (or as originally laid) grade, substantially free from stones, debris and weeds, and reseed with a seed mix to match existing grass in quality and appearance.
- (b) Provide protection and watering to promote successful germination and/or establishment.
- (c) Turf laid for new grass areas or as part of repairs to existing grass shall be watered immediately after laying, then repeatedly and sufficiently during the establishment period to allow water to reach the underlying soil and ensure establishment.

7.1.2.11 All edges are to be trimmed with every cut and edges to be reformed once a year.

## 7.2 Mixed Scrub Habitats

### 7.2.1 Management objective

7.2.1.1 To provide an area of semi-natural mixed scrub growth as a semi-natural habitat at the edge of the gardens, allowed to develop naturally, with varying heights and micro habitats, and should as minimum contain at least 3 native woody species to allowed to grow with varying height

### 7.2.2 Management operations

- 7.2.2.1 The initial planting of the new habitat should be undertaken according to the Landscape Planting Plan, and early aftercare will be subject to the measures outlined in Section 8.1 below.
- 7.2.2.2 90% of the new shrub planting will be of native species (see Landscape Planting Plan).
- 7.2.2.3 The habitats along the southern/southeastern edge of the rear garden will then be managed to provide a moderate condition mixed scrub habitat. In order to do this at least three of the five measures, set out below, to create a semi-natural habitat are required to be met.
  - At least three native woody species are present with no one species comprising more than 75% of the cover;
  - Habitat is managed where possible to provide a good age range, from young scrub to mature scrub;
  - Non-native invasive species (Schedule 9 of the Wildlife & Countryside Act) are not present and other undesirable species (Creeping Thistle *Cirsium arvense*, Common Nettle *Urtica dioica*, Cherry Laurel *Prunus laurocerasus*, Snowberry *Symphoricarpos* spp., Buddleia *Buddleja* spp., Cotoneaster *Cotoneaster* spp., Spanish Bluebell *Hyacinthoides hispanica* or hybrids) make up less than 5% of the ground cover;
- 7.2.2.4 Following establishment after the first 3-5 years, ongoing management should aim to be undertaken outside the nesting bird season, with the exception of minor pruning to the garden edge of the scrub to manage
- 7.2.2.5 Management should be undertaken late winter to allow any fruit to be utilised by wildlife during the winter period.
- 7.2.2.6 In any one winter, a maximum of one third of the scrub should be cut to create glades or simply pruned to maintain the habitat and not spread into adjoining garden areas. As the scrub is at the edge of a garden, pruning of the garden edge to maintain neatness at this edge can be undertaken. The aim is to provide a mix of heights of the scrub to provide some new growth, some mature growth with areas of fruiting/flowering.
- 7.2.2.7 Non-native invasive species should be managed annually by pulling or spot herbicide treatment, having regard to the species listed in 7.2.2.3 above.
- 7.2.2.8 Where possible within the gardens, a tall grassland edge of c. 0.5m-1m should be provided that is not cut as per the lawn management measures set out below but left and only the woody material cut to provide a semi-natural edge to the scrub habitat.

## 7.3 Neutral/Ruderal Grassland Habitats

\*All texts in italics to be amended or replaced by the team ecologist – the example

### 7.3.1 Management objective

7.3.1.1 *To provide an area of semi-natural water meadow, with diverse wetland species consisting of grasses and forbs, complimenting the adjacent stream and providing a diverse habitat for invertebrates, mammals and reptiles.*

### 7.3.2 Management operations

7.3.2.1 *The initial planting of the new habitat should be undertaken according to the Landscape Planting Plan, and early aftercare will be subject to the measures outlined in Section 8.1 below.*

7.2.2.2 *90% of the new shrub planting will be of native species (see Landscape Planting Plan).*

7.2.2.3 *The habitats will then be managed to provide a good condition neutral grassland habitat. In order to do this at least five of the six measures, including essential criteria A and F set out below must be achieved, to create a semi-natural habitat are required to be met.*

- *The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.*
- *Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.*
- *Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.*
- *Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.*
- *Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA5) are present, this criterion is automatically failed.*

7.2.2.4 *Initial preparation shall involve a two-phase mowing process, whereby the tall forbs and grasses are cut to c.100mm height, and the arisings removed. This would allow small mammals and reptiles to vacate the area, prior to a final cut to ground level. This cut should expose the soil, which generally appeared open beneath the forbs. If the sward has subsequently infilled, then a light scarifying can be undertaken following the final cut to open the sward.*

