LANDSCAPE MANAGEMENT MANUAL FOR

4 Wedderburn Road London

Name and Address

| STATUS: | Rev. A | |
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| | 07/06/16 | |

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LANDSCAPE MANAGEMENT MANUAL

INTRODUCTION

This Management Manual has been prepared for 4 Wedderburn Road by Jo Thompson Landscape and Garden Design, to provide a guide to the continued maintenance and development of landscape areas after Practical Completion.

This manual provides a guide to management principles and to the standards required by Jo Thompson Landscape and Garden Design.

The document has been written to assist those who supervise and carry out the landscape management work and to demonstrate to interested parties the intended level of commitment to establishing and maintaining the landscaped garden. The manual is intended for use by individuals or companies who have an understanding of landscape maintenance and of the general terms and standards stated and required by the designer. The manual has been prepared in four sections, as follows: -

Section One – Management Objectives

 A statement of management intent and objectives in respect of the elements concerned i.e. Hedges, shrubs, Topiary etc. and their general functions / use.

The first section is a statement of management objectives, indicating the intent and function - use of the various elements and the general practices of establishment to be adopted over the first five years of establishment following Practical Completion.

Section Two – Elements of Works (Specification)

 A written description of the tasks, methods and standards of workmanship and materials.

The second section, Elements of Works, is a written description of the tasks and workmanship required, which provides an explicit and concise description of the maintenance operations i.e. the works to be carried out to the specific elements. The first part of section two forms a general guide to scope and conditions of works.

Section Three - Schedules

• Schedules of operational tasks (elements) indicating their frequency

This fourth section is a series of schedules that provide an easy reference to specific tasks and their frequency of operation, including a 5-year programme of maintenance tasks.

SECTION ONE – MANAGEMENT OBJECTIVES

The site has been made up of various designed elements be they shrub or hedge planting, they all have a function to perform and have an objective in terms of establishment. The following paragraphs summarise the main functions and the key objectives for the maintenance of each element over a five-year period: -

Ornamental Shrubs

Amenity function; In this instance ornamental shrubs provide a purely visual amenity function and are used when less formal, medium size ornamental planting is required. A variety of heights and seasonal display are used to give interest and provide feeding and nesting opportunities for wildlife, evergreen species provides a year round display. The display therefore has structure, height and year round presence. Objective to maintain as ornamental display and wildlife habitat.

Groundcover

Amenity function; Located where relatively formal but low shrub planting is required. As a setting for other features or amongst ornamental shrub planting. It is planted to provide an evergreen cover.

Objective to establish as clean, tidy areas of groundcover in well defined shapes, preventing the incursion of weeds.

Trees

Amenity and screening functions. In this instance a variety of trees provide visual amenity and screening function. Located as visual focal points and along boundaries Objective to establish a strong green feature in keeping with the conservation area identity

SECTION TWO – ELEMENTS OF WORKS (SPECIFICATION)

GENERAL CONDITIONS

100 SCOPE OF WORKS

The maintenance of both soft and hard landscaping features as described in this Specification (Section 2), Specific Management Requirements (Section 3), Schedules (Section 4) and the as built drawings.

The works involve, but are not limited to, the following maintenance tasks:

Feeding and herbicide application, weeding shrub beds and planters, hedge and topiary trimming and shaping, tree pruning and watering.

The contractor shall fully familiarise himself with the scope of works, site conditions, features and nature of each scheme as no claim for lack of knowledge shall be entertained.

105 STANDARDS OR WORKMANSHIP / REPORTING

The contractor shall maintain the scheme to the highest standards of workmanship and material supply and must bear in mind any access limitations or user constraints.

106 MANAGEMENT / STAFFING

The contractor shall supply appropriately skilled and experienced operatives for the type and quality of work and be familiar with the terms of this manual.

