

boon brown

Proposed Development
at Acorn House,
314-320 Gray's Inn Road | London

Landscape
Management
Plan

Document Reference

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1.0 Overview

1.1 Project Overview

This Landscape Management Plan (LMP) has been prepared by Boon Brown Ltd (“BoonBrown”) on behalf of the applicant, Myco Ltd. in support of a Reserved Matters planning application for the development of 33 No. residential scheme with 2 floors of commercial/retail space at Acorn House, 314-320 Gray’s Inn Road, London. Soft landscaped areas are proposed to communal areas on the lower ground floor and ninth floor, with a living roof installed to the first floor (non-accessible area).

1.2 The Report

This Landscape Management Plan (LMP) is a ‘living’ document that sets out the long-term design objectives, management responsibilities and maintenance schedules for all landscaped areas.

The LMP covers the maintenance of all soft and hard landscaped areas associated with the proposed development site. These measures will be undertaken in the interests of visual amenity, landscape character, biodiversity value and nature conservation of the Site.

All landscape planting and seeding is to be managed for the first 12 months after completion and will be maintained by the implementation contractor employed by Myco Ltd. as part of the defects liability period, thereafter passing to the management company. During which time, appropriate maintenance aftercare would be carried out, including: herbicide application (to be undertaken as a last resort), litter picking and the removal of injurious weed species. All plant failures are to be replaced and any remedial work undertaken on an annual basis.

The LMP is to be updated regularly with records of actions undertaken, their effects as determined by monitoring, annual corrective actions taken and to take into account changing site conditions, climatic changes and the adaptation and establishment of the soft landscape assets.

A review of the LMP will be undertaken in response to any management changes observed during routine monitoring or in response to the establishment/condition of the landscape, where appropriate and alterations are deemed necessary.

1.3 Governance and Implementation

It is the intention that the external hard and soft landscape areas associated with the proposed development will be transferred to a properly constituted management company or held by Myco Ltd. in perpetuity, following the prescriptions outlined within this LMP. Specifically, the communal residential areas will be conveyed to an affordable housing provider (Newlon Housing Trust), who will be responsible for the replacement of defective stock and the long-term maintenance of associated areas.

The managing authority as outlined above, will input to the review and modification of the management methods and prescriptions in order to respond to changing conditions, priorities or the effectiveness of the management being undertaken.

1.4 Management Objectives

Strategic Management Objectives:

- To provide an attractive setting for the residents, visitors and workers of the proposed residential and commercial development;
- To provide year-round structure and screening through evergreen shrubs;
- To provide seasonal and visual interest;
- To be maintained as a high-quality amenity area that is attractive, safe and tidy;

- To increase the biodiversity value of the proposed development site;
- To provide suitable habitats for wildlife;
- To provide a cohesive site character and a green framework for the edge of new built development;
- To monitor the site for the presence of Invasive Non-Native Species (INNS) and other undesirable species; and
- To provide a clear executive structure and basis for the long-term input of necessary expertise and funding to ensure the proper and reliable execution and monitoring of all measures proposed.

1.5 Status of the Natural Resources

The natural resources (both existing and proposed) to be managed as part of this LMP are shown and detailed within the following drawings / schedules:

- MC35-BB-XX-LG-DR-L-0101 Landscape General Arrangement and Planting Plan – Lower Ground
- MC35-BB-XX-01-DR-L-0102 Landscape General Arrangement and Planting Plan – First Floor
- MC35-BB-XX-09-DR-L-0104 Landscape General Arrangement and Planting Plan – Ninth Floor
- MC35-BB-XX-01-DR-L-520 Landscape Details – First Floor Roof Section

The planting of all newly created natural resources is to be carried out in accordance with the aforementioned drawings, technical notes and planting schedule.

1.6 General Maintenance Operations

- All proposed planting is situated within raised planters or as part of a living roof landscape.
- All materials and workmanship are to be to the highest possible standards and shall be in accordance with relevant British Standards, good horticultural and arboricultural practices and the landscape specification.
- Newlon Housing Trust / the Management Company and their appointed contractors shall comply with all relevant Health & Safety regulations and good working practices.

2.0 Soft Landscape

2.1 Shrub Planting

Proposal

Shrub planting has been proposed throughout the soft landscaped areas within the development site (lower ground floor, first floor and ninth floor) to provide an enhanced setting for residents, workers and visitors. In non-accessible areas, shrub planting has been provided for biodiversity value and to enhance visual interest. Shrub planting has been selected to provide seasonal interest, with a high proportion of evergreen and long-flowering species.

<i>Habitat</i>	<i>Desired Future Conditions</i>
Shrub Planting	<ul style="list-style-type: none"> A diverse range of shrub plants to be in a healthy and vigorous condition to maximise the visual amenity of the planting.

For Shrub Planting Mixes refer to the Planting Schedules: MC35-BB-XX-LG-DR-L-0101 / MC35-BB-XX-01-DR-L-0102 / MC35-BB-XX-09-DR-L-0104.

Broad Management Objectives and Actions

<i>Habitat</i>	<i>Broad Management Objectives and Actions</i>
Shrub Planting	<ul style="list-style-type: none"> Shrubs to be maintained and pruned in order to prevent obstructions to paths, roads, signs, steps, sight lines, windows, door and other such scenarios and to allow access as directed by the Management Company; Maintain year-round appearance and visual interest. To encourage rapid establishment of a closed canopy of shrubs and ground cover planting; To increase the biodiversity value of the proposed development site; Control of weed growth where out-competing newly planted planting; Planting beds to be kept free of litter and leaf fall, with all arisings removed from site; and Replacement of failed shrubs during winter.

On-going Management and Monitoring:

Maintenance and aftercare will be undertaken for a period of 2 to 5 years to ensure the successful establishment of proposed ornamental shrub and herbaceous planting.

- Plants to be kept free of pests and diseases;
- Mulch to be topped up as necessary;

- Weed control to be undertaken by hand; and
- Planting areas to be kept free of litter and leaf fall with arisings removed from site.

A visual condition assessment of all new planting will be undertaken annually after project commencement to determine the habitat condition and quality, with any remedial management reported and actioned through a review of this LMP.

2.2 Herbaceous Planting

Proposal

Herbaceous planting has been proposed throughout the soft landscaped areas within the development site (lower ground floor, first floor and ninth floor) to provide an enhanced setting for residents, workers and visitors. Herbaceous planting has been selected to provide seasonal interest, to be pollinator-friendly, to provide winter structure and interest and to enhance biodiversity value throughout the site.

<i>Habitat</i>	<i>Desired Future Conditions</i>
Herbaceous Planting	<ul style="list-style-type: none"> • A diverse range of ornamental shrub and herbaceous plants to be in a healthy and vigorous condition to maximise the visual amenity of the planting.

For the Herbaceous Planting Mixes refer to the Planting Schedules: MC35-BB-XX-LG-DR-L-0101 / MC35-BB-XX-01-DR-L-0102 / MC35-BB-XX-09-DR-L-0104.

Broad Management Objectives and Actions

<i>Habitat</i>	<i>Broad Management Objectives and Actions</i>
Herbaceous Planting	<ul style="list-style-type: none"> • To encourage rapid establishment of a closed canopy of shrubs and ground cover planting; • Winter structure to be provided through carrying out an early spring cut to allow for dried flower heads etc. providing a food source for seed eating birds and insects. Shelter is also found for wildlife in dead foliage over winter; • To increase the biodiversity value of the proposed development site; • Control of weed growth where out-competing newly planted ornamental shrub and herbaceous planting; • Ornamental planting beds to be kept free of litter and leaf fall, with all arisings removed from site; and • Replacement of failed ornamental shrubs during winter and herbaceous planting between April and May or late August and September.

