



L I Z A R D

Landscape Design and Ecology

STONEGATE HOMES

OXFORD ROAD

OXFORD ROAD, READING, BERKSHIRE

Long Term Soft Landscape Management Plan

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Checked by	KM
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1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology has been commissioned to prepare a detailed Landscape Design Scheme for the proposed development at Oxford Road, Reading, Berkshire. As part of this proposal, a Long Term Soft Landscape Management Plan has been compiled to provide management and maintenance prescriptions for the proposed soft landscape scheme.

1.1 The Long Term Soft Landscape Management Plan for the development at Oxford Road has been prepared by Roberto Marchetti (Landscape Architecture MALA, Architecture BSc MSc); Landscape Architect at Lizard Landscape Design and Ecology, Worthing.

1.2 The Soft Landscape Management Plan includes:

- Information about existing site conditions and surrounding landscape;
- Description of the Scheme Proposals;
- Long-Term Design and Management Objectives;
- Landscape Management Responsibilities;
- Landscape Management Prescriptions;
- Annual and Long-Term Management Schedule
- Soft Landscape Maintenance Specification (NBS Q35)

2.0 EXISTING SITE INFORMATION

- 2.1 The development site encompasses 1.26ha, is located to the north of Oxford Road, Reading A329. (Grid Ref: SU 69724 73681).
- 2.2 The Site is situated between the Curzon Club to the south and a large supermarket to the northwest. A large modern residential development surrounds the site to the north and east. Vehicular access to the site is via Curzon Street (immediately to the north), which connects with the A329 (Oxford Road) via Valentia Road.
- 2.3 The topography of the Site falls generally from north to south from approx. 45m aOD to approx. 44m aOD.
- 2.4 Soils on site are described as '*Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils*' through reference to the 'Soilscapes' map developed by Cranfield University sponsored by DEFRA (accessed 07.02.2022).

Existing Site Vegetation

- 2.5 The site comprised of hardstanding, ruderal vegetation, scattered shrubs and trees.
- 2.6 'Growing through the hardstanding across the majority of the site is ruderal vegetation which consist of species including broad-leaf dock (*Rumex obtusifolius*), spear thistle (*Cirsium vulgare*) and ragwort (*Jacobaea vulgaris*). There are also small numbers of common fennel (*Foeniculum vulgare*). Yarrow (*Achillea millefolium*) and rosebay willowherb (*Chamerion angustifolium*) can also be seen dotted across the site. In the southeast of the site areas of cleavers (*Galium aparine*) can be seen. In the same corner is a vegetation run emerging from the dead vegetation. Along the eastern site boundary there were several individual common hogweed (*Heracleum sphondylium*) plants. Ivy covers the majority of the southern wall site boundary'.
- 2.7 'A mixture of immature and mature Mixed Species Shrub Vegetation (*Platanus x hispanica*, ruderal species and buddleia sp.) is seen scattered across the site'.
- 2.8 'There is one mature *Acer pseudoplatanus* found in the southeast corner of the site, which is covered in Ivy (*Hedera helix*). Another sycamore is offsite and has branches overhanging into the site'.
- 2.9 (Refer to the Preliminary Ecological Appraisal prepared by Phlorum (September 2020).

Surrounding Landscape

- 2.10 'The Site is set in a predominantly urban environment with areas of amenity grassland and, trees and hedges. Surrounding green areas are: Lousehill Copse that comprises of natural mature woodland with a pond (1.6km to the west), Mcilroy park contains a large block of mixed deciduous woodland (1.7km to the west), Round Copse consists of a small woodland and borders Mcilroy Park (1.8km to the west)'. (Refer to the Preliminary Ecological Appraisal prepared by Phlorum (September 2020).

3.0 PROPOSED LANDSCAPE SCHEME

- 3.1 The proposed development provides 26no. apartments across five floors and two commercial units at ground floor. On-site car and cycle parking will be provided at ground level.
- 3.2 The principal elevations of the proposed building faces north and west onto the established pedestrianized area of Moultsford Mews.
- 3.3 The soft landscape proposals include two ornamental planting beds within the car parking area, 4 no. green walls along the northern and western aspects and sedum and biodiverse roofs.

Landscape Design and Management Objectives

- 3.4 The Soft Landscape Management Plan sets out long-term objectives for delivery and safeguarding of amenity, functional and ecological values through prescribed landscape maintenance and management operations. The long-term design and management objectives include:
- In the car park area two planting areas would be defined by hedgerow planting to soften and filter visibility of vehicles within the space. The central space would include flowering groundcover shrub, accent and specimen planting and a feature 'signature' tree to help define the environmental character and long-term identity of the proposed building.
 - Green walls at the ground floor would soften the building facade and incorporate accent and specimen planting providing seasonal interest as well as texture, colour and scent.

