

SOFT LANDSCAPE SPECIFICATIONS

Project Title: Loch Lomond & Trossachs – Site at 3 Lochs Drive

Date and Revision: 8th November 2017

Revision A

INTRODUCTION

This document has been produced for tender purposes and is divided into two main sections:

- 1) The Soft Landscape Specifications,
- 2) An Outline Schedule of the Landscape Maintenance requirements for this project.

The Soft Landscape Specification which follows, indicates the minimum requirements and standards to be provided by the appointed Contractor. It is to be read in conjunction with the Landscape Plan drawing number **1607-A(45)101 REV B**, and with all the current Architectural sections, layout and detail drawings, which have been prepared to Planning level.

This specification is also to be read in conjunction with all Civil Engineer's drawings and specifications, and with the numerous surveys/assessments which have been carried out during 2017 and which inform the development proposals and which are listed in the Architect's Schedule of Works.

1.0 PRELIMINARIES

- 1) All materials and workmanship must comply with the relevant British Standards and recognised Codes of Practice for the landscape industry.
- 2) The contractor will be deemed to have visited the site and to have carried out any investigations necessary on all conditions affecting the work, as no claim on the grounds of lack of knowledge will be entertained. It is the Contractor's responsibility to ensure compliance with any aspect of the Planning Permission.
- 3) Before commencing the works the contractor will inform the Loch Lomond and Trossachs National Park Authority (LLTNPA) of their Programme of Operations, and prepare an Environmental Method Statement. The Landscape Contractor shall continue to contact them to inform of variations.
- 4) The Landscape Contractor will be held responsible for any damage to trees and shrubs caused by his negligence. In the case of minor superficial damage, the contractor shall arrange for any necessary surgery to be carried out by an approved tree surgeon. Should damage to any tree or shrub result in its death or serious disfigurement it shall be removed and replaced as the Landscape Architect may direct, to give the same density of cover as previously. All costs will be at the Contractors own expense.
- 5) The Contractor shall protect all pipes, channels, culverts, water courses etc, and make good at his own expense any damage caused by carrying out the works. Notwithstanding information which the Landscape Architect may make available to the contractor regarding the position of the existing services, it shall be the responsibility of the contractor to satisfy himself as to their accurate location and condition.

- 6) The contractor must take adequate precautions to ensure protection of streams and watercourses from pollution caused by carrying out the works.
- 7) The Contractor shall take all necessary measures to protect the works until handed over on completion.

2.0 GENERAL NOTES

- 1) All existing vegetation which is to be retained, as shown on the Landscape Plan must be protected during construction to B.S. 5837 : 2012. All trees to be retained should be marked on site and protected during any operation on site by fencing in accordance with BS 5837 (2012), Heras Fencing or equal. The fencing should be retained for as long as possible and extended around the edge of the new car park to protect new planting from deer browsing.
- 2) Trees will be required to be removed to form the new car park, ancillary buildings and new planting areas. Out with this area no existing trees or shrubs should be topped, lopped or felled without the permission of the LLTNPA and Landscape Architect.
- 3) The condition of all trees on the edge or in close proximity to the car park area to be inspected, and any work agreed, prior to commencement on site. Any tree surgery work must be carried out by an approved arboriculturalist.
- 4) All proposed plant material and procedure must comply with the latest relevant sections of B.S. 3936 and B.S. 4428 respectively, and HTA National Plant Specification Appendix 1. All plants should be strong and healthy with a good root system.
- 5) No plant size, species or variety to be substituted without prior consent of the Landscape Architect.
- 6) Surface vegetation and topsoil storage areas should be agreed prior to work commencing.
- 7) All Service / Drainage positions to be established prior to tree and shrub planting taking place. Minimum distance of drains, new culverts or new services to new and existing trees should be 1.5 m. and should be coordinated to avoid tree locations.
- 8) All planting positions to be as shown on the Landscape Plan. Any deviation from this must be reported.
- 9) All Planting to be carried out within a Planting Season :- November- March unless otherwise agreed. If planting is to be carried out, out-with a planting season then all plant material to be containerised stock, and of a size as specified.
- 10) No planting to be carried out during poor weather conditions, ie. when the ground is frozen, waterlogged, or during drought, hot sunshine or persistent dry or cold winds.
- 11) All plant material to receive enough water to ensure healthy establishment and correct growth.
- 12) All Hard Works, unless otherwise agreed, shall be carried out by the Contractor. All materials and workmanship shall be in accordance with construction details and specifications.
- 13) All paths and edges to be set out properly to lines and radii achieving flowing natural lines and curves.