On-going Management and Monitoring:

Maintenance and aftercare will be undertaken for a period of 2 to 5 years to ensure the successful establishment of proposed ornamental shrub and herbaceous planting.

- Plants to be kept free of pests and diseases;

- Mulch to be topped up as necessary;
- Weed control to be undertaken by hand; and
- Planting areas to be kept free of litter and leaf fall with arisings removed from site.

A visual condition assessment of all new planting will be undertaken annually after project commencement to determine the habitat condition and quality, with any remedial management reported and actioned through a review of this LMP.

2.3 Climbing Plants

Proposal

Climbing plants have been proposed to the communal area on the lower ground floor of the proposed development site. Climbing plants have been selected for their evergreen properties, providing year-round structure and forming a green wall.

<i>Habitat</i>	<i>Desired Future Conditions</i>
Climbing Plants	<ul style="list-style-type: none"> • Continuous evergreen structure and healthy growth, providing year-round screening and softening of built-form.

For the mix of Climbing Plants refer to the Planting Schedule: MC35-BB-XX-LG-DR-L-010.

Broad Management Objectives and Actions

<i>Habitat</i>	<i>Broad Management Objectives and Actions</i>
Climbing Plants	<ul style="list-style-type: none"> • To provide visual screening; • To provide year-round evergreen structure and form; • To soften the built-form; • Provide habitat for invertebrates and other wildlife.

On-going Management and Monitoring:

Maintenance and aftercare will be undertaken for a period of 2 to 5 years to ensure the successful establishment of the proposed Climbing Plants:

- Plants to be kept free of pests and diseases;
- Mulch to be topped up as necessary;
- Weed control to be undertaken by hand; and
- Planting areas to be kept free of litter and leaf fall with arisings removed from site.

A visual condition assessment of all new planting will be undertaken annually after project commencement to determine the habitat condition and quality, with any remedial management reported and actioned through a review of this LMP.

2.4 Semi-intensive Green Roof / Brown/Biodiverse Roof

Proposal

A non-accessible, semi-extensive green roof is proposed to the first floor of the proposed development site, as well as brown roofs to level 9. These habitat types have been proposed to provide visual interest and to enhance biodiversity value.

<i>Habitat</i>	<i>Desired Future Conditions</i>
Semi-intensive Green Roof / Brown Roof	<ul style="list-style-type: none"> • A diverse range of ornamental shrub, herbaceous plants and sedums to be in a healthy and vigorous condition to maximise the visual amenity and biodiversity value of the planting.

For the Semi-intensive Green Roof Planting Mixes refer to the Planting Schedule: MC35-BB-XX-01-DR-L-0102.

Broad Management Objectives and Actions

<i>Habitat</i>	<i>Broad Management Objectives and Actions</i>
Semi-intensive Green Roof	<ul style="list-style-type: none"> • To encourage rapid establishment of groundcover planting; • To increase the biodiversity value of the proposed development site; • To provide surface water management benefits; • To assist with urban cooling and improved health and well-being; • Control of weed growth where out-competing newly planted ornamental shrub, herbaceous planting and sedums; • Any vegetation which has encroached into drainage outlets, inspections chambers, walkways and the fire break gravel strip should be removed; • Replacement of failed ornamental shrubs during winter and herbaceous planting between April and May or late August and September.

On-going Management and Monitoring:

Maintenance and aftercare will be undertaken for a period of 2 to 5 years to ensure the successful establishment of proposed ornamental shrub and herbaceous planting.

- Plants to be kept free of pests and diseases;
- Mulch to be topped up as necessary;
- Weed control to be undertaken by hand; and
- Planting areas to be kept free of litter and leaf fall with arisings removed from site.

A visual condition assessment of all new planting will be undertaken annually after project commencement to determine the habitat condition and quality, with any remedial management reported and actioned through a review of this LMP.

Broad Management Objectives and Actions

<i>Habitat</i>	<i>Broad Management Objectives and Actions</i>
Brown / Biodiverse Roof	<ul style="list-style-type: none"> • Reinstate habitat conducive to local species on the roof; • Designed to be provide a valuable habitat rather than as a visual amenity in its own right; • No need for irrigation, unless there is a visual requirement to extend colour and interest through

the growing season – allow for occasional watering in periods of prolonged drought only.

- To increase the biodiversity value of the proposed development site;
- To provide surface water management benefits;
- Removal of saplings, weeds to be removed only if they become invasive;
- Removal of unwanted waste matter and debris; and
- Any vegetation which has invaded drainage outlets, inspection chambers, walkways and vegetation barriers (pebbles) should be removed – additional washed stoned pebbles to be added if there is movement or settlement of the barrier.

On-going Management and Monitoring:

Maintenance and aftercare will be undertaken for a period of 2 to 5 years to ensure the successful establishment of the brown/biodiverse roof;

- Removal of waste and debris;
- Removal of saplings and weed infestations;
- Irrigation required during prolonged periods of drought;
- Maintenance of vegetation barrier to retain fire break function;
- Mulch to be topped up as necessary;
- Weed control to be undertaken by hand; and
- Removal of any vegetation that has invaded drainage outlets, inspection chambers, walkways and vegetation barriers.

A visual condition assessment will be undertaken annually after project commencement to determine the habitat condition and quality, with any remedial management reported and actioned through a review of this LMP.

3.0 Hard Landscape

3.1 Hard Landscape Surfaces

In addition to, and at the same time as the general litter and refuse clearance is being carried out, all paths, hard surfaces and gullies are to remain clean.

Hard surfaced areas are to be kept clear of litter, twigs, leaves, glass, debris and similar on a fortnightly basis. All waste and arisings are to be removed from the site at the end of each work period and taken to a designated location for disposal.

Any acts of vandalism to these areas are to be reported immediately to the Management Company.

Weed (including moss) growth should not exceed 5% in any area. The use of chemical methods for weed removal are to be used only with written approval from the Management Company.

The Management Company will provide residents with a contact number to allow for notification of any hazards that arise.

Hard landscape areas are to be inspected in a six-monthly basis to identify and repair and damaged areas.

Clean paving and joints, brush in silica block jointing sand as and when required to all sand bedded paving every 5 years or as required.

Repair any subsidence or breakages promptly in accordance with best practice, manufacturer's guidance and using matching paving units.

Inspect and repair all edging on a regular basis making good any damage or wear promptly to maintain the good upkeep of the development.

Repair any damage or breakages promptly in accordance with best practice, manufacturers' guidance and matching surface treatment.

For living roofs / brown roofs, examine all mastic sealant and mortar pointings for signs of degradation. Repair or replace as necessary. Check that all proprietary surfacing and paving slabs are securely fixed/adhered to the roof surface and in good condition.

Ensure any new items of plant / equipment that may have been introduced to the roof are mounted on suitable isolated slabs and any fixings used to secure the plant in place do not penetrate the waterproofing.

The Management Company should keep a record of all inspections and maintenance carried out on the roof. Any signs of damage, contamination or degradation to visible elements of the waterproofing installation to be reported to the manufacturer immediately, in order for arrangements to be made for remedial work to be carried out if necessary.

