

# 5 Year Landscape Maintenance & Management Plan

Project Name: Anderson Way

Project Address: Anderson Way, Belverdere, DA17 6BG

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Compiled by:



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### 1 Introduction

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- 1.1 Urban Wilderness Ltd was commissioned by Lysander to create a Landscape Management Plan for Anderson Way, Belverdere, London.
- 1.2 The Management Plan is broken down into two main sections; in section 2 landscape management objectives and in section 3 Soft Landscape Maintenance including:
  - Tree, shrub, hedge, herbaceous and turf planting (including establishment and replacements)
- 1.3 The appendix contains 390-P-001- Anderson Way - Soft Landscape Plan which should be read in conjunction with the text.

### 2 Landscape Management Objectives

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- 2.1. The maintenance objectives are split into two distinct groups to clarify the responsibility for the various maintenance tasks, namely during (i) the Works Contract period (including plant establishment and Defects Liability Period) and (ii) the subsequent post-Completion period. During both these periods, the relevant contractor is responsible for regular horticultural maintenance. This is to ensure that the design is maintained at the same high level throughout its lifetime.
- 2.2. The main contractor will be responsible for remedying all plant failures; as well as inadequate workmanship during the Defects Liability Period.

#### **Maintenance: Establishment Period (year 0 – 2)**

(During Works Contract and 1-year Defects Period following Practical Completion)

- 2.3. A one-year aftercare maintenance period is built into the implementation contract to cover the following; tree, shrub, hedge and wildflower meadow planting (including establishment and replacements)
- 2.4. During this period the contractor is responsible for all soft maintenance operations, including the replacement of all tree, shrub, hedge and herbaceous planting which has failed during the Defects period. A full-time landscape maintenance contract will be arranged following the end of the Defect Liability period. However, the Facilities Management team will also employ a qualified landscape contractor to carry out the day-to-day maintenance tasks during the Defects period to ensure that watering, feeding, grass mowing, hedge cutting and other essential operations are carried out regularly to maintain the soft landscaping.

#### *Access*

- 2.5. For landscape maintenance purposes vehicular access will be via the main entrance at Anderson Way.

#### *Facilities*

- 2.6. The appointed landscape management company will liaise directly with the Facilities Management team regarding the following onsite requirements:
  - Contractor parking
  - Storage of equipment
  - Water usage and standpipe locations

# 5 Year Landscape Management Plan

## Anderson Way

- Additional specific requirements

### *Weeds*

- 2.7. All planting areas will be maintained to ensure consistent control of annual and perennial weeds. The use of chemicals is permitted, although the use of hand tools is preferred to prevent any possible negative environmental effects (such as contamination of surface water or ingestion by domestic animals).

### *Trees & Hedges*

- 2.8. Trees and hedges will be maintained with good horticultural practice encouraging the vigorous growth and long-term health of all structural planting. The aim will be to present a landscape which is functional and easy to maintain. It is anticipated that this will be achieved through a balanced approach to tidiness and natural form. While hedging by definition will require regular cutting, the trees have been chosen on account of their habit and form and should require minimal annual maintenance. Tree and hedging plant failures will be replaced in the next available winter planting season.

### *Wildflower Area*

- 2.9. The wildflower areas are to be maintained so as to optimise year-round functionality. This will be achieved through an annual maintenance program which minimizes the use of chemicals wherever possible and includes a regular review process highlighting any areas for reinstatement or change in maintenance regime.

### *Southern Boundary Ditch*

- 2.10. The Southern Boundary Ditch is to be maintained with good horticultural practice encouraging the vigorous growth and long-term health of all structural planting. The aim will be to present a landscape which is functional and easy to maintain. It is anticipated that this will be achieved through a balanced approach to tidiness and natural form. The shrubs have been chosen on account of their habit and form and should require minimal annual maintenance. Shrub and herbaceous plant failures will be replaced in the next available winter planting season.

