



Schedule For Specification of Landscape Works & Maintenance

**Proposed Grant Park Public Openspace Area at Clongriffin, Dublin
13.**

For the Client

Land Development Agency

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1.0. Introduction

Ronan MacDiarmada & Associates Ltd has been commissioned by LDA. to compile this report on the Specification for landscape work at Grant Park Public Openspace Area at the Lands located at Clongriffin, Dublin 13.

The purpose of this report is to provide specification for tender in respect of the work at Grant Park Public Openspace Area at the Lands located at Clongriffin, Dublin 13.

1.1.1. How to use specification Document

This specification document is to be used in conjunction with the Landscape Drawings & works document.

1.2.0. Concept

The central concept of the design is to merge the existing landscape with the proposed new development. In this respect, the landscape work shall consist of seeding, tree planting, shrub planting and paving.

1.3.0. General.

1.3.1. Site inspection.

The Landscape Contractor shall be deemed to have visited and inspected the site and surroundings before contract start-up.

The Landscape Contractor shall be employed by the main contractor or otherwise specified.

1.3.3. Plant Protection.

No existing trees, shrubs or other plants shall be removed or cut without specific instruction from the Landscape Architect or Arborist.

1.3.4 Trees

All existing trees shall be retained, care is to be taken when mowing around tree trunk, strimming, if it is to be carried shall be done by a competent General operative who has a minimum of 6 months experience.

1.3.5 Shrubs

All existing shrubs shown to be retained, shall have the weeds around it removed by a hoe or similar mechanical method, spot spraying shall only be done after the first cover of weeds have been removed by a competent General Operative who has experience in spot spraying of a minimum of 6 months and has the necessary qualifications to do so. Qualifications in the handling and use of chemical herbicides in the public realm.



1.3.6 Hedges

All existing Hedges shall be retained if so present, care is to be taken when mowing around the trunk, strimming, if it is to be carried shall be done by a competent General operative who has a minimum of 6 months experience. For Maintenance of new hedges, Pruning and breasting of the hedge shall be as per direction on the drawing – a height of 1.2m is to be achieved – screening of cars but a visual view of the site when standing is the desired effect.

1.3.7 Grassed Areas

Existing Grass areas are to be retained if so present, it is proposed to cut back these areas and remove heavy growth as directed in 4.2.2 of this document and regularly mow thereafter to make good the sward and remove heavy and noxious weeds. Fine cutting – as directed in 4.2.1 of this document or as directed by the Landscape Architect.

1.4.0. Programme of Works.

1.4.1. Landscape Implementation Programme.

1. Weed control.
- 2 Cultivation.
- 3 Planting
- 4 Maintenance – 18 month Period.

1.4.2. Programme of Inspection.

- Inspection and Practical Completion.
- Inspection and Replacement Planting.
- Inspection and End of 5 years defects Liability Period

1.4.3. Work Exclusion or Reprogramming.

Part of the works may be programmed or reprogrammed at the discretion of LDA.

1.4.4. Environmental Conditions Precluding Planting.

To protect the plant root system, no planting shall be carried out during periods of frost, drought or cold drying winds or when the soil is waterlogged or frozen.

1.4.5. Environmental Conditions Precluding Cultivation.

To prevent damage to the structure and texture of the soil ground cultivation shall only be carried out when the soil is dry and friable, under no circumstances shall the soil be disturbed when wet.

1.5.0. Insurance

1.5.1. Employers Liability Policy.

This policy should provide indemnification of in respect of claims which could be made against it as principal by employees of the Contractor.



1.5.2. Public Liability Policy.

This policy should provide for the following: -

- (i) Indemnification of LDA. as principal.
- (ii) Unlimited cover generally and a limit in respect of any one accident.

1.5.3. Full Motor Insurance Policy.

This should provide for the following in respect of vehicles governed by the Roads Traffic Acts: -

- a** Indemnification of LDA. as principal.
- b** Names and addresses of drivers where limited cover only is provided.
- c** Passenger cover in relation to seating capacity of cab.
- d** Cover for towing including trailers where applicable.
- e** Loading and unloading risks both on and beyond public thoroughfares.

2.0. Material - Trees - Supply and works

2.1.0. Schedule of Supply

The nursery stock material shall be delivered following consultation with the Landscape Architect, Landscape Contractor and the selected Nursery(s). It is intended to serve notice of supply by means of phased orders. Delivery will be always by means of covered vehicles, and all plant material shall be clearly labelled. The source of origin must be from the selected nursery, as no other additional stock from other nurseries shall be permitted without prior inspection and approval.

