



Landscape Management Plan

**Chalcroft Business Park,
Horton Heath**

3 Building Scheme

Date: 18/08/23

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Rev	Revision Notes	Date
A	Updated following Ecologist comments.	18.04.23
B	Amended Plans	12.10.23
C	Amended plans following Biodiversity / Landscape Officer comments (See clause 2.8).	31.10.23

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1 Introduction

Purpose of This Document

- 1.1 This Landscape Management Plan (LMP) has been prepared to inform the on-going landscape and ecological management and maintenance operations for the proposed industrial development at Chalcroft Business Park, Horton Heath.
- 1.2 The strategy and associated appendices include the following elements:
 - *Details of existing habitats to be conserved and protected;*
 - *Details of new habitat created on-site;*
 - *Detail, extent and type of new planting;*
 - *Details of maintenance regimes.*
- 1.3 This LMP describes the range of proposed landscape mitigation, biodiversity planting and amenity planting, objectives and post construction aftercare to safeguard specific landscape features, habitats and species.

Site Location

- 1.4 The site is located at Chalcroft Business Park, Burnetts Ln, Horton Heath, SO30 2PA.
- 1.5 The scheme will replace the existing industrial units on Site, with biodiversity enhancement to protect the adjacent Round Copse SINC. Existing habitat on Site is limited.
- 1.6 The existing local soils comprise slowly permeable, seasonably wet slightly acid but base-rich loamy and clayey soil.

Baseline Information

Landscape Strategy

- 1.7 The Landscape Strategy for Chalcroft Business Park will guide the implementation of a sustainable development which main aim is to provide suitable buffer zone to Round Copse SINC and to enhance local green infrastructure. The existing landscape setting contributes species poor amenity grassland around the buildings and circulation areas.
- 1.8 The development and landscape strategy has been informed by the Biodiversity Mitigation and Enhancement Plan prepared by the Ecology Partnership:
 - New native shrub and wildflower planting within the proposed 20 m buffer zone around the SINC to include shade tolerant native flowering species;
 - Installation of bat and bird boxes;

- Provision for enhanced management of proposed habitat to benefit site biodiversity and a broader range of foraging invertebrates, birds and small mammals.

Aims and Objectives

- 1.9 This LMP provides a comprehensive programme of landscape and ecological management, enhancement and future monitoring. Proposals for on-going landscape management and maintenance operation will support the proposed site development to preserve and enhance assets of biodiversity value.
- 1.10 The landscape design proposals will reinforce the existing green infrastructure connectivity to be sufficiently robust so that it can withstand human activity nearby, when the site developments are constructed, and also during day-to-day operation.
- 1.11 A carefully considered palette of native species is intended to continue the car park planting of the recently completed industrial unit, whilst providing suitable low groundcover planting around the circulation areas and car parks. To the rear and to blank building elevations, tall growing native shrub, fern, grasses and climber plant are proposed. The SINC buffer is proposed to be planted with scattered native trees, native shrub planting and sown with shade tolerant wildflower grassland seed mix (Refer Appendix B – Detailed Planting Plans).
- 1.12 This LMP will ensure that the landscape vision is realised through a programme of regular maintenance that will deliver the following objectives:
 - The successful establishment of the planting design using best horticultural practices to maintain healthy growth and seasonal interest.
 - Protection, conservation and enhancement of trees, vegetation and associated habitats for enhanced site biodiversity and contact with nature for the wellbeing of site employees and visitors.
 - To achieve and maintain a high standard of cleanliness, appearance and repair using sustainable management techniques.
- 1.13 This strategy document is intended to provide an overview of the key landscape and ecological areas and associated plant typologies through the course of the site's enhancement and establishment. It provides the basis for the minimum standards to be achieved and a 'benchmark' system, which is capable of adjustment and review in the future to best meet the needs of the site ecology and use.
- 1.14 It should be noted that as the establishment of the new planting progresses, the operation and management may need to be altered from that included within this document to better suit a maturing landscape.

2 Preliminaries

- 2.1 This document should be read in conjunction with the supporting documents (the latest ecological reports and recommendations carried out by the Ecology Partnership) as well as detailed planting plans that have been appended.
- 2.2 The landscape maintenance of the site will be the responsibility of the owners and will be managed and maintained by a dedicated on-site team of operatives.
- 2.3 The site owner shall be responsible for all periodic maintenance as set out in this document and replacements thereafter for all planted areas to which its management covers.
- 2.4 The maintenance of trees, shrubs and other plants after the date of practical completion will be carried out by the appointed contractor for the duration of the agreed rectification / defects liability period. After this is completed, the responsibility will transfer to site owner responsibility for future site management.
- 2.5 Any tree and plant showing the following attributes must be replaced within a period of 5 years from the date of completion unless sated elsewhere within this document. These include those plants that:

- Dead, diseased or dying
- Are missing or not in accordance with the specification
- Lack any vigour

Replacements will be carried out during the next suitable planting season.

- 2.6 Any additional topsoil applied to the planting should be quality loam to BS 3882.
- 2.7 Any loss or damage arising from theft or malicious damage prior through the contract shall be made good by the Contractor at his own expense.
- 2.8 All Proposed Tree Planting selection to be carried out by a representative from Deacon Design Ltd prior to delivery to site to ensure quality of stock.
- 2.9 tree Inspection checks shall be carried out by a competent person, either a current member of BALL or the Landscape Institute, acting for the local authority and/or Management Company, at regular intervals and as appropriate work is carried out.
- 2.10 An Operation & Maintenance Manual will be required for identified site risks and made available to all site operatives.
- 2.11 No existing trees, shrubs or other plants shall be removed or cut without specific instructions from the Contract Administrator. Existing trees are to be retained, protected and undisturbed throughout the construction contract.