7.2.2.5 *Seeding should, where possible, be undertaken in spring, as the area appears prone to inundation which might wash away seeds. Seed should be gently firmed-in. The vegetation shall be allowed to grow until late summer when it shall be subject to an initial cut to no lower than 50mm. The vegetation shall be cut as and when required over winter.*

7.2.2.6 *Cutting should cease in mid-March and the habitat allowed to grow unchecked until August. The habitat shall then again be cut to 50mm and arisings removed. The vegetation shall be cut only if required over winter. Given the condition criteria above, the sward shall not be cut entirely uniformly – areas such as on slopes where mowing is more difficult could be left taller (over 70mm height) and some areas cut very low to expose soil and allow new seed establishment. The aim should be to have a minimum of 20% below 70mm sward height after each cut, and a minimum of 20% left longer than this. The areas left long and cut short should be varied on rotation to ensure maximum variety of habitats over time.*

7.2.2.7 *A diverse seed mix such as the Emorsgate EM8 Meadow Mixture for Wetlands should be used, which contains a diverse mix of 20% wildflowers and 80% slow-growing grasses. The mix contains typical neutral grassland species such as knapweed, birdsfoot trefoil, ribwort plantain, meadow buttercup, common bent, sweet vernal grass, which will enable the sward to become a good example of neutral grassland. Species such as ragged robin, tall fescue and grey sedge will thrive in the wettest areas around the proposed ponds.*

## 8. Planting

### 8.1 Existing trees and vegetation

#### 8.1.1 Maintenance objective

- 8.1.1.1 To ensure existing trees and vegetation are kept in a healthy and safe condition.
- 8.1.1.2 The Landscape Contractor shall ensure that all existing trees and vegetation are treated with the same care and attention as the newly planted stock.
- 8.1.1.3 Retained trees/woodland habitat – Retain and sustain treelines.

#### 8.1.2 Maintenance operations

- 8.1.2.1 Regular checks are to be made on the condition of existing trees. Any necessary tree works are to be carried out by a qualified tree surgeon to BS 3998:2010 and approved by the Management Team (NB. Any trees subject to a Tree Preservation Order will require permission from the Local Authority for any arboricultural work to be carried out).
- 8.1.2.2 If problems are identified in trees off site, the operations team shall notify the Management Team, who should contact and notify the appropriate landowner. Loss of any mature trees with potential for bat roost features should be assessed by a qualified ecologist to determine whether there is a bat roost potential.
- 8.1.2.3 Existing hedges, shrubs, groundcover and perennials retained should be regularly cut, trimmed, pruned, and thinned as required in accordance with the programme found in Appendix B. Planting beds are to be maintained as weed free at all times.

### 8.2 New specimen trees

#### 8.2.2 Management objectives

- 8.2.2.1 To establish, within three years from planting, well-shaped new trees with balanced canopies and frameworks for future healthy growth, and a natural but overall neat and tidy appearance free from all dead and dying vegetation and crossing wood, including around the base of trees.

#### 8.2.3 Management operations

- 8.2.3.1 Where trees are set within planting beds, the area to the base of each tree shall be maintained as weed free at all times.
- 8.2.3.2 Where trees are set within grass, the 1m diameter mulched circle to the base of each tree shall be maintained as weed free at all times.
- 8.2.3.3 In the first two years following planting, any new trees shall be closely monitored on a fortnightly basis to ensure they are upright, firm and stable and in good health.
- 8.2.3.4 The operations team shall ensure during the first two years after planting that all new trees have adequate water, supplemented by other means if necessary. The soil around new trees in planting beds and tree pits shall be inspected to a depth of 300mm at regular intervals during the growing season to determine whether watering is required, and action taken if so.
- 8.2.3.5 In further years water newly planted trees throughout the summer months (May to August) at minimum fortnightly intervals after any period of four weeks without significant rainfall (less than 5mm). Heavy watering will be required in dry periods.
- 8.2.3.6 Should the Statutory Undertakers impose restrictions on the use of water for watering any plants, the operations team shall be responsible for making any special arrangements which may be necessary to ensure regular and adequate watering of plant material to ensure successful establishment.
- 8.2.3.7 It is also important to ensure that the trees are not over-watered. All drainage points shall be regularly checked. Any plants lost due to waterlogging or drought shall be replaced with matching species and size as appropriate. Size shall match that of the surrounding plants, rather than the originally specified size, unless agreed otherwise with the operations and Management Team.