2.1.1. Plant Inspection.

Prior to the signing of the contract, the contractor shall supply samples of three different varieties of transplants/potted shrub demonstrating the typical root system. These samples shall be recorded as the reference for subsequent transplants supplied. The Contractor shall collect all plants and hold at a nursery before undertaking any planting, thereby making all plant materials available for inspection and approval by the Landscape Architect at the nursery prior to supply to the site.

2.1.2. Variations.

Where itemised plant specimens are unavailable substitutions shall be submitted with the contract after approval by the Landscape Architect. The Contractor shall be subsequently informed of acceptable substitutions prior to commencement date. Substitutions may be for either specifications or species but not both, preference shall be given to a change of specification before change of species or variety. No variations from the plant schedule will be allowed at any stage of the contract except on written instructions from the Landscape Architect.

2.2.0. Nursery Stock

2.2.1. Plant Material

All Plant Material shall be good quality nursery stock, free from fungal, bacterial or viral infection, aphids, red spider mite or other insect pests and any physical damage. It shall comply with the requirements of BS 3936: parts 1 - 10: 1965 Specification for Nursery Stock, where applicable.

2.2.2. Species

All plants supplied shall be exactly true to name, size and quantity as indicated in the plant schedules. Any variation that has not been approved shall be replaced by the contractor at his/her own expense.

2.2.3. Standard and Field Grown Trees

Trees shall have a sturdy, reasonably straight stem, and a well-defined straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown and root systems shall be well formed. Roots shall be in reasonable balance with the crown and shall be conducive to successful transplantation.

2.2.4. Multi Stem Trees

Multi stem trees shall be of a specified height with a minimum number of stems as per drawing. Deviations or substitutes to be highlighted in advance of returning tender to landscape architect

2.3.0. General instructions

2.3.1. Lifting

The interval between the lifting of stock at the nursery and planting on site is to be kept to an absolute minimum. Plants shall be protected from drying out and from damage in transport. All stock waiting transport shall be protected from wind and frost and from drying out.

2.3.2. On completion of lifting plants in the nursery, any broken shoots or severed roots shall be pruned, and areas of damaged bark neatly pared back to sound tissue.

2.3.3. The Landscape Architect will inspect the hardy nursery stock on the selected nursery during the execution of the works. Only plants selected and approved in the landscape contractors selected nursery will be accepted on site. Nursery stock selected will be reserved for the project, at lifting time in autumn, there will be another nursery visit to ensure such plants selected and reserved are the same plants being delivered.

2.4.0. Work Protection.



2.4.1. Protection Measures.

The Contractor shall provide adequate temporary protection during landscape work to include temporary coverings, planned barrow runs and all other measures for protecting work from damage.

Any work damaged or soiled by weather, traffic or other causes due to inadequate temporary protection shall be removed and made good at the cost of the Contractor. Any damage caused during this process to plant material, shall be at the cost of the contractor.

2.4.2. Services.

The Contractor shall liaise with the Site Engineer to determine the position of all overhead and underground services and shall satisfy himself that none will be damaged in his works. Any damage made to services caused in consequence of the contract operations shall be made good at his own cost.

2.4.3. Approved chemicals.

All chemicals used by the contractor shall be nontoxic to humans and wildlife. The Contractor shall follow the manufacturers' instructions in the handling, application and storage of all chemicals. Weedkillers shall be stored securely away from the reach of children or pets. These chemicals must be kept in the original container with the label intact. Correct & Proper clothing is essential when using herbicides. Protective goggles, Respirator or face mask, Protective clothing like sturdy rubber gloves. Long-sleeved shirt, long pants and closed toe shoes.

2.4.4. Herbicides.

2.4.5. Roundup.

For eradication of existing weed growth in areas of planting in bare ground use 'Roundup'. Do not spray when wind is likely to cause drift. Wait for a rain free, calm day. The ideal temperature for applying Roundup is between 53 & 77 degrees Fahrenheit. In the case of Round up – a similar approved herbicide may be used.

2.4.6. Weed control.

For eradication of weed and grass around plants planted in grass areas use Kerb granular herbicide obtainable from NAD Ltd or similar approved.

2.4.7 Alternative.

Alternative use of weed control (other than herbicide) shall be explored and used ahead of chemical herbicide.

2.5.0. Specification of Planting

2.5.1. Notification.



The Contractor shall give the Landscape Architect one week's notice of his intention to commence any of the following landscape operations: setting out, top soiling, cultivation, planting, greasing and maintenance inspections.

The Contractor shall give notice to the Landscape Architect by telephone, email, fax or in writing for each period of work on site.

2.5.2. Supervision.

The Contractor shall provide full and adequate supervision during progress of landscape works and shall employ a competent landscape foreperson, approved by the Landscape Architect. The foreperson employed constantly on the works must be able to receive and act upon all instructions, directions or orders by the Site Landscape Architect.