3 Landscape and Ecological Planting

All Planting

- 3.1 All planting within the boundaries of site ownership will be maintained in perpetuity by the owners

Biodiversity Enhancements

- 3.2 Attention has been given to prioritising the use of native species to support the existing site flora and fauna
- 3.3 The protection of the adjacent protected Round Copse SINC and enhancement of the proposed 20 m buffer zone is proposed to create an enhanced habitat corridor including:
- Native understory buffer planting to site boundaries to reinforce movement corridors, maintain varied sward heights, provide protection for foraging birds and insects;
 - Provision of bat boxes to increase ecological enhancement among existing mature trees and vegetation and bird nesting boxes onto proposed buildings;

Trees

- 3.4 There are no existing mature trees on Site. No digging or extensive change in ground levels are allowed within the Root Protection Areas of the trees adjacent the Site. Tree protection to be carried out in accordance with BS5837: 2012 Trees in Relation to Design, Demolition and Construction.

Proposed Native Tree Planting

- 3.5 New Tree planting will create habitat connectivity along the eastern and western site boundaries as well as will complement the buffer and enhanced green infrastructure. Tree species selection will be based on native varieties of local prevalence, in accordance with local plan guidelines.
- 3.6 Heavy Standard, Selected Standard and Feathered trees should be planted in accordance with nursery instructions.
- 3.7 Any tree failures during establishment of the trees should be replaced during autumn or winter of the same year and will be undertaken annually for 5 years' post-construction. Replacement planting species may require adaptation e.g. where cause derives from endemic disease or pest, where replacement with 'like for like' would perpetuate failures. Any requirement for plant substitution will need to be locally appropriate species of native and non-invasive varieties.

- 3.8 Management operations for new tree planting will include periodic thinning to remove any deadwood and promote growth.
- 3.9 All tree works to be undertaken by an Arboricultural Association Approved Contractor to British Standard 3998 Tree Work specifications.
- 3.10 Any thinning works are to be carried out outside of the nesting season to avoid disturbance to birdlife.

Proposed Wildflower Meadow Grassland

- 3.11 New areas of grassland will be created to the eastern Site boundary by sowing of a grassland / wildflower seed mix. Seed mix to be Emorsgate's Hedgerow Mix or similar and approved. Upon preparation of a weed-free tilth, the seed will be sown at 4g per m² and then lightly raked into the surface.
- 3.12 During the first year after sowing, the sward will be first mown in early August, removing cuttings. Keep short by regular mowing until next March.
- 3.13 After establishment, the grassland should be mown every 2-3 years on a rotational basis, only cutting half or third of the area at one time, between October and February.
- 3.14 Arisings from mowing should be composted or removed off-site. Removing the arisings will lower the nutrient content of the soil over time, favouring a range of wildflowers and reducing competition from grasses which may otherwise come to dominate the sward.
- 3.15 Regular mowing will prevent the encroachment of scrub into the site whilst providing useful foraging and refuge habitats.

Invasive Species

- 3.16 Where necessary annual monitoring of the site for invasive species will be carried out each summer by a qualified ecologist or site manager. Non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981) may become established within the site during the lifetime of the development. In such an event, appropriate action will be required to eradicate invasive species from the site.

Soft Landscape Maintenance – General Notes

- 3.17 The following maintenance activities should be carried out for all areas of soft landscaping under management control:

Item	Activities	Suggested Frequency
Watering	Water all areas of grass, perennials, shrub and tree planting to ensure healthy development and survival	As required during periods of dry weather

Plant replacements	All plant deaths should be replaced as soon as practical Remove dead plants within one week and replace within the next planting season, with originally specified species at a size to match maturity of established planting or as soon as practical	As required
Clearing of services	All plant material is to be kept clear of the following structural elements where present: ventilation ducts and openings, drainage channels and gullies, service access points, and light fittings	Once a month
Debris and Litter	Keep planting beds clear of litter, leaves and debris	Total 18 visits. Twice a month from May to October. Once a month from November to April.
Weed Control	Keep planting beds free from weeds at all times Remove weeds entirely, including roots Remove the minimum quantity of soil, and disturb plants, bulbs and mulch as little as possible Rake area to a neat and tidy condition Where present reinstate mulch. Do not mulch where ground cover planting has established, and no bare ground is visible	Total 18 visits.
Soil Aeration	All areas of planting suffering compaction by pedestrian or vehicular movements should be lightly forked over Prick surface to a depth of 75mm Reduce soil to crumbs and level off Do not damage plant roots	Once every 2 months
Digging Over	All planting beds, should be lightly forked over to maintain healthy soil condition to a depth of 75mm	Once a year in Spring