### *Replacements*

- 2.11. During the Contract Works and Defects Liability periods, plant failures will be replaced by the Main Contractor, or its nominated subcontractor, at their own cost. This includes:

- Theft of plants
- Malicious damage

- 2.12. Any plants found to be defective during the five year post practical completion period as a result of the following will be at the Main Contractor's expense.

- Failure
- Lack of vigour
- Being not in accordance with the specification

- 2.13. Replacement of plants should be undertaken a maximum of two times. If the plant fails for a third time, a Landscape Architect or trained Horticulturalist will be appointed to review the cause of plant failure and make recommendations for mitigation.

- 2.14. All plant replacements should occur within the correct planting season according to the specific requirements of the following plant types:

- *Woody Plants*  
Optimally, trees, shrubs and hedges should be planted within the dormant season (November to March) using bare root, root balled or air-pot grown nursery stock. If planting is required at other times of year, containerised stock should be used instead, with plants watered regularly.
- *Herbaceous Plants*  
Perennials and grasses can be planted any time of year so long as the ground isn't water-logged or frozen. Again, ensure regular watering to ensure proper establishment.

### **Maintenance: From Completion (year 2-5)**

#### **(From Completion Onwards)**

- 2.15. Following Contract Completion and discharging of all the Main Contractor's liabilities and responsibilities, the maintenance of all hard and soft landscape elements will be passed to a competent Landscape Maintenance Contractor, as appointed by Facilities Management team, for a minimum period of four years. The breakdown of landscape operations required is given in the following section.

### **3 Soft Landscape Maintenance**

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- 3.1. All Soft Landscape Maintenance should be undertaken in compliance with the requirements of BS 7370:1991.
- 3.2. The appointed landscape maintenance contractor will be expected to use his professional knowledge and discretion in both (i) producing a detailed annual programme of maintenance operations and (ii) applying these standards of work to the contract area.

#### **Weed Control**

- 3.3. Within the two-year establishment period, all planting beds should be kept weed free to ensure full and rapid establishment of all plant species. Frequency: once per month during active growing season (April-October).
- Do not allow strimmers or other mechanical tools closer than 200mm of the base of any plant. Operations within this zone should be carried out with hand tools.
  - Contact herbicide can be applied to emergent weeds. A non-residual herbicide such as glyphosate is recommended.
  - Non residual herbicides such as glyphosate, should not be used near or around water bodies on site, such as the ditches along the western and southern boundary.
  - Loosen soil within the planting beds, taking care not to damage the roots of plants within the planting bed. Planting beds to be maintained weed-free.
  - Ensure the minimum amount of soil and mulch is removed during weeding.
  - Dispose of all weeds off site; rake planting beds, with minimum disturbance to plants, to an even condition.
  - Re-mulch as necessary to maintain 50mm deep weed suppressing layer.

### Trees

#### Objective

- 3.4. For the establishment and maintenance of all trees identified in Urban Wilderness Drawing 390-P-001.
- 3.5. All tree works to be undertaken by suitably qualified maintenance contractor able to work to BS 3998:2010 'Tree Work. Recommendations'.
- 3.6. New trees planted will include: *Acer saccharum*, *Prunus padus* 'Watereri' and *Quercus rubra*

#### Maintenance: Establishment Period (year 0-2)

##### Watering

- "Water in" each tree after planting with 40-50 litres of water. Frequency: once per week, during dry periods during the growing season.

##### Cultivation

- Weed planting beds as per paragraph 3.3.
- Monthly inspection for wind firmness: trees to be firmed as necessary. Where tree is beyond a slight lean it should be staked and tied. Upon subsequent inspection if tree has firmly established, remove all staking and ties.
- Replacement: if a tree fails as a result of disturbance it should be replaced in the next planting season at the Contractors expense.
- Stakes to be kept in situ for two years, with an annual check on tree ties undertaken in early Spring to prevent abrasion and deterioration of the stem bark.

#### Maintenance (year 2-5)

##### Watering

- Water each tree with 40-50 litres of water following 10 days without rain. Frequency: Weekly during growing season (May-September) and until natural rainfall resumes.