2.5.3. Setting Out

All works including cultivation, grassing and planting shall be set out and approved by the Landscape Architect prior to commencement of works. Setting out shall be in accordance with the site meetings with Landscape Architect, and the drawings listed in the preliminaries. No planting works shall take place when the soil /fill is in a waterlogged condition.

No planting shall take place until all planting holes (with ameliorants) have been inspected and approved by the Landscape Architect, or a person appointed by him as a representative, to ensure accordance with the specifications. No planting shall take place when ground conditions are frozen or waterlogged. All Planting holes shall be opened and closed on the same day.

2.5.4. Finished Grade:

All areas planted by the landscape contractor shall be left in an even state, with all soil clumps broken up and stones of greater than 50mm diameter shall be removed. Particular attention to finished grading and removal of stones will be required on the planting areas in the four main interchanges.

2.5.5. Stakes:

Rounded stakes shall be of peeled larch, pine or Douglas fir, preserved with a waterborne copper chrome arsenic composition in accordance with I.S131. For standard and select standards stakes shall be 2m long, 75mm diameter, 37mm X37mm square. Stakes shall be pointed at the butt end. Set stakes vertically in the pit, to the western side of the tree station, and drive before planting. Drive stake with a wooden maul or cast-iron headed drive. Stakes shall be driven into the excavated planting pit to a depth of:

- 1400mm for Standards/Light Standards/ Feathered Trees
- 1400mm for Heavy Standards
- 450mm for Whips/Transplants

2.5.6 Double Stakes

Trees above 12-14cm girth or 150cm (height) in the case of Multistems shall be a double stake. 1m maximum from ground level with 100x50x600mm treated wooden bar fixed horizontally by galvanised nails to the two posts. The tree will be fixed in place using a tree tie.

2.5.7. Tree Ties:

For Standard and select standards, tree ties shall be of rubber, PVC or proprietary fabric laminate composition and shall be strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie. Ties shall be min.25mm wide for 150cms height trees and min.50mm for larger sizes. They shall be fitted with a simple collar spacer to prevent chafing. Two ties per tree shall be applied to standards: for staked transplants, one per tree is required.

Ties shall be nailed to the cross board/ stake with galvanised nails.

2.5.8. Protection of plant material - bareroot.

The interval between the lifting of the stock at the heeling in area and planting on site is to be kept to an absolute minimum. Plants shall be protected from drying out and from damage of transport.

All stock awaiting planting on site shall be stored in a sheltered place protected from wind and the frost and from drying out.

All transplants shall be wrapped in polythene from the time of lifting to conserve moisture. Except when heeling-in, they shall be always protected in polythene until planted into their final position on site.

2.5.9. Damage:

On completion of planting any broken branches shall be pruned, areas of damaged bark neatly pared back to sound tissue.

2.6.0. Water / Alginure / Fertilizers:

All bare rooted light standards and select standards shall be soaked in water overnight, on site, before planting in a liquid solution containing "Alginure" at the recommended dilution rate. Fertilizers shall conform to BS5581: 1981. In the case of granular fertilizer being added to plantings, it must be mixed through and incorporated into the base of the planting hole and covered in order to avoid roots of plants coming in direct contact.

2.6.1. Standard tree planting Procedure.

Standard trees shall be planted to the depth of the existing level as indicated by the stem ad



roots spread in the planting pit. Staking shall be set with the plant centred in the pit prior to back-filling. Topsoil including fertiliser shall be backfilled and heeled or pressed firmly around the plant roots taking care not to damage them. The surface around plants shall be slightly cambered to prevent waterlogging. Plants should be well watered at the time of planting.

Tree Depths shall be as per associated details on accompanying drawings.

2.6.2 Tree/Shrub Pit

All plants – shrubs and transplants shall be planted by hand using a spade or shovel. No works shall occur during wet, snowing weather. The Shrub pit shall be 1.5 times the size of the rootball in width and approximately 1.2 times the depth, with the bottom of the pit broken with a spade or similar. Topsoil or compost to be used at the bottom of the shrub pit to aid growth of the shrub. The shrub is to be planted approximately level with the surrounding earth and a thin layer of topsoil graded around the base of the plant.

Transplants are to have a tree pit dug the size of the root ball and approximately the same depth. The bottom of the pit to be loose when the transplant is being planted. The sod if any is to be broken up and used to firm in the transplant – with a heel of a boot or similar. The minimum depth for topsoil shall be 450mm for shrubs. See section 3.0

2.6.3 Planting of Semi Mature Trees

Selected semi-mature trees shall have a minimum height of 4.5 metres and a minimum girth of 20-25 cm at 1m above ground level and shall be root balled.