- 8.2.3.8 Stakes and ties shall be regularly checked for firmness, tightness and support and adjusted as necessary. Tree stakes shall be checked regularly for breaks and decay, replaced as necessary to original specification. All should be checked after strong winds for stability.
- 8.2.3.9 Soil shall be firmed around the roots to ensure that trees are securely planted in the ground and upright. All trees shall be re-firmed in the spring period following planting. Any trees loosened due to late frosts, strong winds or surface water movement shall be re-firmed as required. 'Collars' at the base of tree stems created by tree movement to be broken up by fork, avoiding damage to roots and stem, backfilled with topsoil as necessary, and re-firmed.
- 8.2.3.10 Adjust, re-fix or replace loose or defective ties as necessary, allowing for growth and some movement to encourage development of a stable root system whilst preventing chafing, excessive wind rock, and to compensate for settlement. Where chafing has occurred, reposition or replace ties or guying cords to prevent further chafing. Ties shall at no point be over-tight on the tree and shall be checked and loosened regularly, especially at the start of the growing season to allow room for growth. Remove redundant tapes, tags, ties, labels and other encumbrances to prevent damage to bark.
- 8.2.3.11 Where stakes are longer than the height of the lowest branch of the tree, cut the stake to this height in spring and retie to tree firmly but not tightly with a single tie.
- 8.2.3.12 If a tree with a defective stake has grown sufficiently to become self-supporting, the operations team shall inform the Management Team and, if instructed, remove stakes and fill the holes with lightly compacted soil. These trees should be continued to be monitored in cases of a deterioration in stability.
- 8.2.3.13 It is anticipated that all stakes and ties shall be removed in the region of 5 years after planting, but this must be approved by the Management Team before actioning.
- 8.2.3.14 Soils around trees shall receive a surface application of suitable and approved compound, controlled-release fertilizer each spring.
- 8.2.3.15 Trees shall be pruned as necessary to remove any dead, diseased or damaged shoots and to create a balanced form for future growth. The eight trees that are highlighted as allowed to grow to medium height should continue to be monitored to ensure that they remain healthy and can achieve the aim of reaching a minimum size. Where there are issues, amendments should be put in place in the management plan to ensure replacement or varying of management.

## 8.3 Clipped hedges

### 8.3.1 Management objectives

- 8.3.1.1 To maintain hedges with healthy thriving plants and encourage strong growth.
- 8.3.1.2 New Beech hedging is proposed in the gardens on site. These will be managed to 2m and will be a single species formal hedging in the gardens. The BNG assessment provides a poor condition assessment because of the location and formal nature of these hedges, and the management operations set out below will ensure that the hedges will function and provide some cover and foraging opportunities for suburban biodiversity features.

### 8.3.2 Management operations

- 8.3.2.1 The planting area is to be maintained as weed free at all times.
- 8.3.2.2 Hedges shall be pruned to encourage dense bushy growth. The contractor will ensure that they are aware of the specific needs of each variety of shrub. The main stems of plants shall not be visible on the sides or top of the hedge.
- 8.3.2.3 Cut hedge a minimum of twice a year to maintain a tidy appearance at all times and 'a wedge shape' (with the top of the hedge slightly narrower than the base) to encourage healthy bushy growth, with formal shape.
- 8.3.2.4 When cutting hedges, care should be taken to ensure that there are no nesting birds within the hedging as it is an offence under the Wildlife and Countryside Act 1981 to disturb wild birds, their nests or eggs.
- 8.3.2.5 Where transitions in hedge height and width are required, these shall be achieved in a smooth uninterrupted manner. Where abrupt changes in height are required, these shall be maintained as crisp right-angled profiles.
- 8.3.2.6 Ensure that tools used are sharp and cut hedge so that top is narrower than the base to ensure base will remain clothed in leaves.
- 8.3.2.7 Subject to approval, replace any dead or damaged plants with matching species and size.
- 8.3.2.8 Soils to receive a surface application of a compound, controlled-release fertilizer each spring.

- 8.3.2.9 Top up mulch as required to maintain continuous 75mm deep cover.
- 8.3.2.10 Allow for re-firming soil around roots to ensure plants are securely planted and upright especially following periods of high winds.
- 8.3.2.11 Ensure the all post and wire fencing remains in good condition with taut wires, and that all hedge plants are regularly checked to ensure that they are tied in.