When carrying out any maintenance to adjoining roof areas, care must be taken to prevent damage to both the landscaping and the waterproofing system.

3.2 Gullies and Slot Drains

Gullies, grilles, covers and slot drains are to be inspected on each site visit. They shall be thoroughly cleaned of any silt, dirt, debris, leaves, stones, concrete etc. as necessary.

Inspections shall include checking that water is running freely in the gullies and drains, reporting any defects or unacceptable obstruction to the Management Company.

On removing any grating, cover or grille, the rebate in the frame should be cleaned and then replaced flush in the frame. All waste shall be removed from site to the designated location for disposal.

Drainage systems associated with the biodiverse/brown roof to be inspected annually and maintenance work undertaken as necessary.

Check irrigation taps are functioning correctly. If damaged or broken, repair in accordance with best practice / manufacturers' guidance.

For living roofs / brown roofs, open the lids of all inspection chambers to inspect and ensure that all rainwater outlets and downpipes are free from any blockages and that water can flow away freely. Ensure that any protective metal flashings and termination bars remain securely fixed in place. Renew or repair as necessary.

3.3 Fencing / Walls and Railing

All fencing, walls, railings/balustrades shall be checked for damage/wear and when necessary, shall be replaced/repared/re-stained or re-painted as appropriate.

3.4 Clear Snow and Supply and Apply Rock Salt

At times of inclement weather, any snow or ice is to be removed by applying an approved rock salt, evenly spread at 20 grams per square metre, to specified areas within the proposed development. Care is to be taken to avoid spreading rock salt near and around trees, shrubs, turf and other plant material.

3.5 Street Furniture

All elements such as litter bins, benches and all other street furniture elements are to be regularly maintained throughout the year to meet health and safety requirements.

Check edging and walls for breaks and repair immediately.

3.6 Litter Clearance

The proposed development site is to remain clean and litter-free at all times, by removing litter to the standards defined below:

Definition of Litter

- i) 'Litter is anything whatsoever which is thrown down, dropped or otherwise deposited in, onto or from any place in the open air to which the public are permitted to have access without payment, unless otherwise by law or done with the written permission of the Management Company. This shall include all items, i.e. beverage containers, fast-food packaging, tree branches and animal waste.
- ii) Large items such as discarded furniture and household effects, mattresses etc. which require two or more people to lift and single deposits in excess of 1-2m³ will be treated as fly tipping.

Method of Litter Collection

Methods of litter collection may be by hand, paper picker or mechanical means as approved by the Management Company. Any damage caused to the soft landscaped or hard landscaped areas due to litter picking/collection operations being carried out shall be made good at the Contractor's expense and to the completed satisfaction of the Management Company.

All arisings from litter collection operations shall be immediately cleared from each plot on completion. The Contractor shall leave groupings of collected litter on site for bulk removal, unless specific approval from the Management Company has been issued in writing. All green waste to be removed via lifts. With care taken when moving equipment in and out of the building.

Remove Fly-tipped Material

Fly tipped material is to removed to the designated location for disposal.

4.0 Management Constraints

4.1 Timing of operations

Ornamental planting areas to be inspected in August each year, with any replacement planting undertaken in the planting season following the loss.

4.2 Water

A key consideration in the management of the landscape is the sustainable and responsible use of water. A balance must be sought between watering newly planted plants to help them to establish and conserving water in times of drought. The Landscape Institute's watering guidance 'Water restrictions and watering specification' (re-issued 2011) should be referred to for up-to-date advice. As basic guidance to aid establishment, during the first five years, plants may be watered in periods of dry weather. Balance is to be sought between the needs of the plant versus the responsible and sustainable use of water.

NB: elements of the LI's Technical Bulletin may have been superseded since publication and users of this guidance should ensure they comply with current legislation and local measures imposed by water authorities.

Roofs are to be manually watered via tap points if there has been two weeks of consecutive dry and windy weather conditions. The roofs should be inspected regularly during the first year of establishment.

4.3 Biosecurity

In recent years there has been a rise in pests and diseases impacting native species, this is in part due to greater globalisation of trade and the impacts of climate change. Biosecurity measures are to be put in place, such as planting a range of different plant genera and species, specifying British provenance stock and requesting full documentation of plant origin, consignment details, impact of pest/disease and/or plant passports.

4.4 Presence of Invasive Non-Native Species

Management of Invasive Non-Natives Species (INNS) is to be undertaken throughout the lifecycle of the project. Techniques for managing invasive species will be appropriate for the species in question, whilst minimising risk to non-target neighbouring species. Herbicides must be approved for use near water (avoiding the use of glyphosate). New biological controls for invasive species are currently being trialled and may be utilised in the future if they are proven to be effective.

4.5 Presence of Protected Species

Management cannot be undertaken which compromises the survival or success of the fauna described in the previous section.

All British birds are legally protected from disturbance while actively nesting (generally acknowledged to occur between March and August inclusive). As such, management of hedgerow and trees will be timed to avoid the bird nesting season or preceded by checks for nesting birds by a trained ecologist immediately prior to any removal. Should any nesting birds be recorded within the site during works, no work will take place in that location until the young have left the nest.

All wild birds, their nests and eggs are afforded protection under the WCA 1981 (as amended). In order to avoid a breach in the legislation, work will be undertaken outside of the nesting bird season (generally taken as March to August inclusive, though this is not defined in law and birds may nest outside of this time). As such, management of hedgerow and trees will be timed to avoid the bird nesting season or preceded by checks for nesting birds by a trained ecologist immediately prior to any removal. Should any nesting birds be recorded within the site during works, no work will take place in that location until the young have left the nest.

4.6 Climate Change

The aims, objectives and management of habitats should be adjusted throughout the lifecycle of the project, to anticipate and reflect new conditions resulting from climate change. Maintaining monitoring will be critical in order to respond to observations, to ensure that the habitats remain robust, diverse and resilient. Future editions of the LMP should be adapted to incorporate additional methods and ideas to enhance the landscape and ecology of the Site, delivering current best practice ensuring that favourable conditions are maintained, created or enhanced.

4.7 Working at Height

Care is to be taken when working at height, and Contractors are to prepare risk assessments and method statements prior to commencing work, to ensure that work is properly planned, supervised and carried out by competent people (suitably informed and qualified operatives) including the use of the right type of equipment. Work should be undertaken in line with associated regulations and policies, such as the Work at Height Regulations (2005).

Ensure that relevant health and safety procedures are followed when working at roof level, this includes making sure that safe access can be gained to the roof. It is advised that the contractor should always seek proof of current maintenance for any man-safe access systems prior to proceeding with the work on site.

5.0 Management and Monitoring Prescriptions

5.1 Management of Shrub Planting

Establishment Maintenance of newly planted Shrub Planting will be required for the first 2-5 years after planting to ensure rapid early growth.