4 Proposed Amenity Planting

Proposed Shrub Planting

- 4.1 Shrub planting varieties have been chosen for their native origin, aesthetic value and their suitability to the site conditions. Proposed species will provide year-round interest for residents, while attracting wildlife with shelter and food.
- 4.2 Management operations will include thinning of shrubs to remove any deadwood and promote growth and regular pruning to maintain a healthy and attractive form. Thinning promotes new dense growth thus encouraging a strong, more robust planting in the mid to long term, and also increases air flow within the planting to maintain its good health.
- 4.3 A programme of thinning will also maintain a balance between the shrub and perennial planting types, increasing biodiversity rather than allowing one to dominate and kill off the weaker which would potentially happen in a natural situation. This system is to be managed to maintain a point in succession, which provides a greater ecological and aesthetic benefit to the residential areas.
- 4.4 Any growth which will obscure windows, signs or sight-lines shall be cut back. Once established, any support canes shall be removed from the shrubs.
- 4.5 Any thinning works are to be carried out outside of the nesting bird season to avoid disturbance to breeding birds.
- 4.6 Operations are to be carried out by hand and waste is to be recycled as compost wherever possible or appropriate.
- 4.7 The density of planting will require that all weeding is carried out by hand (unless agreed with otherwise), using the appropriate tools. All resultant material should be removed from site.
- 4.8 Litter should be collected and cleared every two weeks.
- 4.9 All plants shall be watered as may be required to maintain healthy growth following planting, during the maintenance period and subsequently in periods of extreme drought.
- 4.10 Whilst species in drier locations especially prone to drought have been chosen for their drought tolerance, if the local temperature exceeds 25 degrees centigrade then planting should be watered daily during the first season, and at least every three days in the second and third seasons until the onset of natural rainfall.
- 4.11 Bark mulch, which also helps to retain soil moisture, should be maintained at an even spread, 75mm. deep, of consistent thickness, to ensure that it is effective as a weed suppressant and moisture conserver.

- 4.12 Following any maintenance operations and on a biannual basis, the mulch shall be supplemented to allow for any material which may have been lost.

Herbaceous Planting

- 4.13 Herbaceous plants will provide seasonal interest to the planting. The proposed species will provide flowers and attractive leaf structure.
- 4.14 Perennials will need selective cutting back in the autumn and early winter. Most herbaceous plants will need aesthetical pruning after their flowering period, although some species will provide winter interest when dry flowers and long shoots remain.
- 4.15 Any attractive dead stems or flowerheads can be left until early spring.

Native Grasses and Ferns

- 4.16 Similar to management of the herbaceous plant, attractive flower heads can be left on during winter. With this treatment, grasses will provide striking winter structure within the planting beds.
- 4.17 Detailed pruning methods of grasses are described in Section 6 of this document.

5 Maintenance Schedule – General Schedule

5.1 Maintenance activities for all areas of soft landscaping under management control:

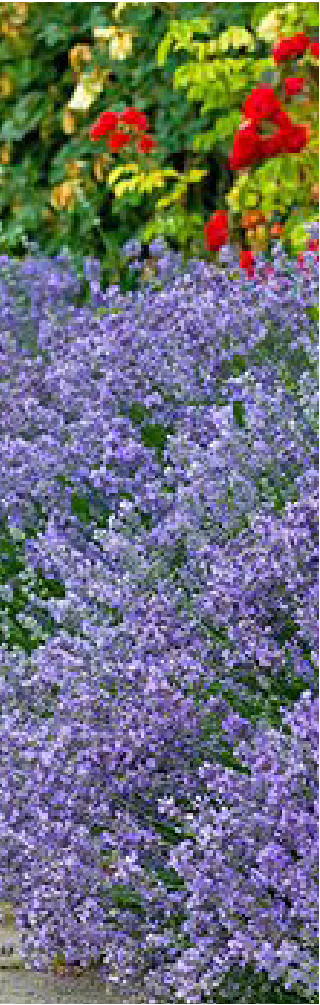
Management of New Specimen Trees

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Specimen Trees 	To ensure the successful establishment of new standard trees	Establish tree canopy and good root system quickly Control competition from weeds Provide conditions that will ensure survival of trees Provide visual variety and wildlife benefits	2 visits per annum: Check for dead or dying trees and replace with like for like (species/ specification). Water regularly using the irrigation pipe during establishment (first 24 months) and in drought conditions in first 5 years to ensure establishment and continued thriving of planting Check tree and remove dead or damaged branches. Formative prune Years 3 & 5 Check stakes to ensure that they are secure and are not causing damage to the tree. Check tree ties & adjust if required annually. Check tree guards and maintain tree During spring apply fertiliser and top up bark mulch ring to tree to maintain a max of 50mm depth.	Remove stakes and ties after five years. 2 visits per annum: Pruning where required to ensure appropriate habit and form. Check for failing or dangerous trees and remove/ replace with like for like (species/ specification). Remove all crossing branches. Check tree for damaged limbs and remove and treat wounds where necessary. Check for leaning trees and re-straighten. Replace/ Top up with bark mulch to 75mm depth.	2 visits per annum: Pruning where required to ensure appropriate habit and form. Check for failing or dangerous trees and remove/ replace with like for like (species/ specification). Remove all crossing branches. Check tree for damaged limbs and remove and treat wounds where necessary. Check for leaning trees and re-straighten. Replace/ Top up with bark mulch to 75mm depth. Maintain as safe trees with adequate clearance to crown and without obstruction to vehicles or pedestrians/cyclists

Management of Native Buffer / Shrub Planting

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Landscape Buffer 	To maintain appropriate, healthy and safe native woodland edge To define boundaries and offer privacy/ screening	Provide conditions that will ensure survival, persistence and spread of plants To reinforce boundary and define screening edge. Ensure appropriate layers of planting establish and thrive To promote biodiversity To support local character	4 visits per annum: Check for dead or dying plants and replace with like for like (species/ specification) in the next planting season. Water during drought conditions in years 1-2. Check for damaged limbs. Remove and treat wounds where necessary Check tree ties & loosen if required annually Check stakes to ensure that they are secure and are not causing damage to the tree Check tree guards and maintain tree integrity To provide a continuous supply of flowers, fruit and seeds for wildlife any pruning works to scrub areas must be trimmed no less than on a 3 year rotation, with top and alternate sides trimmed in successive years. Remove litter off-site after every site visit.	Remove stakes and ties after five years. 2 visits per annum: Pruning where required to ensure appropriate habit and form. Check for failing or dangerous trees and remove/ replace with like for like (species/ specification). Remove all crossing branches. Check tree for damaged limbs and remove and treat wounds where necessary. Check for leaning trees and re-straighten. Remove litter & debris off site after every site visit	1 visits per annum: Pruning where required to ensure appropriate habit and form. Check for failing or dangerous trees and remove/ replace with like for like (species/ specification). Remove all crossing branches. Check tree for damaged limbs and remove and treat wounds where necessary. Thin tree planting to approved horticultural standards, firstly removing misshapen and / or weak trees. Ensure all Health & Safety considerations are taken into account. Remove litter & debris off site after every site visit