## 8.4 Native hedges

*\*All texts in italics to be amended or replaced by the team ecologist – the example below*

### 8.4.1 Management objectives

- 8.4.1.1 *To maintain hedges with healthy thriving plants and encourage strong growth.*
- 8.4.1.2 *New native mixed species hedging is proposed along the site boundaries to north, south and east. These will be managed to 2m and will be a mixed species native hedging, trimmed to suit the surroundings. The BNG assessment assumes a moderate condition assessment of those hedges to the north and east, with these having ample room to grow out. The southern hedges have at this time been excluded from the BNG assessment because of the location and formal nature of these hedges but shall be managed to achieve 'moderate' condition as well. The operations set out below will ensure that the hedges will function and provide cover and foraging opportunities for rural biodiversity features.*

### 8.4.2 Management operations

- 8.4.2.1 *The planting area is to be maintained as weed free at all times.*
- 8.4.2.2 *Hedges shall be pruned to encourage dense bushy growth. The contractor will ensure that they are aware of the specific needs of each variety of shrub. The main stems of plants shall not be visible on the sides or top of the hedge.*
- 8.4.2.3 *Cut hedge every year on the inside/site edges to maintain a tidy appearance; cut the outer edges every 1-3 years to allow these to grow wilder. A 'wedge shape' (with the top of the hedge slightly narrower than the base) shall be created to encourage healthy bushy growth, with formal shape.*
- 8.4.2.4 *When cutting hedges, care should be taken to ensure that there are no nesting birds within the hedging as it is an offence under the Wildlife and Countryside Act 1981 to disturb wild birds, their nests or eggs.*
- 8.4.2.5 *Where transitions in hedge height and width are required, these shall be achieved in a smooth uninterrupted manner. Where abrupt changes in height are required, these shall be maintained as crisp right-angled profiles.*
- 8.4.2.6 *Ensure that tools used are sharp and cut hedge so that top is narrower than the base to ensure base will remain clothed in leaves.*
- 8.4.2.7 *Subject to approval, replace any dead or damaged plants with matching species and size.*
- 8.4.2.8 *Soils to receive a surface application of a compound, controlled-release fertilizer each spring.*
- 8.4.2.9 *Top up mulch as required to maintain continuous 75mm deep cover.*
- 8.4.2.10 *Allow for re-firming soil around roots to ensure plants are securely planted and upright especially following periods of high winds.*
- 8.4.2.11 *Ensure all post and wire fencing remains in good condition with taut wires, and that all hedge plants are regularly checked to ensure that they are tied in.*

## 8.5 Ornamental planting beds (including rain gardens)

### 8.5.1 Management objectives

- 8.5.1.1 To maintain attractive ornamental borders with healthily growing vegetation with a well-shaped framework for healthy growth, with a managed and tidy appearance.
- 8.5.1.2 To provide a mosaic of flowering, fruiting and seeding species at different times of year to ensure that there are fruit, nut and high nectar species for suburban wildlife to take advantage.
- 8.5.1.3 To provide a mosaic of different structure to shrubs, with some shrubs allowed to develop a thick vegetation to allow for micro habitats for wildlife to rest and for birds to nest.

## 8.5.2 Management operations

- 8.5.2.1 The planting area is to be maintained weed free at all times.
- 8.5.2.2 Plants are required to be pruned to encourage healthy regeneration and flowering. The contractor will ensure that they are aware of the specific needs of each variety of shrub.
- 8.5.2.3 When agreed with the Management Team the plants are to be selectively thinned to allow room for growth and avoid 'overcrowding'. Care is to be taken to avoid overthinning, so creating obvious 'gaps' in shrub beds.
- 8.5.2.4 Subject to approval, any dead or damaged plants are to be replaced with matching species and size. Size should match that of the surrounding plants, rather than the originally specified size.
- 8.5.2.5 Soils to receive a surface application of a compound, controlled-release fertilizer each spring.
- 8.5.2.6 Mulch is to be topped up as required to maintain continuous 75mm deep cover. Any additional material required is to match specified mulch.
- 8.5.2.7 Soil around roots is to be refirmed as necessary to ensure plants are securely planted and upright especially following periods of high winds.

## 8.6 Perennials

### 8.6.1 Management objectives

- 8.6.1.1 To maintain formal planting areas of dense, weed-free perennials of healthy growth, trimmed and supported as necessary to give a neat and tidy finish contained within the planted area and a crisp and even interface with all paved areas.
- 8.6.1.2 To provide a mosaic of flowering, fruiting and seeding species at different times of year to ensure that there are fruit, nut and high nectar species for suburban wildlife to take advantage.

