RWTS

REMOTE WATER TREATMENT SERVICES

DEDICATED TO OUR CLIENTS

IN SOLVING ALL THEIR WATER AND WASTEWATER TREATMENT ISSUES

ABOUT RWTS

REMOTE WATER TREATMENT SERVICES IS PROUD TO BE
AUSTRALIA'S TRUSTED WASTEWATER AND WATER TREATMENT SOLUTION PROVIDER.

Our vision is to be the leader in short and long-term turnkey wastewater and water solutions in Australia and the Pacific. We foster our in house professional expertise, extensive knowledge of designing and constructing wastewater and water treatment solutions to ensure our clients receive a tailored service that meets all vast project requirements.

Based in Brisbane, our company has been operating for over 10 years throughout Australia and the Asia-Pacific. Throughout our company journey our state of the art technology has been tried and tested and been supported by a global network supply; backed by research and development.

Our extensive field experience spanning all areas of wastewater and water treatment throughout regional and remote destinations in Australia, provides the up-most confidence to our clients in our design, construction and servicing capability.

Our focus is on technical performance, 100% quality and safety compliance and responsibility in adopting environmental sustainable practices in our operations. From drinking and process water, to sewage and wastewater treatment, RWTS has a wide range of systems, designed to meet various site specific wastewater and water sources.

RWTS HAS OVER 100 YEARS OF INDUSTRY EXPERIENCE IN THE WATER, WASTEWATER AND SEWAGE TREATMENT MANAGEMENT INDUSTRY!

ACCREDITATIONS

100% QUALITY

RWTS aims to ensure reliable quality and delivery in our custom wastewater and water treatment plant, throughout the designing, build and service stages.

We harness the experience and expertise of our skilled employees to become the preferred partner to our clients. Our quality objective is to operate our business in a proactive manner that consistently exceeds the requirements and quality standards set by our stakeholders and ISO 9001.

To achieve this, we are committed to continuous improvement of our operations, products and services provided by our company.

OUR COMMITMENT TO THE ENVIRONMENT

RWTS takes a proactive and resourceful approach in wastewater and water treatment and recognises our responsibility in adopting environmentally sustainable practices. Our nationwide staff policy is in accordance with ISO 14001 and complies with environmental reporting and regulations.

Our progressive policy for waste disposal ensures resources are used sustainably and waste is disposed of responsibly.

OCCUPATIONAL HEALTH & SAFETY

Our priority at RWTS is ensuring that the safety and health of our employees, contractors, clients and visitors takes precedence in our everyday operations to achieve an injury-free work environment. We are dedicated to preventing work-related injury, ensuring compliance with workplace legislation and client requirements in addition to creating a safe, healthy and positive workplace. Our OHS policy is in accordance with ISO 4801 to ensure we protect the welfare, health and safety of all patrons.

We are committed to implementing continual improvement strategies and allocating resources in our endeavour to minimise risk in our workplace.

SPECIALTIES

At RWTS, we cater to all facets of wastewater and water treatment solutions. We offer a unique range of systems ready to for installation, as well as custom-designed equipment based on our clients project scope of works.

RWTS is proud to be acknowledged as specialists not only in the mining sector but across many industries. With extensive and proven field experience in regional and remote locations as well as the overseas markets, you can be confident in our design, construction and servicing.

CLIENT SERVICES

- Design
- Project Management
- Manufacturing
- Installation
- Commissioning
- After Sales Service
- Live Online Reporting System
- Quality Parts & Consumables
- Water Management Plans
- Equipment Hire
- Irrigation Field Monitoring
- Environmental Consultancy

INDUSTRY EXPERIENCE

- Mining & Resources
- Civil & Construction
- Oil & Gas (on and offshore)
- Remote Camps
- Agriculture
- Defence Force
- School Infrastructure
- Council Townships
- Food and Beverage production
- Landfill Leachate
- Hospitals and Health Care
- Abattoirs
- Emergency/Disaster Response

HOW CAN WE HELP YOUR COMPANY?

