

# Master Specification

## Part PR-LS-C6

### Hydroseeding and Direct Seeding

September 2024



**Government of South Australia**  
Department for Infrastructure  
and Transport

**Build.**  
**Move.**  
**Connect.**

## Document Information

Document Information	
K Net Number:	13722708
Document Version:	1
Document Date:	30/09/2024

## Document Amendment Record

Version	Change Description	Date
0	Initial issue	31/08/2023
1	Updated cover page	30/09/2024

## Document Management

This document is the property of the Department and contains information that is confidential to the Department. It must not be copied or reproduced in any way without the written consent of the Department. 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 Documentation	4
3 Supply of seed	4
4 Setting out	5
5 Weed control	5
6 Pre-treatment of seed	6
7 Hydroseeding mixture	6
8 Method of seedbed preparation and seed sowing	6
9 Hold Points	7
10 Appendix 1: Native seed mixture schedule	8

---

## PR-LS-C6 Hydroseeding and Direct Seeding

### 1 General

- a) This Master Specification Part specifies the requirements for hydroseeding and direct seeding in rural areas, including:
  - i) the documentation requirements, as set out in section 2;
  - ii) the supply of seed requirements, as set out in section 3;
  - iii) the setting out requirements, as set out in section 4;
  - iv) the weed control requirements, as set out in section 5;
  - v) the pre-treatment of seed requirements, as set out in section 6;
  - vi) the hydroseeding mixture requirements, as set out in section 7;
  - vii) the method of seedbed preparation and seed sowing requirements, as set out in section 8; and
  - viii) the Hold Point requirements, as set out in section 9.
- b) This Master Specification Part does not apply in urban or township areas.
- c) Hydroseeding and direct seeding must comply with the Reference Documents, including the AGRD Part 6B: Roadside Environment.
- d) 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 3.1d).

#### 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:

- a) current Pest Management Technician's Licenses, in accordance with section 1d); and
- b) verification of the provenance of all local plant materials from the supplier and a native seed mixture schedule, in accordance with section 3.2e).

### 3 Supply of seed

#### 3.1 Non-native seed

In relation to supply of non-native seed:

- a) seed must comply with the requirements in the Design Documentation;
- b) seed must be pre-packed and commercially prepared;

- c) seed bags must be marked to show species, weight and supplier's name;
- 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; and
- e) the Design Documentation must specify whether the seed requires pre-treating prior to sowing. The Contractor must pre-treat the seed in accordance with the Design Documentation if required.

### 3.2 Native seed

In relation to supply of native seed:

- a) seed must comply with the requirements in the Design Documentation;
- b) seed must be packaged in individual sealed bags for each species;
- c) seed bags must be marked to show species, weight and provenance;
- d) the Design Documentation must specify whether the seed requires pre-treating prior to sowing. The Contractor must pre-treat the seed in accordance with the Design Documentation if required;
- e) if local provenance plant materials are specified in the Design Documentation:
  - i) subject to section 3.2f), the plant materials must be obtained from local sources, with a general limit of 10 km radius around the Site; and
  - ii) the Contractor must supply written verification of the provenance of all plant materials from the supplier, including map or GPS co-ordinates for each species on the Design Drawings, and a native seed mixture schedule in the form provided in Appendix 1: Native seed mixture schedule, as part of the Quality Management Records;
- f) 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 must be from the nearest source practicable. The Contractor must submit a request to use non-local provenance material on a species-by-species basis, which will constitute a **Hold Point**. Non-local provenance material must not be used until the Hold Point has been released; and
- g) collection of native plant materials must be in accordance with PR-LS-S1 "Supply of Plant Material".

## 4 Setting out

- a) Prior to commencing hydroseeding and direct seeding works on Site, the Contractor must set out the location of hydroseeded and direct seeded areas in accordance with the Design Drawings.
- b) Hydroseeded and direct seeded areas must be set out in accordance with the Reference Documents (including the AGRD Part 6B: Roadside Environment) and other Utility Service Authority legislation, regulations and requirements.
- c) The Contractor must provide 2 days prior notification to the Principal when setting out is to occur to allow for inspection of the set out, which will constitute a **Hold Point**. The Contractor must not commence seeding until this Hold Point has been released.

