



Description

Whether managing existing clearing or new clearing, adequate groundcover is essential in reducing the risk of erosion. Groundcover is an effective, comparatively cheap and easy way to manage erosion risk and can eliminate the need for other erosion or sediment controls.

Application and Function

Whenever soil is exposed, it is at risk of erosion – from wind, rain or further disturbance (eg. stock or vehicle access). Groundcover acts to protect the soil from disturbance by reducing erosive forces, binding the soil and increasing infiltration. Retention or limited removal of existing groundcover during clearing or development is always preferable to reinstatement. Establishment of new groundcover is essential as soon as possible following disturbance.

Examples of different types of vegetative groundcover include: native grasses, lawn, turf, mulch, covercrops, annual and perennial pastures and horticultural crops. Examples of artificial groundcover include: hydromulch, geotextile, gravel, roadbase, concrete or bitumen.

Groundcover management is usually used in combination with other erosion control measures however depending on the circumstances, may reduce the need for other controls.

Limitations

Establishment of new vegetative groundcover can be subject to seasonal constraints. Establishment during the dry season is likely to require irrigation, while establishment during the wet season can be at risk of being washed away by heavy rains if planted too late. Vegetative groundcovers may also be at risk of fire or weed invasion. Artificial groundcovers can be expensive and may be difficult to source or transport (depending on location).

Other factors affecting successful establishment of groundcover include exposure to sunlight (canopy cover may inhibit sunlight penetration, while no shade will influence soil temperature and evaporation rates) and competition for water and nutrients from larger plants.

Advantages

Effective management of vegetative groundcover (especially existing) can be a cheap and easy erosion control option – and in some cases may

reduce the need for other control measures. If maintained, groundcover can prevent and control erosion.

Other advantages associated with good groundcover include maintenance of soil structure, increased infiltration of runoff and water retention, increased organic matter and nutrient cycling – which all help to reduce erosion risk and promote healthy soil.

Alternatives

Retaining strategically located vegetation buffers to slow runoff and filter sediment can (in some circumstances) be used to control erosion instead of contour or diversion banks.

Where establishment of vegetative groundcover is difficult or ineffective, artificial options may be required. For example, hydromulching, geotextile, rock gabions/armouring or concrete may be used on road batters where seeding has failed.

Construction

Establishment/instalment methods will depend on the situation and intended groundcover. Tips for managing vegetative groundcover include:

- Areas may require fencing, particularly during establishment periods.
- Plan ahead: always flag 'no go' or retention areas prior to clearing and ensure required resources and/or seed stocks are available and on hand.
- Limit clearing of existing groundcover or use no/minimum till.
- Leave felled vegetation in situ (where it falls) for as long as possible (ideally until the end of the dry season, just prior to planting) to minimise wind erosion.
- Manage vehicle and machinery access both during clearing and establishment phases of the development.
- Always select species suited to local soil and climatic conditions.
- Plant a mixture of perennial and annual pastures.
- Manage stocking rates – prevent/manage (depending on pasture species) access during establishment periods, monitor groundcover condition, de-stock when necessary and spell paddocks regularly.
- Be aware that reseeding may be required.
- Ensure fertilizer application and weed management are effective.
- Be aware that dry season irrigation may be required in order to ensure successful establishment prior to wet season rains.

Maintenance

Maintenance options will depend on the type of groundcover, however responsible monitoring of groundcover (particularly during the wet season) will be vital in ensuring effective erosion prevention.

Contact details

For further information contact the DLRM Land Management Unit in your region. Additional Technical Notes and Erosion and Sediment Control Guidelines are available on the website: <http://www.lrm.nt.gov.au/soil/management>

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