Visits are to be undertaken at least monthly between April and September, with a further two visits during the dormant season, to ensure that the following maintenance requirements are undertaken:

- Shrub planting to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer’s recommended rates) in April of Years 1, 2 and 3.
- Plants that have become loosened, lifted up or out of the ground, are to be set upright and re-firmed by treading.
- Regular hand weeding will be required to ensure weed-free planting areas throughout the development site. Minimise weed control through the use of a 75mm minimum layer of mulch. Mulched areas are to be kept 10mm below adjacent grass, paved areas etc. It is essential to ensure that the lower branches and foliage of plants within the mulched areas are not smothered.
- A general Autumn tidy is required, taking care not to discourage any wildlife which may be present.
- An inspection is to be made in August each year. Any losses of plants and shrubs to be replaced in the planting season following the loss. Replacement shrubs are to be of the same specification and size as the original plants and shrubs.
- Surroundings of shrub planting to be maintained in a weed-free state with trimmed edges and mulch material to be kept topped up to a depth of 75mm.
- Following completion of the Establishment Period, the need for both watering and weed-control is likely to be reduced but must still be undertaken as necessary to ensure healthy growth and maintain the mulched beds in a weed-free condition.
- Specific shrub species to receive general and formative pruning as required in accordance with best horticultural practice. Winter flowering shrubs shall be pruned in spring. Shrubs flowering in March-July shall be pruned immediately after the flowering period and shrubs flowering in July-October shall be cut back to old wood in winter. Shrubs that require spring pruning to provide seasonal colour shall be pruned in March and shrubs that require seasonal pruning to promote continual flowering will be pruned appropriately.
- Regular monitoring for pests and diseases will also be needed on an on-going basis and any necessary control measures undertaken as soon as possible.

Management regimes for Shrub Planting are shown in the table below:

Shrub Planting Management & Monitoring Prescriptions:

<i>Management & Monitoring Tasks</i>	<i>Description</i>	<i>Frequency</i>	<i>Responsibility</i>	<i>Comments</i>
Control of broad-leaved weeds Years 1-4	Regular hand weeding will be required to ensure weed-free planting areas.	Visits to be undertaken monthly between April and September, with a further two visits during the dormant season.	Contractor / Ground staff	Weed removal is critical to establishment. The need for weed control will be minimised through the use of a 75mm minimum layer of mulch – which is to be regularly topped up.

Inspection Years 1-4	Inspect all shrubs and re-firm if necessary. Remove any dead, damaged or diseased plants and replace during November.	Check for any dead, damaged or diseased plants in July and replace during November. Bark mulch is to be replenished annually.	Contractor / Ground staff	N/A
Slow-release Fertiliser Application	Newly planted shrub planting to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer's recommended rates).	Annually in April of Years 1,2 and 3.	Contractor / Ground staff	N/A
Control of broad-leaved weeds Year 5 onwards	Hand weeding within planting beds as required.	April, September and November.	Contractor / Ground staff	N/A
Formative pruning	Specific shrubs are to be pruned in accordance with best horticultural practice. Refer to Landscape Specification.	Annually	Contractor / Ground staff as required.	Pruning of shrubs is for the purpose of building a strong framework, keeping shrubs healthy and vigorous, maintaining the shape and balance, ensuring the maximum amount of flowering wood is produced and that the shrubs do not create a nuisance or danger.
Corrective pruning	Shrubs are to be pruned to remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, discoloured, thin, weak, over-crowded, old or broken branches by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral.	Annually	Contractor / Ground staff as required.	N/A
Monitoring Programme	A visual condition assessment of all newly planted shrubs to determine the habitat condition and quality with any remedial	Every 5 years after project commencement	Landscape Architect	Any remedial management necessary is to be reported and actioned through a review of this

management reported and actioned through a review of this LMP.

document.
Monitoring criteria includes checking for pests and diseases and undertaking any necessary control measures as soon as possible.

5.2 Management of Herbaceous Planting

Establishment Maintenance of newly planted Herbaceous Planting will be required for the first 2-5 years after planting to ensure rapid early growth.

Visits are to be undertaken at least monthly between April and September, with a further two visits during the dormant season, to ensure that the following maintenance requirements are undertaken:

- Ornamental Shrub and Herbaceous planting is to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer's recommended rates) in April of Years 1, 2 and 3.
- Plants that have become loosened, lifted up or out of the ground, are to be set upright and re-firmed by treading.
- Regular hand weeding will be required to ensure weed-free planting areas throughout the development site. Minimise weed control through the use of a 75mm minimum layer of mulch. Mulched areas are to be kept 10mm below adjacent grass, paved areas etc. It is essential to ensure that the lower branches and foliage of plants within the mulched areas are not smothered.
- A general autumn tidy is required, taking care not to discourage any wildlife which may be present.
- Herbaceous planting to be dead headed after flowering and routinely managed to maintain a clean and tidy appearance.
- Taller perennial species may require staking in early spring / summer to maintain an upright form.
- An inspection is to be made in August each year. Any losses of plants and shrubs to be replaced in the planting season following the loss. Replacement plants and shrubs are to be of the same specification and size as the original plants and shrubs.
- Surroundings of shrub plants are to be maintained in a weed-free state with trimmed edges and mulch material to be kept topped up to a depth of 75mm.
- Following completion of the Establishment Period, the need for both watering and weed-control is likely to be reduced but must still be undertaken as necessary to ensure healthy growth and maintain the mulched ornamental beds in a weed-free condition.
- Specific shrub species to receive general and formative pruning as required in accordance with best horticultural practice.
- Regular monitoring for pests and diseases will also be needed on an on-going basis and any necessary control measures undertaken as soon as possible.

Management regimes for the Herbaceous Planting are shown in the table below:

Herbaceous Planting Management & Monitoring Prescriptions:

<i>Management & Monitoring Tasks</i>	<i>Description</i>	<i>Frequency</i>	<i>Responsibility</i>	<i>Comments</i>
Control of broad-leaved weeds Years 1-4	Regular hand weeding will be required to ensure weed-free planting areas.	Visits to be undertaken monthly between April and September, with a further two visits during the dormant season.	Contractor / Ground staff	Weed removal is critical to establishment. The need for weed control will be minimised through the use of a 75mm minimum layer of mulch – which is to be regularly topped up.
Inspection Years 1-4	Inspect all herbaceous plants and shrubs and re-firm if necessary. Remove any dead, damaged or	Check for any dead, damaged or diseased plants in July and replace	Contractor / Ground staff	N/A

	diseased plants and replace during November.	during November. Bark mulch is to be replenished annually.		
Staking	Taller perennial species may require staking to maintain an upright form.	Staking to be undertaken in spring / summer.	Contractor / Ground staff	N/A
Dividing	Plants to be divided to maintain healthy growth and to avoid overcrowding.	To be undertaken in spring every 2 to 3 years.	Contractor / Ground staff	Division to occur when the soil is dry enough to work and before new growth and flowering occurs. For plants that require dividing in autumn, carry out dividing in September / October.
Slow-release Fertiliser Application	Newly planted ornamental shrub and herbaceous planting to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer's recommended rates).	Annually in April of Years 1,2 and 3.	Contractor / Ground staff	N/A
Control of broad-leaved weeds Year 5 onwards	Hand weeding within ornamental planting beds as required.	April, September and November.	Contractor / Ground staff	N/A
Formative pruning	Specific shrubs are to be pruned in accordance with best horticultural practice. Refer to Landscape Specification.	Annually	Contractor / Ground staff as required.	Pruning of shrubs is for the purpose of building a strong framework, keeping shrubs healthy and vigorous, maintaining the shape and balance, ensuring the maximum amount of flowering wood is produced and that the shrubs do not create a nuisance or danger.
Corrective pruning	Shrubs are to be pruned to remove straggling stems, over-vigorous shoots, suckers and dead,	Annually	Contractor / Ground staff as required.	N/A

	misshapen, discoloured, thin, weak, over-crowded, old or broken branches by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral.			
Monitoring Programme	A visual condition assessment of all newly planted ornamental shrubs and herbaceous planting to determine the habitat condition and quality with any remedial management reported and actioned through review of this LMP.	Every 5 years after project commencement.	Landscape Architect	Any remedial management necessary is to be reported and actioned through review of this document. Monitoring criteria includes checking for pests and diseases and undertaking any necessary control measures as soon as possible.