Excavate tree pits to 1.5 cubic metres volume (1.2m x 1.2m. x 1m deep) or 300mm all round greater than the rootball, whichever is the greater. Break up the base of the pit to a depth of 150mm and roughen glazed sides.

Topsoil depth shall be a minimum of 900mm per tree,

Position tree centred in the planting pit and in an upright position.

Drive 3Nr. pressure treated stakes (2.5m x 75mm dia.) vertically through rootball in the pit to 1900mm below ground, 600mm above ground.

Backfill the planting pit using the excavated material, incorporating 500g/cm of soil, of 0:10:20 fertilizer, 200g/cm. of soil, of I.B.D.U fertilizer and 0.3cu.m. moist organic matter. Firm the backfilled material to ensure there is good contact between the rootball roots and the soil substrate.

Trees shall be planted at the same depth as in nursery, as indicated by the soil mark on the stem of the trees.

Fit tree tie. Tree ties shall be of rubber, P.V.C. or proprietary fabric laminate composition and shall be secured to the stake using

2.7.0. General

2.7.1. Finish

Upon completion of planting, all pits shall be raked over lightly to leave an even surface and neat appearance. All stones greater than 100mm diameter to be removed. Provision should be made for the watering of trees and shrubs during periods of prolonged drought in the first year following planting.

2.7.2. Liability for Replacement Plants.

The Landscape Architect when inspecting the Planting will issue instructions for replacement of failures. The Contractor shall be financially responsible for replacements if scheduled operations were not carried out or performance requirements not met, and such neglect contributed to the failure of plants. Replacement of plants which fail, or show no or insufficient growth during the contract, shall be equal to those first planted and corresponding to the original specification, characteristics of the species, variety, form and habit of plant with good fibrous root system which they replace.

Shall any pest or disease be brought to the site on the replacement material; the Contractor shall be immediately taking steps to prevent spread and eradication at his own cost.

2.7.3. Drought

Persistence of weed in planted areas will be regarded as a contributory cause of failure due to drought. Prolonged dry weather will not exonerate the Contractor if the scheduled aftercare operations have not been carried out as programmed.

2.7.4 Watering – Pipe

Large trees shall have proprietary drainage pipe wrapped around the Rootball. The pipe shall be 75mm in diameter and flexible. The Pipe shall be standard pipe used for land drainage, with crenulated surface and water slits. Water is to be funnelled down drainage pipe to Rootball.

2.7.5 Pre-Planting Watering.

Rootballs of all plants to be soaked – not sodden with water prior to planting. The Rootball should only damp to touch with no excess dripping of water when pressure is applied with a thumb

2.7.6 Watering – Large Trees

Landscape Contractor to allow for watering of newly planted trees every day. Watering to take place principally in the morning and the evening, to prevent excessive transpiration due to heat of the sun, notably during Summer and Autumn months

This action to take place for a minimum of 2 weeks after planting of large trees, including weekends (Saturday). 14 visits per week x 2 = 28 no visits

Each large tree to watered until satisfied that the Rootball has been watered to an extent



that the entire Rootball is wet.

Thereafter during every maintenance visit for a period of a year.

2.7.7 Watering - Shrubs

Shrubs are to be watered every day for 2 weeks immediately after planting

Each large tree to watered until satisfied that the Rootball has been watered to an extent that the entire Rootball is wet to touch.

Thereafter - watering should take place twice a day for a period of a week.

Landscape contractor to give a fee for every visit to complete such water activity, as the action shall be weather dependent.

3.0. Topsoil - Materials (Samples Testing and Delivery)

The Contractor shall, if required, furnish the Supervising Officer with satisfactory evidence that materials are of the origin and quality specified and shall provide samples for approval and for the testing by the Supervising Officer who shall have the power to reject all materials which do not correspond with approved samples. All lorries or trucks calibrated to convey soil and sand, ballast, clinker etc. to the site shall carry only that amount calibrated thereon.

3.1.0. Topsoil

Topsoil will usually be supplied from the original surface layer of grassland or cultivated land in the area or be imported for use of the site; it shall conform to the description of topsoil set out in British Standard Specifications No. 3882: 1991, (BS 3882:2007) entitled "Recommendations and Classifications for Topsoil"

3.1.2. Imported Topsoil

Topsoil shall be good quality medium topsoil, loam, easily molded when moist. It must be neither too sticky nor leave a smooth polished surface when smeared. It shall be free from all chemical or other pollutants, without excessive portions of stones or flints and those present must not exceed 50mm gauge. It must not include subsoil, excessive proportions of clay, sand, chalk or lime, nor may it include rubbish or other extraneous material, pernicious weeds or couch grass whether roots or top-growth, or roots of trees or shrubs. No organic matter derived from a sewage works will be accepted as topsoil substitute. The Contractor shall submit a sample load of not less than 5cu.m for approval. Any substandard loads shall be removed from the site at the Contractors expense.