Management of Ornamental Shrub Planting

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Ornamental Shrub Planting 	Provide softening of the built environment and reflect and enhance local character and distinctiveness.	Establish plant cover quickly Control competition from weeds Provide conditions that will ensure survival, persistence and natural spread of ground cover plants. Provide visual variety in the terms of height, colour, form and texture appropriate to local character.	2 visits per annum: Check for dead or dying ornamental plants and replace with like for like (species/ specification) in the next available planting season Maintain shrub planted areas free of weeds using combination of cultivation, mulching and spot weeding using suitable translocated herbicide. Apply during growing season in favourable weather conditions as per manufacturer's instructions. Note: Avoid spray drift. Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance Remove litter off site after every site visit. Water as necessary to ensure establishment and continued thriving of planting	2 visits per annum: Check for dead or dying ornamental plants and replace with like for like (species/ specification). Apply fertiliser at the rates used at the time of planting Clean out undesirable and unwanted growth especially in variegated species once per year. Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance Remove litter off site after every site visit. Divide herbaceous planting infilling into gaps as necessary. Replace/ Top up with bark mulch to 75mm depth.	2 visits per annum: Check for dead or dying ornamental plants and replace with like for like (species/ specification). Apply fertiliser at the rates used at the time of planting Clean out undesirable and unwanted growth especially in variegated species once per year. Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance Remove litter off site after every site visit. Divide herbaceous planting infilling into gaps as necessary. Replace/ Top up with bark mulch to 75mm depth. Maintain ornamental shrubs as to cause no obstruction to vehicles and or pedestrians/cyclists.

Management of Amenity Grass Areas

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Amenity Grass Areas. 	Provide usable lawn areas to support a variety of informal recreation activities and contribute to site character	Establish plant cover quickly Control competition from weeds Provide conditions that will ensure survival, persistence and spread of grasses Monitor establishment to maintain a grass sward to a height of between a minimum of 25mm and a maximum of 75mm. Provide usable open space.	Throughout year and as/ when required: Replace/ repair failed areas of turf and ensure sufficient watering is carried out to maintain thriving grass sward. Water with a fine spray during prolonged periods of drought to ensure survival and maintain thriving grass sward. Maintain grass sward to a height of between a minimum of 25mm and a maximum of 150mm Trim edges to footpaths/ hard landscape Remove litter & debris off site after every site visit. Apply annually, in spring and autumn a suitable fertiliser at manufacturers recommended rate.	Throughout year and as/ when required: Maintain grass sward to a height of between a minimum of 25mm and a maximum of 150 mm to encourage vigorous growth Trim edges to footpaths/ hard landscape Remove litter off site after every site visit. Apply annually, in spring and autumn a suitable fertiliser at manufacturers recommended rate.	Throughout year and as/ when required: Maintain grass sward to a height of between a minimum of 25mm and a maximum of 150 mm to encourage vigorous growth Trim edges to footpaths/ hard landscape Remove litter off site after every site visit. Apply annually, in spring and autumn a suitable fertiliser at manufacturers recommended rate.

Management of Wild Flower Meadows

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Wildflower meadows 	To establish attractive, diverse and locally appropriate wildflower areas to enhance character and biodiversity.	Control competition from weeds and invasive species. To benefit biodiversity. Provide usable open space. Final selection of wildflower and grass seed mix to be taken following soil testing of site won material. The maintenance regime adopted will be in accordance with the supplier's recommendations. Typical activities may include those identified in this schedule. To establish an even wildflower and grass sward quickly, that will provide a visual contrast to the adjacent amenity grass and hard surfaced areas.	Throughout year and as/ when required: Water with a fine spray during prolonged periods of drought to ensure survival and maintain thriving grass sward. Annually: After flowering in July or August take a 'hay cut'. Cut back with a scythe, petrol trimmer or tractor mower to 50mm. Leave the 'hay' to dry and shed seed for 7-14 days then remove from site. A second cut shall be carried out in October. Mow the re-growth through to late autumn/winter to 50mm and again in spring if required. Trim edges to footpaths/ hard landscape Remove litter & debris off site after every site visit.	Throughout year and as/ when required: Water with a fine spray during prolonged periods of drought to ensure survival and maintain thriving grass sward. Annually: After flowering in July or August take a 'hay cut'. Cut back with a scythe, petrol trimmer or tractor mower to 50mm. Leave the 'hay' to dry and shed seed for 7-14 days then remove from site. A second cut shall be carried out in October. Mow the re-growth through to late autumn/winter to 50mm and again in spring if required. Trim edges to footpaths/ hard landscape Remove litter & debris off site after every site visit.	Throughout year and as/ when required: Water with a fine spray during prolonged periods of drought to ensure survival and maintain thriving grass sward. Annually: After flowering in July or August take a 'hay cut'. Cut back with a scythe, petrol trimmer or tractor mower to 50mm. Leave the 'hay' to dry and shed seed for 7-14 days then remove from site. A second cut shall be carried out in October. Mow the re-growth through to late autumn/winter to 50mm and again in spring if required. Trim edges to footpaths/ hard landscape Remove litter & debris off site after every site visit.