5.3 Management of Proposed Climbing Plants

Establishment Maintenance of newly planted Climbing Plants will be required for the first 2-5 years after planting to ensure rapid early growth.

Visits are to be undertaken at least monthly between April and September, with a further two visits during the dormant season, to ensure that the following maintenance requirements are undertaken:

- Climbing Plants to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer’s recommended rates) in April of Years 1, 2 and 3.
- Plants that have become loosened, lifted up or out of the ground, are to be set upright and re-firmed by treading.
- Regular hand weeding will be required to ensure weed-free planting areas throughout the development site. Minimise weed control through the use of a 75mm minimum layer of mulch. Mulched areas are to be kept 10mm below adjacent grass, paved areas etc. It is essential to ensure that the lower branches and foliage of plants within the mulched areas are not smothered.
- A general Autumn tidy is required, taking care not to discourage any wildlife which may be present.
- An inspection is to be made in August each year. Any plant losses to be replaced in the planting season following the loss. Replacement shrubs are to be of the same specification and size as the original plants and shrubs.
- Surroundings of shrub planting to be maintained in a weed-free state with trimmed edges and mulch material to be kept topped up to a depth of 75mm.
- Following completion of the Establishment Period, the need for both watering and weed-control is likely to be reduced but must still be undertaken as necessary to ensure healthy growth and maintain the mulched beds in a weed-free condition.
- At each visit, Climbing Plants are to be checked and where necessary, branches/stems shall be secured with appropriate ties to the support structure the plant is growing against.
- Care is to be taken when working at height, contractor to prepare risk assessment and method statement prior to commencing work and ensure suitably informed and qualified operatives carry out the work.
- Specific shrub species to receive general and formative pruning as required in accordance with best horticultural practice. Winter flowering shrubs shall be pruned in spring. Shrubs flowering in March-July shall be pruned immediately after the flowering period and shrubs flowering in July-October shall be cut back to old wood in winter. Shrubs that require spring pruning to provide seasonal colour shall be pruned in March and shrubs that require seasonal pruning to promote continual flowering will be pruned appropriately.
- Regular monitoring for pests and diseases will also be needed on an on-going basis and any necessary control measures undertaken as soon as possible.

Management regimes for the Climbing Plants are shown in the table below:

Climbing Plants Management & Monitoring Prescriptions:

<i>Management & Monitoring Tasks</i>	<i>Description</i>	<i>Frequency</i>	<i>Responsibility</i>	<i>Comments</i>
Control of broad-leaved weeds Years 1-4	Regular hand weeding will be required to ensure weed-free planting areas.	Visits to be undertaken monthly between April and September, with a further two visits during the dormant season.	Contractor / Ground staff	Weed removal is critical to establishment. The need for weed control will be minimised through the use of a 75mm minimum layer of mulch – which is to

				be regularly topped up.
Inspection Years 1-4	Inspect all shrubs and re-firm if necessary. Remove any dead, damaged or diseased plants and replace during November. Supports and fixings are to be checked at least every year.	Check for any dead, damaged or diseased plants in July and replace during November. Bark mulch is to be replenished annually.	Contractor / Ground staff	All climbers are to be checked at each visit and where necessary, branches/stems shall be secured with appropriate ties to the support structure the plant is growing against.
Slow-release Fertiliser Application	Newly planted shrub planting to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer's recommended rates).	Annually in April of Years 1,2 and 3.	Contractor / Ground staff	N/A
Control of broad-leaved weeds Year 5 onwards	Hand weeding within planting beds as required.	April, September and November.	Contractor / Ground staff	N/A
Formative pruning	Specific shrubs are to be pruned in accordance with best horticultural practice. Overly thick or tangled growth shall be removed to outward points. Shoots close to areas where they could penetrate between building materials such as cladding or tiles shall be pruned.	Annually	Contractor / Ground staff as required.	Pruning of shrubs is for the purpose of building a strong framework, keeping shrubs healthy and vigorous, maintaining the shape and balance, ensuring the maximum amount of flowering wood is produced and that the shrubs do not create a nuisance or danger.
Corrective pruning	Shrubs are to be pruned to remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, discoloured, thin, weak, over-crowded, old or broken branches by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral.	Annually	Contractor / Ground staff as required.	Prune shoots growing in the wrong direction or those that are close to gutters and cables where they might grab hold of them. To be trimmed with appropriate equipment and arisings removed from site.

Monitoring Programme	A visual condition assessment of all newly planted climbing plants to determine the habitat condition and quality with any remedial management reported and actioned through a review of this LMP.	Every 5 years after project commencement	Landscape Architect	Any remedial management necessary is to be reported and actioned through a review of this document. Monitoring criteria includes checking for pests and diseases and undertaking any necessary control measures as soon as possible.
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5.4 Management of Semi-intensive Green Roof

Establishment Maintenance of the Semi-intensive Green Roof will be required for the first 2-5 years after planting to ensure rapid early growth.

Visits are to be undertaken at least monthly between April and September, with a further two visits during the dormant season, to ensure that the following maintenance requirements are undertaken:

- Ornamental Shrub and Herbaceous planting is to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer's recommended rates) in April of Years 1, 2 and 3.
- Plants that have become loosened, lifted up or out of the ground, are to be set upright and re-firmed by treading.
- Regular hand weeding will be required to ensure weed-free planting areas throughout the development site. Minimise weed control through the use of a 75mm minimum layer of mulch. Mulched areas are to be kept 10mm below adjacent grass, paved areas etc. It is essential to ensure that the lower branches and foliage of plants within the mulched areas are not smothered.
- A general autumn tidy is required, taking care not to discourage any wildlife which may be present.
- Herbaceous planting to be dead headed after flowering and routinely managed to maintain a clean and tidy appearance.
- Taller perennial species may require staking in early spring / summer to maintain an upright form.
- An inspection is to be made in August each year. Any losses of plants and shrubs to be replaced in the planting season following the loss. Replacement plants and shrubs are to be of the same specification and size as the original plants and shrubs.
- Surroundings of shrub plants are to be maintained in a weed-free state with trimmed edges and mulch material to be kept topped up to a depth of 75mm.
- Following completion of the Establishment Period, the need for both watering and weed-control is likely to be reduced but must still be undertaken as necessary to ensure healthy growth and maintain the mulched ornamental beds in a weed-free condition.
- Specific shrub species to receive general and formative pruning as required in accordance with best horticultural practice.
- Regular monitoring for pests and diseases will also be needed on an on-going basis and any necessary control measures undertaken as soon as possible.
- Any dead vegetation, leaf litter or debris to be removed from the roof surface, ensuring that any gutters, outlets, chutes and downpipes are free from blockages and that water can flow freely.
- Cultivation of intensive green roof substrate may be carried out in the same way as with any normal horticultural growing medium. However, care must be taken not to mechanically damage either the waterproofing system or any of the green roof components. The use of fertilisers and weed killers will have no detrimental effect on either waterproofing or the green roof system.