SOFT LANDSCAPE SPECIFICATIONS

3.0 EXCAVATION AND TOPSOIL

This specification is based on the relevant NBS clauses and has been prepared in order to indicate the minimum requirements and standards to be provided by the appointed Contractor.

1) Site Clearance

Timing: Before any topsoil stripping takes place.

General: Clear site (area as shown on Landscape plan only) of debris such as old tree stumps, boulders and surface vegetation. Do not compact topsoil.

Treatment: Do not apply any non-residual herbicide to areas to receive planting.

Boulders : Any large boulders on site and any boulders excavated in the course of cultivation should be removed and stored locally to be re-used on site, as shown in the landscape Plan at the car park edge.

Storage area should be agreed on site with the Landscape Clerk of Works (LCW).

2) Removing Trees, Shrubs and Roots

Identification: Prior to any works taking place on site, clearly mark all coniferous trees to be removed which are located in the car park construction zone.

- Cut down and remove from site all marked trees and grub up roots.
- Roots: dispose of without undue disturbance of soil and adjacent areas.
- All small shrubs namely Erica, Calluna and Vaccinium should be dug up from their positions and stored on site at an agreed location, where they should be 'Healed In' to topsoil until required for replanting on site.
- Safety: Comply with HSE/ Arboriculture and Forestry Advisory Group Safety Guides.

3) Stripping Surface Vegetation and Topsoil

General: Before beginning general excavation, strip surface vegetation from areas where there will be regrading, buildings, car parking and footpaths as shown on landscape drawings.

Depth: Remove surface vegetation to an average depth of the existing topsoil, which contains all roots from the grass turves by screefing the surface using hand tools. These turves to be replanted onto the low mound at the edge of the newly formed car park, which is to be constructed from buried gabion boxes filled with hardcore.

Stacking : The vegetation should be stacked in an area to be agreed with the LCW in such a way as the top surface is allowed to continue to grow, as these surface vegetation turves are the seed bank for the low bund and the areas of turf grass around the back of the buildings.

The amount of hand screefing is dependent on the area required for the turf grass as shown on the landscape plan.

Once enough surface vegetation for re-use has been removed, other areas of surface vegetation can be removed from site by mechanical means.

Do not remove surface vegetation and topsoil from below the spread of trees to be retained.

Topsoil : Once surface vegetation has been removed from the construction areas to be excavated, topsoil can then be stripped and stockpiled.

Storage: Stockpile topsoil in temporary storage heaps, no more than 1m height and 2 metres wide.

Re-use all excavated topsoil where possible.

Do not place any other material on top of storage heaps. - Do not allow any construction plant to pass over storage heaps to prevent compaction and contamination.

Topsoil storage treatment: If necessary apply a suitable herbicide at appropriate times to prevent seeding of weeds.

4) Surplus Subsoil

It may be necessary to excavate areas of subsoil from construction areas, this can be stockpiled in temporary heaps to be agreed with LCW.

It can be spread to make up levels on site or in construction of low mound and footpath.

Care must be taken not to mix subsoil with other materials and it must not be spread around the base of trees.

All unused subsoil should be removed from site.

5) Handling Topsoil

- Obtain instructions before moving topsoil.
- Select and use plant/machinery to minimize disturbance, trafficking and compaction.
- Do not mix topsoil with: Subsoil, stone, hard-core, or material from construction work or other grades of imported topsoil.
- Keep multiple handling to a minimum
- Stockpile topsoil immediately after stripping.
- Handle topsoil to in the driest condition possible. Do not handle during or after heavy rainfall.

6) Spreading Topsoil

- Spread topsoil generally in layers of no more than 150mm and over existing subsoil in planted areas no deeper than 400mm.
- Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.
- Adjoining soil areas: Marry in.

7) Imported Topsoil

In an extreme case and only where absolutely necessary imported topsoil should be supplied to make up any deficiency in topsoil existing on site and to complete the work. If this is necessary then the topsoil should comply as follows :

Topsoil : All imported topsoil should be to BS 3882. 2015.