### 8.6.2 Management operations

- 8.6.2.1 The planted area shall be maintained as weed free at all times.
- 8.6.2.2 Where perennials abut road kerbs, they shall be trimmed and supported as necessary to ensure that they do not spill over the face of the kerbs. Care shall be taken to prevent perennials encroaching onto roads or footpaths.
- 8.6.2.3 Where perennials abut grass, they shall be trimmed to form a neat and tidy interface.
- 8.6.2.4 Plants shall be trimmed and tidied to remove dead vegetation or overgrowing branches. Dead flower heads shall be removed.
- 8.6.2.5 Untidiness of top growth shall be corrected by trimming as required.
- 8.6.2.6 Staking shall be introduced as required to support larger plants.
- 8.6.2.7 Soil around roots to be refirmed as necessary to ensure plants are securely planted and upright especially following periods of high winds.
- 8.6.2.8 Soils to receive a surface application of a compound, controlled-release fertilizer each spring.
- 8.6.2.9 Mulch around perennials shall be topped up each spring to maintain a continuous 75mm settled depth. Any additional material shall match existing mulch.
- 8.6.2.10 Any dead or damaged plants shall be replaced with matching species, which need not be the same size as adjacent plants.

## 8.7 Groundcover

### 8.7.1 Management objectives

- 8.7.1.1 To maintain areas of dense, weed-free groundcover of healthy growth, clipped or pruned as necessary to give a neat and tidy finish and contained within the planted area and a crisp and even interface with all paved areas.
- 8.7.1.2 To provide a mosaic of flowering, fruiting and seeding species at different times of year to ensure that there are fruit, nut and high nectar species for suburban wildlife to take advantage.

## 8.7.2 Management operations

- 8.7.2.1 The planting area is to be maintained as weed free at all times.
- 8.7.2.2 Where groundcover abuts road kerbs, it shall be managed uniformly to cover the top and face of the kerbs.
- 8.7.2.3 Where groundcover abuts grass, it shall be encouraged to develop onto the sward and shall then be trimmed to form a crisp interface.
- 8.7.2.4 Care should be taken to prevent groundcover encroaching onto roads or footpaths.
- 8.7.2.5 Plants are to be trimmed and tidied to remove dead vegetation or overgrowing branches.
- 8.7.2.6 Untidiness of top growth shall be corrected by pruning as required.
- 8.7.2.7 Plants should not be allowed to climb other plant stems.
- 8.7.2.8 Subject to approval, any dead or damaged plants are to be replaced with matching species.
- 8.7.2.9 Soils to receive a surface application of a compound, controlled-release fertilizer each spring.
- 8.7.2.10 Mulch is to be topped up as required to maintain continuous 75mm deep cover.
- 8.7.2.11 Soil around roots to be reformed as necessary to ensure plants are securely planted and upright especially following periods of high winds.
- 8.7.2.12 Ivy should be pruned to maintain a fresh appearance and shall not be encouraged to form woody stems.

## 8.8 Climbers

### 8.8.1 Maintenance objectives

- 8.8.1.1 To establish and maintain attractive ornamental climbing plants of managed and tidy appearance, with healthily growing vegetation and a well-shaped framework for future healthy growth in formal planting areas.
- 8.8.1.2 To provide a mosaic of flowering, fruiting and seeding species at different times of year to ensure that there are fruit, nut and high nectar species for suburban wildlife to take advantage.
- 8.8.1.3 To provide a mosaic of different structure to climbers, with some shrubs allowed to develop a thick vegetation to allow for micro habitats for wildlife to rest and for birds to nest.

### 8.8.2 Maintenance operations

- 8.8.2.1 The area around the base of each climbing plant is to be maintained weed free at all times.
- 8.8.2.2 Excess growth shall be removed by pruning, to ensure that signs, light fittings, doors, windows, gutters and downpipes are kept clear at all times.
- 8.8.2.3 Insecure growth shall be attached to supporting wires using natural fibre twine.
- 8.8.2.4 Check and repair as necessary supporting structures of climbing plants; wires to be extended if required.
- 8.8.2.5 Soil around roots to be reformed as necessary to ensure plants are securely planted and upright especially following periods of high winds.
- 8.8.2.6 Soils around the base of climbing plants shall receive a surface application of compound, controlled-release fertilizer each spring.
- 8.8.2.7 Mulch within planted areas is to be topped up as required to maintain continuous 75mm settled depth during establishment period (first 3 years). Any additional material required is to match existing mulch.
- 8.8.2.8 Any dead or damaged plants shall be replaced with matching species and size. Size shall match that of the surrounding plants, rather than the originally specified size.

