

LANDSCAPE MANAGEMENT & MAINTENANCE PLAN

**Land adjacent to
15 BILLET AVENUE,
WATERLOOVILLE,**

**Discharge of Conditions
APP 18/00109**

**Landscape Management & Maintenance Plan
15 BILLETT AVENUE, WATERLOOVILLE**

INTRODUCTION

Lundi Architects were appointed by Landwise Ltd to develop the Landscape proposal for this development at 15 Billett Avenue, Waterloooville, for the purpose of Discharging of Conditions associated with Application App/18/00109 (approved 26 March 2021). This Management & Maintenance Plan addresses Condition 8. This document is to be read in conjunction with the following drawings:- LA2202:- 04,05,06,07,10,11,12 and 13.

All hard landscaping surfaces associated with individual properties and the proposed external materials are specified on drawing LA2202 04 which addresses Conditions 9 and 10

The Development consists of four number, four bedroom, detached new homes each with private gardens. Planting is restricted to certain areas, as indicated on the accompanying drawings, all in accordance with legal agreements with Southern Water.

To the eastern boundary there is a strip of existing woodland consisting of a variety of mature trees. Ten number new semi-mature native trees are to be planted in locations indicated to replace previously felled trees.

To the western boundary is the estate entrance and road, which is finished, as agreed with Local Authority and Water Board with non permeable tarmac.

Soft landscaping consisting of a mix of native hedgerow, fruit trees, wild flower meadow and some shrubs to the edge of this area will be subject to a separate maintenance agreement, as indicated on the drawings and associated legal documents.

The proposed landscape to this communal zone will screen the fenced boundary, filter noise and provide habitats for birds and insects. Additional planting will provide colour, variety and visual benefit with fruiting trees, flowering shrubs and a wild flower area for wildlife benefit.

The proposal seeks to provide users and visitors to the development a sense of place and identity. An integral part of the strategy has been to provide a sensory rich environment with ecological benefits to the area whilst promoting local biodiversity and mitigating any adverse effects.

The low maintenance planting proposals aim to provide a simple setting that is at the same time a rich and stimulating environment for all.

The management of the grounds will be to a good standard to maintain attractiveness and accessibility.

1.0 PREPARATION

Note:

Generally for all areas, see separate area headings below for specific details.

1.1 The soft-landscaping works shall be carried in the first planting and seeding seasons following the occupation of the building/s or when the use is commenced.

1.2 Conditions for planting: Planting shall be carried out between October and February when soil is frost free. No planting shall be undertaken when the soil is waterlogged.

1.3 All pernicious and invasive weeds, including roots shall be cleared from the site before works commence. Clearance shall be restricted to hand weeding, forking out the roots or treatment with permitted glyphosate product, following supplier's guidelines and carried out with the instructions of the supervising officer.

1.4 Ground outside the working area shall not be overrun by heavy machinery, to avoid compaction. Any compacted ground shall be thoroughly broken up and aerated before cultivation works commence.

1.5 Ground preparation: All tree pits shall be free from any waste material from construction operations. Soil shall be used in situ and shall be free from stones or waste matter.

Ground for planting and seeding shall be cultivated to full depth. Ground shall be thoroughly weeded before planting or seeding operations commence.

2.0 PLANTING SPECIFICATION

Note:

For fruit tree and shrub planting in maintenance areas and planting to front beds to individual units, see drawing nos. LA 2202 10 -Site Entrance Area , LA 2202 11 - Sloping Bank, LA 2202 12 - Landscape Zones Plots 1-3 and -LA 2202 13 - Landscape zones Plot 4. See separate notes on hedgerow, flower meadow and replacement trees to eastern boundary zone.

2.1 Planting materials used shall be environmentally friendly, using peat free composts and soil conditioners from approved, managed sources. No Herbicides or Pesticides shall be used without prior approval by the Supervising officer.

2.2 An inoculant of mycorrhizal fungi shall be added to each tree pit at time of planting over and in contact with roots and at manufacturer's recommended rates. Tree pits shall be of a size to accommodate root spread and backfilled with tree mulching compound.

2.3 Trees: Trees to be U.K. grown and sourced in line with current bio-security guidelines. Trees be planted in positions as shown on the Proposed landscape Drawing nos LA 2202 10, 11 as above . These are to be planted at the sizes specified on the accompanying Plant Schedule.

All trees shall comply with the Horticultural Trades Association National Plant Specification

2.4 The tree pits to be at least 200mm. greater in diameter than the root spread of the tree, with a minimum diameter as recommended by supplier. The pits shall be dug to a depth no deeper than the roots. Trees to be planted at correct depth at root flare. Re-use existing top soil and sub soil. Pit to have a layer of horticultural sand to base at depth of 50 mm. Planting to suppliers instructions. See separate specific notes on semi-mature, replacement trees.

