

Master Specification

Part PR-LS-C3

Lawn Establishment

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PR-LS-C3 Lawn Establishment

1 General

- a) This Master Specification Part specifies the requirements for the establishment of various types of lawn such as broadcast seeding, hydroseeding and instant turf, including:
 - i) the documentation requirements, as set out in section 2;
 - ii) the weed control requirements, as set out in section 3;
 - iii) the ground and soil preparation requirements, as set out in section 4;
 - iv) the soil testing requirements, as set out in section 5;
 - v) the supply of soil requirements, as set out in section 6;
 - vi) the spreading of soil requirements, as set out in section 7;
 - vii) the soil additives requirements, as set out in section 8;
 - viii) the fertiliser requirements, as set out in section 9;
 - ix) the supply of seed and turf requirements, as set out in section 10;
 - x) the seed and turf installation requirements, as set out in section 11;
 - xi) the watering requirements, as set out in section 12; and
 - xii) the establishment requirements, as set out in section 13; and
 - xiii) the Hold Point requirements, as set out in section 14.
- b) The Contractor must ensure that, where required under the *Controlled Substances Act 1984* (SA), and the *Controlled Substances (Pesticides) Regulations 2017* (SA), all workers undertaking pest control work must hold a current Pest Management Technician's License. The Contractor must provide evidence of the Pest Management Technician's Licenses prior to commencement of a spraying program, as part of the Quality Management Records.

2 Documentation

2.1 Construction Documentation

In addition to the requirements of PC-CN3 "Construction Management", the Construction Documentation must include a certificate of germination in accordance with section 10d).

2.2 Quality Management Records

In addition to the requirements of PC-QA1 "Quality Management Requirements" or PC-QA2 "Quality Management Requirements for Major Projects" (as applicable), the Quality Management Records must include current Pest Management Technician's Licenses, in accordance with section 1b).

3 Weed control

- a) The Contractor must ensure that, before lawn establishment commences:
 - i) the areas to be grassed must be eradicated of weeds;
 - ii) any existing vegetative growth (excluding native vegetation) must be slashed to a height of 150 mm prior to spraying with a knockdown herbicide;
 - iii) trash build-up and cut material must be removed from the area prior to spraying with a knockdown herbicide (Roundup or equivalent) incorporating an herbicide marker dye; and

- iv) where weed control is to be undertaken in and around waterways and wetlands, Roundup Biactive (or equivalent) must be used.
- b) Herbicides must be used according to the manufacturer's recommended rates and any off-target damage must be rectified by the Contractor.
- c) Herbicides must be used in accordance with PR-MA-M1 "Herbaceous and Woody Weed Control".

4 Ground and soil preparation

- a) After a period no shorter than 10 days after spraying in accordance with section 3, the areas to be grassed must be cultivated.
- b) Soil must be cultivated to a depth of 150 mm in order to break up compacted soil and incorporate any specified soil additives.
- c) Preparation works must not be carried out if the soil is too wet or too dry.
- d) The soil must be cultivated to a fine tilth, raked, and lightly rolled to bring the surface to an even grade, free from small mounds and hollows.
- e) All deleterious material including roots, vegetative material, stones, building and construction debris exceeding 50 mm in diameter, which is unsuitable for respreading, must be removed and disposed of offsite.
- f) If an irrigation system is to be installed, it must be completed prior to cultivation and final levelling.

5 Soil testing

Where on-site soil is used for lawn establishment, soil testing must be undertaken in accordance with PR-LS-C7 "Topsoil and Earthworks".

6 Supply of soil

- a) Imported soil must be in accordance with PR-LS-C7 "Topsoil and Earthworks".
- b) The Contractor must supply and spread the necessary additives and fertilisers in accordance with sections 8 and 9 immediately after the soil is laid down.

7 Spreading of soil

- a) Soil must be evenly spread, lightly consolidated, and levelled to provide a surface free from lumps and hollows to a minimum depth of 100 mm.
- b) The finished soil level for seeded lawns must be flush with adjacent hard surfaces such as kerbs, paths and mowing strips.
- c) The finished soil level for instant turf lawns must be 30 mm below adjacent hard surfaces such as kerbs, paths and mowing strips to allow placement of turf.
- d) Soil must not be worked in a muddy condition.

8 Soil additives

Soil additives must be applied in accordance with the soil additive requirements as specified in the soil testing results.

9 Fertiliser

Fertiliser must be applied in accordance with the fertiliser requirements as specified in the soil testing results.

10 Supply of seed and turf

- a) Seed and turf must be supplied by the Contractor.
- b) The Contractor must source the seed species as specified in the Design Documentation. There must be no substitution of any species unless otherwise agreed by the Principal as a Design Departure.
- c) Seed mixtures must be pre-packed and commercially prepared.
- d) A certificate of germination identifying seed species and germination viability must be provided to the Principal before sowing, which will constitute a **Hold Point**, with the certificate to also be submitted as part of the Construction Documentation. The sowing of seed must not commence until this Hold Point has been released.
- e) Turf must be supplied in accordance with the turf requirements as specified in the Design Documentation.

11 Seed and turf installation

11.1 General

- a) Newly seeded and turfed areas must be identified using barrier tape, bunting with flags or equivalent during the establishment period.
- b) If star pickets are used to support the tape or bunting, they must have end caps installed.
- c) Seed and turf must be installed in accordance with the seed and turf installation requirements as specified in the Design Documentation.

