

# Public Realm

## Master Specification

### PR-LS-C3 Lawn Establishment

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## Contents

Contents	3
PR-LS-C3 Lawn Establishment	4
1 General	4
2 Weed Control	4
3 Ground and Soil Preparation	4
4 Soil Testing	4
5 Supply of Soil	4
6 Spreading of Soil	5
7 Soil Additives	5
8 Fertiliser	5
9 Supply of Seed and Turf	5
10 Seed and Turf Installation	5
11 Watering	7
12 Establishment	7

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## PR-LS-C3 Lawn Establishment

### 1 General

- 1.1 This Part specifies the requirements for the establishment of various types of lawn including Broadcast Seeding, Hydroseeding, Instant Turf, Plugging and Synthetic Turf.
- 1.2 All clauses of this Part apply unless otherwise specified in the Contract Documents.
- 1.3 Where a specification differs between the Drawing and the Design Report, the Drawing shall take precedence.
- 1.4 Where a specification differs between the Drawing and the Soil Testing report, the Soil Testing report shall take precedence.
- 1.5 If not specified in the Drawings or Design Report, the clauses in this Part shall be followed.
- 1.6 Where required under the Controlled Substances Act 1984, and the Controlled Substances (Pesticides) Regulations 2003, employees undertaking pest control work shall hold a current Pest Management Technician's License.

### 2 Weed Control

- 2.1 Before grassing commences, the areas to be grassed shall be eradicated of weeds and any existing vegetative growth (excluding native vegetation) shall be slashed to a height of 150 mm. Trash build-up and cut material shall be removed from the area prior to spraying with a knockdown herbicide (Roundup or equivalent) incorporating an herbicide marker. Roundup Biactive (or equivalent) shall be used around wetlands and waterways. The herbicide shall be used according to the manufacturer's recommended rates and any off-target damage shall be rectified by the Contractor.

### 3 Ground and Soil Preparation

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

### 4 Soil Testing

- 4.1 Where onsite soil is used for lawn establishment, soil testing shall be carried out by the Contractor to identify soil deficiencies that must be amended prior to installation of lawn.
- 4.2 Soil testing shall be carried out in accordance with AS 4419.
- 4.3 Soil tests shall be conducted by a laboratory accredited under ISO 9001 and the results supplied to the Principal.

### 5 Supply of Soil

- 5.1 Imported soil shall be in accordance with AS 4419 "Soils for Landscaping and Garden Use". The texture of the imported soil blend shall be a sandy loam capable of being handled when moist, but lacking cohesion so that it will fall apart easily when dry. Soil shall be free of debris, stones, weeds, roots or other deleterious material, plant pathogens and other pests.

- 5.2 The Contractor may modify soil on site to bring it up to the required standard. The supply and spreading of the necessary fertilisers and additives shall be at the Contractor's expense, and the work shall be carried out immediately after the soil is laid down, or while stockpiled prior to spreading on site.

## 6 Spreading of Soil

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

## 7 Soil Additives

- 7.1 Refer to the Drawings or Soil Testing results for the soil additive requirements.
- 7.2 If soil testing is not undertaken, the following soil additives are required at a minimum:
- a) Gypsum
    - i) Agricultural gypsum (Calcium Sulphate) shall be applied to all planting areas prior to any cultivation at a rate of 2 kg/m<sup>2</sup>, and shall be incorporated into the surface by rotary hoeing. Gypsum shall not be applied to creek environments or areas adjacent to ephemeral wetlands. Planting or grassing shall not be carried out within 2 weeks of the gypsum application. Gypsum derived from recycled plasterboard shall not be used.
  - b) Organic Compost
    - i) Two to three weeks before planting, 2 cubic metres of organic compost per 100 square metres shall be spread and thoroughly incorporated into the cultivated zone during cultivation in order to stimulate soil microbial activity to convert some of the organic matter to available nutrients prior to planting.
    - ii) Organic compost shall be well rotted vegetative material or animal manure, or other approved material free from chemicals, grass and weed growth, with a neutral pH value. All the material must have been through a controlled composting process to ensure the elimination of pathogens and weed seeds.

## 8 Fertiliser

- 8.1 Refer to the Drawings or Soil Testing results for the fertiliser requirements.

## 9 Supply of Seed and Turf

- 9.1 Seed and turf shall be supplied by the Contractor. Arrangements for seed sourcing / collection shall be the Contractor's responsibility. There shall be no substitution of any species without the Principal's approval.
- 9.2 Seed mixtures shall be pre-packed and commercially prepared. A certificate of germination shall be provided (upon request) to the Principal before sowing, identifying seed species and germination viability.
- 9.3 Synthetic turf shall be sourced and supplied by the Contractor.
- 9.4 Refer to the Drawings or Design Report for the turf requirements.

## 10 Seed and Turf Installation

- 10.1 Newly seeded and turfed areas shall be identified using barrier tape, bunting with flags or equivalent during the establishment period. If star pickets are used to support the tape or bunting they shall have end caps installed.

