Vegetation Retention | Technical Note No. 12

Erosion and Sediment Control Guidelines

Description

Areas of vegetation retention are commonly referred to as buffer zones or native vegetation corridors. They are areas of natural vegetation flagged prior to construction that will act as sediment traps. To be effective as a sediment control, the area for retention should contain at least 80% ground cover.

Application and Function

Retained vegetation can intercept overland flow prior to discharging into watercourses, higher quality bushland areas surrounding the site, drainage lines and other sensitive areas.

Retained vegetation can have the dual purpose of not only assisting in the settling of sediment from overland flows, but also provide a refuge for flora and fauna. Generally, the wider the strip of retained vegetation, the more effective it will be.

Limitations

•Retained native vegetation can limit the accessibility to a site for heavy machinery.
•Buffer zones of retained vegetation can easily be disturbed or destroyed by poor on-site management.
•Areas of retained vegetation are only capable of trapping course sediments. The fine silt will pass through this buffer during periods of heavy rainfall so other types of sediment control devices may be required in conjunction with the retained vegetation.

Alternatives

•Use native plants to revegetate the site and provide a buffer. This may also require a combination of other erosion control measures to assist in soil stabilisation.
•Sediment fences can act as a temporary measure in controlling overland water flows and settling of suspended sediment.
•Filter strips can be utilised in the trapping of suspended sediment from overland water flows (see Technical Note No. 4: Filter Strips).

Advantages

•There is no need to purchase materials, just good planning.
•They are a natural and effective measure to remove coarse sediment.
•They can be a long term sediment control measure.
•The impact on the surrounding land is reduced.
•They can also act as a refuge for existing indigenous vegetation and wildlife.
•Where vegetation is retained on slopes greater than 1% the natural vegetation can provide good binding of the soils while still acting as a sediment filter for water entering from upslope.

Construction

Refer to approved plans for design, location, extent and detailed specifications for retained vegetation.

Refer any questions regarding location, extent or methods of installation to the responsible on-site supervisor or Natural Resource Officer.

Areas will need to be identified early in the planning phase and No-Go areas will need to be flagged prior to any construction works taking place.

As clearing upslope progresses, construct diversions as required to capture and direct runoff evenly through the retained vegetation. Flow must enter the retained vegetation as sheet flow and spread out over the width of the buffer.

Runoff must be able to flow to and be dispersed through the area without concentrating water into rills and gullies.

The vegetation must remain undisturbed while it is being used for trapping sediment.

Maintenance

Retained vegetation buffers should be inspected after each rain event and checked for evidence of concentrated flow or bypassing flow. If necessary, take steps to correct the passage of sheet flow through the area.

•Remove excessive accumulated sediment which may cause flow concentrations.
•If excessive sediment loads are apparent, investigate the source and resolve.
•Vehicular traffic and construction equipment must be kept off the retained vegetation buffer.
•Where monitoring identifies problems in performance, additional installation of erosion and sediment control measures may be required upslope of the vegetation buffer.

Weed control may be required to ensure the origional vegetation make-up of the site is retained as much as possible and further weed spread does not occur.

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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