The following information should be considered by Project Managers, Road Designers and Contract Administration staff when soft subgrades are identified during geotechnical investigations, or are encountered during the construction phase of a road project.

**Soft Subgrade Material**

The following hierarchy of controls should be implemented when soft subgrades or other unsuitable materials are encountered on road projects:

* Excavation and replacement of the soft material with suitable select fill material
* Stabilisation of the subgrade with suitable stabilisation agents
* Use of geotextiles, geofabrics and geogrids (note these products are not to be used to modify the thickness of proposed pavements)

In all of the options above critical attention to drainage is required. The following types of drainage systems are applicable:

* Surface drainage
* Subsurface drainage
* Drainage blankets

Drainage blankets have a particular application in the construction of road pavements and road embankments.

**Drainage Blankets**

Drainage blankets should be utilised in locations subject to high ground water levels, where other drainage alternatives and formation features are ineffective in intercepting or managing free water. In this situation, the use of a rock blanket as a lower subbase layer may be the most effective means of removing the free water from beneath the pavement or embankment.

Drainage blankets should only be used for their intended purpose and should not be used as general solution for subgrade improvement regardless of actual site conditions.

**Reference Documents**

Additional information relating to this topic can be found in the following Reference Documents:

* Austroads Guide to Pavement Technology – Part 2: Pavement Structural Design – 2012
* Austroads Guide to Pavement Technology – Part 8: Pavement Construction – 2009
* Austroads Guide to Pavement Technology – Part 10: Subsurface Drainage - 2009