108 CHEMICALS (PESTICIDE) APPLICATION

All chemicals used shall be non-toxic, under normal use, to human beings, birds and animals. Chemicals that are not on the Agricultural Approved Scheme current list of approved products shall not be used. The contractor shall use operatives, which hold a recognised certificate of competence. The selection of the chemical chosen must be by a

BASIS qualified operative and be the least hazardous for the job, attention to the requirements under current C.OS.H.H. and any other relevant Health and Safety regulations shall be adhered to. The contractor is responsible for obtaining all the permissions and giving notification to all relevant bodies e.g. Environment Agency of the intent to use a selected chemical.

The contractor shall be responsible for the replacement of any material damaged or killed by 'spray drift' or the incorrect interpretation of the manufacture's instructions, including season and susceptibility of certain plant species to chemicals.

The contractor shall inform the client 48 hours prior to the application of a chemical. Informing him of the spraying location, type of chemical, operative undertaking the work and the reason for the control. The contractor shall undertake the application of chemicals with extreme caution and shall make full allowance for programming applications to suit the user of the site.

109 FERTILISER APPLICATION

All fertilisers shall be supplied by the contractor and are to be applied during suitable weather conditions and at the manufacturer's recommended rates.

In the choice of material to be used, which must be approved by the client prior to application, the contractor is to ensure its suitability for its intended use and be mindful to use environmental friendly materials and methods.

The contractor shall ensure that no damage occurs to plant material as a result of incorrect application. The contractor at his expense shall replace any plant material so damaged.

No fertiliser product may be stored within the site, or applied without the written approval of the client.

110 MACHINERY

The contractor shall only use machinery and tools suitable for the sites and the work to be carried out. Use hand tools around trees, plants, confined spaces and where it is impractical to use machinery. The contractor shall make full allowances for minor handworks defined within the scope of works, or as indicated in this manual. The contractor shall ensure that all mechanically propelled vehicles and or machines are licensed in accordance with the Vehicles (Excise) Act 1971 and are properly taxed and that all operatives hold the required class of driving licence for their use.

The contractor shall ensure that no vehicles or machinery are left unattended whilst on any site. The contractor shall ensure that, except in freezing or drought conditions, each vehicle receives a thorough wash of all external areas at least once per week.

Vehicles and plant are not to be re-fuelled while on grass and the contractor shall avoid damage to grassed or planted areas or paths or paving caused by dripping oil or fuel from vehicles or plant while in use or parked.

111 SERVICES

Care shall be taken not to disturb or damage any cables, conduits, pipes or fittings belonging to any Statutory Undertaking, Local Authority or private parties. Any damage to such cables shall be reported to the client immediately and shall be made good at the contractor's expense and in accordance with the Bylaws or regulations of the relevant authorities and or statutory undertakers.

Before commencing work the contractor shall satisfy himself as to the positions and depths of such cables, conduits and underground pipework etc, and shall instruct his staff accordingly.

113 ENVIRONMENTAL DEFECTS

Where during the course of the works the contractor observes the presence of any significant defect, pest or disease, in the inorganic or organic structures or materials on site, he shall report such findings to the client immediately along with a proposed course of action, the contractor shall allow for treating such pest and diseases as Vine Weevil, Brown Tail Moth and pernicious weeds as described in clause 680 as part of their routine maintenance works.

114 BRITISH STANDARDS / WILDLIFE & COUNTRYSIDE ACT Except where otherwise specified, all materials and workmanship shall be in accordance with the appropriate current British Standard.

Allow for complying with and work in accordance with the Wildlife & Countryside Act.

115 TOXIC / POISONOUS & HARMFUL PLANTS

Many plants can cause injury or harm to people, either by skin irritation or thorns and spikes or poisoning by ingesting; the contractor should wear suitable protective clothing when working with plants as appropriate for the task and plants; never ingest any plant material from this site.

116 GOOD PRACTICE

Where and to the extent that materials, products and workmanship are not fully specified, they are to be:

- Suitable for the purpose of the works stated herein and or reasonably to be inferred from the manual.