- The roofs would be enhanced with sedum and brown roofs to enhance the ecological aspect of the proposal by creating additional habitat for wildlife and biodiversity gains across the site.

Landscape Management Responsibilities

- 3.5 Delivery of the Long-Term Design and Management Objectives would be safeguarded by implementation of the proposed scheme and by means of regular maintenance. An outline scope of maintenance responsibilities of respective parties would be as follows:

Drawings and Reports

- 3.6 The Soft Landscape Management Plan is accompanied and shall be read alongside the following documentation;

- LLD2498 -ARB-DWG-001 – Tree Protection and Retention Plan;
- LLD2498-ARB-SCH-001 – Existing Tree Schedule
- LLD2498 -LAN-DWG-100/101 – Hard and Soft General Arrangement Drawings;
- LLD2498 -LAN-DWG-200 – Detailed Planting Plans;
- LLD2498 -LAN-SCH-001 – Detailed Plant Schedule and Specification

4.0 LANDSCAPE MANAGEMENT PRESCRIPTIONS

P1 – Existing Vegetation

Protection and Retention of Existing Vegetation

- 4.1 The Contractor shall exercise diligence and care when performing operations beneath the canopy of existing mature trees and vegetation designated for protection and avoid at all times damage to the roots, trunk and branches.

Protective Fencing

- 4.2 All trees to be retained on site shall be protected with fencing erected around the area of mature vegetation in accordance with *BS 5837; 2012 – Trees in Relation to Design, Demolition and Construction – Recommendations*. The fencing is to be erected according to the specified and dimensioned Root Protection Areas in accordance with the Tree Protection and Retention Plan.
- 4.3 The fencing is to be erected prior to the commencement of all works on site and retained in place throughout construction. The fencing is to be a min. 2.0 metres height 'Heras' Welded Wire Mesh Fencing secured upon a scaffolding framework, with uprights at maximum 3.5m spacing, braced to the ground with 45-degree struts; supporting standard anti-climb 'Heras' welded mesh fence panels secured with anti-lift devices to concrete or cable ties. "*TREE PROTECTION ZONE - KEEP OUT*" or similar notices to be attached to every fifth panel.
- 4.4 The fencing is to be positioned to the outside edge of the Tree Root Protection Areas specified. All such fencing shall be maintained for the full contract period. Repositioning of the protective fencing during the contract as the contract works progress shall need to be agreed on site with the Landscape Architect.
- 4.5 At the end of the contract period the Contractor shall remove protective fencing from the site. All retained vegetation shall be healthy and thriving at the handover date. Within the protected area the following activities must not take place:
- No vehicles are to be used in the fenced off areas;
 - No materials are to be stockpiled or stored;
 - No chemicals are to be stored;
 - No excavation or increase in the soil level shall occur
 - No fires shall be lit on site.

Ground Protection Measures - Manual Excavation

- 4.6 Within the tree Root Protection Areas, the first 750mm depth of any excavation, whether for proposed foundations, hard surfacing, or underground services shall be undertaken by hand under arboricultural supervision. The soil shall be loosened with a pick or a fork, and then will be cleared from roots with a compressed air soil pick. All roots will be cut cleanly with a hand saw or secateurs. The edge of the excavation closest to the trees will be covered with hessian sacking to prevent drying out, and if necessary be shuttered with an appropriate material to prevent soil collapse.
- 4.7 All excavations, cultivation and grading beneath the canopy of existing mature trees and within the tree Root Protection Areas outside the canopy of the trees and vegetation shall be carried out using hand tools, taking care not to damage or disturb any existing tree roots.

Tree Protection Zone – Temporary Construction Access.

- 4.8 Construction areas and access routes / existing ground beneath the existing tree canopy or within the tree Root Protection Areas is to be overlain with a geo-textile membrane and compressive material. The construction access / area is to be protected with interlocking metal plates or scaffolding boards for the duration of the construction period. Tree Protective Fencing is to be realigned / relocated on site only in agreement with the Landscape Architect/ Arboricultural Consultant, to suit the construction phasing / process.

Arboricultural Supervision

- 4.9 The Landscape Architect/ Arboricultural Consultant will directly supervise all construction works that have to be undertaken within Root Protection Areas. These include:
- Location of protective fencing and ground boarding;
 - Construction of above-soil surfacing – No Dig Construction;
 - Depth of manual excavations for sub-base of proposed roads;
 - All other excavations, whether for proposed foundations, hard surfacing, or underground services.