- Industrial Wastewater
- Mine Tailings
- Sewage Treatment
- Potable Water
- Industrial Process Water
- High Purity Process Water
- Bore Water
- River Water
- Sea Water
- Surface Water
- Rain Water
- Pumping Systems
- Effluent Disposal Systems
- Assisted Evaporative Disposal Systems (particularly with Evaporation Dams/Ponds requiring assisted losses due to high inflows/ loads)
- Application and Submission of Environmental Licensing to State Regulatory Authorities
- Site Systems Auditing
- Problem System diagnosis and reviews
- Site Maintenance Agreements one off, short and long term offerings
- Full Time Qualified Water and Wastewater Treatment Operations Agreements
- Water and Wastewater Operations Training Support and Competency Assessments
- Design, Design/Supply and Design/Supply/ Construct options
- Third Party Independent RPEQ design certification available via industry network members

ecoFarmer

Introducing the EcoFarmer series - The containerised, ‘PLUG AND PLAY’ wastewater treatment plants are designed for rapid deployment, providing ongoing wastewater treatment solution whilst also maintaining environmental site compliance.

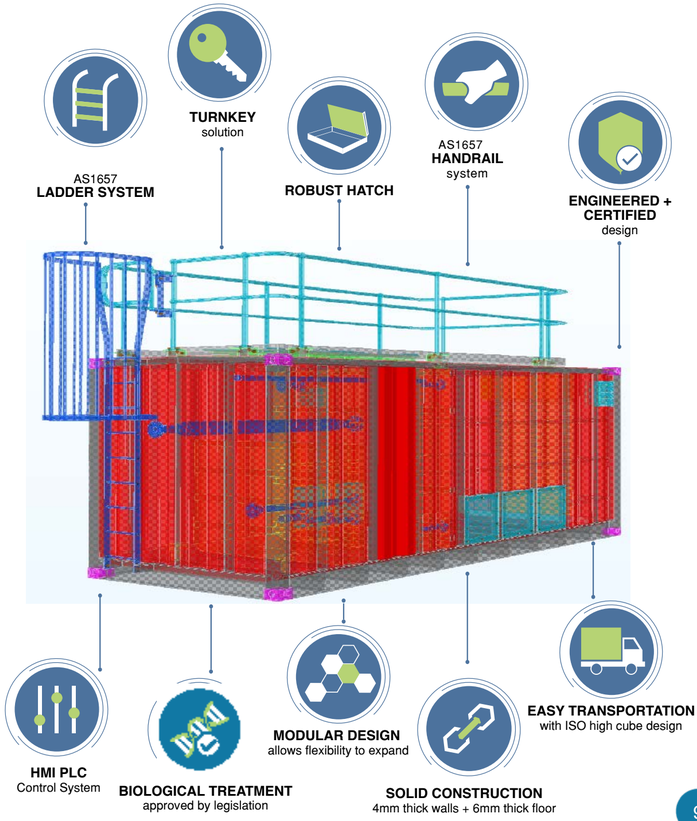
Each system is designed and built to cater beyond the unique needs of our valued clients, based in remote working camps across Australia and the Pacific. The EcoFarmer provides a cost-effective wastewater treatment solution, catering to the mining, gas and oil, disaster relief, defence and construction industries.

Utilising a durable and robust modular platform, the EcoFarmer includes a comprehensive 20 year structural guarantee, ensuring the long-term asset protection of your wastewater treatment investment.

The EcoFarmer is available in two standard sizes, 50 or 250, however multiple modular designs provide the perfect solution catering for larger permanent camp facilities. Our systems have been tried and tested throughout Australia and exceed the expectations of all state and territory legislation.