Management of Retaining Walls, Structures and Steps

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Brick and Blockwork Walls. Concrete Benches & Steps 	Provide visually attractive, safe and appropriate structures within the landscape	To provide robust retaining walls to raised terrace areas and changes in levels that will require minimal maintenance. Where remedial work needs to be carried out this should be done in accordance with the original specifications and details to ensure aesthetic character is retained and preserved. Ensure all Health & Safety considerations are taken into account. Prevent hazards, risks, trips and falls.	12 visits per annum: Inspect for; Structural integrity - conduct risk assessment and remedy any defects immediately Graffiti - remove as soon as possible Inspect finishes for damage - repair / replace as required. Inspect climbing plant supports - re-tighten or repair as necessary	1 visits per annum: Inspect for structural integrity on a quarterly basis and repair. 1 visits per annum: Inspect for graffiti and remove as soon as possible 1 visits per annum: Inspect finishes for damage on a and repair Inspect climbing plant supports on a monthly basis and re-tighten or repair as necessary	1 visits per annum: Inspect for structural integrity on a quarterly basis and repair. 1 visits per annum: Inspect for graffiti and remove as soon as possible 1 visits per annum: Inspect finishes for damage and repair Inspect climbing plant supports on a monthly basis and re-tighten or repair as necessary

Management of Fences, Gates and Metal Railings

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Metal Railings, Fences and Gates 	To provide robust and secure perimeters to prevent unwanted access and egress for safety and security reasons.	Provide visually attractive fencing, railings and gates, that are in keeping with local character. Ensure all gates are robust, effective and fit for purpose. Ensure screening and privacy is maintained.	12 visits per annum: Inspect for structural integrity on a monthly basis and repair to maintain protection against intruders Inspect gates, fencing and metal railings for graffiti on a monthly basis and remove as soon as possible Inspect gates, fencing and metal railings for damage on a monthly basis and repair as necessary. Ensure all gate mechanisms work correctly and that all locking facilities are in working order on a monthly basis Check for abuse of intended operation and report/repair as required (safety gates being propped or tied open, animal holes under playground railings etc).	6 visits per annum: Inspect gates, fencing and metal railings for structural integrity on a 2 monthly basis and repair to maintain protection against intruders. Inspect gates, fencing and metal railings for graffiti and remove as soon as possible Inspect gates, fencing and metal railings for damage and repair as necessary. Ensure all gate mechanisms work correctly and that all locking facilities are in working order 1 visit per annum: Inspect condition of paintwork annually and touch up as required. Repaint railings every 5 years Check for abuse of intended operation and report/repair as required (safety gates being propped or tied open, animal holes under playground railings etc).	6 visits per annum: Inspect gates, fencing and metal railings for structural integrity on a 2 monthly basis and repair to maintain protection against intruders Inspect gates, fencing and metal railings for graffiti and remove as soon as possible Inspect gates, fencing and metal railings for damage and repair as necessary. Ensure all gate mechanisms work correctly and that all locking facilities are in working order 1 visit per annum: Inspect condition of paintwork annually and touch up as required. Repaint railings every 5 years Check for abuse of intended operation and report/repair as required (safety gates being propped or tied open, animal holes under playground railings etc).

Management of Paved Surfaces

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
All hard surfaced areas within development 	To provide clean, safe and attractive hard surfaced areas for pedestrian use	Provide even surfaces free from trip hazards. Provide clean surfaces free from debris or slip hazards. Ensure surfaces are adequately drained. Ensure all defects are dealt with promptly	Minimum 12 visits per annum: Inspect hard surfaced areas monthly for broken elements or uneven areas, dips and ponding and repair as necessary Clean surfaces monthly by brushing, removing all litter, leaf, chewing gum etc Carry out weed control as necessary using a selected spot herbicide treatment. Remove litter and debris from surfaces monthly. Wash surfaces annually as required. (Using high pressure wash) Carry out de-icing (spreading/ application of salt rock or similar) and snow clearance as and when required during winter months.	1 visits per annum: Inspect hard surfaced areas monthly for broken elements or uneven areas, dips and ponding and repair as necessary Clean surfaces monthly by brushing, removal of chewing gum, litter and leaf etc. Annually: Wash surfaces annually as required. (Using high pressure wash) Carry out de-icing (spreading/ application of salt rock or similar) and snow clearance as and when required during winter months. Maintenance to be carried out in accordance with BS7370	1 visits per annum: Inspect hard surfaced areas monthly for broken elements or uneven areas, dips and ponding and repair as necessary Clean surfaces monthly by brushing, removal of chewing gum, litter and leaf etc. Annually: Wash surfaces annually as required. (Using high pressure wash) Carry out de-icing (spreading/ application of salt rock or similar) and snow clearance as and when required during winter months. Maintenance to be carried out in accordance with BS7370