Removal of Existing Vegetation

- 4.10 All existing trees designated for removal are to be removed in accordance with drawing *LLD2498-ARB-DWG-001 – Tree Retention and Protection Plan*. All tree work and removal shall be carried out in accordance with *BS 5837: 2012 – 'Trees in Relation to Design, Demolition and Construction – Recommendations'* and *BS3998: 2010 – 'Tree Work: Recommendations'*. Trees designated for removal and felling shall be clearly marked on site with white paint. Prior to the removal and felling of trees, the required work and tree positions shall be agreed on site with the Landscape Architect/ Arboricultural Consultant. Trees shall be felled, and tree surgery works undertaken prior to the erection of the Tree Protective Fencing. Care should be taken during the tree removal process to avoid any damage to any trees which are designated to be retained and protected.
- 4.11 Stumps shall be removed and cut away so that the top of the stump shall be at least 450 mm below the final topsoil level in order that the site can be levelled and grassed/ planted over. Stumps are to be treated with a herbicide approved by the Landscape Architect/ Arboricultural Consultant. Where the depth is greater than 450 mm the areas shall be backfilled to the required ground level providing min. 300 mm deep topsoil coverage.
- 4.12 The removal of shrub or scrub material within the tree root protection area of any tree to be retained shall employ a manual removal method; the use of hand tools shall be used in order to maintain the ground surface of the tree root protection area, and reduce any damage to existing tree roots within the protected tree root zone. Adjacent trees shall not be utilised as anchors or levers to facilitate the removal of adjacent vegetation.

Tree Surgery

- 4.13 Any significant defects found in the trees during the course of the scheduled work shall be reported to the Landscape Architect. All work shall be undertaken by an approved and qualified Tree Surgeon in accordance with BS3998: 2010 Tree Surgery. Care should be taken to avoid damage to neighbouring trees to be retained. Branches in confined spaces shall be removed and taken down in sections. All arisings shall be transported and disposed of away from site to the Contractor's tip.

Existing Mature Trees to be Retained and Protected on Site

- 4.14 The condition of the retained existing mature trees shall need to be monitored each year, in order to identify any dead or dying branches within the existing canopy or any areas of significant die-back. The existing trees should be checked annually for dead, dying, or damaged branches during the spring of each year. Dead, dying, or damaged branches should be cleaned from the tree trunks, removing all dead wood back to the tree trunks. Any overhanging branches which constrict use within the development site should be trimmed hard back to the development boundary. Any works required to neighbouring trees / vegetation should be limited to the extent of removing overhanging branches. Tree Surgery works are to be undertaken in accordance with BS 3998; 2010.

P1 – Existing Mature Trees and Vegetation - Management Prescriptions

- **Existing Mature Trees and Vegetation;** All existing trees are to be inspected every year during the spring for dead, dying, or damaged branches; including any diseased wood or wounds. Any dead, dying, or damaged branches should be cleaned from the tree trunk by a Qualified Tree Surgeon, removing all dead wood back to the tree trunk;
- **Existing Mature Trees;** The condition of the existing mature trees to the development site boundaries shall need to be monitored each year, in order to identify any dead or dying branches within the existing canopy or any areas of significant die-back.

P2 – Proposed Tree Planting

Tree Planting Proposals

- 4.15 The proposals incorporate a coordinated scheme of native species and feature trees of the following stock sizes:
- 14-16 cm girth; 4.5 m height; Standard (Extra Heavy) nursery stock;
- 4.16 For species selection and location refer to LLD2498 -LAN-DWG-200 – Detailed Planting Plans; for nursery stock details and specification refer to LLD2498 -LAN-SCH-001 – Detailed Plant Schedule and Specification. For specifications of tree staking, topsoil refer to LLD2498 -LAN-SPE-001 – Soft Landscape Specifications

Proposed Tree Planting – Planting Specification

- 4.17 Where required, backfilling material shall be the site excavated topsoil combined with an organic compost planting medium, and soil improver. The organic compost shall be thoroughly mixed into the backfill or cultivated material at a rate of 1 no. part planting medium to 3 no. parts existing site topsoil.

Tree Staking – Standard (Extra Heavy) Nursery Stock Trees

- 4.18 Tree staking is to be Long Double Staking for Extra Heavy Standard Trees with stakes driven vertically at least 300 mm into bottom of pit on either side of tree position before planting. The stakes should be placed to allow the fixing of the cross bar to the windward side of the tree and as close to the stem as possible. Backfilling should seek to consolidate material around stakes. The stake shall extend above ground level to a maximum of one third of the total height of the tree. The crossbar shall be no more than 40 mm away from the stem of the planted tree and the tree secured firmly but not rigidly to the cross bar with one adjustable tie plus spacer within 50 mm of the top of the stake with a 25 mm long galvanised clout nail.

Organic Mulch - Applied to Trees and Ornamental Planting Areas

- 4.19 Organic mulch comprising of well composted organic material, wood chips, or bark, shall be free of pests, disease, fungus, weeds and foreign material.
- 4.20 Clear all weeds, water soil thoroughly and mulch all planting beds to dimensions as follows, to an even depth of 75 mm/ 50-100 mm after settlement.

