Embankments and bunds require a transition layer to be tested to ensure its particle size. A sample of the proposed transition layer is to be provided to the superintendent for approval prior to installation. The superintendent may require the transition layer to be tested to ensure its particle size.

Drainage layers convey infiltrated water into the sub-drainage pipes.

Materials

- All under-drainage pipes must be unobstructed by any geosynthetic or soil.
- The maximum spacing of under-drains for stormwater systems is 10 m. All under-drains must slope towards the outlet pit (min. 0.5% longitudinal grade) and the base of filtration trench shall be free from depressions.
- The hydraulic conductivity of potential filter media shall be measured using the hydraulic conductivity test method.

ESM 128.6.1-1995

- Under-drain pipes shall be sealed into the overflow pit.
- All under-drains shall have clean cut outlets (non-diluted pipes) which must extend 150 mm into surface filter media.

Bioretention System Specification

The following documents are incorporated into this specification by reference:

- AS 1289 - Methods of Testing Soils for Engineering Purposes
- AS 4419 - Soils for Landscaping and Garden Use
- AS 3706.12 - Compost Quality Standards
- ECA/BE 2006 - Bioretention System Construction Specifications

11.2 Under-drainage

- Under-drainage pipes shall not be constructed using any geosynthetic or soil.
- The maximum spacing of under-drains for stormwater systems is 10 m. All under-drains must slope towards the outlet pit (min. 0.5% longitudinal grade) and the base of filtration trench shall be free from depressions.
- The hydraulic conductivity of potential filter media shall be measured using the hydraulic conductivity test method.

ESM 128.6.1-1995

- Under-drain pipes shall be sealed into the overflow pit.
- All under-drains shall have clean cut outlets (non-diluted pipes) which must extend 150 mm into surface filter media.

11.3 Under-drainage

- All under-drains shall have clean cut outlets (non-diluted pipes) which must extend 150 mm into surface filter media.
- The hydraulic conductivity of potential filter media shall be measured using the hydraulic conductivity test method.

ESM 128.6.1-1995

- Under-drain pipes shall be sealed into the overflow pit.
- All under-drains shall have clean cut outlets (non-diluted pipes) which must extend 150 mm into surface filter media.

11.4 Permeable liner

- The liner material for the bioretention system must be tested to ensure it meets the required specifications.
- The liner material must be tested to ensure it meets the required specifications.
- The liner material must be tested to ensure it meets the required specifications.
- The liner material must be tested to ensure it meets the required specifications.

11.5 Bioretention System Specification

- The following documents are incorporated into this specification by reference:
- AS 1289 - Methods of Testing Soils for Engineering Purposes
- AS 4419 - Soils for Landscaping and Garden Use
- AS 3706.12 - Compost Quality Standards
- ECA/BE 2006 - Bioretention System Construction Specifications

11.6 Certification and chain of custody

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

- The following certification and the chain of custody applies to bioretention media:

11.7 Construction

- Construction and Establishment Guidelines - Swales, Bioretention systems

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention System Specification

- Bioretention SystemSpecification