##### Cultivation – Tree Works

- Apply course organic mulch (preferably well-rotted horse manure) around the base of each tree. Frequency: once yearly in early Spring.
- Tree Inspections:
  - For all newly planted trees, except *Prunus* (cherry) species: Undertake inspection for dead or damaged wood. Frequency: yearly, between end-November and February. Remove all deadwood using either secateurs or a sharp pruning saw.
- For *Prunus* (cherry) species: undertake pruning during active growing season as emerging sap in this species contains protective anti-fungal properties and helps promote natural healing.
- Other guidance:
  - Protect surrounding structures and plants during pruning.
  - Pruning should result in a natural and well balanced crown appearance.
  - Pruning should be back to source stem.
  - Pruning arisings to be removed off site.
  - Do not apply any surface dressings to pruning wounds or pruning scars.
- For all mature trees on site, ensure that a suitably qualified tree surgeon (preferably Arboricultural Association accredited) is appointed to undertake all necessary tree works

which arise during the maintenance period, due to storm damage, etc. Wherever possible, trees should be left to reach their respective mature growth habit and height. Only the bare minimum of tree work should be undertaken to ensure the health, longevity and safety of the tree population on site.

### Hedging

#### Objective

- 3.7. For the establishment and maintenance of all hedge plants identified in Urban Wilderness Drawing 390-P-001.
- 3.8. Including Native Hedgerow mix; *Corylus avellana*, *Crataegus monogyna*, *Euonymus europaeus*, *Ilex aquifolium*, *Prunus spinos* and *Viburnum opulus* and formal hedging; *Fagus sylvatica*.

#### Maintenance: Establishment Period (year 0-2)

##### Watering

- “Water in” each whip after planting until wet to full rooting depth (approx. 300mm).

##### Cultivation of Native Hedge Mix

- Weed planting beds as per paragraph 3.3.
- Undertake monthly inspection for wind firmness in the first year, with whips to be firmed as necessary.
- Do not prune for first year.
- In year 2, in late February (before bird nesting season) prune the leaders back to 900mm high.
- In establishment period only, use hand tools for pruning.

##### Cultivation of Formal Hedge Mix

- Weed planting beds as per paragraph 3.3.
- Undertake monthly inspection for wind firmness in the first year, with whips to be firmed as necessary.
- No need to prune for the first year
- In year 2, in late February (before bird nesting season) prune the leaders back to 2m high.

#### Maintenance (year 3-5)

##### Watering

- Water each plant after until wet to full rooting depth (approx. 300mm) following 10 days without rain. Frequency: once per week, during dry periods during the growing season.

##### Cultivation of Native Hedge Mix

- In year 3, in late February, cut the hedge to a rectilinear form to 1.5m-high using mechanical pruning equipment. An additional cut can be made after July (following the end of the Bird Nesting season)
- As the hedge matures in year 4 and year 5, in late February the hedge can be cut to the desired height of 1.5m-2m high using mechanical pruning equipment. An additional cut can be made after July (following the end of the Bird Nesting season)
- During visit after of the growing season to check all plants and remove any dead foliage/wood and any damaged element of the plant using hand tools.

## Wildflower Areas

### Objective

- 3.9. For the establishment and maintenance of all wildflower meadow areas identified in Urban Wilderness Drawing 390-P-001.

### Autumn Sown:

#### Maintenance: Establishment Period (year 0-2)

##### Cultivation

- During the first year the meadow should be mowed regularly this will maintain a balance between faster growing grasses to slower growing wildflowers.
- Year One: First cut early June, then monthly during July, August, September and October. Cutting height 70-100mm. Ensure that all arisings are collected and disposed of off-site.
- Thereafter: Cut from mid-July to early September. This can be done as one cut but preferably, and if the meadow is big enough, you will cut it in sections leaving a week to a fortnight between cuts.

