HydroTerra
Environmental Monitoring Specialists

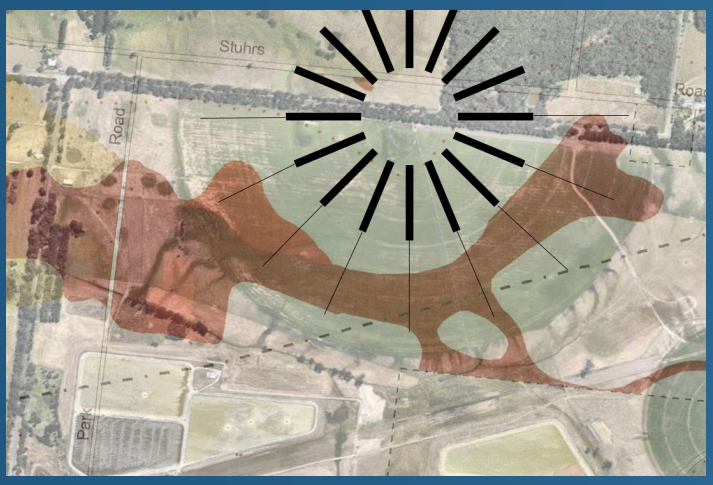
Integrated Monitoring Network

Optimisation of Pasture Irrigation using Waste Water

Operational Support: Waste Water Reuse & Effluent Disposal Optimisation

HydroTerra was commissioned in 2017 to develop the design of an automated monitoring system, this report *HT 17-09192 Design Report R1 titled MONITORING SYSTEM DESIGN* for Fonterra's Darnum Park facility. The purpose of the design to identify the key monitoring variables underpinning the compliance regime and operational controls for the wastewater irrigation program at Darnum Victoria. The underlying purpose being the development of metrics to allow the optimised wastewater application rate whilst protecting the environment (groundwater, surface water and pasture productivity).

Following completion of the design, HydroTerra was engaged to develop a system specification defining the sensors, scripting and manual data input devices, data management and reporting required to automate the collection and data analysis of the requisite parameters. HydroTerra was then engaged to implement the monitoring program including the sensor installation, scripting, reporting, data management in DataStreamTM, ongoing maintenance and oversight SLA. The project challenges included the establishment of scripting to automate ingestion of laboratory data direct into DataStream, the integration of data feeds from Fonterra's SCADA system into DataStreamTM for operational metrics from the effluent ponds, the integration of pre existing hardware including a weather station, the installation of soil moisture sensors in water loggedvpasture paddocks.



Technologies:

- DataStreamTM iPad Apps for manual data ingestion
- DataStreamTM customised dashboard & reporting
- Sentek telemetered Enviroscan soil moisture capacitance probes
- Automated Weather Station
- Halytech cellular telemetry monitoring network
- Water quality sensor

HydroTerra's team includes experience, qualified environmental scientists, hydrogeologists and electrical engineers.

To learn more:

Visit **www.hydroterra.com.au** for more information about our wide-ranging services or contact the team directly:
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