- In accordance with good horticultural practice, including relevant provisions of current BSI documents relating to landscape or other associated works.

117 REINSTATEMENT

Reinstate to original condition and within a reasonable period of time (according to season), any damage or disturbance occurring during the work, to soil structure, planting, grass, fencing, hard landscaping, structures or buildings.

The contractor shall prior to the autumn period, of each year, undertake a review of each scheme in the respect of any missing plant stock.

The schedule should fully identify any missing, failed and or stock which is below the quality specified, indicating numbers, sizes, all in accordance with the original planting plans and the areas on site from which the stock is missing.

On production of the schedule the contractor shall submit the schedule to the client for his approval, comments and amendments. The contractor shall make full allowances for replacing this stock at his own cost, after approval of the schedule by the client.

The contractor shall make full provisions and allowances for undertaking replacement / remedial works with due care to the already established plant stock and prior to the commencement of replanting works the contractor shall submit a programme for the client's consideration and approval. All replacement / remedial works shall be carried out in accordance with the Soft Landscape Specification.

118 CONTROL OF MAMMALIAN PESTS

Unless instructed otherwise the control of mammalian pests will be the responsibility of others. If habitats become a hindrance to maintenance operations report such to the client.

119 WATERING GENERALLY

Obtain client's approval before using a supply other than potable mains water.

Ensure the full depth of topsoil is thoroughly wetted.

Use a fine rose or low-pressure hose where appropriate to avoid damaging or loosening plants.

Where necessary, loosen soil or form depressions around the stem base of plants to ensure that water reaches the root zone instead of dispersing on the surface. Where planters have a self- contained water reservoir ensure this is refilled as necessary.

120 WATERING

Water as necessary to ensure the continued thriving of all planting. Ensure the full depth of the topsoil is thoroughly wetted.

121 DROUGHT CONDITIONS

If water supply is or is likely to be restricted by emergency legislation the contractor shall inform the client without delay and ascertain availability and additional cost of second quality water or other alternative source of supply.

122 DISPOSAL OF ARISINGS GENERALLY

Dispose of 'green' arisings from all specified operations by removing from site to an approved recycling facility for composting. All arisings shall be removed at the end of the maintenance operation in the area / building or prior to the end of the working day.

Leave beds free from pruning cuttings, and footpaths free from grass/pruning clippings and the like, and swept clean of the completed activity.

125 WASTE TRANSFER

For all and any waste transfer, including green waste, the contractor shall maintain and keep transfer notes in accordance with the Environmental Protection (Duty of Care) Regulations 1991 and upon request shall provide copies of the notes to the client.

126 CLEANLINESS

Remove soil and arisings from hard surfaces and leave the works in a clean, tidy condition after maintenance operations.

127 MANNER OF CARRYING OUT OPERATIONS

Once a maintenance operation has commenced for an area / building, the whole area / building shall be completed during the visit / working day; the contractor shall allow resources to achieve such.

128 INSPECTIONS

Not withstanding the conditions of this section the contractor must give 48 hours' notice to the client of his intention to begin the following operations:

Application of herbicide or fertiliser

Watering

Each site maintenance visit.

129 TREE STEMS

Do not allow mowing machinery closer than 100 mm to any tree stem. Avoid damage to tree stems by nylon filament rotary cutters or other mechanical tools.

230 LEAF REMOVAL

Remove fallen leaves on a weekly basis by hand from plant beds and by sweeping hard surfaces, use of leaf blowers will be permitted.

231 UNDERGOUND GUYING

Adjust tension of ratchet, as required.

232 REFIRMING

Ensure that trees and shrubs remain firmly bedded after strong winds, frost heave and other disturbances. Re-firm by treading around the base. 'Collars' at the base of tree stems created by tree movement to be broken up by fork, avoiding damage to roots, backfilled with topsoil as necessary, and re-firmed.