FEATURES

- Ideally transportable to regional and isolated destinations, where deployment is often difficult.
- Designed to ensure rapid commissioning on-site. Simply connect to power via an electrical plug of your choice and connect to water input and output by way of camlocks, or a customised hosing solution.
- Built and designed to exceed Australian standards and harsh environmental conditions
- Using the very best in automatic control solutions, systems can be configured for remote telemetry and remote control
- SAI Global Quality, Safety & Environmental Certifications
- Service, installation and maintenance packages available
- Low operational costs



BLACK DIAMOND
GROUP PROJECT

Client: Acciona and Black Diamond Group

Location: Fitzroy River, Central Queensland

Technology: Twin train Ecofarmer 250 series wastewater treatment plant

Industry: Agricultural

BACKGROUND:

Black Diamond Project Group were contracted to construct a workers accommodation village to accommodate 250 workers. The construction phase of the project saw the need for wastewater and water treatment to maintain vital village services.

Remote Water Treatment Services were successfully awarded a design and construct project to action a suitable wastewater treatment plant to cater for the Fitzroy River village waste water requirements.

RWTS SOLUTION - ECOFARMER 250:

RWTS provided a twin train Ecofarmer 250 series wastewater treatment system to cater for the village waste water requirements. We also completed the design and implemented the irrigation field evenly dispersing the treated water over 50 000 m2 through supported wastewater distribution networks.

In addition RWTS provided the potable water treatment system to cater for the village demands, where raw water was to be harvested from the lower Fitzroy region and delivered to the raw water storage tanks. As water is required for consumption through the camp the treatment process commences operation passing water through the array of water treatment specialty filtration modules and stored in treated water storage tanks. Water in the treated water storage tanks is continuously recirculated and monitored for Chlorine, Ph, conductivity and turbidity. RWTS also sized and installed the main village reticulation pumps ensuring potable water delivery to the village on demand.

Potable water treatment and water reticulation met. Waste water treatment and dispersal of final effluent met.

HEAVY VEHICLE WASH BAY

A AUTOMATED RECYCLED WASTE WATER TREATMENT FACILITY

HEAVY VEHICLE WASH BAY
- ORIGIN ENERGY

Client: Origin Energy & Sodexo

Location: Reedy Creek lay down facility

Technology: Heavy Vehicle Wash Bay

Industry: Energy

BACKGROUND:

Remote Water Treatment Services were successfully awarded a design and construct project to action a suitable wash bay treatment facility that would see the wastewater treated for reuse purposes.

Over the past decade we have continually seen so many vehicle wash bay systems under perform in their duty to treat water to an acceptable reuse standard leaving unsatisfactory and odorous water to wash and rinse whilst more importantly neglecting the impact on human contact.

RWTS SOLUTION - CUSTOM SOLUTION:

The RWTS treatment process included an oversized hydraulic advanced beach pit and sump design separating the initial heavier solids portion – water was then transferred to the designated raw water tanks where pumps continually recirculated and aerated the fluid to prevent stagnant water minimising ordure and keeping particles in suspense – batched through a Dissolved Air Flotation Process (DAF) with the correct chemistry applied – treated water was then pumped through a dual set of glass packed media filtration units and then onto treated water storage – treated water was continually recirculated and monitored for turbidity, ph, conductivity and free available chlorine levels. Once the fluid was corrected and in specification it was then released to the hose reels and automated system to begin its cycle.

Although these sound like relatively simple filtration methods, the systems flexibility in design saw an impressive automation and control platform setting it apart from all other systems on the market today.

The heavy vehicle wash bay was programmed and controlled through our sophisticated Allen Bradley software platform with high end analytical instruments used as reference all programmed and calibrated by the RWTS electrical division.

waterBOX

The WaterBox was engineered to solve two key pain points we've seen time and time again with water storage on remote sites throughout the Asia-Pacific region – poor mobility and time-consuming connection.

SEAMLESS TRANSPORTATION

The WaterBox is optimised for seamless transportation by any rail, shipping or freight service. This is a result of their external design as an international shipping container which ensures they are ideal for regional and isolated destinations where deployment is often difficult.

RAPID CONNECTION

The WaterBox can be commissioned on site in just 15 minutes. Simply connect to power via an electrical plug of your choice and connect to water by way of camlocks or a customised hosing solution.