Management regimes for the Semi-intensive Green Roof are shown in the table below:

Semi-intensive Green Roof Management & Monitoring Prescriptions:

<i>Management & Monitoring Tasks</i>	<i>Description</i>	<i>Frequency</i>	<i>Responsibility</i>	<i>Comments</i>
Control of broad-leaved weeds Years 1-4	Regular hand weeding will be required to ensure weed-free planting areas. All litter, debris, leaves and unwanted vegetation to be removed.	Visits to be undertaken monthly between April and September, with a further two visits during the dormant season.	Contractor / Ground staff	Weed removal is critical to establishment. The need for weed control will be minimised through the use of a 75mm minimum layer of mulch – which is

				to be regularly topped up.
Inspection Years 1-4	Inspect all herbaceous plants and shrubs and re-firm if necessary. Remove any dead, damaged or diseased plants and replace during November. Inspect all roof outlets and remove any encroaching vegetation to enable water to flow freely to rainwater pipes.	Check for any dead, damaged or diseased plants in July and replace during November. Bark mulch is to be replenished annually.	Contractor / Ground staff	N/A
Dividing	Plants to be divided to maintain healthy growth and to avoid overcrowding.	To be undertaken in spring every 2 to 3 years.	Contractor / Ground staff	Division to occur when the soil is dry enough to work and before new growth and flowering occurs. For plants that require dividing in autumn, carry out dividing in September / October.
Slow-release Fertiliser Application	Newly planted ornamental shrub and herbaceous planting to be treated with an annual application of an approved slow-release fertiliser (applied at the manufacturer's recommended rates).	Annually in April of Years 1,2 and 3.	Contractor / Ground staff	N/A
Control of broad-leaved weeds Year 5 onwards	Hand weeding within ornamental planting beds as required.	April, September and November.	Contractor / Ground staff	N/A
Formative pruning	Specific shrubs are to be pruned in accordance with best horticultural practice. Refer to Landscape Specification.	Annually	Contractor / Ground staff as required.	Pruning of shrubs is for the purpose of building a strong framework, keeping shrubs healthy and vigorous, maintaining the shape and balance, ensuring the maximum amount of flowering wood is produced and that

				the shrubs do not create a nuisance or danger.
Corrective pruning	Shrubs are to be pruned to remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, discoloured, thin, weak, over-crowded, old or broken branches by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral.	Annually	Contractor / Ground staff as required.	N/A
Monitoring Programme	A visual condition assessment of all newly planted ornamental shrubs and herbaceous planting to determine the habitat condition and quality with any remedial management reported and actioned through review of this LMP.	Every 5 years after project commencement.	Landscape Architect	Any remedial management necessary is to be reported and actioned through review of this document. Monitoring criteria includes checking for pests and diseases and undertaking any necessary control measures as soon as possible.

5.5 Management of Biodiverse/Brown Roof

Maintenance is necessary to keep biodiverse/brown roof systems in good condition. Care is to be taken to ensure that there is no build-up or dead or unwanted vegetation and any potential fire risks if not correctly maintained. Maintenance is to be undertaken annually, during springtime and in late autumn. This may include strimming and the removal of dead organic matter.

Designated biodiverse areas should be disturbed as little as possible during maintenance to minimise the upset of any micro-habitats that may have colonised.

- Ensure that all dead vegetation is removed with a strimmer and provision made for the debris to be safely lowered to the ground and disposed of.
- Remove unwanted leaf litter that has fallen onto the roof surface from any overhanging trees (both in the spring and autumn) to ensure that this does not smother the vegetation beneath.
- Saplings to be removed, manually remove weeds if they become invasive.
- Vegetation which has encroached into drainage outlets, inspection chambers, walkways and the fire break gravel strip should be removed.
- Water during periods of prolonged drought.

Management regimes for the Biodiverse/Brown Roof are shown in the table below:

Biodiverse/Brown Roof Management & Monitoring Prescriptions:

<i>Management & Monitoring Tasks</i>	<i>Description</i>	<i>Frequency</i>	<i>Responsibility</i>	<i>Comments</i>
Control of broad-leaved weeds Annually	All litter, debris, leaves and unwanted vegetation are to be removed. Remove saplings. Any weed infestations to be attended to manually.	Visits to be undertaken twice annually during springtime and in late autumn.	Contractor / Ground staff	Sapling removal is critical to the integrity of the roof structure.
Inspection Annually	Inspect all roof outlets and remove any encroaching vegetation to enable water to flow freely to rainwater pipes.	Visits to be undertaken twice annually during springtime and in late autumn.	Contractor / Ground staff	Dead vegetation is to be removed with a strimmer and debris safely lowered to the ground to be disposed of.
Monitoring Programme	A visual condition assessment of the biodiverse/brown roof is to be undertaken to determine the habitat condition and quality with any remedial management reported and actioned through review of this LMP.	Every 5 years after project commencement.	Landscape Architect	Any remedial management necessary is to be reported and actioned through review of this document. Monitoring criteria includes checking for pests and diseases and undertaking any necessary control measures as soon as possible.

6.0 Maintenance Schedules

The Management and Monitoring Prescriptions outlined in Chapter 5 for the newly created soft and hard landscaped areas are provided as Yearly Maintenance Schedules in this Chapter and are scheduled as follows:

- Schedule of Soft Landscape Maintenance Operations Year 1;
- Schedule of Soft Landscape Maintenance Operations Years 2-5;
- Schedule of Soft Landscape Maintenance Operations Year 5 onwards; and
- Schedule of Hard Landscape Maintenance Operations Year 1 onwards.

Schedule of Soft Landscape Maintenance Operations – Year 1

<i>Newly Created Natural Resources</i>	<i>Maintenance Operation</i>	<i>Spring</i>	<i>Summer</i>	<i>Autumn</i>	<i>Winter</i>	<i>Comments</i>
Shrub Planting	Control of broadleaved weeds	✓ April/May	✓ Jun/July	✓ Aug/Sep	✓ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas.
	Inspection	✓ Mar	✓ Jul	✓ Sep	✓ Nov	Plants which have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading. Check for any dead, damaged or diseased plants in July and replace during November.
	Slow-release Fertiliser Application	✓ Apr				Application applied at the Manufacturer's recommended rates.
	Formative Pruning	✓ Spring For shrubs that flower from July-October and are deciduous	✓ Summer For shrubs that flower from Nov-Jun and are deciduous	N/A	✓ Late Winter For Evergreen plants that require renovating or severe reduction.	Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).
Herbaceous Planting	Control of broadleaved weeds	✓ Apr/May	✓ Jun/Ju	✓ Aug/Sep	✓ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas.
	Inspection	✓ Mar	✓ Jul	✓ Sep	✓ Nov	Plants which have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading. Check for any dead, damaged or diseased plants in

					July and replace during November.
	Slow-release Fertiliser Application	✓ Apr			Application applied at the Manufacturer's recommended rates.
	Staking	✓ Early Spring	✓ Summer		May be required for taller species to maintain an upright form. Stake as appropriate.
	Formative Pruning	✓ Spring For shrubs that flower from Jul-Oct and are deciduous	✓ Summer For shrubs that flower from Nov-Jun and are deciduous	N/A	✓ Late Winter For Evergreen plants that require renovating or severe reduction. Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).
Climbing Plants	Control of broadleaved weeds	✓ Apr/May	✓ Jun/Jul	✓ Aug/Sep	✓ Nov-Mar Regular hand weeding will be required to ensure weed-free planting areas.
	Inspection	✓ Mar	✓ Jul	✓ Sep	✓ Nov Plants which have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading. Check for any dead, damaged or diseased plants in July and replace during November. Supports and fixings are to be checked at least every year.
	Slow-release Fertiliser Application	✓ Apr			Application applied at the Manufacturer's recommended rates.
	Formative Pruning	✓ Spring	✓ Summer	N/A	✓ Late Winter Horticultural best practice should be used when pruning shrubs