234 PRUNING GENERALLY

Prune in accordance with good horticultural practice. Prune larger branches and woody stems in accordance with good arboricultural practice.

Thin, trim and shape appropriately to each species, location, season, and stage of growth, leaving a well-balanced appearance.

Use clean sharp secateurs, handsaws or other tools. Trim off ragged.

Use clean sharp secateurs, handsaws or other tools. Trim off ragged edges of bark or wood with a sharp knife.

Remove branches without damaging or tearing the stem.

Keep wounds as small as possible and cut cleanly back to sound wood.

Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.

Prune larger branches neither flush or leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.

Notify the client of any disease or fungus. Do not apply growth retardants, fungicide or sealant unless agreed by the client.

235 PRUNING ORNAMENTAL SHRUBS

Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.

Many evergreen and deciduous shrubs require little or no regular pruning other than to maintain shape and to keep them within bounds. Any light spring pruning shall be carried out from March after the risk of frost has passed.

Remove all suckers by cutting back level with the source stem or root.

236 PRUNING SHRUBS TO MAINTAIN FORM

Prune to encourage healthy and bushy growth; to maintain plant 'distinction', shape and to keep within bounds – at a frequency to maintain individual plant and group form that reflects the plant species by removing extension growth during the growing season.

Groundcover plants such as Ivy shall be pruned at a frequency to prevent incursion into adjoining plant groups and off hard surfaces – pavements & walls.

237 PRUNING FLOWERING SPECIES

Winter flowering shrubs in spring.

Shrubs flowering between March and July immediately after the flowering period.

Shrubs flowering between July and October back to old wood in winter.

238 PRUNING ADJACENT TO PATHS / BUILDINGS

Selective pruning and trimming should be undertaken as required to maintain free pedestrian / vehicular access along roads, paths and building lines.

239 TRIMMING RAPIDLY ESTABLISHING HEDGES

Allow to reach planned height as rapidly as possible, trimming back lateral branches moderately to establish the required shape.

240 TRIMMING SLOWLY ESTABLISHING HEDGES

Cut back hard in June and September both sides to encourage bushy growth down to base level.

Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

241 REMOVAL OF DEAD PLANT MATERIAL

At each maintenance visit, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

242 REMOVE AND REPLACE DEAD PLANTS

As soon as possible, and in any case within current or next planting season or as instructed in accordance with Clause 117 – Reinstatement.

243 WEED CONTROL GENERALLY

Remove and/or prevent plant growth that is not required in the landscape. Maintain beds and tree bases <u>weed free</u>, as indicated on the Schedules – Section 4

Ensure that the methods used do not cause any damage to adjacent plants or trees.

244 HAND WEEDING

Remove all weeds, including roots, by hand using hoes, trowels or forks, taking care to remove not more than a minimum quantity of soil, causing minimum disturbance to trees, plants, mulched surfaces and bulbs and leaving the area in a neat, raked, clean condition.

245 WEED CONTROL WITH HERBICIDE

Apply a suitable foliar acting translocated herbicide being dependent on season, maturity of stock and location. The timing and number of treatments should ensure that weeds are prevented from shedding any seeds.

Refer to Clause 108 for chemicals and operative requirements. Re-apply, as necessary to maintain required level of weed control. Allow the recommended period before clearing arisings.

246 MAINTENANCE OF MULCH

Top up with specified mulch to a thickness of 50 mm. Sweep up and replace mulch spilling onto adjacent areas and, if not contaminated with weeds or rubbish, return to planted area. Remove weeds growing on or in mulch by hand weeding or herbicide.

247 LEAF REMOVAL

Remove fallen leaves by hand from plant beds, use of leaf blowers will be permitted, and grass areas and hard surfaces – roads, paths, gutters, kerb runs, car parks etc. on a weekly basis during periods of leaf fall.

Ensure that all leaves are removed from under hedge rows and from within shrub beds including leaves 'lodging' in shrub canopies.