Watering

- 4.21 In order to establish newly planted trees, the proposed planted trees should be watered fortnightly throughout the Spring / Summer Period; May / June / July / August / September. 20 litres should be applied to each tree at each watering visit. Thereafter, water as deemed necessary only where natural precipitation levels are insufficient in order to maintain healthy dense growth.

Tree Guards and Tree Ties

- 4.22 All tree guards and rubber tree ties, should be checked to each tree bi-annually; Spring / Autumn. All tree guards should be in place and properly positioned and fitted at the base of each tree. Rubber tree ties should accommodate the tree girth. The tree ties should also not draw the tree stake into the trunk of the tree, potentially causing abrasion. Tree ties should be fitted so that the tree trunk and tree stake are located comfortably side by side and aligned. Replace and refit rubber tree ties / tree stakes and tree guards if necessary.

Tree Planting - Pruning

- 4.23 Tree planting should be checked for dead, dying, or damaged branches and stems bi-annually.
- 4.24 Trees should also be checked for shape, form, and size within the site areas and adjacent to the property and highway footpaths. Where min. clear stem height has been specified, this should be maintained by removing any low branches or growth within the lower tree trunk.
- 4.25 Trees should be pruned accordingly outside of the bird nesting season, during the late Winter or Autumn.

P2 – Proposed Tree Planting – Management Prescriptions

- **Tree Planting - Mulching;** Trees within Ornamental Planting should be maintained with mulch to the base of the trees. Mulch layer to be checked annually;
- **Defects;** Replace dead trees as required.
- **Tree Watering;** Nursery Stock Tree Planting to be watered fortnightly throughout May / June / July / August / September; and as deemed necessary after the establishment period, only where natural precipitation levels are insufficient; provide 20 ltr/ tree/ visit;
- **Tree Guards and Tree Ties;** Check fitting of tree guards and rubber tree ties including tree stakes; check bi-annually; Spring / Autumn;
- **Tree Pruning;** Prune dead and damaged branches bi-annually; February or September not to disturb nesting birds.

P3 – Proposed Hedge Planting

Hedge Planting

- 4.26 Single Species Clipped hedge to highlight the planting beds within the car park.
- 4.27 For species selection and location refer to LLD2498 -LAN-DWG-200 – Detailed Planting Plans; for nursery stock details and specification refer to LLD2498 -LAN-SCH-001 – Detailed Plant Schedule and Specification.

Hedge Weeding

- 4.28 Where hedgerow plants shall be planted, the planting area should be kept clear of all weeds at the base of the plant material. The hedgerow planting should be kept weed free by either hand weeding or application of a non-residual herbicide application, taking care not to spray or scorch existing plant material. The hedgerow planting within the development should be cleared of all weeds annually; Spring and Autumn.

Hedge Mulch Top-up

- 4.29 Organic mulch comprising of well composted organic material, wood chips, or bark, shall be free of pests, disease, fungus, weeds and foreign material. The organic mulch shall be matured for a minimum of 16 weeks. Organic mulch shall consist of graded fines to a maximum particle size of 40 mm with approximately 70% particle size 5mm to 40 mm, 30 % particle size less than 5 mm.
- 4.30 Clear all weeds, water soil thoroughly and mulch all planting areas to a depth of 50-100 mm after settlement.
- 4.31 Mulch should be topped up and checked annually during Spring.

Hedge Trimming and Pruning

- 4.32 During the two years of hedgerow establishment the hedgerow plants should be lightly trimmed to maintain shape and form. Light trimming shall encourage vigorous and dense growth. The appropriate pruning strategy and objectives address the proposed function and character of hedges. Pruning should be carried out to avoid disturbance to nesting birds
- **Formal, clipped hedges;** formative trimming during the first two years of establishment should be undertaken annually during the late Winter. Regular

maintenance trimming should be then carried out annually at the same time to maintain their character and sightlines where this might affect motorist users.

Hedge Planting Watering

- 4.33 In order to establish the hedgerow planting, the plants should be watered fortnightly throughout the summer season in the first two years of establishment during May / June / July / August / September. Quantity of water to be 10 litres per metre square during each visit. Thereafter, water as necessary where natural precipitation levels are insufficient to maintain healthy dense growth.

Hedge Planting Litter Collection

- 4.34 All hedgerow planting areas should be checked on a regular basis for litter and leaf collection. All Hedgerow Planting areas should be cleared of litter and checked on a monthly basis throughout the year. All litter to be removed from the site.