## 8.9 Bulbs

### 8.9.1 Maintenance objectives

- 8.9.1.1 To establish and maintain attractive ornamental bulb planting, managed and tidy appearance, with healthily growing vegetation.

8.9.1.2 To provide a mosaic of flowering, fruiting and seeding species at different times of year to ensure that there are fruit, nut and high nectar species for suburban wildlife to take advantage.

### 8.9.2 Maintenance operations

8.9.2.1 For Daffodils (*Narcissus* species). Deadhead plants after flowering and let the leaves remain above ground level. After 6 weeks cut back foliage to the base of the flower stalk

8.9.2.2 No routine maintenance is required for the Crocus or Bluebells

8.9.2.3 (*Hyacinthoides non-scripta*).

8.9.2.4 For Alliums, Lift, divide and replant overcrowded clumps after foliage and flowers have died down.

## 9 Weed, pest and disease control.

9.1 All plants, planting beds, trees and grass areas shall be maintained as weed, pest and disease free at all times. The operations team is expected to adopt a pro-active approach to weeds, pests and diseases and treat accordingly.

9.2 Any plant or trees losses as a result of pest and disease infestation will be replaced by the operations team. Exceptions will occur when this is as a direct result of an instruction from the Management Team, e.g. a ban on chemical use.

9.3 The operations team shall periodically inspect all planted areas, including trees, for any signs of pest or disease infection and report any such discovery to the Management Team.

9.4 The same diligence shall be required in monitoring soil and plant health in terms of the application of fertilizers, ameliorates, mulches or anti-desiccant sprays.

9.5 If damage is found to be occurring then, where necessary and with agreement and in consultation with the Management Team, appropriate pest control shall be used. The operations team shall, where possible, use nonchemical means in the first instance and seek approval from the Management Team for any use of pesticides.

9.6 Non-native and invasive species listed under Schedule 9 of the Wildlife & Countryside Act (as amended) are present on the site. These include Cotoneaster species, Rhododendron species, and Montbretia. These plants can be retained in a garden setting but should be controlled to prevent spread by regular maintenance according to the measure set out above in relation to perennials and shrubs. The site should be regularly monitored to ensure that new populations do not establish around the site.

## 10 Reporting and review process

10.1 In order to monitor standards and make amendments where required, the Management Team will need to review the management work (with reference to this document) with the operations team at least quarterly for the first year after practical completion of the development. Post-handover review annually unless agreed otherwise.

10.2 A monitoring Sheet is provided at *Appendix A* for this purpose. This is to be utilised to assess how the conservation aims of the LEMP are (and are not) being met how contingencies will be identified and/or remedial action will be identified, agreed and implemented so that the development delivers fully functioning biodiversity objectives of the originally approved scheme.

10.3 All plant failures should be logged and reported to the Management Team at the first opportunity. It is anticipated that, where approved, replacement planting should be carried out in the next planting season, with replacement plants to match size and species of adjacent plants. If the originally specified species is found to be unsuitable for the current situation (during the design stages species were chosen carefully so as to avoid this issue), then the operations team should propose an appropriate alternative.

10.4 The operations team will contribute to an annual review of the use of the site carried out by the management team, looking at the following (as appropriate):

- Pedestrian routes and desire lines
- Litter
- Neighbouring properties and uses and any problems arising (such as dead, dying or dangerous trees)
- Wildlife impact
- H&S management and duty of care

10.5 It is anticipated that following the review of the use, any issues or changes that are impacting on the landscape will be either accommodated through design proposal from the operations team or approach to the appropriate body by the Management Team.

10.6 It is suggested that the Management Team discuss any significant changes to the site layout and management regime, where appropriate, with the Local Authority.

## 11 Maintenance activities (years one to ten)

11.1 **Appendix A** provides a list of maintenance activities to be carried out in the short term and doubles as a checklist to be used during maintenance visits.

11.2 The operations team shall be required, whenever maintenance visits are carried out, to complete and sign the checklist itemising the operations that have been carried out and that the work has been completed. This should be submitted for approval to the Management Team.

11.3 The outline of a suggested **programme of work** has been produced as a guide (see **Appendix B**). The maintenance programme should ensure that the frequency of activities is sufficient to meet all the management objectives.