2.5 Tree anchoring. Stakes should be installed before planting, penetrate the soil at least 60cm and should be fitted at recommended height to trunk of tree. An angled stake is recommended for tree planting on sloping sites. Fit number of stakes according to tree Supplier's recommendations. Stakes should be inserted on side of prevailing wind so tree is blown away from the stake. Fix with proprietary flexible tree tie/s, all as recommended by supplier. A 1.2 m. diameter circle around the plant shall be kept clear

of weeds for a minimum of three years. This may be mulched over but keep woody stems/ roots free of mulch to prevent damage to bark and roots.

2.6 Tree planting compost shall be used in addition to existing top and sub soils for backfilling tree pits at the manufacturers recommended rate.

2.7 Anticipate water loss and irrigate to prevent damage. Prior to planting tree roots to be thoroughly watered and again watered in upon planting with at least 50 litres of water on same day and thereafter irrigated/ watered as per the supplier's recommendations.

2.8 Shrubs: Shrubs shall be planted as shown on accompanying drawings and shall be planted at densities according to the ultimate size of plants. All shrubs shall comply with the Horticultural Trades Association National Plant Specification. The plants should be U.K. grown and sourced in line with current bio-security guidelines. Plants to be watered thoroughly before planting and then watered in as soon as planted by soaking to saturation. In the first year all plants should be regularly watered in dry spells to get them established. At all times follow suppliers' planting and watering instructions. Wood chip mulch shall be applied to shrub areas to a depth of 75mm.

3.0 SEEDING AND TURFING

3.1 Area to be turfed shall be cultivated to a fine tilth. The preferred turfing time shall be early September. Turf shall be shade tolerant and low maintenance. Seed composition to be 100% Supra / Supranova – POA SUPINA or similar. Cutting height no lower than 50mm. Turf to be fitted according to suppliers instructions.

4.0 MANAGEMENT GUIDELINES

Note: See separate details for Hedgerow, flower meadow and replacement trees to Eastern Boundary.

4.1 Trees. During the first 5 years of establishment tree stakes shall be maintained in place and replaced when necessary. Stakes and ties to be checked annually and also after high winds to check for wind rock and to avoid stem damage. Trees to be refirmed in the ground as required. Dead, diseased, or dying branches shall be removed on

observation. Trees to be inspected every Autumn and all remedial works to be carried out in accordance with BS8545:2014 trees from Nursery to Independence in the Landscape.

4.2 Pruning will be essential to promote healthy compact growth and prevent encroachment on paths and driveways. Pruning shall also be undertaken to avoid shading of areas close to the buildings. Thinning shall be carried out only where plants are unduly crowded

4.3 Shrub areas shall be pruned to prevent overhang and to provide compact form

5.0 MAINTENANCE SCHEDULE

5.1 Maintenance shall be for five years, during which time the contractor shall be liable for plant losses, which occur due to death, disease or deformity. Tree replacements shall, where necessary, be carried out in each year of the Contract.

5.2 Weeding: Where any surface weeds appear, they shall be carefully removed by hand, replacing mulch. Weeding by means of herbicide spray (glyphosate only) shall only be carried out at the instruction of the supervising officer. Only use authorised pesticide products and always follow manufacturers instructions. Herbicides shall be applied only in accordance with the following, COPR, Control of Pesticide Regulations 1986 and all associated amendments, COSHH, Control of Substances Regulations 1988 and subsequent 2002 amendments, also all up-to-date GBPPP, Plant Protection Products Regulations and MRL Maximum Residue Regulations.

5.3 Tree Maintenance: Diseased leaves and or damaged or crossing branches shall be removed.

5.4 Removal of Waste Material: All waste material arising from the maintenance works shall be removed from site at each visit and composted. However, flower meadow waste to be dealt with as per flower meadow notes. See below.

5.5 Watering to tree pits and shrub areas shall be carried out during dry periods at the instruction of the Supervising Officer. Watering shall be to field capacity.

Watering:

Generally the following quantities of water in the first 24 months:

Trees - 25 litres on 10 occasions throughout the growing season, or when less than 30mm precipitation at the end of any 4 week period.

Shrub borders – on 10 occasions throughout the growing season or when less than 30 mm precipitation at the end of any 4 week period.

5.6 Weeding shall be carried out on a regular basis between March and October. Weeding shall at all times be preferably by means of hand weeding or if absolutely necessary spraying with glyphosate. If glyphosate is used dead weeds shall be removed promptly. When removing weeds disturbed mulch shall be replaced. Weeding frequency shall be such that weeds shall not be allowed to grow above 150mm in height.

5.7 Any plants which are dead, diseased or failing to thrive shall be removed on observation. In the first five years these shall be replaced in the following planting season. Thereafter replacement shall be to fill gaps.