Long-Term Hedgerow Management

- 4.35 The Long-term management objective for the hedgerow planting should be to achieve a dense hedgerow boundary or frontage treatment. Where existing or proposed hedgerows could possibly obscure sightlines of motorists, these should be monitored and trimmed regularly to ensure clear visibility splays.
- 4.36 After two years of establishment and light trimming, the hedgerows should be maintained to the maximum objective height and should be hard-trimmed bi-annually to achieve this goal. The hedgerow should be trimmed to an 'A' shape and form. The following hedgerow heights should be achieved:

- Clipped hedges to front planting beds in the car park: min. 1.1 m height.

P3 – Proposed Hedgerow Planting – Management Prescriptions

- ***Proposed Hedgerow - Weeding***; Maintain hedgerow planting areas weed free; check annually, Spring / Autumn;
- ***Proposed Hedgerow - Mulch Top-up***; Maintain mulch to all hedgerow planting areas; check annually; Spring;
- ***Proposed Hedgerow - Trimming and Pruning***; Light trimming of hedgerow transplants to stimulate vigorous and dense growth; carry out for first two years

annually during early February; Long-term regular hard maintenance trimming of formal hedgerows to car parks should be carried out annually in early February.

- **Proposed Hedgerow - Planting Watering;** Fortnightly during April/ May / June / July / August / September for establishment of new hedgerow planting; and as deemed necessary after the establishment period, only where natural precipitation levels are insufficient; provide 10 ltr/ m²/ visit.
- **Proposed Hedgerow - Litter Collection;** Collection on a fortnightly basis.
- **Proposed Hedgerow - Long-term Management;** Maintain hedgerows at prescribed heights.

P4 – Proposed Ornamental Planting Areas.

- 4.37 The planting areas are to enhance the visual amenity and provide additional opportunity to increase biodiversity within the site (for species selection and location refer to *LLD2498-LAN-DWG-200 – Detailed Planting Plans*; for nursery stock details and specification refer to *LLD2498-LAN-SCH-001 – Detailed Plant Schedule and Specification*).

Setting Out

- 4.38 The Ornamental Planting material shall be set out throughout the proposed locations in staggered rows according to densities specified.
- 4.39 Plant species in mixes shall be planted in single-species groups of 3 – 7 no. plants.

Planting Pits

- 4.40 The size of perennial and shrub planting pits shall be twice as large as container/ root protection and no deeper than roots.

Ornamental Planting Areas – Weeding.

- 4.41 All Ornamental Planting areas should be maintained weed free throughout the maintenance period. It is recommended that shrub planting areas should be cleared of all weed growth either by hand weeding or by the application of a non-residual herbicide application. Weed growth to be checked annually during Spring / Autumn. Regular maintenance visits should be made to the Ornamental Planting areas to check weed growth by hand weeding. This should be checked and undertaken monthly throughout the year; March – October.

Plant Debris

- 4.42 Soft landscape plant debris such as spent flowers, bulb, and perennial plant material debris should be cleared from the planting beds on a regular basis. The condition of the planting beds should be checked monthly throughout the year; March – October.
- 4.43 All plant debris to be cleared from the soft landscape areas.

Ornamental Planting Areas - Mulch Top-up

- 4.44 The Ornamental Planting areas are to be mulched with an ornamental bark mulch. Organic mulch comprising of well composted organic material, wood chips, or bark, shall be free of pests, disease, fungus, weeds and foreign material. The organic mulch shall be matured for a minimum of 16 weeks. Organic mulch shall consist of graded fines to a maximum particle size of 40 mm with approximately 70% particle size 5mm to 40 mm, 30 % particle size less than 5 mm.
- 4.45 Clear all weeds, water soil thoroughly and mulch all planting areas to a depth of 50-100 mm after settlement.
- 4.46 Mulch should be topped up and checked annually during Spring.

Watering

- 4.47 In order to establish the Ornamental Planting areas, the shrub planting material should be watered fortnightly throughout the summer season in the first year of establishment during May / June / July / August / September. 10 litres per metre square should be applied fortnightly throughout the summer season at each maintenance visit. Thereafter, water as deemed necessary only where natural precipitation levels are insufficient in order to maintain healthy dense growth.

Pruning and Trimming

- 4.48 Shrub plant material should be lightly trimmed and pruned to maintain vigorous and dense growth during early establishment. Plant material should be checked for size and space adjacent to the footpaths and paving. Pruning and trimming should be undertaken annually, according to individual species requirements:
- Shrubs flowering in Winter – prune in Spring;
 - Shrubs flowering in Spring and early Summer – prune immediately after the flowering period;
 - Shrubs flowering in Summer and Autumn – prune back to old wood in Winter;
 - Shrubs with ornamental winter shoots – coppice in Spring

Litter Collection

- 4.49 All planting areas should be checked on a regular basis for litter collection. All planting areas should be cleared of litter and checked fortnightly throughout the year.