## 12 Health and Safety

### 12.1 Safe working at night

12.1.1 The operational team is fully accountable for demonstrating statutory compliance and in particular comprehensive risk assessment and method statements for all works and undertakings in respect of the provision of landscape management.

### 12.2 Safe working in or near water

12.2.1 The operational team is fully accountable for demonstrating statutory compliance and in particular comprehensive risk assessment for all works and undertakings in respect of the provision of landscape management.

12.2.2 A full risk assessment must be carried out by the operations team to ensure all hazards are identified. This will include identification of potential hazards including, but not limited to, use of suitable footwear and protective clothing.

12.2.3 Following flooding, staff should not wade through any water until a thorough survey for hidden obstacles has been carried out.

12.2.4 Dirty contaminated water can also mask ditches, hollows and areas of deeper water. These types of situations represent an unseen hazard even in the shallowest of waters.

12.2.5 Health hazards from water borne contaminants will be present in floodwater. These hazards may derive from overflow from sewage treatment plants, or from nearby agricultural or industrial premises.

12.2.6 To minimize risk to infection, staff should undertake basic precautions such as:

- (a) Covering cuts and broken skin with waterproof plasters;
- (b) Wear protective clothing;
- (c) Wash hands after handling any animal or contaminated clothing or other material;
- (d) Wash hands before eating or drinking.

12.2.7 Risk Assessment Compliance Review, Audit and Action Plans prior to any work should be drawn up and a responsible person identified by the contractor.

12.2.8 Access points should be identified by workers to allow safe entry and exit to the working area.

### 12.3 Chemical Use

12.3.1 It is the responsibility of the operations team to ensure they are aware of, familiar with and abide by all current legislation pertaining to pesticides (insecticides, herbicides, fungicides) and their use.

12.3.2 A full Risk Assessment shall be undertaken and documented for each planned chemical application.

12.3.3 Chemicals are only to be used for weed control and pests/diseases where specified and approved. All work and workmanship shall comply with latest COSHH regulations. Where work is near to drainage ditches or land drains it must comply with Environment Agency guidelines for use of chemicals. Where scheduled or instructed the operations team shall apply a suitable foliar acting herbicide to kill regrowth and allow the recommended period before clearing arisings.

## 12.4 First Aid

12.4.1 The operations team shall provide a minimum of one First Aid trained staff member, who should be present on site at any time during working hours.

## 12.5 Procedures for external contractors

12.5.1 The following should be discussed and confirmed at initial meetings with the operations team:

- a) Storage of materials and parking
- b) Location of underground services
- c) First aid arrangements
- d) Emergency procedures

12.5.2 In the event of an incident occurring during the carrying out of the operations team works, this would be required to be reported to the Management Team. Any incident shall be reported immediately, and emergency services contacted if necessary.

## APPENDIX A:

### Summary of Management Objectives and Activities Checklist

\*Ecologist To Check, Add and Amend

Reference	Item	Activity
2	General	Litter pick to all areas
4	Hard surface, external fittings and furniture	Inspect and clean Sealant treatment to NVD Herbicide treatment Inspect road markings for wear
5	Fencing and gates	Inspect Cut back vegetation
6	Surface water drainage	Ensure drainage fittings areas (including rain gardens) free from obstruction. <ul style="list-style-type: none"> <li>• Inspect</li> <li>• Clear drains</li> <li>• Remove debris</li> </ul> Swales, ditches, attenuation ponds; <ul style="list-style-type: none"> <li>• Remove debris, leaves, litter and undesirable plant species</li> <li>• Trim vegetation on rotation</li> <li>• Remove trimmed vegetation after two days</li> <li>• Check proper functioning of drainage and correct problems</li> <li>• Remedial actions as required to maintain proper operation</li> <li>• Check ground stability</li> </ul>
7.2	Mixed scrub habitats	Minor pruning Spot removal of invasive species Less mown lawn edge
7.3	Grassland habitats	Regularly cut amenity lawns and grass paths only <i>Do not cut meadows between March and August</i> <i>Cut as required between September-February</i> Remove arisings <i>Monitor species composition</i>
8.1	Existing trees and vegetation	Inspect trees Prune/cut/thin/trim existing vegetation as required Harvest fruit
8.2	New specimen trees	Check and adjust tie and stakes Re-firm soil Prune Spring fertilizer application Water as required Top up mulch Reform mulch circles for trees in grass, and top up Harvest fruit Check Silvacell systems in hard surface areas
8.3	Clipped hedges	Weed control as required Cutting Fertilizer application Top up mulch Inspect any support fencing Water as required