- Classification: Premium Grade, loamy texture with good structure.
- Source: to be approved. Provide a 'Declaration of Analysis'.
- Spread topsoil in minimum layers of 100mm. Gently firm each layer before spreading the next.
- Do not compact topsoil.
- Depths after firming and settlement : Proposed shrub planting areas approx. depth 300mm,
- Proposed grass/turf areas approx. 100- 150mm

4.0 EXTERNAL PLANTING

1) Planting Generally

- All plants supplied by the contractor shall be obtained from a reputable Scottish nursery.
- They should be grown in Scotland of Scottish provenance and from Scottish seed or plants.
- All material supplied will be similar in size and quality and in accordance with the relevant parts of BS 3936.
- All plants shall be true to name as specified,
- Any variations or substitutions, must be replaced at the contractors own expense. However, the submission of a tender shall imply that the contractor is able to obtain all the materials specified in the contract documents.
- The contractor is to ensure that all plant material is to be handled in accordance with the NPS Plant Handling and establishment Code, from collection at the nursery to planting on site.
- Topsoil both existing and supplied shall be handled in accordance with BS 3882.
- The main contractor will carry out ripping of subsoil to relieve any compaction and allow free drainage.
- The existing ground levels within an area up to 1m beyond the branch spread of existing trees shall not be varied.
- The landscape contractor is to satisfy himself that the soil levels and soil quality are adequate before

work commences on site and that existing vegetation can be successfully removed and stored on site.

- Attention must be paid to watering, particularly to containerised material before, during and after planting and especially in Spring as planting is establishing.

2) Plants

- All trees and plants are to conform to the relevant section of BS3936 Part 1 and 2 and the National Plant Specification.
- No substitutes will be accepted without the prior consent. All plants shall be true to the size specified on the planting plan and schedule.
- All plants shall be healthy, bushy, pest and disease free and not pot-bound, dry, water-logged, leggy or weak. A minimum of 5 breaks per shrub is required.
- All Cell Grown plants will be vigorous, with good root structure and true to size.
- Provenance is vital and all Cell grown plants, shrubs, ground cover plants and plant seed should be from Scottish Plants and native flora. Plants should all be sourced from a Scottish nursery supplier, such as : Alba Trees, Lower Winton. Gladsmuir East Lothian, Scotia Seeds Brechin Angus or Poyntzfield Herb Nursery, Black Isle, by Dingwall, Ross and Cromarty, or equal approved.
The nursery source must be approved before any planting takes place.
- Carry out planting work only while soil and weather conditions are suitable for relevant operations. Plants to be protected from drying out/water logging/scorch or any other damage whilst awaiting planting in accordance with the National Plant Specification – Handling and Establishment.

3) Preparation for Planting

- Cultivate all shrub planting areas (except under existing trees) to a depth of 300mm, where feasible using a three tine ripper at 500mm centres in two directions obliquely, when ground conditions are reasonable dry.
- Remove all stones over 50mm diameter and all other rubbish brought to the surface.
- In the areas where forestry transplants are to be planted, the surface soil should be ploughed to a depth of 600mm at 500mm centres avoiding existing trees. Where machine ploughing is impractical the subsoil is to be broken up by hand cultivator to a depth of 600mm at 200mm centres.

4) Planting Native Forestry Transplants and Shrubs

- All native planting to BS 3936 Part 1
- Native provenance cell-grown transplants and shrubs to be set out in single random groups of 3 - 5 of single species in accordance with the group size and spacing specified on the landscape plan drawings.
- Cell-grown transplants to be notch planted, using a forest or cell planting spade, ensuring a notch of sufficient size to avoid damage to roots. The soil should be loosened to the depth of the transplants and after planting the top of the cell should be just below the surface of the topsoil.
- No fertiliser will be added at planting so as not to enrich the local soils.
- If using container plants, they should be pit planted in holes large enough for the root ball.
- All native transplants and shrubs are to be protected with green laminate Tubex Shelterguards and Shrubshelters for trees. Guards for all trees are to be cut from roll to comfortably suit furnished tree diameter. Softwood stakes. All as supplied by Tubex, Knaresborough HG5 UTF 01423 332100 www.tubex.com. Install in accordance with manufacturer's recommendations, using manufacturer's

standard accessories. Also available from Alba Trees.

- Alternatively Tubex Shelterguards Guards and Shrubshelters individually from 75mm to 120cm depending on size of plants or by spiral tree/shrub protection.
- They must be removed once plants are well established.
- Planting areas should be watered after planting.
- Failures: Tree replacements as original specification will be supplied and planted in the next available planting window or as agreed with the LCW.
- Forestry transplants should be kept weed free at all times, to allow full establishment. This can be only be done by mechanical means and a circle of approximately 500mm around the base of each transplant should be kept free from weeds and competing surface vegetation.