		For shrubs that flower from July-October and are deciduous	For shrubs that flower from Nov-Jun and are deciduous		For Evergreen plants that require renovating or severe reduction.	(pruning should be undertaken according to a shrub pruning groups – see RHS). Shoots should be pruned that are growing in the wrong direction or are close to gutters or cables, or where they could penetrate building materials such as cladding or tiles.
Semi-intensive Green Roof	Control of broadleaved weeds	✓ Apr/May	✓ Jun/Jul	✓ Aug/Sep	✓ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas.
	Inspection	✓ Mar	✓ Jul	✓ Sep	✓ Nov	Inspect all herbaceous plants and shrubs and re-firm if necessary. Remove any dead, damaged or diseased plants and replace during November. Inspect all roof outlets and remove any encroaching vegetation to enable water to flow freely to rainwater pipes.
	Slow-release Fertiliser Application	✓ Apr				Application applied at the Manufacturer's recommended rates.
	Formative Pruning	✓ Spring For shrubs that flower from Jul-Oct and are deciduous	✓ Summer For shrubs that flower from Nov-Jun and are deciduous	N/A	✓ Late Winter For Evergreen plants that require renovating or severe reduction.	Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).

Biodiverse/ Brown Roof	Control of broadleaved weeds	√ Spring		√ Autumn		All litter, debris, leaves and unwanted vegetation are to be removed. Remove saplings. Any weed infestations to be attended to manually.
	Inspection	√ Spring		√ Autumn		Inspection of roof outlets and removal of any encroaching vegetation. Evaluation of roof structure to determine if any remedial work is required.

Schedule of Soft Landscape Maintenance Operations – Years 2-5

<i>Newly Created Natural Resources</i>	<i>Maintenance Operation</i>	<i>Spring</i>	<i>Summer</i>	<i>Autumn</i>	<i>Winter</i>	<i>Comments</i>
Shrub Planting	Control of broadleaved weeds	√ Apr/May	√ Jun/July	√ Aug/Sep	√ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas. To be undertaken monthly.
	Inspection		√ Jul		√ Nov	Check for any dead, damaged or diseased plants in July and replace in November. Bark mulch is to be replenished annually.
	Maintenance Visits	√ Apr/May	√ Jun/July	√ Aug/Sep	√ Nov-Mar	Undertake general tidying e.g. removal of litter, leaves and debris. Arisings to be removed from site. Monthly intervals with two visits during the dormant season.
	Slow-release Fertiliser Application	√ Apr				Application applied at the Manufacturer's recommended rates. Annually in April of Years 2 and 3.
	Formative Pruning	√ For shrubs that flower from July-October and are deciduous	√ For shrubs that flower from Nov-Jun and are deciduous	N/A	√ Late Winter For Evergreen plants that require renovating or severe reduction.	Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).
Herbaceous Planting	Control of broadleaved weeds	√ Apr/May	√ Jun/Jul	√ Aug/Sep	√ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas. To be

						undertaken monthly.
	Inspection		✓ Jul		✓ Nov	Check for any dead, damaged or diseased plants in July and replace in November. Bark mulch is to be replenished annually.
	Maintenance Visits	✓ Apr/May	✓ Jun/Jul	✓ Aug/Sep	✓ Nov-Mar	Undertake general tidying e.g. removal of litter, leaves and debris. Arisings to be removed from site. Monthly intervals with two visits during the dormant season.
	Staking	✓ Early Spring	✓ Summer			May be required for taller species to maintain an upright form. Stake as appropriate.
	Division	✓ Spring		✓ Autumn (carry out autumn division in Sep/Oct)		Plants to be divided every two to three years to maintain healthy growth and avoid overcrowding.
	Slow-release Fertiliser Application	✓ Apr				Application applied at the Manufacturer's recommended rates. Annually in April of Years 2 and 3.
	Formative Pruning	✓ For shrubs that flower from July-October and are deciduous	✓ For shrubs that flower from Nov-Jun and are deciduous	N/A	✓ Late Winter For Evergreen plants that require renovating or severe reduction.	Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).
Climbing Plants	Control of broadleaved weeds	✓ Apr/May	✓ Jun/July	✓ Aug/Sep	✓ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas. To be

						undertaken monthly.
	Inspection		√ Jul		√ Nov	Check for any dead, damaged or diseased plants in July and replace in November. Bark mulch is to be replenished annually. Check branches and stems are secured with appropriate ties. Check supports and fixings at least every year.
	Maintenance Visits	√ Apr/May	√ Jun/July	√ Aug/Sep	√ Nov-Mar	Undertake general tidying e.g. removal of litter, leaves and debris. Arisings to be removed from site. Monthly intervals with two visits during the dormant season.
	Slow-release Fertiliser Application	√ Apr				Application applied at the Manufacturer's recommended rates. Annually in April of Years 2 and 3.
	Formative Pruning	√ For shrubs that flower from July-October and are deciduous	√ For shrubs that flower from Nov-Jun and are deciduous	N/A	√ Late Winter For Evergreen plants that require renovating or severe reduction.	Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).
Semi-Intensive Green Roof	Control of broadleaved weeds	√ Apr/May	√ Jun/Jul	√ Aug/Sep	√ Nov-Mar	Regular hand weeding will be required to ensure weed-free planting areas. To be undertaken monthly.
	Inspection		√		√	Inspect all herbaceous plants

		Jul		Nov	and shrubs and re-firm if necessary. Remove any dead, damaged or diseased plants and replace during November. Inspect all roof outlets and remove any encroaching vegetation to enable water to flow freely to rainwater pipes.
Maintenance Visits	√ Apr/May	√ Jun/Jul	√ Aug/Sep	√ Nov-Mar	Undertake general tidying e.g. removal of litter, leaves and debris. Arisings to be removed from site. Monthly intervals with two visits during the dormant season.
Division	√ Spring		√ Autumn (carry out autumn division in Sep/Oct)		Plants to be divided every two to three years to maintain healthy growth and avoid overcrowding.
Slow-release Fertiliser Application	√ Apr				Application applied at the Manufacturer's recommended rates. Annually in April of Years 2 and 3.
Formative Pruning	√ For shrubs that flower from July-October and are deciduous	√ For shrubs that flower from Nov-Jun and are deciduous	N/A	√ Late Winter For Evergreen plants that require renovating or severe reduction.	Horticultural best practice should be used when pruning shrubs (pruning should be undertaken according to a shrub pruning groups – see RHS).
Biodiverse / Brown Roof	Control of broadleaved weeds √ Spring		√ Autumn		All litter, debris, leaves and unwanted vegetation are to be removed. Remove saplings. Any weed infestations to be

					attended to manually.
Inspection	√ Spring		√ Autumn		Inspection of roof outlets and removal of any encroaching vegetation. Evaluation of roof structure to determine if any remedial work is required.