5.8 Litter shall be collected and removed from site at each visit.

5.9 Pruning shall be undertaken to prevent encroachment on hard surfaced areas. Pruning shall be undertaken at the appropriate time of year for each species and according to suppliers instructions.

5.10 Bark mulch depth. Bark mulch depth shall be measured each year and topped up to the specified depth where necessary.

5.11 Any pests or diseases affecting plants or grass shall be reported to the site supervisor who shall take appropriate action.

Note:

The supervising officer shall be a suitably qualified officer appointed by the client or main contractor. Replacement trees and shrubs shall be inspected before planting and any which fail to come up to the specification will be rejected.

6.0 HEDGEROWS

Note: Native British Hedgerow will provide nesting sites, berries and seeds for birds. The flowers of the *Malus sylvestris*, *Prunus spinosa* and the *Rosa canina* will encourage and support a wide diversity of insects, including bees, butterflies and other invertebrates. These will encourage predators such as birds and shrews. The hedge base will provide cover for small animals.

6.1 Planting:

- All trees and shrubs to be planted in accordance with suppliers' instructions and to include:
- Prepare soil before winter planted season, irrigate copiously before any cultivation is begun.
- Planting must be take place when soil can be worked easily
- Planting should take place in the period of mid-Autumn to late Winter, delay planting if ground is waterlogged or frozen.
- All weeds must be removed at least 30cm both sides of hedge line.
- Soil must be thoroughly dug over to form a strip 90cm wide by spade blade deep.
- Enrich soil using organic matter or proprietary tree and shrub planting mix following manufacturer's instructions. Root system needs to be enhanced at planting.
- Plants to be planted in a double staggered row, no less than 45cm apart with each plant no more than 90cm apart.
- Water plants and allow to drain, fill planting hole with water too.
- Tease out roots and plant in trench to same depth as grown in pot.
- Firm soil to eliminate air pockets around roots, to prevent frost damage.
- Water plants thoroughly
- Cover with mulch to a depth of 7.5cm, to inhibit weeds and retain moisture
- After planting formative pruning to be carried out. Cut back leading and side shoots by one third, cutting to a well-placed bud.
- Provide shelter/protection for each individual plant, using 60cm. perforated spiral tree guards with cane support or 60-15cm.square shrub shelters fixed according to manufacturer's instructions.
- Spirals/shelters to be fixed a minimum of 5cm below ground level.

- Spirals/shelters to remain on for a minimum of 12 months, refer to plant supplier's advice and with regard to successful establishment of hedge.

6.2 Maintenance:

- All trees and shrubs to be maintained for a minimum of 5 years as specified by suppliers instructions and with regard to the information below.
- Repeat formative pruning in 2nd and 3rd Winter, or according to plant species requirement, to encourage hedge base growth.
- Plants to be well watered throughout the seasons but especially during dry spells for a minimum 2-year period following planting.
- Plants to be top-dressed annually, for a minimum of 5 years with general purpose fertilizer applied according to the manufacturer's instructions.
- Hedge and 45cm. each side to be kept weed free, for a minimum of 5 years.
- Re-apply mulch as required for a period no less than 5 years.
- Any trees or shrubs, which, within a period of 5 years of planting, die, are removed, seriously damaged or diseased, shall be replaced in the next planting season with others of similar size and species.
- Hedgerows to be pruned outside bird nesting season, generally late February. Maintenance trimming shall take place each Summer, after flowering. NOTE. The *Crataegus monogyna* may be pruned twice a year, once in Summer and then again in Autumn where necessary. The *Rosa canina* require pruning after flowering and then again in late winter (February to March).
- Watering: 20 litres per m² on three occasions throughout the growing season, or when less than 30 mm precipitation in any 4 week period.
- All to ensure hedge is successfully established.

Note: The supervising officer, a suitably qualified officer appointed by the client or main contractor, shall inspect any required replacement trees or shrubs before planting and any which fail to come up to the specification will be rejected.

7.0 FLOWER MEADOW

7.1 Ground preparation:

All vegetation and perennial weeds to be thoroughly cleared, with associated root systems dug up and removed.

Once ground is free of vegetation dig or rotovate soil, then rake and make seedbed as for a new lawn.

Do not incorporate manure or fertiliser as high fertility encourages grasses, which will crowd out wildflowers.

Allow four to six weeks for soil to settle then hoe off any germinated weeds.

7.2 Sowing:

This should take place in April/May/June as supplier's guidelines.

A wild flower and grass seed mix to be sown by hand at + 3 gms per m2.. Mix with seed supplier's recommended amount of silver sand or buck wheat husks or use ready mixed seed/buck wheat product.

Seed to be evenly distributed in meter areas. Sow half lengthways then half sideways.

Rake or roll in seed to give good contact between soil and seeds.