Forestry Transplants

| Key | Name of Tree | Specification | Total Number |
|-----|--------------------------------------|---|--------------|
| BP | Betula Pendula (Native) | 1+1 or 1/1 Cell Grown, Seed raised, height 60-90cm, min 4mm stem diameter. 200cc. | 40 |
| PSS | Pinus sylvestris Scotia (SPC) | 1+0 or 1/0 Cell Grown, Seed raised, height 20-40cm stem diameter 4mm 100cc. | 40 |
| PT | Populus Tremula | 1+1 or 1/1 Cell Grown, Seed raised, height 40-60cm, min 4mm stem diameter. 150cc. | 16 |
| QP | Quercus petraea | 1+1 or 1/1 Cell Grown, seed raised, height 40-60cm min 4mm stem diameter | 45 |
| SA | Sorbus aucuparia | 1+1 or 1/1 Cell Grown, Seed raised, height 40-60cm, min 4mm stem diameter. 150cc. | 36 |

5) Native Shrub Planting

- All plants will be to BS 3639, container grown, generally in 2 or 3 litre pot size. All planted areas are shown on accompanying drawing **1607-A(45)101 REV B (3 Lochs Drive Landscape plan as proposed)**
 - All areas to be planted, should be well cultivated to a depth of 300mm. Break up existing topsoil into particles, remove material brought to the surface exceeding 50mm.
 - Set out shrub planting carefully and evenly spaced over indicated areas. Remove plants from pots and plastic containers, water thoroughly before planting.
 - Shrubs shall be individually pit planted in prepared pits 15mm greater than root spread of shrub and 200mm deep to accommodate full spread of roots. Very pot bound plants shall be rejected and replaced. Lightly pot bound plants should have their roots teased out to encourage lateral growth. Any existing shrubs, lifted and removed from their original positions because of construction requirements, should be replanted along with the same species in the new planting. These plants are additional, over and above the numbers shown on the Landscape Plan.
 - Plant shrubs into 300mm of well cultivated, existing or only if necessary, imported topsoil to BS 3882.
 - Firm backfill by treading, ensuring the ground is not overly compacted and that the plant is positioned upright.
 - Water immediately after planting, thoroughly and without damaging or displacing plants or soil.
 - On completion of planting cultivate and rake the surface of the soil, ensuring that there is no compaction.

Native Shrubs

| Key | Name of Plant | Specification and Density | Total Number |
|-----|----------------------------|---|--------------|
| BS | Blechnam spicant | 20-25cm several fronds 1-1.5 litre pot 4/m2. | 44 |
| CV | Calluna vulgaris | 20-40cm bushy, 2 litre pots. 6/m2. | 205 |
| CA | Corylus avellana | 1+0 or 1/0 Cell Grown, Branched, height 20-40cm stem diameter 4mm 100cc. 1/m2. | 47 |
| DD | Dryopteris dilatata | 30-40cm several fronds 2 litre pot 3/m2. | 53 |
| ET | Erica tetralix | 20cm bushy 2 litre pots. 6/m2. | 155 |
| IA | Ilex aquifolium | M/F plants. 1+1 or 1/1 Cell Grown, height 40-60cm, min 4mm SD 150cc. 1/m2. | 60 |
| JC | Juniperus communis | 20-30cm diameter 2 litre pot, branched 2/m2. | 128 |
| PS | Prunus spinosa | 1+1 or 1/1 Cell Grown, Seed raised, height 40-60cm, min 4mm stem diameter. 150cc. 1/m2. | 56 |
| SAU | Salix aurita | 1+0 or 1/0 Cell Grown, Branched, height 20-40cm stem diameter 4mm 100cc. 1/m2. | 37 |
| SC | Salix caprea | 1+0 or 1/0 Cell Grown, Branched, height 20-40cm stem diameter 4mm 100cc. 1/m2. | 59 |
| VM | Vaccinium myrtillis | 9cm pot, 15-20cm. branched. 6/m2. | 134 |

6) Native Re-planted Turf Grass

The edge of the car park is formed from gabions filled with hardcore and positioned below ground to give stability and structure to the carpark formation and geogrid/gravel surface. Detailed drawings indicate the construction of the subsurface gabion retaining edge.