3.1.3. Structural Soil

Sample of structural soil to be supplied in 1 cubic meter for review. Minimum depth of 700mm & an area of approximately 20m²



3.1.4. Root Barrier

To be supplied when installing structural soil & tree pit to surround entire tree pit to required depth.

3.1.5 CBR Testing

A CBR test is to be carried out on structural soil to determine the load bearing capacity. Results to be retained and given to the local authorities at the end of the project.

3.2.0. Groundworks

3.2.1. Surface cultivation

Shall be carried out where appropriate and shall be as is defined and described in British Standard Specification No.4428: 1989, Section 3.5.

3.2.2. Surface cultivation and regulating by minor grading within the topsoil depth shall be as defined and described in British Standard Specification 4428: 1989, entitled “Recommendations for General Landscape Operations”, Section 3.6.

3.2.3. Minor Grading

Involved adjustment of local high and low spots shall be as defined and described in British Standard Specification No4428: 1989, entitled “Recommendations for General Landscape Operations”, Section 3.8.

The Precise form of surface cultivation, grading or regulating of levels required for each site or location and the sequence and timing of the operations involved shall be determined by the Landscape Architects before commencement of work.

3.2.4. Subsoil cultivation

shall be carried out with a subsoiler or ripper and at depths depending upon soil texture and degree of compaction. Generally, the depth and spacing of subsoil cultivation required shall be as is recommended in British Standard 4428:1989, entitled “Recommendations for General Landscape Operations”, Section 3.8.9.

After major grading has been carried out or in circumstances where topsoil must be imported to existing formations levels, topsoil shall be spread evenly on formation levels to depths recommended in British Standard 4428:1989, entitled “Recommendations for General Landscape Operations”, Section 3.9.1 and thereafter cultivated as is described in Section 3.9.2.

3.3.0. Drainage

Subsoil drainage shall be provided where appropriate and for the reasons outlined in British Standard 4428:1989, entitled “Recommendations for General Landscape Operations”, Section 4.1.6. The precise form and amount of drainage required for each site or location and the timing and sequence of the operations involved shall be determined by



the Landscape Architects

3.4.0. Grass Seed

Seeds and seedling shall conform to BS 4428:1989 unless otherwise stated in this specification. Seed shall be fresh and clean seed of the latest crop. The germination capacity of each constituent of the mix shall be not less than 80% and the purity of the mix shall be not less than 90%. Total weed seed content shall be not more than 0.5% and the total content of other crop seeds shall be not more than 1%.

3.4.1. Seeding of Grass Areas – Remedial works around works area.

Grass seeding shall be carried out on areas where satisfactory surface cultivation's have been completed and precisely indicated by the Landscape Architects according to site and location. The quality and standard of workmanship and materials used shall be as is outlined in British Standard 4428:1989, entitled "Recommendations for General Landscape Operations", Section 5.

3.4.2. Preparations of the Seed Bed

The seed bed shall be prepared by reducing to a fine tilth by raking or harrowing with a spike or a chain harrow (light and uniform rolling). All stones larger than 50mm in any one dimension shall be removed. No seed shall be sown until the cultivation and preparation works have been approved. Finished levels to have fullness under moderate consolidation, to average 75mm above paths, kerbs, or manholes.

Sowing of seed strains specified by the Landscape Architects shall be carried out during calm weather conditions with equal sowing in transverse directions at the specified rate per square metre, 35g per square metre British Standard 4428:1989, Section 5.5. and lightly rake by hand.

3.4.3. Initial (Topping) Cut

About two days before topping remove all stones larger than 50mm in any one direction and roll lightly. When the grass is 50-75mm cut with a roto-scythe to leave 25-50mm growth. If the swathe is likely to be very heavy, the cuttings shall be removed.

3.4.5. Germination

No payments for the seedling shall be made to the Landscape Contractor if the seed fails due to any cause whatsoever. He shall be required to repeat the seedlings until a good sward is obtained. Grass areas shall only be accepted as reaching practical completion when germination has proved satisfactory, and all weeds removed.

4.0. Maintenance and Management

4.0.1. General Maintenance.

Maintenance shall be for 18 months from the date of practical completion of a completed



and maintained landscape of trees and shrubs. The Contractor shall provide for regular visits for General Maintenance to carry out the following routine operations.

4.0.2. Defects Arising.

The Contractor shall include in pricing for the immediate remedy of any defect noted at a maintenance visit. There shall be a defects liability period of 18 months from the certified date of practical completion.