4.50 All litter to be removed from site.

P4 – Proposed Ornamental Planting Areas – Management Prescriptions.

- **Planting Area Weeding;** Maintain Ornamental Planting areas weed free; check annually; Spring / Autumn. Hand-weed monthly throughout the Spring / Summer repeat where necessary;
- **Plant Debris;** Remove and trim all plant debris during monthly maintenance visits throughout the Spring / Summer;
- **Planting Area Mulch Top-Up;** Maintained mulch levels to a consistent depth of 75 mm; check annually Spring;
- **Watering;** Water plant material fortnightly during the summer season for the first year of establishment; and as deemed necessary after the establishment period, only where natural precipitation levels are insufficient; provide 10 ltr/ m²/ visit.
- **Planting Area Pruning;** Pruning and trimming; lightly prune / trim plant materials to all soft landscape areas annually according to individual species requirements.
- **Litter Collection;** Collection on a fortnightly basis.

Soft Landscape Maintenance Specification

Q35 Landscape Maintenance

To be read with Preliminaries / General Conditions.

Generally

110 Notice

- Give notice before:
 - Application of herbicide.
 - Application of fertilizer.
 - Watering.
 - Each site maintenance visit.
- Period of notice: 2 days.

130 Reinstatement

- Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.

155 Watering

- Supply: Potable mains water.
- Quantity: Wet full depth of topsoil.
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to root zone.
- Frequency: As necessary for the continued thriving of all planting.

160 Water Restrictions

- General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

170 Disposal of Arisings

- General: Unless specified otherwise, dispose of arisings as follows:
 - Biodegradable arisings: Remove to recycling facility.
 - Grass cuttings: Remove to recycling facility.
 - Tree roots and stumps: Remove to recycling facility.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and non-biodegradable arisings: Remove to local authority facility.

180 Chipping or Shredding on Site

- General: Not permitted on site.

190 Litter

- Extraneous rubbish not arising from the Contract Work: Collect and remove from site.

225 Tree Stems

- Precautions: Do not use mowing machinery closer than 100 mm to tree stems. Use nylon filament rotary cutters and other hand held mechanical tools carefully to avoid damage to bark.

226 Tree and Plant Stems

- Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
 - Operations close to stems: Complete using hand tools.

250 Leaf Removal

- Operations: Collect fallen leaves.
- Disposal: Remove from site for recycling.

Shrubs / Trees / Hedges**500 Establishment of New Planting**

- Duration: maintenance period to further agreement.
- Weed control:
 - Method: Keep planting beds clear of weeds by use of suitable herbicides; maintaining full thickness of mulch and hand weeding.
 - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering: When instructed.

502 Establishment of New Planting - Fertilizer

- Time of year: March or April.
- Type: Slow release.
- Spreading: Spread evenly. Carefully lift and replace any mulch materials.
 - Application rate: As manufacturer's recommendations.

510 Tree Stakes and Ties

- Inspection / maintenance times: monthly as part of the routine maintenance inspections and immediately after strong winds.
- Stakes:
 - Replace loose, broken or decayed stakes to original specification.
 - If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
- Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
 - Where chafing has occurred, reposition or replace ties to prevent further chafing.
- Removal of stakes and ties: as instructed by the Landscape Architect;
 - Fill stake holes with lightly compacted soil.

520 Refirming of Trees and Shrubs

- Timing: After strong winds, frost heave and other disturbances.
- Refirming: Tread around the base until firmly bedded.
- Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

540 Pruning Generally

- Pruning: In accordance with good horticultural and arboricultural practice.
 - Removing branches: Do not damage or tear the stem or bark.
 - Wounds: Keep as small as possible and cut cleanly back to sound wood.
 - Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
- Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
- Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
- Disease or fungus: Give notice if detected.
- Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

545 *Pruning of Excessive Overhang*

- Timing: annually or as instructed by the Landscape Architect.
- Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
- Special requirements: Allow ground cover plants to partially overlap paths and lawns.

550 *Pruning of Excessive Height*

- Timing: annually or as instructed by the Landscape Architect.
- Operations: Remove excessive height as instructed.

555 *Pruning Trees and Shrubs*

- Standard: To BS 7370-4.
- Special requirements: None.

570 *Formative Pruning of Young Trees*

- Standard: Type and timing of pruning operations to suit the plant species.
- Time of year: Do not prune during the late winter/ early spring sap flow period.
- Young trees up to 4 m high:
 - Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well-balanced head and ensure the development of a single strong leader.
 - Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
- Operatives: Extensive pruning of young trees and any surgery to larger trees must be carried out by an approved member of the Arboricultural Association or other approved specialist.

575 *Pruning Ornamental Shrubs*

- General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
- Suckers: Remove by cutting back level with the source stem or root.