8.4	Native hedges	<i>Weed control as required</i> <i>Cutting – annually on the inside and less frequently on the outsides</i> <i>Fertilizer application</i> <i>Top up mulch</i> <i>Inspect any support fencing</i> <i>Water as required</i>
8.5	Ornamental planting beds	Weed control as required Fertilizer application Top up mulch Trimming and support as required Water as required Harvest fruit, herbs and vegetables
8.6	Perennials	Weed control as required Trim and deadhead Support as required Fertilizer application Top up mulch Water as required
8.7	Groundcover	Weed control as required Fertilizer application Trim edges Top up mulch Water as required
8.8	Climbers	Weed control as required Fertilizer application Top up mulch Trimming and tie-in as required Water as required
8.9	Bulbs	Deadhead daffodils Cut back and remove vegetation

## Appendix B: Indicative Programme – Years 1 to 10

ITEM	ACTIVITY AND MINIMUM FREQUENCY	January	February	March	April	May	June	July	August	September	October	November	December
GENERAL	Litter 12/yr												
	Water as required												
	Weed control as required												
	Top up mulch 1/yr												
	Prick up soil as required												
Ecology	Bird/ Bat boxes: Winter months (Nov-Feb)-by a suitably licensed individual.												
	Hedgehog holes in timber fencing (As required)												
	Checking of hibernacula and log piles and replenishing												
HARD SURFACES, EXTERNAL FITTINGS AND FURNITURE	As required												
FENCING AND GATES	As required												
SURFACE WATER DRAINAGE	As required												
SWALES	As required												
LAWN & AMENITY GRASS AREAS	Cutting 22/yr												
	Edging 10/yr												
	Reform edges 1/yr												
	Selective herbicide / spot weeding as required												
	Spring renovation 1/yr												
	Fertilizer application 2/yr												
MIXED SCRUB HABITATS	Grass cutting Year 1 3/yr to 5cm												
	Grass cutting Year 2 onwards 1/yr												
	Remove arisings												
	Minor pruning/ Selective herbicide/spot weeding as required												
	Check for Invasive species												
NEUTRAL GRASSLAND HABITATS	Grass cutting Year 1 to 5cm												
	Grass cutting Year 2 onwards												
	Remove arisings												
	Minor pruning /spot weeding as required												
	Check for Invasive species												
EXISTING TREES & VEGETATION	Regular tree inspections and work as required												
	Check for signs of disease												
	Cutting and pruning (outside of nesting period)												

ITEM	ACTIVITY AND MINIMUM FREQUENCY	January	February	March	April	May	June	July	August	September	October	November	December
NEW SPECIMEN TREES	Selective herbicide / spot weeding as required												
	Check and adjust ties, stakes 2/yr				■						■		
	Fertilizer application 1/yr				■								
	Weed control as required												
	Break up root collars as required												
	Prune 1/yr (outside of nesting period)										■		
	Yr 1 Water as required during establishment												
	Check tree guards yearly for 5 years, then remove if established				■								
	Check for signs of disease												
	Replacement planting where trees fail to establish										■		
	Harvest fruit (as appropriate)								■	■			
NATIVE HEDGES	Weed control as required												
	Cutting internal aspects 1/yr										■		
	Cutting external aspects every 1-3 yrs											■	
	Check post-and-wire support 4/yr				■				■				■
CLIPPED HEDGES	Weed control as required												
	Cutting 2/yr							■				■	
	Fertilizer application 1/yr							■					
	Check post-and-wire support 4/yr				■			■			■		
PLANTING BEDS	Weed control as required												
	Thinning as required												
	Pruning as required												
	Fertilizer application 1/yr						■						
	Harvest vegetables, herbs, cut flowers as appropriate												
PERENNIALS	Weed control as required												
	Trim edges & deadhead 4/yr							■				■	
	Support as required							■					
	Fertilizer application 1/yr												
GROUNDCOVER	Weed control as required												
	Remove from other plant stems as required												
	Fertilizer application 1/yr							■					
	Trim edges 4/yr							■			■		
CLIMBERS	Weed control as required												
	Pruning as required												
	Secure loose growth to support as required												
	Fertilizer application 1/yr												
BULBS	Deadhead Daffodils							■					
	Cut back vegetation to ground level												
	Remove withered leaves, mulch Alliums												
	Lift, divide and replant allium clumps										■		
As required		Frequency of visit											