- 248 FERTILISING TREES / SPECAMIN TOPIARY AND SHRUBS
 Apply a compound, slow release fertiliser e.g. Enmag 4:19:10:7.5 –
 as follows.
 - Trees 100g/m2 to each tree at spring in years indicated in Section
 4. The top dressing should cover the whole rooting area plus at least one metre beyond the spread of branches.
 - Shrubs 70g/m2 to each shrub area at springtime in years indicated in Section 4. The top dressing should cover the area of each rootball and 500mm-diameter circle around shrub.

HARD LANDSCAPE AREAS/FENCING

249 HARD SURFACES AREAS

Sweep all hard surfaces – Take particular care to keep paths and courtyard areas free of debris including leaves and other debris <u>arising</u> <u>from landscape areas / maintenance operations</u> on a weekly basis.

Remove mud, silt, litter and debris from surface gutters, window ledges, channels and kerbs.

Sweeping hard surfaces - weekly.

<u>SECTION THREE - SCHEDULES</u>

The following schedules of operational tasks (elements) provide a guide to the required operations, proving an indication on 'timing' and frequency.

MANAGEMENT MANUAL SCHEDULES - GROUNDCOVER- ALL AREAS

| Operation | Frequency | Timing | Required Performance | Year |
|--|-----------------------------|---|---|---------------------------|
| Pruning – | as needed | or as needed | Prune groundcover plants | All years |
| Pachysandra, Geranium species, | | | to maintain neat, tidy areas in well-defined shapes. | |
| Watering | 1 x per week if required | Weekly or as environmental conditions require | Irrigation to wet full depth of topsoil | All years |
| Cultural operations to promote the health and vigour of the plants | 2 x per year | May /Sept | Enmag fertiliser to be applied at a rate of 35g per m2. Soil to be tested every 2 years | All years Every 2nd year |
| General maintenance | 12 x per year | Monthly throughout the year | Replenishing bark mulch material and removing any litter, plant debris and weeds | All years |

MANAGEMENT MANUAL SCHEDULES - PERENNIAL /SHRUB PLANTING

| Operation | Frequency | Timing | Required Performance | Year |
|--|--------------------------------|---|--|---------------------------|
| Pruning | 1x per year | In accordance with good horticultural practise depending on plant species | Trim evergreen plants to maintain form and health, clip using hand shears or suitable power trimmers. Remove or clear all dead blooms from flowering trees and shrubs as necessary. Cut back Lavender stems in Autumn after flowering to maintain a tight shrub base | All years |
| Watering | 1 x per week if required | Weekly or as environmental conditions require | Irrigation to wet full depth of topsoil as necessary | All years |
| Cultural operations to promote the health and vigour of the plants | 2 x per year | May /Sept | Enmag fertiliser to be applied at a rate of 35g per m2 Soil to be tested every 2 years | All years Every 2nd year |
| General maintenance | 12 x per year | Monthly throughout the year | Replenishing bark mulch material and Removing litter and weeds | All years |

MANAGEMENT MANUAL SCHEDULES - GENERAL / HORTICULTURAL ELEMENTS

| Operation | Frequency | Timing | Required Performance | Year |
|--|--|---|--|-----------|
| Plant replacements | 4 x per year for seasonal planting elements, all others as needed | Generally November / March or seasonally as specified | Inspect 100% of areas and carry out as required, check original planting plan(s). Where persistent failures investigate cause/ use different species. Mulching is less critical and more difficult as plants mature | All years |
| Plant health inspection | 12 x per year | All year round | Inspect 100% of stock and carry our remedial action as required. Consult specialist in terms of unidentifiable diseases etc. – e.g. ADAS | All years |
| Watering – All planting | As required | In dry weather or to ensure establishment | Water in early morning or late evening, depending on priority | All years |
| General site inspection – safety, trip hazards | 52x per year – 1x per week | All year round | Inspect 100% of site and advise client accordingly | All years |
| Sweeping paths and hard landscaping | 52x per year 1x per week | All year round | As above | All years |