Water thoroughly according to suppliers' recommendations and allow to grow naturally. When and if necessary, protect seed with proprietary netting to stop birds taking seed for food.

Note: Additional sowing may be required in the first few years until wildflower seed bank increases in the soil.

7.3 Flower meadow Maintenance:

Maintenance contractors to follow seed suppliers recommendations for meadow maintenance and replenishing of seed. Instructions may include :-

Mow meadow in first year after sowing to 5cm. height after 6 to 8 weeks growth and repeat every 2 months throughout first summer.

Thereafter for a perennial meadow Maintenance as follows:-

1. Late winter/early summer cut (no later than end of April). This cut may only be required in the first year. Maintenance contractor to follow seed supplier's instructions. Leave cuttings in place for a few days to allow seeds to drop to soil. Cuttings can then be gathered and removed from site to be composted.

2. Main summer/ Hay cut carried out at the end of August all according to seed supplier's instructions. After a few days remove bulk of material to be removed from site and composted.
3. Autumn/winter cut. One or two cuts in Autumn removes surplus growth and helps keep grasses at bay, allowing wildflowers to persist.

Following this last cut of the season the meadow can be mown to keep grasses short and neat through winter. Clippings to be removed from site and composted.

Note:-

Mowings must be collected after a few days in place to reduce soil fertility.

Perennial weeds to be pulled out by hand

Care must be taken that grasses do not become dominant. Where and when required, sow *Rhinanthus minor* (yellow rattle) in August and keep area mown until March.

8.0 EASTERN BOUNDARY REPLACEMENT TREES.

To the eastern boundary of the development is a band of natural woodland which requires the replacement of a number of native trees please see drawing LA 2202 07 for number, schedule and placement of trees.

Species will include the following:-

Semi Mature Trees

Querus rubra / **Red Oak**

Querus robur / **English Oak**

Sorbus aucuparia Fastigiata / **Mountain Ash**

Standard Trees

Taxus baccata / **English Yew**

Querus rubra / **Red Oak**

Querus robur / **English Oak**

Carpinus betulus Fastigiata / **Hornbeam**

Trees to be U.K. grown and sourced in line with current bio-security guidelines. Trees be planted in positions as shown on the Proposed landscape drawing as above. These are to be planted at the sizes specified on the accompanying Plant Schedule.

All trees shall comply with the Horticultural Trades Association National Plant Specification.

Trees to be planted in the season between early November and March following supplier's instructions. Ground conditions at the time should be favourable. The ground must not be waterlogged or excessively dry or frozen.

Before digging tree pits evaluation of existing tree root systems must be carried out. Any potential damage to be mitigated appropriately including possible soil compaction. Use of mechanical plant should be limited; existing root systems must be appropriately protected. Follow guidelines set out in BS5837:2012.

Tree pits for smaller tree replacements in this area to be hand dug to ensure limited damage to existing trees root systems. Smaller replacement tree specimens to use a traditional anchoring system, as recommended by suppliers. During the first 5 years of establishment tree stakes shall be maintained in place and replaced when necessary. Stakes and ties to be checked annually and also after high winds to check for wind rock and to avoid stem damage. Trees to be refirmed in the ground as required. Dead, diseased, or dying branches shall be removed

For Tree pits for semi-mature replacements see sketch diagram on Drawing LA 2202 08. Pits to be 1.5 times the diameter of the rootball / square to size and depth to supplier's instructions. Tree to be planted at correct depth for root flange. Pits to be fitted with proprietary underground guying system with deadman anchoring/ platypus system installed to manufacturer's instructions. Backfilling as shown on drawing.

Compost and fertilisers to be incorporated into the top 200mm of each square metre of Topsoil for all tree pits.

Watering: Unless otherwise advised by tree suppliers

Standard and Semi- mature trees - 25 litres on 10 occasions throughout the growing Season or when less than 30mm precipitation at the end of any 4 week period.

The replacement tree planting shall be carried out in the first planting season, following the occupation of the building/s or when the use is commenced.

All work stages pertaining to unloading and temporary storage, soil considerations, planting and post-planting management and maintenance of trees to be undertaken

following guidelines as set out in BS 8545: 2014 and at all times carried out by suitably qualified persons and inspected at all stages by a Supervising Officer.

All planting and maintenance of soft landscaping to the development must ensure that the appearance of the development is satisfactory and have all due regard to the following, policies CS11 and CS16 of the Havant Borough Local Plan (Core Strategy) 2011 and the National Planning Policy Framework.

In addition to ensure the protection of bats and enhance biodiversity within the development new bat roosts shall be provided. Details of these will be provided by other parties and shall be permanently maintained and retained in accordance with approved details all to accord with Policy CS 11 of the Havant Borough Local Plan (Core Strategy) 2011.

Lundi Architects