CASE STUDY:

WATER

Rowan Block Land Development - Stormwater Pond

FLAT BUSH, AUCKLAND
MARCH 2017
CLIENT: **GARY MUNDY CONSTRUCTION LTD**

ELCOSEAL®

ELCOSEAL® Geosynthetic Clay Liners (GCLs) are used as an easy to install lining system in landfills and waste containment structures and for liquid containment in effluent ponds and tailings dams. ELCOSEAL® GCLs are also effective liners for dams, ponds, lakes, wetlands, irrigation canals and channels.

ELCOSEAL® GCLs consist of a layer of bentonite bonded between two layers of woven and nonwoven geotextiles. The needle-punching process reinforces the bentonite layer with thousands of fibres, maximising the product's internal resistance. An additional heat treating process called "thermal locking" secures the needle-punched fibres, further improving strength and performance.

A job well done, completed on time and finished with Biomac C300 coconut fibre matting erosion control matt pinned around the pond edges to help hold soil to establish and retain vegetation.

With increased land development (urban housing subdivisions) in the Auckland Region the need for management of stormwater runoff becomes of paramount significance. Stormwater management ponds have been used in the Auckland region for years, initially for water quantity control, but more recently for water quality control. They have been, and are expected to remain, important components in the ARC (Auckland Regional Council's) stormwater effort to minimise adverse impacts associated with urban land use.

One way of managing this is to build wet land ponds which was a requirement at this subdivision. Existing site clays are not always suitable or effective for use in creating an impermeable lining for ponds, hence the specification and use of Geosynthetic Clay Liners (GCL's) being ELCOSEAL® X1000 grade in this case.

GEOFABRICS®
Smarter Infrastructure

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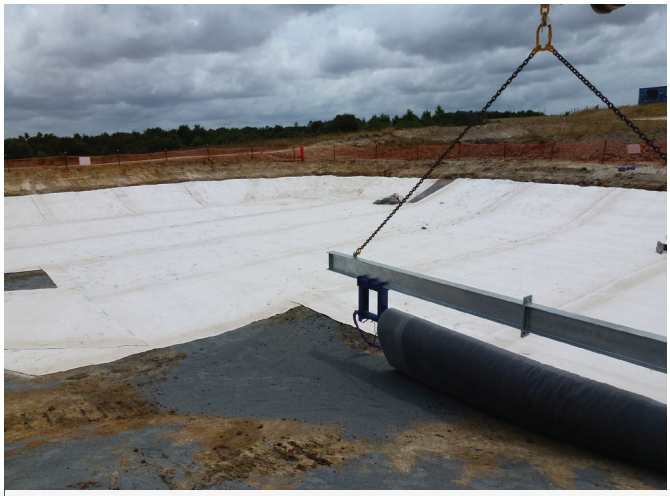
Installation is relatively simple with no specialist jointing equipment needed. Geofabrics hire out a suitably rated, tested and certified lifting and placement rig, making it safe quick and easy for the contractor to install. Geofabrics technical staff come to site to provide the contractor with hands on installation guidance for contractors who have not used the product previously, as was the case at the Rowan Block Pond.

Mundy Construction were able to install 1500m² over a 2-day period which included intricate lining / sealing work around the pond inlet and out let structures, also done with the ELCOSEAL®. Geofabrics also supply premixed High Performance Bentonite Paste in convenient 20 litre pails for sealing ends of GCL roll laps and around any pond liner penetration structures. ELCOSEAL® rolls have self-sealing side overlaps with no need for paste application.

SITE PRIOR TO INSTALLATION OF ELCOSEAL®
Preparation of site



ELCOSEAL® LAID
Spreader bar in use

COMPLETION OF SITE
ELCOSEAL® laid for stormwater pond

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