

Living Wall and Planting Maintenance Specification.

Maintenance to be undertaken by LBC's term GM contractor Idverde.

1.1 **LW01020 - Living Walls**

The Contractor will carry out biannual maintenance visits to living walls, one in the Spring and another in Autumn. All visits will be carried out by qualified operatives who are experienced in carrying out the routine maintenance of living wall systems and ensuring they remain healthy and attractive. This will also increase the longevity of the walls and promote sustained plant growth. It is also an effective means of eliminating potential problems the wall may face, such as drainage issues and weed infestation. Where an irrigation system is installed this will be checked on a weekly basis in line with the current weekly water feature inspections.

Localised spot weeding of invasive weeds

- 1.2 The Contractor will remove weeds, suckers, litter, leaves and debris including twigs and branches, leaving the wall surfaces clean. Hand weeding must be undertaken if mechanical equipment or tools cannot be used.

Remedial Patching

- 1.3 The Contractor will gap fill areas due to poor establishment. This does not include areas where it is deemed the system has been neglected or damaged by adverse weather effects.

Cut back Vegetation

- 1.4 In Autumn cut back and remove arising's from site. It is not advised to trim vegetation in the first year. Depending on rate of growth in the first year, this will be reviewed by the AO and appropriate maintenance carried out by the Contractor as instructed.
- 1.5 Inspection of drainage channels and clearance of exposed outlets
- 1.6 The Contractor will be responsible for inspecting drainage channels, exposed outlets and cavities between installation and wall, ensuring they are clear of weeds, leaves, litter and debris.

Watering

- 1.7 The living wall needs to be adequately watered at least three times per week all year, and more in warm or windy weather as instructed by the AO. This must be done even if there has been rain as the wall may not get sufficient moisture in the planting medium from rain. In the Winter months the plants will still need moisture so weekly watering is essential. Failure to provide the screens with sufficient water will result in the plants failing. It is recommended that watering is done in the evening or morning to reduce the possibility of scorching.

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Fertilisers

- 1.8 Fertilisers are essential for the welfare of the living walls. A good quality liquid feed will be applied once a week as part of the watering during the growing season.
- 1.9 The Contractor will apply a slow release organic fertiliser in the Spring (March) and again in late Summer (September)

Completion Report

- 1.10 Upon completion, the Contractor will provide a report for each site, with pictures outlining further action or additional remedial visits outside of the standard maintenance contract. The completion report will also include details of any pest and diseases identified and advise on treatment.

2 SHB - Shrubs

General

- 2.1 This specification covers planting and maintenance of ornamental shrubs as contained in formal shrub beds or borders and for specimen shrubs individually located. Planting and maintenance of whips and/or informal shrub areas are contained in Section 3, WM - Woodland Management. The Contractor will ensure that all operations contained within this specification are carried out to approved horticultural standards.
- 2.2 All works specified in this section will be carried out in accordance with BS 4428 1989, General Landscape Operations, Section 8 and the Committee on Plant Supply and Establishment (CPSE) advisory leaflet.
- 2.3 All materials will be approved by the AO and supplied by the Contractor.
- 2.4 Plant Procurement - See Section 2 Item 23

Shrub Pruning

- 2.5 Shrub pruning is a skilled operation and must be carried out by those who can undertake the work in a proficient horticultural manner and have a good working knowledge of shrubs. It is not intended that all shrubs should be pruned every year. Where required shrubs are; to be pruned to prevent overcrowding, to be maintained in a shape corresponding with their natural species shape, and to be kept in a healthy state. Constant checking of shrub beds is necessary and forms part of the Contractor's regular duties.

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- 2.6 All pruning cuts must be clean and made above and slightly sloping away from buds using sharp secateurs. Where the wood is too thick for secateurs, a sharp saw will be used. All arising's will be removed to an approved location. For the purpose of this contract, shrub pruning is split into three distinct sections;
- i. To maintain shrubs in a healthy state and to reduce the problems of nuisance and danger to those who come into contact with them.
 - ii. To regulate their growth to prevent or alleviate overcrowding.
 - iii. To promote vigorous new growth to improve flowering, coloured Winter stems and juvenile foliage production.
- 2.7 The Contractor must note that methods of pruning will differ between species and cultivars within genera, and where there is doubt about the appropriate method the Contractor will consult with the AO who will instruct accordingly. Where shrubs have been incorrectly pruned, the Contractor will be expected to make good and carry out remedial pruning, or replace the plant as deemed necessary by the AO at the Contractor's own expense.
- 2.8 The Contractor will be responsible for the establishment of new planting, including theft and vandalism for the first growing season.

Ground Preparation

- 2.9 **SHB01020 - Remove weeds, debris, dig over and rake level**

All unwanted vegetation and debris on areas to be planted will be cleared prior to being cultivated, and removed to an approved location. Topsoil to be cultivated to a depth of 300mm in areas to be planted with shrubs or groundcover using cultivators, or other approved equipment, taking care not to bring up the subsoil, to a medium tilth. Cultivation will be completed by hand to the same standard where machinery cannot be used.

- 2.10 The soil will only be worked in reasonable weather conditions and not in conditions that could result in serious damage to the soil structure. All stones over 75mm diameter, weeds, roots or other deleterious matter which are brought to the surface will be removed to an approved location. This includes excavated items associated with the building trade.

- 2.11 **SHB01016 - Change soil**

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The Contractor will excavate beds to a minimum depth of 500mm and dispose of the soil to an approved location. Bases of the excavated pits will be forked over to a minimum depth of 250mm and rough levelled, prior to backfilling with an approved grade soil and organic compost mix supplied by the Contractor. Sufficient quantities will be applied to provide correct surface levels following settlement. Beds will then be raked to the correct profile prior to planting.