Four-inch suction also allows the WaterBox to be emptied in the shortest possible time.

FEATURES

- Built and designed to exceed Australian standards and harsh environmental conditions
- Using the very best in automatic control solutions, PLC and HMI systems can be configured for remote telemetry and remote control
- Equal Assurance Global Quality, Safety & Environmental Certifications
- Service, installation and maintenance packages available
- Low operational costs

BLADDER TANKS

LIQUID STORAGE

The versatile tank that can accommodate all types of liquids (water, drinking water, wastewater, fuels/hydrocarbons, chemicals, effluents...).

Easy transportable and commissioned liquid storage is limited – there's no doubt about it. RWTS's bladder tanks provide a reliable easy transportable and commissioned liquid storage solution that adapts for all short or long temporary needs.

> **Bladder tanks are made of high density and resistance woven Polyester (PES) with a reinforced PVC or Polyurethane coating layer for durability and strength.**

Liquids stored safely and fully enclosed in the bladder tank, limited air exposure keeping liquids free from risks of oxidation, condensation or evaporation. Furthermore, unlike steel tanks, bladder tanks will not rust or corrode. Bladder tanks are constructed to ensure sturdiness and longevity in your investment.

ULTRAFILTRATION
MEMBRANE MODULES

Our high-performance Ultrafiltration Membrane Modules provide premium treatment to raw water sources, removing even the most undetectable suspended substances, microorganisms, colloids and impurities.

THE RWTS ADVANTAGE

- Apertures evenly distributed with high precision
- High and stable flux rates
- Low operating costs
- Easy maintenance
- Long service life
- Hydrophilic-improved PVC membrane
- Unique anti-fouling membrane coating
- High physical tensile strength and chemical resistance

FEATURES

- NSF Certified membranes
- Ultra-filtration technology ensures the continuous supply of safe drinking water 24/7
- Siemens HMI Interface for operator control
- Remote telemetry functionality for remote access and alarming (optional)
- Automated enhanced back flushing for enhanced filter rejuvenation (optional)

VEOLIA ENERGY
PROJECT

Client: Veolia Energy; University of the Sunshine Coast (USC)

Location: Sunshine Coast, Queensland

Technology: Ultrafiltration

Industry: Infrastructure – School and Universities

BACKGROUND:

The University of the Sunshine Coast (USC) is a leading tertiary education provider, catering to over 11,000 students on Queensland's Sunshine Coast. USC prides themselves on their commitment of sustainability; with an active program to better manage waste, water and recycling. In an effort to minimise the use of potable water from the local council, USC engaged Veolia Energy to implement a ultrafiltration system (UF). RWTS were subcontracted to design and manufacture the water waste management system.

RWTS SOLUTION - ULTRAFILTRATION SYSTEM:

RWTS developed an ultrafiltration system (UF), with pre-filtration to purify the raw lake water. This removed all suspended solids and microbes to ensure high quality treated water.

RWTS needed to design the system to be capable of treating up to 10 kL of net permeate production. Advanced UF modeling software allowed RWTS to develop the basis of the water reclamation design, that was signed off by Veolia Energy engineers.

The waste generated from the ultrafiltration (UF) system through chemical cleans and enhanced backwashes was captured into a waste holding tank. It then underwent a staged correction process with validation prior to the release to the council sewer network. This process was approved by the contractor and local plumbing council, meeting the strict trade waste guideline release limits.

The operating system included an Allen Bradley PLC with HMI screen. Functional description (FD) was written and programmed by our in-house electrical division for approval by Veolia Water. The water reclamation system build saw RWTS use quality analytical and pumping components from trusted suppliers, including Grundfos, Burkert and IFM.

DESALINATION
SYSTEMS

RWTS's Desalination Systems harness saltwater reverse osmosis (SWRO) to recover high quality potable water from the earth's most abundant reservoir – the ocean. Desalination is a trusted technology that currently provides around 95.37 million m^3 of potable water to the world per day. In a world where only 3% of our water is fresh water and its scarcity is growing, our desalination systems offer security.