## 5 Weed control

- a) The Contractor must ensure that, before seeding commences:
  - i) the areas to be seeded must be eradicated of weeds, including at least one weed control event per month over a period of 3 months prior to seeding;

- 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) The Contractor must ensure that erosion protection measures are implemented during the pre-seeding weed control period.
  - c) Herbicides must be used according to the manufacturer's recommended rates and any off-target damage must be rectified by the Contractor.
  - d) Herbicides must be used in accordance with PR-MA-M1 "Herbaceous and Woody Weed Control".

## 6 Pre-treatment of seed

- a) Unless specified in the Design Documentation, seed requiring pre-treatment to aid in germination must be treated prior to sowing or seeding by implementing an appropriate pre-treatment.
- b) The Contractor must rectify any damage to the seed during pre-treatment that is caused by the Contractor's actions.

## 7 Hydroseeding mixture

In relation to hydroseeding mixture:

- a) the mixture must be prepared by mixing the mulch, seed, fertiliser, pigment, water and tackifying agents in the proportions specified in the Design Documentation, which must be in accordance with the manufacturer's recommendations unless agreed otherwise with the Principal;
- b) all ingredients must be thoroughly mixed to form a homogenous slurry;
- c) 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;
- d) the mixture must contain a green biodegradable, non-toxic pigment;
- e) fertiliser must be applied in accordance with the Design Documentation. If not specified in the Design Documentation, fertiliser must be complete organic liquid applied in accordance with the manufacturer's instructions and recommended rates; and
- f) fertiliser with an N:P:K ratio of 18:10:10 must be included in exotic grass seed mixes.

## 8 Method of seedbed preparation and seed sowing

- a) The Contractor must undertake seedbed preparation and seed sowing for hydroseeding and direct seeding in accordance with the methods specified in the Design Documentation.
- b) Seed sowing must be undertaken a minimum of 10 days after weed control spraying and ground preparation.
- c) Seed must be uniformly sown over all areas to be planted using the rate, seed mixes and quantities specified in the Design Documentation.
- d) Soil additives must be applied in accordance with the soil testing report and the requirements of PR-LS-C7 "Topsoil and Earthworks".

- e) Fertiliser for direct seeding areas must not be applied unless specified in the Design Documentation. If fertiliser is specified in the Design Documentation:
  - i) fertiliser must be applied in accordance with the manufacturer's instructions and recommended rates; and
  - ii) unless specified otherwise in the Design Documentation, fertiliser with an N:P:K ratio of 18:10:10 must be included in exotic grass seed mixes.
- f) Hydroseeding 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, which must be in accordance with the manufacturer's recommendations unless agreed otherwise with the Principal.
- g) If the incorrect seed mix is used, the seed must be re-sown. 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.
- h) For hydroseeding, the Contractor must ensure an even distribution of seed and mulch over the whole of the seeded area is achieved by correct application of the prescribed method in accordance with this section 8.
- i) For direct seeding, the Contractor must ensure an even distribution of seed over the whole of the seeded area is achieved by correct application of the prescribed method in accordance with this section 8.
- j) The Contractor must ensure germination of seed is achieved over the whole seeded area.
- k) Dry-land grass areas must be kept green and actively growing until continuous healthy grass cover has been achieved, then the watering program must be adjusted gradually until the grass is hardened off to natural climatic conditions.
- l) The Contractor must reseed areas which have not been evenly seeded or have achieved poor germination.

## 9 Hold Points

Table PR-LS-C6 9-1 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-C6 9-1 Hold Points**

Section reference	Hold Point	Documentation or construction quality	Review period or notification period
3.1d)	Certificate of germination	Documentation	5 Business Days review
3.2f)	Request to use non-local provenance material	Documentation	5 Business Days review
4c)	Approval of setting out on site	Construction quality	48 hours notification

# 10 Appendix 1: Native seed mixture schedule

**Table PR-LS-C6 10-1 Native seed mixture schedule**

SPECIES OF PLANT	QUANTITY gm/kg	LOCATION GRID OR GPS	DATE COLLECTED	NAME OF SUPPLIER
Total				

---