Management of Asphalt and Concrete Road Surfaces and Footpaths

Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
All road surfaces within development - asphalt and concrete. 	To provide clean, safe and attractive hard surfaced area for vehicular use.	Provide even surfaces for vehicular movement. Provide clean surfaces free from debris or hazards. Ensure surfaces are adequately drained - inspect gully traps	Inspect surfaced areas once per annum for broken elements or uneven areas, dips and ponding and repair as per original specification Remove litter and debris from surfaces monthly or as necessary Carry out de-icing (spreading/ application of salt rock or similar) and snow clearance as and when required during winter months. In spring remove with cold water pressure washer. Apply proprietary moss and weed killer as and when required.	Inspect surfaced areas once per annum for broken elements or uneven areas, dips and ponding and repair as per original specification Remove litter and debris from surfaces monthly or as necessary Carry out de-icing (spreading/ application of salt rock or similar) and snow clearance as and when required during winter months. In spring remove with cold water pressure washer. Apply proprietary moss and weed killer as and when required.	Inspect surfaced areas once per annum for broken elements or uneven areas, dips and ponding and repair as per original specification Clean surfaces monthly by brushing, removing all litter as necessary Carry out de-icing (spreading/ application of salt rock or similar) and snow clearance as and when required during winter months. In spring remove with cold water pressure washer. Apply proprietary moss and weed killer as and when required.

Management of Street Furniture					
Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
Fixed furniture: Bollards, Litter bins, Bench seating etc 	To provide attractive, robust and functional fixed furniture items that provide and support informal amenity and compliment local character	Ensure cleanliness and fitness for purpose at all time Ensure furniture is accessible and usable	1 visits per annum: Inspect for structural integrity, check fixings and repair accordingly 12 visits per annum: Inspect for graffiti and rubbish - remove as required Repair any damage as needed to manufacturers specifications Report and/or address any signs of misuse	1 visits per annum: Inspect for structural integrity, check fixings and repair accordingly 12 visits per annum: Inspect for graffiti and remove as soon as possible or as required Repair any damage as needed to manufacturers specifications Report and/or address any signs of misuse	1 visits per annum: Inspect for structural integrity, check fixings and repair accordingly 12 visits per annum: Inspect for graffiti and remove as soon as possible or as required Repair any damage as needed to manufacturers specifications Report and/or address any signs of misuse

Management of External Lighting					
Area Type	Aims	Objectives	Post Construction Years 1-5	Maintenance Years 5-10	Maintenance Years 10-15
All external lighting fixtures, poles and bollards. 	To provide a safe environment for residents and visitors without compromising privacy and ecological aims. Provide lighting infrastructure that is sustainable and of appropriate character.	Ensure lighting remains functional Ensure lighting infrastructure is kept in a manner that contributes positively to the street-scene and local character	4 visits per annum: Repair any damage Replace bulbs as required Annually: Clear away any vegetation hindering the effectiveness of the light. As required: React promptly to any reports of broken or flickering bulb and 'day burners' and repair as required.	4 visits per annum: Repair any damage Replace bulbs as required Annually: Clear away any vegetation hindering the effectiveness of the light. As required: React promptly to any reports of broken or flickering bulb and 'day burners' and repair as required.	4 visits per annum: Repair any damage Replace bulbs as required Annually: Clear away any vegetation hindering the effectiveness of the light. As required: React promptly to any reports of broken or flickering bulb and 'day burners' and repair as required.

6 Maintenance Schedule

- 6.1 The following maintenance activities are specific to the plant types and habitats created within the site. To be carried out in addition to the above standard activities.

MAINTENANCE OPERATIONS MATRICES

	TREE PLANTING													
NO	TASK	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES
1	Watering				X	X	X	X	X	X				Daily if required in summer
2	Check ties, staking and strimmer guard			X						X				Replace if damaged. Consider removal after 5yrs
3	Weed control (by hand)	X	X	X	X	X	X	X	X	X	X	X	X	As specified
4	Weed control (chemical)					X		X						And as necessary
5	Application of mulch					X					X			To 75mm as required
6	Apply fertiliser			X										
7	Pest and disease control			X	X	X	X	X	X	X	X			As required
8	Replacement planting (trees)	X	X	X								X	X	By agreement as schedule

MAINTENANCE OPERATIONS MATRICES

	HABITAT AREA													
NO	TASK	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES
1	Weed control (by hand)	X	X	X	X	X	X	X	X	X	X	X	X	As specified
2	Spot Weed control (chemical)					X		X						And as necessary
3	Watering				X	X	X	X	X	X				Daily if required in summer
4	Firm up plants			X						X				
5	Pest & disease control			X	X	X	X	X	X	X	X			As required
6	Thin out planting			X							X			As required
7	Replacement planting	X	X	X								X	X	By agreement as schedule
8	Works to trees		X								X			As required

	SHRUB PLANTING													
NO	TASK	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES
1	Litter collection and removal from site	X	X	X	X	X	X	X	X	X	X	X	X	Keep litter free at all times
2	Weed control (by hand)	X	X	X	X	X	X	X	X	X	X	X	X	As specified
3	Weed control (chemical)					X		X						And as necessary
4	Watering				X	X	X	X	X	X				Daily if required in summer
5	Top up mulch					X					X			To 75mm as required
6	Firm up plants			X						X				
7	Pest and disease control			X	X	X	X	X	X	X	X			As required
8	Trimming out and trimming planting										X			As required
9	Replacement planting (all plant types)	X	X	X								X	X	By agreement as schedule

MAINTENANCE OPERATIONS MATRICES

	AMENITY GRASS AREAS													
NO	TASK	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES
1	Litter collection and removal from site	X	X	X	X	X	X	X	X	X	X	X	X	Keep litter free at all times
2	Watering of newly turfed areas until established				X	X	X	X	X	X				Daily if required in very dry conditions
3	Apply suitable fertiliser (not too high in Nitrogen) and weed control, water thoroughly			X			X			X				Do not apply when weather is excessively dry and sunny as to avoid burning of grass
4	Mow to a height of 25 - 35mm, remove arisings		X	X	X	X	X	X	X	X	X	X		Gradually reduce mowing height to required level, min 25mm high