580 *Pruning Flowering Species of Shrubs and Roses*

- Time of year:
 - Winter flowering shrubs: Spring.
 - Shrubs flowering between March and July: Immediately after the flowering period.
 - Shrubs flowering between July and October: Back to old wood in winter.
 - Rose bushes: N/A.

620 *Removal of Dead Plant Material*

- Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

630 *Dead and Diseased Plants*

- Removal: As soon as possible.
- Replacement: In the next suitable planting season.

635 *Reinstatement of Shrub / Herbaceous Areas*

- Dead and damaged plants: Remove.
- Mulch / matting materials:
 - Carefully move to one side and dig over the soil, fit for replanting.
 - Do not disturb roots of adjacent plants.
- Replacement plants:
 - Use pits and plants to original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
 - Additional requirements: Submit details and cost of plants before ordering.
- Dressing: Slow release fertilizer:
 - Type: Organic.
 - Application rate: As manufacturer's recommendations.

640 *Thinning by Removal of Surplus Plants*

- Plants to be thinned: as instructed by the Landscape Architect;
- Standard: BS 7370-4:1991.
- Timing: as instructed by the Landscape Architect;
- Roots:
 - Disturbance to adjacent plants: Minimise.
 - Soil: Refill holes with topsoil to leave an even graded surface.
 - Mulch: Maintain mulch as original specification.
 - Adjacent plants: Make good any minor damage immediately.
- Plants for retention: Select plants with a strong healthy habit.
- Mature planting density: As schedule.

645 *Weed Control Generally*

- Weed tolerance: Weed to clear ground every two weeks.
- Adjacent plants, trees and grass: Do not damage.

650 *Hand Weeding*

- General: Remove weeds entirely, including roots.
- Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
- Completion: Rake area to a neat, clean condition.
- Mulch: reinstate to original depth.

657 *Herbicide to Kill Regrowth*

- Type: Suitable foliar acting herbicide to kill regrowth.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

665 *Weed Control with Winter Herbicide*

- Type: Suitable residual soil acting herbicide.
- Time of year: Unless otherwise agreed, complete before end of March.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

670 *Weed Control with Summer Herbicide*

- Type: Suitable foliar acting herbicide.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

675 *Digging Over*

- General: Dig over beds. Do not damage existing plants, bulbs and roots.
 - Depth of dig (minimum): 100 mm.

680 *Soil Aeration*

- Compacted soil surfaces:
 - Prick up: To aerate the soil of root areas and break surface crust.
 - Size of lumps: Reduce to crumb and level off.
 - Damage: Do not damage plants and their roots.

685 *Soil Level Adjustment*

- Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
 - Arisings (if any): Spread evenly over the bed.

690 *Maintenance of Loose Mulch*

- Thickness (minimum): 75 mm consistent depth.
 - Top up: Annually.
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by non-residual herbicide treatment and / or hand weeding.

695 *Fertilizing Established Trees and Shrubs*

- Time of year: During April or May.
- Type of fertilizer: Slow release.
- Application: Spread evenly.
 - Rate: As manufacturer's recommendations.

700 *Snow Removal from Shrubs/ Trees*

- Standard: To BS 7370-4.
- Plants Subject to Snow Removal: As instructed.
- Timing: When instructed.

705 Winter Leaf Removal

- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Arisings: remove to a Local Authority Green Waste Recycling Facility.

Tree Work**810 Tree Work Generally**

- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Standards: To BS 3998:2010 'Tree Work. Recommendations' and Health & Safety Executive (HSE) 'Forestry and Arboriculture Safety Leaflets'.
- Removing branches: Cut as Arboricultural Association Leaflet 'Mature tree management'. Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
- Appearance: Leave trees with a well-balanced natural appearance.
- Chain saw work: Operatives must hold a Certificate of Competence.
- Tree work: To be carried out by an approved member of the Arboricultural Association.

815 Additional Work

- Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.

820 Prevention of Wound Bleeding

- Standard: To BS 3998:2010, Clause 8.

825 Prevention of Disease Transmission

- Standard: To BS 3998:2010, Clause 9 and Appendix B.

830 Cleaning Out and Deadwooding

- Remove:
 - Dead, dying, or diseased wood, broken branches and stubs.
 - Fungal growths and fruiting bodies.
 - Rubbish, wind blown or accumulated in branch forks.
 - Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - Other unwanted objects, e.g. tree houses, swings.
 - Climbing plants retain within existing trees.

