

Case Study Point Boston



Point Boston Peninsula is a 10 year master planned community development that stretches over 750 hectares of natural peninsula just 12 kms from Port Lincoln in South Australia. Special covenants have been developed to ensure that a harmonious relationship between the natural environment and the development is maintained. Point Boston Peninsula will be developed in 4 grouped settlements, retaining much of the natural landscape in between. Each will offer about 250 opportunities to build conventional homes or duplex accommodation. When dealing in remote locations, water recycling is a mandatory consideration for installations wanting to make the most of their available water resources.

Point Boston Peninsula is based on the highest of ecologically sustainable practices, with building guidelines designed to ensure all development is sensitive to the location. Ecological sustainability is a keystone principle of the development, particularly in respect of water cycle management. The development requires 174 ML of water per annum and is to be self sufficient in water resources except for the need for an average of 6% supplementation from the SA Water regional distribution network, rising to 17% for the lowest rainfall year on record.

This high level of water self sufficiency is to be achieved by capturing as much roof rainwater runoff as practicable in tanks on each lot for potable use within the house; treating household wastewater to a high standard in an aerobic unit on each lot; collecting the treated effluent in a pressure reticulation network; passing part of the treated effluent through a tertiary polishing and disinfection plant and recycling it to houses for reuse in toilet flushing, clothes washing, garden watering and other non potable external uses.

Cullys and EcoNova have been engaged to deliver the tertiary ultra-filtration, disinfection water recycling facility and system wastewater management (WRF) with a capacity of 24 kL/h, built in two 12kL/h stages. The plant will polish the secondary effluent collected from the household aerobic units to recycled effluent quality for unrestricted non-potable domestic uses specified in the Australian Guidelines for Water Recycling 2006 (AGWR). The purpose of EcoNova's tertiary treatment plant is to remove pathogens to an extent that makes the water safe for household non-potable uses. The WRF is being supplied, installed & operated by EcoNova & includes the following process train:

- ◆ Secondary effluent inflow covered balancing tanks (by others).
- ◆ NovaUltra™ 0.01 µm absolute ultra-filter.
- ◆ UV disinfection.
- ◆ Chlorine disinfection.
- ◆ Treated water balancing tanks and recycled water distribution pump station (by others).
- ◆ Stabilisation and reduction of the ultra-filter backwash suspended solids by aerobic digestion in a NovaPro™ Membrane Bioreactor (MBR) for periodic removal by tanker to an approved biosolids receival facility.
- ◆ Return of the MBR filtrate to the treated effluent inflow balancing tanks.

In addition to our involvement in the water and waste water component, Cullys was also responsible for the design, manufacturing, programming and integration of the electrical and control components. The plant operates fully automatically using a programmable logical controller (PLC) which also allows for remote monitoring and management to reduce onsite operator involvement.

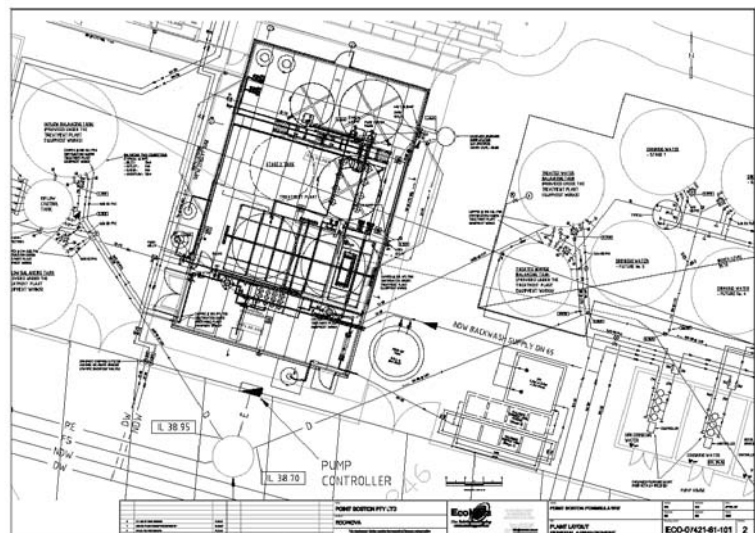
As Principal Contractor, Cullys offers turnkey solutions and provides its clients with a single point of contact for all communications, liaison and management responsibilities.

Cullys Management Systems is implemented to manage all aspects of our business. The management system provides a framework by which the performance of the customer focused business activities; the health & safety and environmental management activities can be monitored, controlled and continuously improved.

Cullys is committed to ensuring the health, safety & welfare of all personnel within its workplaces & ensuring a high standard of environmental performance from management, employees & contractors. Cullys management team accepts responsibility for the effective implementation of this policy & will provide systems, education, supervision & support to ensure a safe working environment.

Cullys commitment to professionalism has seen our client base continue to expand. Our flexibility allows Cullys to be able to deliver exceptional results across a complex and varied customer base. We provide the full range of consulting, electrical, mechanical, structural and process solutions that are applied to new projects, upgrades, expansions, renewals and operations & lifecycle support phases.

For further details please refer to the company website - www.cullys.com.au.



Head Office – Perth
20 Egmont Rd,
Henderson, WA 6166

Contact – Tom Cull,
WA Managing Director
P - +61 08 9410 5000
F - +61 8 9410 5050
E - admin@cullys.com.au

Regional Office - Darwin
3/43 Marjorie St,
Pinelands, NT 0829
PO Box 27, Palmerston NT 0831

Contact - Gary Nunan,
NT State Manager
M - + 61 439 853 669
P - +61 8 8932 9565
F - +61 8 8932 6065
E - gnunan@cullys.com.au

Regional Office - Sydney
PO Box 1728,
Warriewood NSW 2102

P - +61 2 9979 6366
F - +61 2 9979 6399
E - info@rwspl.com

Sunshine Coast Office
PO Box 1340
Noosaville DC, QLD 4562

Contact – Christian Uhrig
Sales & Marketing Manager
P – +61 (0)439 640 512
E - christian.uhrig@rwspl.com