4.0.3. Weed control of Planted Areas.

Areas of 450mm diameter around Standard trees and shrub planting in open ground or grass shall be kept weed free by hand or careful application of approved contact herbicide between February and September and by application of Kerb (or other approved chemical) granular herbicide between the months of October and January inclusive to ensure a weed free area around each plant.

4.0.4 Mulch.

Mulch is allowed around planted areas. It shall be of a landscape grade and shall not include wood chips or peelings from the wood. Mulch is to be from the bark only. It is to be treated and not to be fresh from the tree. The contractor shall provide evidence of supply from a reliable and reputable source. The bark mulch shall be applied at a depth of 60mm.

4.0.5. Cutting Back.

Plants shall be cut back by one third size each February during the period of maintenance prior to new spring growth and after site inspection by the Landscape Architect.

4.0.6. Pruning.

To ensure healthy growth plants shall be pruned to remove dead, damaged or discoloured branches, suckers or epicormic shoots. Pruning shall be with a sharp knife, saw or secateurs, cutting back to sound growth immediately above a healthy bud or stem. If pruning trees cut back so as to leave the branch bark ridge intact. Wounds exceeding 25mm diameter must be treated with an approved sealant such as Arbrex.

4.0.7. Firming.

Firm any plant stakes and ties loosened by frost, wind or during cultivation, as necessary.

4.1.0. Nature of Works

The work consists of specification for supply of soft landscape materials and landscape maintenance for the proposed Development within the curtilage of at the Proposed Residential Development at the Lands located at Clongriffin, Dublin 13.

The contract commencement and completion dates are suggestive and will be subject to detailed tender documents. The initial maintenance schedule would be for an 18-month period.



4.1.1 Reporting

A weekly report shall be reviewed, and tasks completed should be noted and ticked. These reports are to be compiled for a monthly report – to be submitted to the main contractor and or client at the end of each month – Template is included as an Appendix to this document

4.2.0. Grass Areas - Cutting.

There shall be approximately 2 cuts to the reinstated areas, grass shall be cut in an even and uniform manner, with clippings taken away to prevent thatch build up or finely mulched and spread evenly.

The blades shall be sharp to prevent rough cut and tearing of the grass sward. Blades shall be cleaned of foreign material, debris before arrival on site, to prevent promotion of pest and diseases infecting the ground, planting and grass sward.

Contamination of such kind shall be eradicated and made good at the contractor's expense. Grass shall be cut by machinery that is in good mechanical order, to prevent damage to the ground, operator or third party on site. Regular maintenance checks on machinery shall be recorded on a log that must be presented to management before, during and after or on request to satisfy the mechanical worthiness of grass cutting machinery.

No refuelling of machinery shall take place on grassed or planted areas to prevent contamination of the ground, grass and water courses from fuel spillage, overfilling etc.

Any damage, contamination of the ground, grass or plant material from fuel or oil of the machinery, shall be made good at the contractor's cost.

No strimming shall take place in areas of human activity, especially that of young children, car parks and communal areas.

The operators of all machinery shall wear all manner of protective clothing, boots, hard hat, eye goggles, ear muffers and a High - visibility vest.

4.2.1. Fine cutting

Fine cutting shall mean mowing to 25mm high. This operation is to be carried out in location in the area shown on the contract drawings, at 2 x ten-day intervals during the seasons of March to November. The grass is to cut evenly over the whole area, with cutting left evenly spread over surfaces. Removal and disposal of stones and other obstructions, from the area of grass to be cut. A minimum of 2 cuts is involved per month. (February – November)

February – 2 cuts, March -3 cuts, April - 4 cuts, May - 4 cuts, June - 4 cuts, July- 4 cuts, August - 5 cuts, September - 5 cuts, October - 3 cuts, November - 2 cuts,
= (total cuts = 36).

4.2.2. Rough cutting

Rough cutting shall consist of the cutting back all the existing grass with a strimmer or similar on all overgrown areas. All material to be collected and disposed of site. Care to be taken around existing trees and shrubs, it shall be prohibited to strim close to plants/trees and damage the plants.

4.2.2.1 Rough Cutting

Damage All damage to be made good by the contractor at their own expense. Making good shall mean replacement of plant material, to the existing size of the material at the time of the damage.

4.2.3. Second Grass Cut

At every second grass cut, grass shall be trimmed from around the base of wall and fences, back of footpaths and kerbs, litter bins, manholes and hydrant markers. Once a year in mid-April a broadleaf herbicide at the recommended rate, to control weeds in the grassed areas during the growing season.

