

Public Realm

Master Specification

PR-LS-C6 Hydroseeding and Direct Seeding

Document Information

| | |
|----------------------|-----------|
| K Net Number: | 13722708 |
| Document Version: | 1 |
| Document Date: | 28/6/2019 |
| Responsible Officer: | |

DEPARTMENT OF
PLANNING, TRANSPORT
AND INFRASTRUCTURE



Government of South Australia
Department of Planning,
Transport and Infrastructure

Document Amendment Record

| Version | Change Description | Date | Endorsement record (KNet ref.) |
|---------|--|---------|--------------------------------|
| 1 | Initial issue (formerly L20 Hydroseeding and Direct Seeding) | 28/6/19 | |
| | | | |
| | | | |
| | | | |

Document Management

This document is the Property of the Department of Planning Transport and Infrastructure (DPTI) and contains information that is confidential to DPTI. It must not be copied or reproduced in any way without the written consent of DPTI. This is a controlled document and it will be updated and reissued as approved changes are made.

Contents

| | |
|---|---|
| Contents | 3 |
| PR-LS-C6 Hydroseeding and Direct Seeding | 4 |
| 1 General | 4 |
| 2 Supply of Seed | 4 |
| 3 Setting Out | 4 |
| 4 Weed Control | 5 |
| 5 Pre-Treatment of Seed | 5 |
| 6 Hydroseeding Mixture | 5 |
| 7 Method of Seedbed Preparation and Seed Sowing | 5 |
| 8 Practical Completion | 6 |
| 9 Hold Points | 6 |
| 10 Verification Requirements and Records | 6 |

PR-LS-C6 Hydroseeding and Direct Seeding

1 General

- 1.1 This Part specifies the requirements for hydroseeding.
- 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 If not specified in the Drawings or Design Report, the clauses in this Part shall be followed.
- 1.5 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 Supply of Seed

Non-Native Seed

- 2.1 Seed shall comply with the requirements shown on the Drawings or in the Design Report and shall be pre-packed and commercially prepared. Seed bags shall be marked to show species, weight and supplier's name.
- 2.2 A certificate of germination shall be provided to the Principal before sowing, identifying seed species and germination viability.
- 2.3 If stated in the Drawings or the Design Report, seed shall be pre-treated prior to sowing.

Native Seed

- 2.4 Seed shall comply with the requirements shown on the Drawings or the Design Report and shall be packaged in individual sealed bags for each species. Seed bags shall be marked to show species, weight and provenance.
- 2.5 If stated in the Drawings or the Design Report, seed shall be pre-treated prior to sowing.
- 2.6 If local provenance plant materials are specified in the Drawings or the Design Report, the plant materials shall be obtained from local sources, with a general limit of 10 km radius around the project site. The Contractor shall supply written verification of the provenance of all plant materials from the supplier, including map and / or GPS co-ordinates for each species on the Drawings.
- 2.7 Plant materials of other sources may only be used if the Contractor can demonstrate that local provenance material is not available, in which case it shall be from the nearest source practicable. The use of non-local provenance material shall be subject to prior approval by the Principal on a species by species basis.
- 2.8 Collection of native plant materials shall be in accordance with PR-LS-S1 "Supply of Plant Material".

3 Setting Out

- 3.1 Prior to commencing work on site, the Contractor shall set out the location of hydroseeded and direct seeded areas in accordance with the Drawings. Hydroseeded and direct seeded areas shall be set out in accordance with the Austroads Guidelines for clear zones and sight lines and other Service Authority legislation and regulations.
- 3.2 The Contractor shall provide notification when setting out has been completed and allow 3 days for inspection of the set out by the Principal.
- 3.3 Provision of the setting out on site shall constitute a **Hold Point**.

4 Weed Control

- 4.1 Before seeding commences, the areas to be seeded 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 dye. 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.

5 Pre-Treatment of Seed

- 5.1 Unless specified on the Drawings or in the Design Report, seed requiring pre-treatment to aid in germination must be treated prior to sowing or seeding. Seed must be treated using methods of commonly accepted horticultural practice. Damage to the seed during pre-treatment as a result of the Contractor's actions must be rectified at the Contractor's expense.

6 Hydroseeding Mixture

General

- 6.1 The mixture shall be prepared by mixing the mulch, seed, fertiliser, pigment, water and tackifying agents in the proportions specified in the Drawings or in the Design Report. All ingredients shall be thoroughly mixed to form a homogenous slurry.
- 6.2 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.

Fertiliser for Hydroseeding

- 6.3 Fertiliser shall be applied in accordance with the Drawings or the Design Report. If not specified in the Drawings or the Design Report, fertiliser shall be complete organic liquid applied in accordance with the manufacturer's instructions and recommended rates. Fertiliser with an N:P:K ratio of 18:10:10 shall be included in exotic grass seed mixes.

7 Method of Seedbed Preparation and Seed Sowing

- 7.1 If the method is not stated in the Drawings or Design Report, the Contractor shall examine the site conditions and prepare a Hydroseeding and Direct Seeding Report recommending preferred methods of seedbed preparation and seed sowing for the specific project conditions to achieve the urban and landscape design. Information to be supplied by the Contractor shall include proposed cultivation techniques, seeding methods and machinery to be used.
- 7.2 The methods shall allow for seed sowing to be undertaken a minimum of 10 days after weed control spraying and ground preparation. Seed shall be uniformly sown over all areas to be planted using the rate, seed mixes and quantities specified in the Drawings or the Design Report.
- 7.3 Soil additives shall be applied in accordance with the Soil Testing report, refer to PR-LS-C7 "Topsoiling".
- 7.4 Fertiliser for direct seeding areas shall not be applied unless specified in the Drawings or Design Report. If fertiliser is specified in the Drawings or Design Report, fertiliser must be applied in accordance with the manufacturer's instructions and recommended rates. Unless specified in the Drawings or Design Report, fertiliser with an N:P:K ratio of 18:10:10 shall be included in exotic grass seed mixes.
- 7.5 Hydroseeding 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 rate specified in the Drawings or the Design Report.

- 7.6 In the event that the seed mix is not sown in accordance with this Specification, the seed shall be re-sown. If sowing operations with incorrect seed have been completed, replacement shall be carried out by spraying out the germinating seedlings with Roundup or equivalent (Roundup Biactive or equivalent shall be used around wetlands and waterways), cultivating the soil and sowing the correct seed.

8 Practical Completion

- 8.1 Practical Completion means that an even distribution of seed and mulch over the whole of the seeded area is achieved by correct application of the prescribed method, and germination of seed is achieved over the whole area. The Contractor shall reseed areas which have not been evenly seeded, or have achieved poor germination.

9 Hold Points

- 9.1 The following is a summary of Hold Points referenced in this Part:

| Document Ref. | Hold Point | Response Time |
|---------------|----------------------------------|----------------|
| 3.3 | Provision of setting out on site | 3 working days |

10 Verification Requirements and Records

- 10.1 The Contractor shall supply the following documentation to demonstrate that the requirements of this Part have been complied with and where appropriate, supply the documentation with the lot package.

| Document Ref. | Subject | Records to be Provided |
|---------------|---|---|
| 2.2 | Non-native Seed: Seed Species and Viability | Certificate of Germination and seed species |
| 2.4-2.8 | Native Seed: Provenance of species | Native seed Mixture Schedule |
| 7 | Hydroseeding and Direct Seeding methodology | Hydroseeding and Direct Seeding Report |