11.2 Broadcast seeding (by hand)

In relation to broadcast seeding (by hand):

- a) following ground preparation in accordance with section 4, and a minimum of 10 days after weed control spraying in accordance with section 3, the soil bed must be lightly raked in one direction, allowing the rake to drag across the area creating shallow seed furrows. On sloping sites, the soil bed must be lightly raked along the contour;
- b) the seed mix must be prepared by mixing the seed, fertiliser and bulking medium in the proportions specified by the manufacturer's (seed supplier's) recommendations;
- c) the seed mix must be uniformly sown over all specified areas;
- d) the seed mix must be broadcast either by hand, through a rotary spreader or by a machine-mounted spreader in one direction (east-west) and then again in another (north-south);
- e) once seeded, the area must be lightly raked in the opposite direction of the last broadcast and lightly rolled, bringing the seed in contact with the soil; and
- f) if the seed mix is not sown in accordance with the methodology in sections 11.2a) to 11.2e) or the incorrect seed mix is used, the seed must be replaced. If sowing operations have been completed, the germinating seedlings must be sprayed out with Roundup (Roundup Biactive must be used around wetlands and waterways), the soil cultivated and the correct seed sown by the Contractor in accordance with the methodology in sections 11.2a) to 11.2e).

11.3 Hydroseeding

In relation to hydroseeding:

- a) the seed mix must be prepared by mixing the mulch, seed, fertiliser, pigment, water and tackifying agents in the proportions specified in the Design Documentation;
- b) the mulch must be manufactured in such a manner that, when thoroughly mixed with seed and fertiliser in the proportions specified in the Design Documentation, it forms a homogenous slurry capable of being sprayed through a hand-held nozzle;
- c) the seed mix must contain a green biodegradable, non-toxic pigment;
- d) fertiliser must be added to the seed mix in accordance with the manufacturer's recommendations for the seed mix specified in the Design Documentation;
- e) the seed mix must be applied using mobile plant with:
 - i) tanks having a built-in continuous agitator and recirculation system of sufficient operating capacity to produce and maintain a homogenous mix; and
 - ii) a discharge system capable of spraying the slurry continuously and uniformly at the rate specified in the Design Documentation; and
- f) if the seed mix is not sown in accordance with the methodology in sections 11.3a) to 11.3e) or the incorrect seed mix is used, the seed must be replaced. If sowing operations have been completed, the germinating seedlings must be sprayed out with Roundup or equivalent (Roundup Biactive or equivalent must be used around wetlands and waterways), the soil cultivated and the correct seed sown by the Contractor in accordance with the methodology in sections 11.3a) to 11.3e).

11.4 Instant turf

In relation to the installation of instant turf:

- a) on delivery, rolls of turf must be stacked in a cool location out of the sun, lightly sprinkled with water and covered with wet hessian to prevent the turf drying out;
- b) turf must be laid within 24 hours of delivery to site;
- c) if the temperature is above 20°C, the ground must be dampened prior to laying turf;
- d) laying the turf must begin along the longest straight boundary line;
- e) the underside of the turf must be in full contact with the soil bed;
- f) adjoining edges and ends must be butted tightly together avoiding gaps and overlapping;
- g) rolls of turf must be staggered in a brick like fashion (stretcher bond) and excess overhang trimmed with a sharp knife to achieve the desired shape;
- h) narrow strips of turf must only be used where unavoidable;
- i) on sloping sites, the turf must be laid parallel to the contour and pegged or staked as required;
- j) after installation, the turf must be lightly rolled to remove air pockets and bring the roots in contact with the soil; and
- k) turf varieties such as Buffalo and Kikuyu must be lightly top dressed at the time of laying.

12 Watering

- a) Watering must be carried out by the Contractor in accordance with this section 12 from the time of installation until the end of the Landscape Maintenance Period as required to ensure successful germination and establishment of the lawn.
- b) In relation to watering of broadcast seeded and hydroseeded areas:

- i) following seeding, broadcast seeded and hydroseeded areas must be irrigated until the topsoil is moistened to its full depth, avoiding disturbance to the seed bed;
 - ii) watering must be continued to keep the surface damp and the topsoil moist but not waterlogged; and
 - iii) after germination watering must continue to maintain a healthy condition, progressively reducing watering to the required frequency.
- c) In relation to watering of instant turf:
- i) watering must occur immediately after laying until the topsoil is moistened to its full depth; and
 - ii) turf must be watered frequently to maintain moisture to the full topsoil depth whilst continuing a healthy condition.
- d) Where an irrigation system is present:
- i) the Contractor must monitor the watering program and irrigation system to ascertain any faults and malfunctions. The Contractor must check the irrigation system:
 - A. monthly between December and March for summer programming and adjusted accordingly to seasonal conditions; and
 - B. at the start of autumn, winter and spring for programming and adjusted accordingly to seasonal conditions;
 - ii) any faults or malfunctions of the irrigation system must be rectified by the Contractor within 24 hours of being identified; and
 - iii) the Contractor must reinstate any turf that dies due to the fault or malfunction of the irrigation system.

13 Establishment

- a) The Contractor must undertake establishment and maintenance of the lawn for the duration of the Landscape Maintenance Period, including:
- i) providing continuing care and maintenance of the lawn areas shown in the Design Documentation to promote healthy and vigorous growth by implementing Best Industry Practice relevant to horticulture activities; and
 - ii) rectifying any Non-Conformances that become apparent in the lawn establishment under normal use.
- b) On completion of the Landscape Maintenance Period:
- i) seeded and turf areas must have a healthy, dense continuous sward notwithstanding adverse weather conditions at the time; and
 - ii) irrigated grass must be evenly green.
- c) The Contractor must achieve an even and continuous sward over 100% of the total area.

14 Hold Points

Table PR-LS-C3 14-1 details the review period or notification period, and type (documentation or construction quality) for each Hold Point referred to in this Master Specification Part.

Table PR-LS-C3 14-1 Hold Points

Section reference	Hold Point	Documentation or construction quality	Review period or notification period
10d)	Certificate of germination	Documentation	5 Business Days review