2.12 **SHB01030 - Incorporate compost**

Upon instruction from the AO, beds will be spread evenly and completely with 50mm of well-rotted manure or other well-rotted compost as approved by the AO, and dug in to a depth of 250-300mm.

Planting

2.13 **SHB02020 - Set out and plant shrubs**

Positions of shrubs to be planted will be marked out in accordance with the planting plan or as specified. When shrubs are set out precautions will be taken to prevent roots drying out.

2.14 All containers will be removed and any badly damaged roots dead or damaged branches carefully pruned. Each shrub will be placed upright in the centre of a hole dug large enough to accommodate the roots without restriction or damage. Compost will be incorporated in the base of each planting hole and mixed with soil to be returned. If composting of the entire bed has been carried out, the Contractor will make an allowance for settlement. The hole will be backfilled to half its depth and firmed by treading. Care will be taken not to crush the root ball. The remainder of the soil will be returned and again firmed by treading. Specified plants will be staked and tied as instructed by the AO.

Maintenance

2.15 **SHB03020 - Remove weeds, litter, leaves and debris and prick over bed**

The Contractor will clear all litter, leaves and debris, including twigs and branches, from bed surfaces. Suckers will be pulled or cut off below ground level and the bed will be hand weeded. All arising's must be removed before pricking over to a depth of 50mm using a hand fork, or approved equivalent.

2.16 The Contractor must ensure no damage is caused to plant roots or stems during these operations. All leaves, litter or debris to be removed from plant stems or branches at the same time and all arising's taken to an approved location. The bed surface is to be left clean, evenly raked or tilled with a smooth even profile.

2.17 **SHB03030P - Maintain shrub beds free from weeds and debris etc. and prune as specified**

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The Contractor will ensure bed surfaces and plants emanating from beds are maintained such that at no time, as determined by the AO, is there to be more than 10% 'weed' coverage of the bed surface, or are there to be 'weeds' higher or longer than 100mm and at no time will there be any 'weeds' growing through or lodged within the plants. 'Weeds' include all unwanted vegetation, litter, leaves (including Autumn leaf fall) twigs, branches, seedlings, suckers, blossom and any other items considered by the AO to be detrimental to the appearance of the bed.

- 2.18 Autumn leaf fall must be removed by the end of period 2. All shrubs will be kept pruned during all periods to the following:
- i. To remove dead or damaged wood.
 - ii. To remove overhangs to public walk ways, including access ways to services, where they may cause an obstruction. This operation may cause plants to be misshaped. If this occurs then the whole plant should be pruned.
 - iii. To remove or treat wood affected with pests or disease. This must be notified to the AO within 24 hours when there may be a high risk of contamination with other plants, especially of notifiable pests or diseases. If the application of a pesticide is indicated, then the Contractor must be prepared to carry out treatment within 24 hours upon instruction from the AO
 - iv. To remove unwanted reversion growth, basal, trunk and crown growth from stock wood where plants are grafted or budded.
 - v. To eliminate, as far as is possible or practicable, possible danger to the public or others.
 - vi. To eliminate damage to property. This will be done only occasionally and generally under instructions from the AO.
 - vii. To eliminate overhang to private property.
 - viii. To keep windows clear from obstruction and to stop the blocking out of light. It should be noted that some shrubs may be planted to prevent access to windows for security reasons. These are generally obvious but where there is uncertainty the Contractor must seek approval from the AO.
 - ix. To remove flower heads from Rhododendrons and Azaleas immediately after flowering, ensuring that emerging buds are not damaged.

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- 2.19 All shrubs will be pruned when required to prevent overcrowding. This should be a Contractor initiative and should be carried out on all shrub beds that require attention over a three year cycle so that all beds are attended to within that period and maintained in a good condition. Plans for this three year cycle should be made available for AO inspection within four months of the start of the contract and should be kept up to date for the duration of the contract.
- 2.20 It will be the responsibility of the Contractor to prune shrubs at the correct time of year and in the correct manner on all sites. This will not apply to plants that are generally never pruned such as Rhododendrons, Camellias and Magnolias etc. This will also not apply to shrubs that are pruned annually such as some Forsythia, Buddleia, Cornus varieties etc.
- 2.21 As operatives are required to have horticultural proficiency in shrub pruning, any plants incorrectly pruned, damaged or killed will be the responsibility of the Contractor and will be replaced as closely as possible regarding size at the Contractor's expense. Below is a list of preferred pruning times and methods for the above work although this may differ where hard pruning is necessary.

Shrub Pruning Timetable

- 2.22 See Section 4 Appendix 5.

2.23 **SHB03040 - Apply bark mulch**

The Contractor will apply approved pulverised medium grade bark mulch from a sustainable source to shrub beds to a depth of 50-75mm to shrub beds. This is to be undertaken on a cyclical routine covering a third of all shrub beds each year, and programmed in order that each bed is mulched at least once every three years. Sites to be agreed annually in advance with AO. Mulch is to be free of pests, diseases and weeds. The Contractor will take care not to smother the 'crown' of the shrubs with the mulch material. The surface to be mulched must be free of weeds and other deleterious material and irrigated to field capacity or to an even penetration of 100mm. The Contractor will monitor and identify sites to be mulched. These will be sent to the AO for authorisation.

2.24 **SHB03050 - Apply organic mulch**

As SHB03040, with the amendment to apply an approved organic mulch.

2.25 **SHB03046 - Apply mushroom mulch**

As SHB03040, with the amendment to apply an approved mushroom mulch.