	HARD AREAS													
NO	TASK	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES
1	Litter collection and removal from site	X	X	X	X	X	X	X	X	X	X	X	X	Keep litter free at all times
2	Watering of newly seeded areas until established				X	X	X	X	X	X				Daily if required in very dry conditions
3	Mow to a height of 75mm, remove arisings			X	X	X			X	X	X			Mow twice yearly, March/April, 2nd cut between August and October when seeds have fallen
4	Remove leaves from grass to avoid rotting and moss growth									X	X	X		

MAINTENANCE OPERATIONS MATRICES

WILDFLOWER MEADOW, FIRST YEAR														
NO	TASK	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES
1	Litter collection and removal from site	X	X	X	X	X	X	X	X	X	X	X	X	Keep litter free at all times
2	Hand removal of perennial weeds			X	X	X	X	X	X	X				
3	Mow to a height of 50 mm, remove arisings			X						X	X			Avoid compacting the ground - don't mow in wet conditions
4	'High cut' to a height of 100 mm, remove arisings					X								Avoid compacting the ground - don't mow in wet conditions
WILDFLOWER MEADOW, SUBSEQUENT YEARS														
5	Litter collection and removal from site	X	X	X	X	X	X	X	X	X	X	X	X	Keep litter free at all times
6	Mow to a height of 50 mm, remove arisings			X							X			Avoid compacting the ground - don't mow in wet conditions
7	'Hay cut', strim meadow to a height of 75mm, leave arisings in place to dry							X						Avoid compacting the ground - don't mow in wet conditions
8	Once dried turn arisings to release seeds, then remove from meadow							X						
9	Hand removal of perennial weeds			X	X	X	X	X	X	X				

7 Monitoring and Ongoing Review

- 7.1 During the construction period it is recommended, where appropriate, that a suitably qualified Landscape Architect and Ecologist monitor the success of the scheme implementation and ongoing maintenance of the works during Year 1. Thereafter a Landscape Manager will be required to manage the prescription operations for Years 2-5 to ensure compliance and appropriate development of the scheme and remedial action is taken with regard to plant replacements and habitat creation.
- 7.2 Close monitoring of the environmental indicators, watering requirements and species identification will provide a clearer view of the actual performance of the landscape and will form a closer indicator of possible changes in management focus.
- 7.3 Before the end of this Plan period the management objectives and maintenance prescriptions should be reviewed, and any refinements incorporated into an updated management plan for on-going medium and long-term management.
- 7.4 Methods and techniques identified in these documents will be updated where relevant to respond to updated best practices in landscape and ecological management.
- 7.5 The results of all any monitoring surveys/reports will feed back into the general management of the site, and management strategies will be altered where necessary to ensure the long-term objectives for the landscape and ecological planting is achieved.

8 Appendices (refer to latest version)

8.1 DD614L05_Landscape Proposal Plan 1 of 2

8.2 DD614L06_Landscape Proposal Plan 2 of 2

The diagram illustrates a cross-section of a tree pit installation. At the top, a tree trunk is shown with a callout: "Trees species / specification as planting schedule". A vertical line from the top of the trunk to the top of the stake is labeled "Stake to be within top of stake". The trunk has a diameter of "75mm dia" and a "band of fine width 70mm". A "250" dimension is shown for the distance from the trunk to the edge of the pit. The pit is filled with "200mm clear washed stone to be included as necessary. 40mm single sized washed stone, no fines - each pit to be inspected following excavation to assess soil conditions and need for positive drainage pipework". A "Strimmer guard fitted to base of trunk where trees fall within grassed areas" is shown at the top of the stone layer. The "Position of rootball at correct level (nursery line). Slightly proud of surrounding ground levels" is indicated. A "Stake driven 300mm below bottom of perforated ground" is shown. The "Subgrade - perforate to 200mm" is at the bottom. Dimensions include "400" for the width of the stone layer, "700" for the height of the stone layer, "Varies" for the height of the rootball, "600" for the height of the stake, "900" for the total height of the pit, "200" for the height of the stone layer, and "1000" for the width of the pit.

NOTE:
Root Barriers to be installed alongside services trench works.

If tree pit is within 3000mm of underground services or kerbs - GreenBlue Urban ReRoot 600 for kerb protection and ReRoot 1000 for services or similar and approved

Stake to be within top of stake

75mm dia

band of fine width 70mm

250

Trees species / specification as planting schedule

700

400

Varies

600

900

200

1000

Strimmer guard fitted to base of trunk where trees fall within grassed areas

Position of rootball at correct level (nursery line). Slightly proud of surrounding ground levels

Stake driven 300mm below bottom of perforated ground

200mm clear washed stone to be included as necessary. 40mm single sized washed stone, no fines - each pit to be inspected following excavation to assess soil conditions and need for positive drainage pipework

Subgrade - perforate to 200mm

If tree pit is within 3000mm of underground services or kerbs - GreenBlue Urban
ReRoot 600 for kerb protection and
ReRoot 1000 for services or similar and
approved

DD Plot Planting Plant Guide:

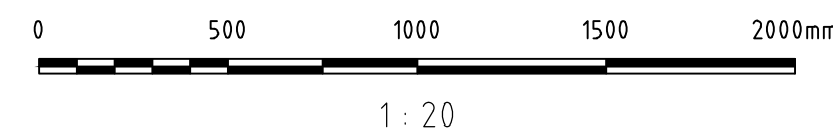
(High, Medium, Low)

The mix of plants for each plot has been divided based on height and position within the border.