A low bund/ mound will be positioned on top of the gabion to provide a further more established and finished edge to the car park and to keep parked cars to within the car park boundary.

- Low mounding to be constructed from onsite subsoil to provide a basic core to the structure which is then to be covered in a thin layer of existing onsite topsoil originally removed from the area of car park construction.
- The mound should be formed to achieve a smooth natural shape in proportion to the surrounding landscape.
- Turves of previously stockpiled grass with a seed bank of native plants, removed from the original surface of the car park area, should be re-laid on top of the topsoil covered mound, with as much of the existing plant roots and topsoil layer as possible.
- Turves should be held down with thin metal pegs where appropriate to aid root establishment. The joints between the turves should be filled with sieved onsite topsoil (not Imported) to allow grass to regrow.
- If difficulty in establishment of grass occurs then a biodegradable coir netting or similar thin netting could be placed over the turves and pinned down to assist in stabilising the grass layer. Ecomerchant Jute Netting 250 or similar can offer soil and turf retention. Will biodegrade completely allowing the natural vegetation to establish and protect the soil from future erosion.

Ecomerchant also supply metal and plastic pegs.

1) LANDSCAPE MAINTENANCE

Contractor Defects Liability and Maintenance Period

The landscape contractor shall be responsible for ensuring the continued healthy growth of all plants and shall report to the LCW any additional operations considered necessary to ensure the satisfactory maintenance and establishment of all soft landscape areas during the Maintenance/ Rectification Period. Replace dead and dying plant material. All materials replaced due to defects and third party damages shall be to the same specification as works implemented during the construction period.

Standard of Landscape Maintenance

A high standard of maintenance is required in order to ensure the formation of a mature landscape. The planted areas are to be maintained to a standard to ensure optimum development and to all acceptable British Standards applicable to Landscape Maintenance. Attention is to be paid to ensure the works do not cause inconvenience or danger to the public.

All people employed to carry out maintenance operations, shall be suitably qualified to do this, and all works must be in accordance with good horticultural practice.

Landscape Maintenance Operations

Allow for one general visit per month, during November to April and up to 4 visits per month from April to October, during the growing period.

To include the following operations:

- Mechanical and hand removal of weeds from shrub and forestry transplant/whip planted areas during establishment. Remove all competitive weed/surface vegetation around the base of transplants only allow herb layer to develop naturally.
- Control all invasive species particularly *Rhododendron ponticum*. See Appendix 1.
- Check tree protection/guards are still intact and has not been damaged by animal browsing. Repair or replace as necessary.
- When transplants grow to a reasonable height consider removing protection.
- Removal of Litter and debris from shrub beds and all other areas close to the car park.
- Check for any damage by cars or pedestrians to the low mounding edge to car park and repair as necessary. Move back any dislodged boulders to original positions.
- Clean hard surfaces of debris, and all weeds and any algal growth found on surfaces.
- Firm up all plants including forestry transplants, especially after very cold weather and frosts.
- Watering as necessary or as directed by Landscape Architect. During the first establishment year water a minimum of once per month and every week during the growing season, as necessary.
- Fork over shrub planted areas to keep surface soil loose with gentle cambers and no hollows.
- Prune damaged stems and branches and any hazardous branches, and check plants for any disease and pests. If found, take necessary action to remove leaves and branches affected and treat with correct horticultural products.
- Prune any shrubs during dormant season as necessary to maintain good growth and so as not

to overhang the car park area and obstruct car park users and campers.

- Prune adjacent trees only as necessary to promote natural growth form.
- Allow for pruning any plants which overhang the footpath.
- Lightly strim the turf grass edging on mounding and to the back of buildings as required, to allow access and encourage native wildflowers to become more dominant. This should be done once per year after seeding has taken place.
- All areas should be kept clean and all arisings to be removed off site. No fires, chipping or shredding are to take place within the development.
- The contractor should notify LCW of any trees, shrubs or other plants which are dead or damaged or which have been stolen. The Contractor shall replace at his own expense all plants which fail to thrive.

Rhododendron Ponticum

- Rhododendron ponticum is present on site and within the development footprint this invasive species should be removed. A five year management plan has been produced to ensure that in the long term there is no Rhododendron ponticum regrowth. The Rhododendron Management Plan forms an Appendix to this Soft Landscape Specification.
- It should be form part of the Landscape Maintenance operations.

Sarah Barron : 8th November 2017. Ref: 1607/SLS