4.2.4 Grass to be reinstated where necessary: -

<p>PROPOSED GRASS AREAS FINE GRASS MIX: 20% Perennial Ryegrass 'Jessica' 35% Perennial Ryegrass 'Evita' 20% Strong Creeping Red Fescue 10% Chewings Fescue 10% Slender Creeping Red Fescue 5% Browntop Bent at 35-50g/square metre.</p>

4.3.0 Tree and Shrub Care

4.3.1. Maintenance

All planted areas and shrubberies throughout the various shrubberies shall be maintained weed, grass, litter, and briar free, all year round, and maintained in a neat and tidy condition for a period of 18 months from the date of practical completion.

4.3.2. Weeding

Currently the amounts of weeds in the shrub areas requires: the contractor shall apply **Round-up** during the growing season in a regular and unspecified number of occasions in order to maintain beds weed free. The contractor may also hand weed planting beds June / July where necessary. Remove weeds by surface hoeing and pulling. Dig out all roots of

deeply rooted or noxious species. Remove all weeds from site each day and dispose.

4.3.2.1. Weeding type.

Weed should be controlled by a combination of hand weeding and herbicide application at the Landscape contractor's discretion, or as directed by the Landscape Architect.

4.3.3. Tree Care

Tree care shall mean pruning deciduous trees including those of hedgerow form when dormant to promote open frame works in the crown. Remove all suckers and dead branches that are encroaching on to footpaths should be cut back to point of branching. Firm any plants loosened as necessary.

4.3.4. Tree Stakes

Tree ties and stakes are to be checked, adjusted, removed or replaced where necessary. Tree stakes should be removed where the diameter of the tree trunk is greater than the stake. Stakes should be peeled larch, pine or Douglas fir, preserved with a water borne copper / chrome / arsenic composition. Stakes for half standard and half-standard trees should e 75mm minimum diameter, 2.7 meters length, pointed one end and driven approximately 900mm into the ground.

4.3.4.1 Tree stakes

Tree stakes to be removed on all existing trees, pulled out of the ground and the earth made good, around the area. The remaining shall be filled back in with soil and graded to surrounding levels.

4.3.5 Tree Ties

The tree ties shall be of rubber, PVC or proprietary fabric laminate composition and shall be strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie. Ties shall be min.25mm wide for standard trees. They shall be fitted with a simple collar spacer to prevent chaffing, and with a buckle for adjustment. Non adjustment, buckle less types will not be permitted.

4.3.5.1 Tree Ties

All tree ties on existing trees that are flaccid or too tight are to be removed along with the posts. The tree ties are to be removed from site and disposed of responsibly, or where the rubber spacers may be reused.

4.3.6. Shrub Care

Shrub care shall mean maintaining a neat and tidy habit, allowing shrubs to be developed into their natural form.

4.3.6.1 Existing Shrubs

Existing shrubs to be pruned back, removing heavy / diseased and or unwanted growth,



with secateurs, hedge trimmer, chainsaw or similar. All tools to appropriate levels of work required.

4.3.7. Application of Fertilizers

The contractor shall apply *Osmocote* 16–18-month slow-release fertilizer at a rate of 100gm/sq.m in March of Year No.1 (1st Jan - 31st Dec) to all shrub areas. The contractor must satisfy his Authorised Representative with appropriate proof of this application.

The contractor shall apply *Sierra Flora* 12–14-month slow-release fertilizer tablets according to label instructions in March of year No. 1 (1st Jan - 31st Dec) to all avenue trees and specimen trees. The contractor must satisfy his Authorised Representative with appropriate proof of this application.

4.3.8 Hedge Cutting

Existing hedges to be trimmed back to last year's growth or to a height of 1200mm. The sides may be breasted back to last year's growth. All material from these works is to be removed from site. Machinery – tools to be clean coming onto site, free of plant material and dirt. Blade to be sharp to provide clean cut.

4.4.0. Hard Surfaces

All paved and gravelled areas such as car parking areas and footpaths throughout the respective locations are to be maintained always weed free. The contractor shall apply 'Round-up' at recommended rates, twice yearly in April and August - September, in addition to a residual herbicide.

4.5.0 Sweeping and Cleaning

4.5.1. Car Parks

Sweeping shall mean sweeping of car parks and footpaths, and removal of all grit rubbish moss and leaves, keeping the paved areas of the respective centres in a neat and tidy manner. Number of sweepings per annum- 12 no.

4.5.2. Cleaning

Cleaning shall mean the removal of paper, plastic bags and other rubbish from grassed areas, roads, car parks and other paved areas, shrubberies, water feature, etc., in respective areas. This operation shall be carried out twice a month.

4.5.3. Tip

All dirt and rubbish to be removed off site to a tip to be provide by the Landscape Contractor.