10.2 Refer to the Drawings or Design Report for the seed and turf installation requirements.

### Broadcast Seeded (by Hand)

- 10.3 Following ground preparation, and a minimum of 10 days after weed control spraying, the soil bed shall be lightly raked in one direction, allowing the rake to drag across the area creating shallow seed furrows. On sloping sites the soil bed shall be lightly raked along the contour. The seed mix shall be prepared by mixing the seed, fertiliser and bulking medium in the specified proportions and shall be uniformly sown over all specified areas.
- 10.4 The seed mix shall be broadcast either by hand, through a Roto-spreader or by a machine-mounted spreader in one direction (east-west) and then again in another (north-south). Once seeded, lightly rake the area in the opposite direction of the last broadcast and lightly roll the area bringing the seed in contact with the soil.
- 10.5 If the seed mix is not sown in accordance with this Specification, the seed shall be replaced. If sowing operations have been completed, the germinating seedlings shall be sprayed out with Roundup (Roundup Biactive shall be used around wetlands and waterways), cultivated and the correct seed sown by the Contractor.

### Hydroseeding

- 10.6 The mixture shall be prepared by mixing the mulch, seed, fertiliser, pigment and water in the specified proportions and sown at the specified. The mulch shall be a paper / water mixture containing no growth inhibiting substances and shall be manufactured in such a manner that, when thoroughly mixed with seed and fertiliser in the specified proportions, it forms a homogenous slurry capable of being sprayed through a hand held nozzle. The mix shall contain a green biodegradable, non-toxic pigment.
- 10.7 Fertiliser with an N:P:K ratio of 18:10:10 shall only be included in exotic grass seed mixes. The mix shall be applied using mobile plant with tank(s) having a built-in continuous agitator and recirculation system of sufficient operating capacity to produce and maintain a homogenous mix. The discharge system shall be capable of spraying the slurry continuously and uniformly at the specified rate.
- 10.8 If the seed mix is not sown in accordance with this Specification, the seed shall be replaced. If sowing operations have been completed, the germinating seedlings shall be sprayed out with Roundup or equivalent (Roundup Biactive or equivalent shall be used around wetlands and waterways), cultivated and the correct seed sown by the Contractor.

### Instant Turf

- 10.9 On delivery, rolls of turf shall 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. Turf shall be laid within 24 hours of delivery. If the weather is hot, the ground shall be dampened prior to laying turf to ensure minimum root damage.
- 10.10 Laying the turf shall begin along the longest straight boundary line. The underside of the turf shall be in full contact with the soil bed. Butt adjoining edges and ends shall be butted tightly together avoiding gaps and overlapping. Rolls of turf shall be staggered in a brick like fashion (stretcher bond) and excess overhang trimmed with a sharp knife to achieve the desired shape. Narrow strips of turf shall be avoided.
- 10.11 On sloping sites, the turf shall be laid parallel to the contour and pegged or staked as required. After installation, the turf shall be lightly rolled to remove air pockets and bring the roots in contact with the soil.
- 10.12 Turf varieties such as "Sir Walter" Buffalo and Kikuyu shall be lightly top dressed at the time of laying.

### Synthetic Turf

- 10.13 The installation of synthetic turf shall be undertaken by a specialist contractor in accordance with the manufacturer's recommendations.

## 11 Watering

- 11.1 Watering shall be carried out by the Contractor from the time of installation until the end of the maintenance period as required to ensure successful germination and establishment of the lawn.
- 11.2 Post germination of broadcast and hydroseeded areas shall be irrigated with a fine spray until the topsoil is moistened to its full depth. Watering shall be continued until germination to keep the surface damp and the topsoil moist but not waterlogged. After germination watering shall continue to maintain a healthy condition, progressively reducing watering to the required frequency.
- 11.3 Watering of instant turf shall occur immediately after laying until the topsoil is moistened to its full depth. Turf shall be watered frequently to maintain moisture to this depth whilst continuing a healthy condition. Where an irrigation system is present the Contractor shall monitor the watering program and irrigation system to ascertain any faults and malfunctions.
- 11.4 The Contractor shall be responsible for the loss of turf due to the fault or malfunction of the irrigation system (which has not been the result of vandalism) and shall reinstate the lost turf in accordance with this Part.

## 12 Establishment

- 12.1 Refer to the Contract Documents for the maintenance period.
- 12.2 Establishment and maintenance means the continuing care and maintenance of the areas shown on the Drawings or in the Design Report to promote healthy and vigorous growth by implementing accepted horticultural practices, as well as rectifying any defects that become apparent in the works under normal use.
- 12.3 On completion of the maintenance period, seeded and turf areas shall have a healthy, dense continuous sward notwithstanding adverse weather conditions at the time. Irrigated grass shall be evenly green. Dry-land grass areas shall be kept green and actively growing until continuous healthy grass cover has been achieved; then the watering program shall be adjusted gradually until the grass is hardened off to natural climatic conditions.
- 12.4 Practical Completion means that an even and continuous sward has been achieved over 100% of the total area.