835 Cutting and Pruning Generally

- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts:
 - Do not use chainsaws on branches of less than 50 mm diameter.
 - When using handsaws, cut in one continuous operation to form a smooth cut surface;
 - Anvil type secateurs: Do not use.
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
- Large branches: Remove only with prior approval.
 - Remove in small sections and lower to ground with ropes and slings.
- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 Crown Reduction / Shaping

- General: Cut back selectively to lateral or sub-lateral buds or branches to retain flowing branch lines without leaving stumps.
- Operations: as instructed by the Landscape Architect.

845 Crown Lifting

- Clearances: Remove branch systems to give clearance.
 - Height: As recommended by *BS 7370-4, clause 3.7.2.3*.
- Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sub-lateral buds or branches. Do not leave stumps.

850 Crown Thinning

- Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
- Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown, as instructed by the Landscape Architect.
- Cutting:
 - Branches: Cut back to lateral or sublateral buds or branches without leaving stumps.
- Appearance: Leave a uniform and well balanced structure of branches and foliage.

855 Cutting Tree Roots

- Excavating: Use hand tools only.
 - Protected area: Do not cut roots within the calculated tree Root Protection Area (RPA) in accordance with *BS 5837:2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'*.
- Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
- Cutting:
 - Cutting: Make clean smooth cuts with a hand saw.
 - Wounds: Minimize. Avoid ragged edges.
 - Finishing: Pare cut surfaces smooth with a sharp knife.
- Backfilling:
 - Protection: Cover cut roots with clean sharp sand.
 - Material: Backfill with original topsoil.

860 Removing Trees, Shrubs and Hedges

- Standards: To BS 3998:2010, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and 'Forestry Advisory Group Safety Leaflets'.
- Existing Services: Check for below and above ground services. Give notice if they may be affected.
- Shrubs and Smaller Trees: Cut down and grub up roots.
- Tree stumps:
 - Removal: Remove mechanically to a minimum depth of 450 mm below ground level.
 - Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Work near Retained Trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
- Filling holes:
 - Material: Use as-dug material and/ or imported soil as required.
 - Finishing: Consolidate and grade to marry in with surrounding ground level.

865 Bark Damage

- Wounds:
 - Do not attempt to stop sap bleeding.
 - Bark: Remove ragged edges using a sharp knife
 - Wood: Remove splintered wood from deep wounds.
 - Size: Keep wounds as small as possible.
- Liquid or flux oozing from apparently healthy bark: Give notice.

870 Cavities in Trees

- Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay, and give notice.
- Water filled cavities: Do not drain.
- Sound wood inside cavities: Do not remove.
- Cavity Openings: Do not cover.

5.0 LANDSCAPE MAINTENANCE AND MANAGEMENT SCHEDULE

Operation	Frequency	Year 1												Year 2	Year 3	Year 4	Year 5
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Tree Planting																	
Monitoring of existing trees	1 x year				✕									✕	✕	✕	✕
Mulching	1 x year				✕									✕	✕	✕	✕
Watering	1 x every 2 weeks				✕	✕	✕	✕	✕	✕				✕	✕	✕	✕
Pruning: dead or damaged branches	2 x year		✕							✕				✕	✕	✕	✕
Hedge Planting																	
Checking Tree Guards and Ties	2 x year				✕						✕			✕	✕	✕	✕
Mulching	1 x year				✕									✕	✕	✕	✕
Weeding	1 x year				✕									✕	✕	✕	✕
Litter Collection	Every 2 weeks				✕	✕	✕	✕	✕	✕				✕	✕	✕	✕
Formative Pruning	1 x year		✕											✕	✕	✕	✕
Clipped Hedges Pruning – When Established	1 x year		✕											✕	✕	✕	✕
Watering	1 x every 2 weeks				✕	✕	✕	✕	✕	✕				✕	As required	As required	As required

Operation	Frequency	Year 1												Year 2	Year 3	Year 4	Year 5
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Ornamental Planting																	
Monitoring	1 x month			✕	✕	✕	✕	✕	✕	✕	✕			✕	✕	✕	✕
Pruning: Species flowering in Winter	1 x year			✕										✕	✕	✕	✕
Pruning: Species flowering between March and July	1 x year				✕									✕	✕	✕	✕
Pruning: Species flowering between July and October	1 x year											✕		✕	✕	✕	✕
Weeding	1 x month					✕	✕	✕	✕	✕				✕	✕	✕	✕
Debris Removal	1 x month					✕	✕	✕	✕	✕				✕	✕	✕	✕
Mulching	1 x year				✕									✕	✕	✕	✕
Watering	1 x every 2 weeks				✕	✕	✕	✕	✕	✕				✕	As required	As required	As required
Sedum Roof XF301 – Refer to appendix 1 – 2 - 3 for specialist maintenance requirements																	
Biodiverse Green Roof with Seed Mix – Refer to appendix 4 – 5 for specialist maintenance requirements																	
Green Wall – Refer to appendix 6 - 7 for specialist maintenance requirements																	



LIZARD

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