



Case Study: Water Purification/Erosion Control Using Recycled Organics

Location:	Salt Pan Creek Landfill, Narwee, Canterbury Council
Participants:	Canterbury Council, Southern Sydney Waste Board & PPI Services
Product:	Enviromedia
Market:	Water Purification Segment and Erosion Control

Enviro-media is selected organic matter or a combination of selected organic matter and minerals such as sand, soil that is used to either, physically, biologically and/or chemically purify or treat contaminated air, soil or water.

Canterbury Council nominated Salt Pan Creek landfill site to demonstrate the use of products containing recycled organics for leachate and erosion control. The site currently accepts councils' street sweepings that potentially contain some contaminants such as hydrocarbons that can be bio-remediated using recycled organics. It was proposed to establish berms made from council derived recycled organics in conjunction with other products containing recycled plastic and organics.

The disposal site has a distinct fall away to the backyard of residential properties which is intercepted and council is keen to prevent erosion and carriage of pollutants into the storm water system. The berms will also act as a wind barrier for air-bourne litter from the street sweepings. The project will act as a high profile demonstration site for landfill operators and also influence council engineers to use products containing recycled organics in other applications.

The treatment site was selected following a site meeting and concentrated on a area of depression that acts as a channeling point for the leachate. Chipped recycled organics were stockpiled on-site prior to installation day and sediment control and purification products containing recycled organics were selected to enhance the treatment process.



Salt Pan Creek Landfill, Treatment Site Area

Chipped fresh Recycled Organics were selected to filter sediment, absorb nutrients contained in the leachate and to host microorganisms that biologically degrade toxic compounds. Prior to installing this material secondary treatment devices containing composted and sized Recycled Organics were positioned. These devices remove finer particulate matter via filtration and chemically/biologically treat a wide range of pollutants.



Installation of devices containing RO

Waste Services Manager for Canterbury Council, Mr. Les Andrews commented, "There was a noticeable difference in water quality immediately following the installation of the system containing recycled organics." "The system was very cost effective and provides Council with an efficient method of dealing with our residual organics collected in the Council region in the future." said Mr. Andrews. Council is now examining other uses for the treatment system throughout the local area.

Freshly chipped recycled organics were then placed over the treatment devices as a berm to direct and primary treat contaminated run-off. The mulch grade material also provides protection for the secondary treatment devices and an aesthetic appearance.



Freshly chipped RO formed into a berm

The freshly chipped recycled organics is a perfect medium for absorbing sediments, nutrients in water and act as a host for microorganisms responsible for degrading many toxic compounds contained in road run-off and storm water. This system can also provide an effective method of erosion control on embankments and sloping ground.

For more information regarding the Canterbury Council Salt Pan Creek demonstration project contact Les Andrews, Canterbury Council, 02 – 9789 9371 or Darren Bragg, Resource NSW at darren.bragg@resource.nsw.gov.au