4.5.4. Sweeping



All areas shall be cleaned and swept once a month during the contract period, except in the case of Autumn leaves which shall be swept away on a weekly basis from end of October to mid-November (three weeks). Any additional cleaning and sweeping deemed necessary, during the year, and requested by the company for any of the various locations will be paid for at a pro rata basis to the rates programmed maintenance schedule.

4.6.0 Fixtures.

The surfaces of seating or other fixtures are to be maintained free from moss and general debris.

5.0. Conclusion

It is hoped that this guide will be seen as a strategy document with the sole aim of ensuring that this development reaches its potential as a top-quality environment providing a comfortable, amenable landscape setting for all users of this housing development.



Appendix (i)

WEEKLY LANDSCAPE MAINTENANCE CHECKLIST

(See Landscape Maintenance Specifications for details.)

Place a check mark by each item completed during the past week.

1. Mow and edge lawns if needed.
2. Prune back any shrubs overhanging curbs or Paths
3. Prune back any groundcover overhanging curbs or paths.
4. Remove litter and leaves from plants, planters, and parking lots.
5. Remove any broken or fallen branches from trees. Remove sucker growth from tree trunks.
6. Remove any weeds larger than 2 inches (5 cm) high or wide from planters. Weeds 2 inches (5 cm) and larger must be removed, not just killed.
7. Replace bark mulch which has been knocked or washed out of planted areas. Smooth mulch layer if it has been disturbed.
8. Check plants for signs of stress or disease. Replace any plants that meet conditions for replacement at the contractor's expense. Request authorization to replace other dead or missing plants. Note: You must request authorization to make replacements within one week of the damage becoming evident!
9. Sweep or blow clean all walkways, curbs, and gutters.
10. Treat for any signs of disease or pest infestation.
11. Complete any items required on the Monthly Checklist.
12. Hand water any plants that are dry and stressed.
13. Check the irrigation system. Make emergency repairs as needed or request authorization to make major repairs. Note: you must request authorization for repairs within one week of the damage becoming evident!



14. Adjust the irrigation controllers for current water needs of plants.

15. Weekly check list to be collated for Monthly Report.

Checked by: _____ (Print Name)

Signature: _____ Date: _____



Appendix (ii)

MONTHLY MAINTENANCE CHECKLIST

(See Landscape Maintenance Specifications for details.)

January:

1. Prune any tree branches that interfere with public safety. Prune all parking areas and street trees yearly to encourage strong upward growth.
2. Grass Cutting - if required – No. of Cuts

February:

1. Apply granular fertilizer in late February. Be sure to make application prior to a moderate rainfall so the rain will wash the fertilizer in
2. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
4. Grass Cutting - if required – No. of Cuts

March:

1. Plant annual colour for spring/summer bloom – if directed by Landscape Architect and
2. 2. Grass Cutting – No. of Cuts

April:

1. Grass Cutting – No. of Cuts

May:

1. Apply fertilizer to all landscape areas. The May fertilization of shrubs/groundcover areas may be deleted when the plants reach maturity or completely fill the planters, without space between them. Written authorization from the owner's representative is required before the foliar fertilization may be deleted from the required work.



2. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
3. Grass Cutting – No. of Cuts

June:

1. Prune spring & winter-flowering shrubs as needed to maintain proper shape.
2. Grass Cutting – No. of Cuts

July:

1. Grass Cutting – No. of Cuts

No additional items.

August:

1. Apply fertilizer to all landscape areas. The August fertilization of shrubs/groundcover areas may be deleted when the plants reach maturity or completely fill the planters, without space between them. Written authorization from the owner's representative is required before the foliar fertilization may be deleted from the required work.
2. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
3. Grass Cutting – No. of Cuts

September:

1. Inventory all plant materials. Inventory shall include an exact count of all shrubs and trees, itemized by planter. Replace any dead or missing plants subject to the terms of these specifications.
2. Prune perennial bulbs back to ground level as soon as leaf blades yellow and wilt due to cold weather. Grass Cutting – No. of Cuts



October:

1. Apply fertilizer to all landscape areas. The fertilization of shrubs/groundcover areas may be deleted during October, when the plants reach maturity or completely fill the planters, without space between them. Written authorization from the owner's representative is required before the foliar fertilization may be deleted from the required work.
2. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
3. Grass Cutting – No. of Cuts

November:

1. Grass Cutting – No. of Cuts – if required

No additional items.

December:

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong, upward growth.
2. Prune summer and autumn -blooming shrubs as needed to maintain proper shape.
3. Grass Cutting – No. of Cuts – if required.

Checked by: _____ (Print Name)

Signature: _____ Date: _____