

NATURAL TURF GRASS AVERTS ENVIRONMENTAL DISASTER

The Portsmith Landfill in tropical North Queensland (Cairns) is situated on a 20.12 hectare parcel of Crown land for which Cairns Regional Council (Council) is a trustee under the lease which expires on 31 August, 2062. The landfill has been operational since 1984 and received household and commercial waste until November, 2009.

On 7 February, 2009 an environmental incident (stormwater and leaching) occurred at the landfill site and all deliveries ceased. The incident required civil rectification works to allow time to source and apply earthen cover material.

The main environmental issues that caused concern were:

1. Landfill location affecting sensitive intertidal and marine ecosystems.
2. The tropical climate - particularly in regards to heavy rainfall events, their duration and intensity.
3. Operational measures in place to mitigate risk



A proposal for the use of natural turf grass on the project was discussed with Turf Queensland members in Far North Queensland and the main contractor BMD, who in turn worked with the regional Council. The talks resulted in specifying a natural turf grass that would not only provide a quality environmental solution to protect the topsoil but an efficient, cost-effective outcome for the project.

Unfortunately the Council considered the environmental risk low and decided on 'Hydromulching' to establish the grass cover. In October 2011 after the very first top soil was spread and before any Hydromulching could begin, heavy rains above 200 mm fell washing the expensive topsoil to the bottom of the site.

CASE STUDY

NO: 007

Date: June 2013

**Turf
Queensland**
Grow Green

This ignited an immediate decision by Council to begin turfing of the initial area with some 7000 m² of natural turf grass. The final project utilised 154,000 m² of turf laid on the site at the rate of 6000 m² per day, to provide stability as the tropical wet season approached.

The capping process started in June. As well as several layers of permeable materials and drainage layer, the site has received 300 mm of cover soil and a further 200 mm of topsoil. Natural turf grass was added as the final layer of coverage and as barrier protection from further environmental concerns. The natural turf grass was laid in stages from October 2011 to February 2012.

Hydromulching was again instigated on the relatively level surfaced on top of the landfill however this was abandoned due to more heavy unpredictable rain events.

Turf Queensland member companies in Tropical Lawns (11ha) and Harden Park Lawns (4.4ha) undertook the project even though this was an emergency and had inadequate time to plan supply efficiently. Primarily, Couch grass and Carpetgrass/Couch mix turf was supplied but due to the large quantities required for the project, the most readily available natural turf grass was provided to meet the high demand.

“The closure of the Portsmouth site has helped us to move forward with new processes and initiatives that significantly reduces Council’s environmental footprint,” a Council spokesman said.

Over time the site is likely to be returned to the public use as open parkland with an excellent cover of natural environmentally friendly turf grass.