PLANT SCHEDULE

Astrantia Major 'Alba'

Trees

Acer palmatum 'Chiba'
Acer palmatum dissectum
Acer rubrum 'October Glory'

Betula pendula Carpinus betulus

Carpinus betulus fastigata 'Frans Fontaine'

Fagus sylvatica

Liquidambar styraciflua

Magnolia x loebneri 'Leonard Messel'

Prunus avium

Shrubs

Camellia japonica 'Nuccio's Pearl' Ceanothus 'Autumnal Blue'

Ceanothus 'Concha'

Cornus alba 'Elegantissima' Corylus maxima 'Purple Filbert'

Daphne x Burkwoodii Deutzia discolour Hydrangea quercifolia Philadelphus 'Virginal'

Pittosporum tenuifolium 'Tom Thumb' Pittosporum tenuifolium 'Variegatum'

Sambucus Nigra 'Black Lace' Syringa vulgaris 'Charles Joly'

Viburnum opulus Viburnum davidii

Sub-shrubs

Lavandula x Intermedia 'Grosso' Thymus vulgaris 'Silver Posie'

Herbaceous

Aconitum 'Stainless Steel' Actaea simplex 'Pink Spike'

Amsonia 'Blue Ice'

Anemone x hybrida 'Honorine Jobert' Aquilegia stellata 'Black Barlow' Aquilegia stellata 'White Barlow' Aquilegia stellate 'Ruby Port'

Artemisia ludoviciana 'Valerie Ennis'

Herbaceous (ctd)

Astrantia major 'Ruby Wedding'
Astrantia major 'Star of Treasure'
Berberis thunbergii 'Atropururea Nana'
Campanula lactiflora 'Prichard's Variety'

Centaurea montana 'Jordy' Ceratostigma plumbaginoides

Cercis canadensis
Cirsium rivulare
Cyanara cardunculus
Delphinium 'Blue Dawn'
Dierama 'Blackbird'
Digitalis purpurea

Digitalis 'Sutton's Apricot' Echinops ritro 'Veitch's Blue' Geranium himalayense 'Gravetye' Geranium 'Mrs Kendal Clarke'

Geranium phaeum
Geranium psilostemon

Geranium sylvaticum 'Mayflower'

Hesperis matronalis 'Alba'

Knautia macedonia Liatris spicata' Alba'

Luzula nivea

Lychnis coronaria 'Alba'

Nepeta x faasenii

Pachysandra term. 'Green Carpet' Papaver orientale 'Patty's Plum'

Papaver somniferum

Penstemon 'Appleblossom'

Penstemon 'Garnet'

Phlox panniculata 'Blue Boy' Phlox panniculata 'Eventide' Salvia nemorosa 'Caradonna' Sanguisorba 'Red Thunder'

Thalictrum 'Elin'

Verbascum chaixii 'Album' Veronica gentianoides Veronicastrum 'Rose Glow' Veronicastrum 'Spring Dew'

Climbers

Clematis alpina 'Francis Rivis'
Clematis armandii 'Apple Blossom'
Clematis macropetala `Lagoon`
Clematis montana
Lonicera periclymenum 'Serotina'
Trachelospermum jasminoides
Wisteria floribunda

Molina caerulea 'Transparent'

Bulbs/rhizomes/coums

Iris germanica 'Jane Phillips' Iris germanica 'Perry's Blue'

Roses

Rosa 'Chianti'
Rosa 'Eglantyne'
Rosa 'Filipes Kiftsgate'
Rosa 'Gertrude Jekyll'
Rosa 'Louise Odier'
Rosa 'Reine de Violettes'
Rosa 'The Albrighton Rambler'
Rosa 'The Generous Gardener'
Rosa 'Tuscany Superb'

Grasses

Molina caerulea 'Transparent'

Bulbs/rhizomes/coums

Iris germanica 'Jane Phillips' Iris germanica 'Perry's Blue'