Plants in the low category should be planted in the front of the bed, plants in the medium category in the mid area and the high category in the rear area against the blank walls or in the middle of any island beds.

Where space allowing plants should be planted in same species groups in odd numbers to create bold drifts of planting.

Refer to DD planting plans and schedules for planting bed matrices.



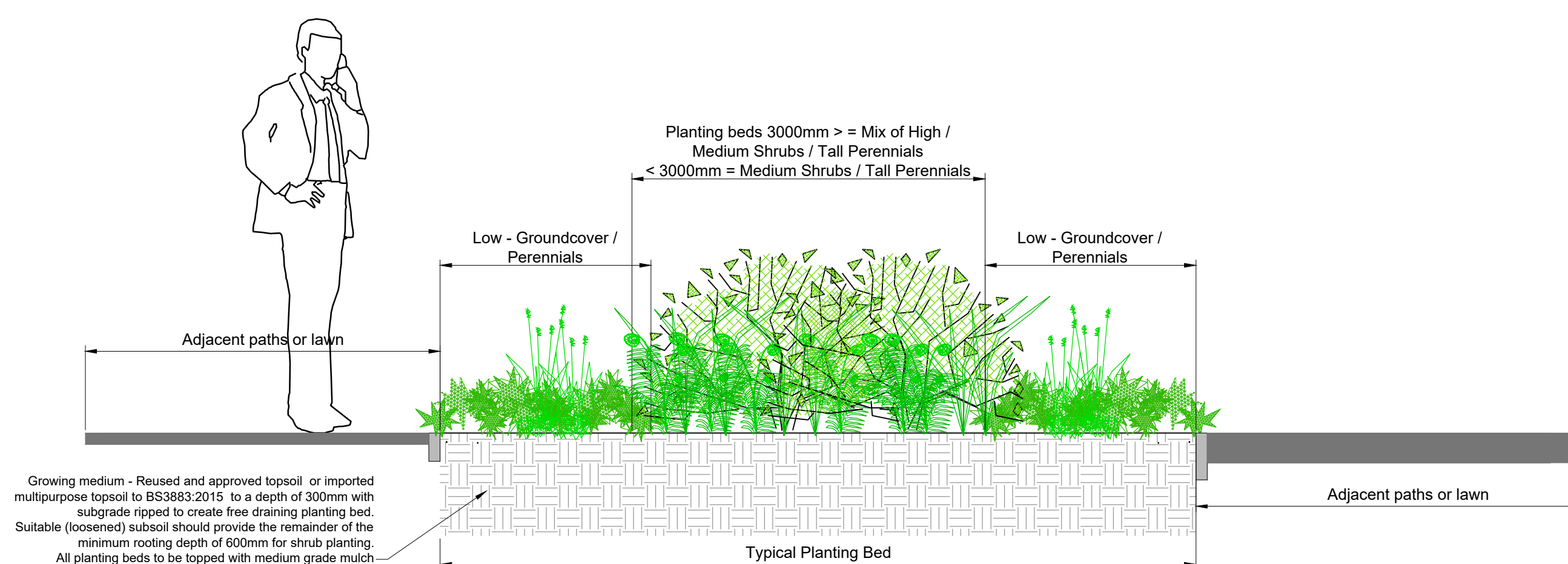
The diagram illustrates a cross-section of a tree pit. At the top, a tree is shown with its trunk passing through a series of layers. The layers, from top to bottom, are:

- Topsoil:** A layer of topsoil, 400mm thick, with a diameter of 400mm. It is secured centrally by a supporting band of fine hose or equivalent webbing, with a minimum width of 70mm.
- Mulch:** A 50mm layer of organic mulch.
- Green Blue Urban ROOTRAIN:** A layer of Green Blue Urban ROOTRAIN Metro irrigation system (or similar approved) nailed to the stake. Ensure the filter cap is slightly above the mulch level.
- Stake:** A 75mm diameter FSC approved timber stake, 700mm high, driven into the ground. The tree fixing is to be within 50mm of the top of the stake.
- Subsoil/Horticultural Grit:** A 600mm layer of free-draining imported subsoil or horticultural grit, depending on the porosity of the soil type.
- Geotextile Membrane:** A 200mm clear geotextile membrane, Terram 1000 or similar and approved.
- Subgrade:** The base layer of the ground.

Additional details include:

- The tree species / specification as per the planting schedule.
- The position of the root barrier (nursery line) surrounding the tree.
- The stake is driven to the bottom of the pit.
- The 200mm clear geotextile membrane is necessary for excavation to a depth of 400mm for positive drainage.
- The subgrade is pebbles.

NOTE Where insufficient root volume is provided by the soft landscape areas, supplementary root cells will be provided in accordance with supplier details; GreenBlue Urban (<https://greenblue.com/gb/>), or similar, and approved.



Key Schedule
RB=Rootballed
C=Container Grown
L=Litre Size
BR=Bareroot

NOTES:

1. This drawing is to be read in conjunction with all relevant contract drawings and specifications with any conflicting information to be brought to the attention of Deacon Design before works commence on site.
2. Do not scale from this drawing, (except for planning application purposes only) always work to noted dimensions.
3. All given dimensions in mm.

Refer to DD614L05 for Landscape Plan

FINAL

14.11.23	PD	Updated following Landscape Officer Comments	B	PD
31.10.23	PD	Updated following Biodiversity Officer Comments	A	PD
DATE	DRAWN	DESCRIPTION OF REVISION	REVISION LETTER	CHECKED BY

FOR PLANNING

D

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