Schedule of Soft Landscape Maintenance Operations – Year 5 Onwards

<i>Newly Created Natural Resources</i>	<i>Maintenance Operation</i>	<i>Spring</i>	<i>Summer</i>	<i>Autumn</i>	<i>Winter</i>	<i>Comments</i>
Shrub Planting	Control of broadleaved weeds	√		√	√	Topping up of bark mulch and hand weeding only. April, September and November.
	Corrective pruning	√ For shrubs that flower from Jul-Oct and are deciduous.	√ For shrubs that flower from Nov-Jun and are deciduous		√ Late Winter For Evergreen plants that require renovating or severe reduction.	Corrective pruning as required.
Herbaceous Planting	Control of broadleaved weeds	√ Apr		√ Sep	√ Nov	Maintain a 1m diameter weed-free area around each shrub. Apply foliar herbicide in April, cut tall weeds between shrubs in September and November.
	Staking	√ Early Spring	√ Summer			May be required for taller species to maintain an upright form. Stake as appropriate.
	Division	√ Spring		√ Autumn (carry out autumn division in Sep/Oct)		Plants to be divided every two to three years to maintain healthy growth and avoid overcrowding.
	Corrective pruning	√ For shrubs that flower from Jul-Oct and are deciduous.	√ For shrubs that flower from Nov-Jun and are deciduous		√ Late Winter For Evergreen plants that require renovating	Corrective pruning as required.

					or severe reduction.	
Climbing Plants	Control of broadleaved weeds	√		√	√	Topping up of bark mulch and hand weeding only. April, September and November.
	Corrective pruning	√ For shrubs that flower from Jul-Oct and are deciduous.	√ For shrubs that flower from Nov-Jun and are deciduous		√ Late Winter For Evergreen plants that require renovating or severe reduction.	Corrective pruning as required. Inspect supports and fixings at least every year. Prune shoots growing in the wrong direction or that are close to gutters and cables. Shoots close to areas where they could penetrate building materials such as cladding or tiles shall be pruned.
Semi-intensive Green Roof	Control of broadleaved weeds	√ Apr		√ Sep	√ Nov	Maintain a 1m diameter weed-free area around each shrub. Apply foliar herbicide in April, cut tall weeds between shrubs in September and November.
	Division	√ Spring		√ Autumn (carry out autumn division in Sep/Oct)		Plants to be divided every two to three years to maintain healthy growth and avoid overcrowding.
	Corrective pruning	√ For shrubs that flower from Jul-Oct and are deciduous.	√ For shrubs that flower from Nov-Jun and are deciduous		√ Late Winter For Evergreen plants that require	Corrective pruning as required.

					renovating or severe reduction.	
Biodiverse / Brown Roof	Control of broadleaved weeds	√		√	√	Topping up of bark mulch and hand weeding only. April, September and November.
	Formative Pruning	√ For shrubs that flower from July-October and are deciduous.	√ For shrubs that flower from Nov-Jun and are deciduous	N/A	√ (Late Winter) For Evergreen plants that require renovating or severe reduction.	Refer to the Landscape Specification for further guidance around pruning of shrubs.

Schedule of Hard Landscape Maintenance Operations – Year 1 onwards

ANNUAL MAINTENANCE PROGRAMME:

ACTIVITY	J	F	M	A	M	J	J	A	S	O	N	D
HARD LANDSCAPE												
Sweeping of hard landscape	■	■	■	■	■	■	■	■	■	■	■	■
Weed Control – spray with herbicide	■	■	■	■	■	■	■	■	■	■	■	■
Gullies etc. – keep clear	■	■	■	■	■	■	■	■	■	■	■	■
Clearing snow	■	■	■	■	■	■	■	■	■	■	■	■
Brushing of paving joints									■			
Clear Litter, debris and fallen leaves	■	■	■	■	■	■	■	■	■	■	■	■
Fencing / Walls / Railing / Balustrades – check condition & repair	■	■	■	■	■	■	■	■	■	■	■	■
Roof evaluation inc. inspection of outlets / fire breaks etc. to ensure clear from leaves, debris. Remedial works undertaken as required.	■	■	■	■	■	■	■	■	■	■	■	■
Street Furniture – check condition & repair	■	■	■	■	■	■	■	■	■	■	■	■

Note:

These tables list the key routine hard landscape operations required during both the defects and long-term maintenance periods together with an indication of when they should be undertaken throughout the year. It should be noted that the table should be used as a guide to times only. It does not include every operation listed relevant to the maintenance of the hard landscape, but all checking and intermittent maintenance actions should occur during the routine visits. The contractor is responsible for the appearance and condition of the landscape areas and should be prepared to undertake specific maintenance tasks outside the above periods throughout the year to satisfy management or safety objectives.

7.0 Monitoring and Reporting

7.1 Procedures for Reporting and Monitoring

Chapter 7 of this LMP contains arrangements for the reporting of land management actions and monitoring outcomes. Arrangements are to be made using the forms found within this volume. It is intended that these forms will be used for the 5-year aftercare period and for the duration of the maintenance period for the proposed development and for ongoing monitoring as outlined in the previous chapters.

All retained or created landscapes/habitats will be managed by the management company, in perpetuity of the proposed development, following the prescriptions set out in this LMP.

All works, materials and operations will be in accordance with relevant legislation, British Standards, Regulations (including the CDM Regulations) and Codes of Practice.

7.2 Arrangements for updating the Landscape Management Plan (LMP)

The LMP and maintenance schedules will be monitored and assessed for their effectiveness on an annual basis for the first five years and at five yearly intervals thereafter in perpetuity.

Each review will be coordinated and completed by the management company or their agents and will include advice from specialist consultants, such as a qualified Ecologist, Landscape Architect and Landscape Management Contractor (as required).

To this end, the review shall/may include (as appropriate):

- Specialist reports – advising on particular aspects such as protected species, general silvicultural husbandry and health and safety issues;
- Records or attendance sheets demonstrating the maintenance work undertaken; and
- A walk over assessment of the landscape areas to assess landscape components and their condition, and the need for enhancement.

Each review will identify any changes to the Site conditions and circumstances and whether the aims and objectives of the LMP are being met, where identified changes are needed to existing management practices and timeframes and where any strategic enhancements, including new planting will be identified and priorities established for undertaking these works.

Within 1 calendar month of the review, a revised LMP shall be produced (if appropriate) and circulated to the relevant parties to ensure that the site is managed as per any updates / requirements.

After the first five years, the Landscape Management Plan will be reviewed every five years in order to ensure the satisfactory management of the landscape.

7.3 Landscape Monitoring Pro Forma

The Monitoring Forms are intended to be adaptable in order to be site-specific and capture information relevant to the locations being monitored. Identifying areas for remedial works / or any alterations to the landscape management and to ensure that maintenance has been carried out in line with the landscape and ecological maintenance and management objectives/aims and prescriptions as set out within this LMP.

Landscape Quality Monitoring Record:

Proposed Development at Acorn House, 314-320 Gray's Inn Road, London

Landscape Monitoring Inspection

Year:

<i>Inspection by:</i>	<i>Date of Inspection:</i>	<i>Site Conditions</i>

Description of Works:

Purpose of Inspection:

Third Parties Present:

General Summary of Findings and Key Issues

Actions and Recommendations:

Date of Next Visit:

8.0 Appendix 1: Figures

- MC35-BB-XX-LG-DR-L-0101 Landscape General Arrangement and Planting Plan – Lower Ground
- MC35-BB-XX-01-DR-L-0102 Landscape General Arrangement and Planting Plan – First Floor
- MC35-BB-XX-09-DR-L-0104 Landscape General Arrangement and Planting Plan – Ninth Floor
- MC35-BB-XX-01-DR-L-520 Landscape Details – First Floor Roof Section

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