#### Maintenance (year 3-5)

##### Cultivation

- Mow the meadow to 70-100mm at the end of the active growing season and when all flowers have faded and set seed (usually around early October). Remove all arisings off site thereafter to retain a low-fertility soil substrate.

### Spring Sown:

#### Maintenance: Establishment Period (year 0-1)

##### Cultivation

- During the first year the meadow should be mowed regularly this will maintain a balance between faster growing grasses to slower growing wildflowers
- Year One: First cut early August, then monthly during September and October. Cutting height 70-100mm. Cutting height 70-100mm. Ensure that all arisings are collected and disposed of off-site.
- Thereafter: Cut from mid-July to early September. This can be done as one cut but preferably, and if the meadow is big enough, you will cut it in sections leaving a week to a fortnight between cuts.

#### Maintenance (year 3-5)

##### Cultivation

- Mow the meadow to 70-100mm at the end of the active growing season and when all flowers have faded and set seed (usually around early October). Remove all arisings off site thereafter to retain a low-fertility soil substrate.

## Southern Boundary Ditch

### Objective

- 3.10. For the establishment and maintenance of all shrubs and herbaceous planting identified in Urban Wilderness Drawing 390-P-001; *Salix viminalis* and *Luzula sylvatica*

### Maintenance: Establishment Period (year 0-2)

#### Watering

- “Water in” each shrub after planting until wet to full rooting depth (approx. 300mm). Frequency: once per week, during dry periods during the growing season.
- “Water in” each plant after planting until wet to full rooting depth (approx. 150mm).

#### Cultivation

- Weed planting beds until *Luzula sylvatica* established to form dense ground cover. Weed by hand, removing self-set saplings.
- Non residual herbicides such as glyphosate, should not be used near or around water bodies on site, such as the ditches along the western and southern boundary.
- Monthly inspection of *Salix viminalis* for wind firmness, with shrubs firmed-up as necessary.
- No cutting required for herbaceous ground cover of *Luzula sylvatica*

### Maintenance (year 2-5)

#### Cultivation

- Weed planting beds by hand if needed, removing self-set saplings.
- Non residual herbicides such as glyphosate, should not be used near or around water bodies on site, such as the ditches along the western and southern boundary.
- Undertake annual inspection of all *Salix viminalis* in October (at the end of the growing season), removing any dead foliage/wood or damaged limbs, using either secateurs or a sharp pruning saw to avoid bacterial infection of affected plants.
  - Protect surrounding structures and plants during pruning.
  - Pruning should result in a natural and well-balanced shape.
  - Pruning should be back to source stem.
- No cutting required for herbaceous ground cover of *Luzula sylvatica*.

## 4 British Standards

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4.1. As well as the HTA standards described above the soft landscape works should meet the following British Standards:

### *Topsoil handling, stripping and storage*

- BS ISO 15799:2003 Soil quality - guidance on ecotoxicological characterization of soils and soil materials
- BS 3882:1994 Specification for topsoil and AMD 9938
- BS 6031:1981 Code of practice for earthworks
- BS 7562-4:1992 Planning, design and installation of irrigation schemes guide to water resources
- BS 4428:1989 guide of practice for general landscape operations (excluding hard surfaces) AMD 6784

### *Quality of Trees and Shrubs*

- BS 3936-1:1992 Nursery stock specification for trees and shrubs
- BS 3936-5:1985 nursery stock specification for poplars and willows
- BS 3936-10:1990 nursery stock specification for ground cover plants

### *Maintenance of gardens/ Landscapes*

- BS 7370-3:1991 grounds maintenance recommendations for maintenance of amenity and functional turf (other than sports turf)
- BS 3998:1989 recommendations for tree work and AMD 6549

### *Horticulture*

- BS EN 12579:2000 Soil improvers and growing media - sampling
- BS EN 13037:2000 Soil improvers and growing media - determination of pH

### *Turf*

- BS 3969:1998 Recommendations for turf for general purposes
- BS 4428:1989 Code of practice

## **5 Appendix**

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### 5.1. Softworks General Arrangement