AUSTRALIAN-MADE
and designed by our experienced engineers to meet the highest standards in quality and safety

COMPLETE AUTOMATION
for reliability with minimal operator intervention

REMOTE TELEMETRY
for 24/7 monitoring and expert support

CUSTOMISATION
to meet client objectives, ensuring optimal performance and efficiency

MODULARITY
to enable your system to expand as your water needs do

CONTAINERISED DESIGN
to enable seamless deployment and superior flexibility

REVERSE OSMOSIS
SYSTEMS

Reverse Osmosis is a modern technology used to purify water through the removal of trace elements and a selection of chemicals, hormones, salts and solutes.

The RWTS Industrial Reverse Osmosis Systems integrate complete and proven pre-engineered designs, featuring user-friendly automation and control, superior construction and easy access for maintenance and installation.

Our systems can assist in energy conservation, reducing the quantity of water required for operation and even provide for water recycling. Up to 1.5 million litres of consistent high quality water can be produced per day.

ADDITIONAL OPTIONS

- Low energy membranes (150 psi / 225 psi)
- High water recovery operation (based on feed quality)
- Output controlled operation with variable speed drive
- Reject water recovery and reuse systems
- Feed water ORP and pH
- Clean in place (CIP) systems
- Digital smart meters

RWTS specialises in tailored RO systems, complete with any necessary pre-filtration requirements based on your project scope of works. Working with our in-house team of experienced engineers, we can design, construct and install the ideal solution for your project whilst providing only the best quality of product and service.

WESTGOLD RESOURCES
PROJECT

Client: Westgold Resources

Location: Western Australia

Technology: EcoFarmer Wastewater Treatment Plant and Brackish Water Reverse Osmosis System

Industry: Mining

BACKGROUND:

Westgold Resources, a top 10 Australian gold producer, recently began operations on their fourth Western Australian project – Cue Gold Operations. In order to manage the wastewater of their 200-man remote accommodation village at the Big Bell Underground Mine, Westgold approached RWTS to design and manufacture a wastewater treatment system. This same site also required a water treatment system to transform he local raw (bore) water into high quality drinking water as deemed by the Australian Drinking Water Guidelines.

RWTS SOLUTION:

RWTS designed and manufactured a reverse osmosis potable water treatment system to meet the potable water requirements of the Westgold Big Bell remote workers' village.

As the industry specialist in packaged water treatment systems, we decided to containerise the RO system. This allowed for ease of transportation and protection of the system from harsh rural environmental conditions.

For optimal insulation, the internal plant room was lined with 75 mm foam-filled paneling on the walls and ceiling, and air-conditioning system was integrated to ensure ideal operating temperature through the hotter and cooler months.

The treated water recirculation monitoring and dosing control platform was our internal proprietary offering. This specialist feature is able to measure chlorine pH and conductivity, utilising the new range of Burkert flow fit cubes with gateway Ethernet, and display these levels in real-time on the PLC HMI plant platform.

Our internal programming and instrumentation division designed and custom-built the HMI to be single interface of all plant monitoring, streamlining plant observation and operation. This feature allows Westgold to reduce operating costs and rapidly identify and respond to any potential issues.

GRIFFITH UNIVERSITY -
RO WATER TREATMENT SYSTEM

Client: Griffith University

Location: Brisbane

Technology: Reverse Osmosis water treatment system

Industry: School Infrastructure

BACKGROUND:

Griffith University recently constructed a high end laboratory in their new state of the art 'Aviation Building'. Griffith University required purified water for cooling, cleaning and sampling and testing requirements, within these laboratories.

RWTS were successfully awarded the contracted portion to supply a suitably design two pass Reverse Osmosis (RO) water treatment system, with pre-filtration and loop line disinfection to supply demineralised water to the laboratory sinks at a nominated flow rate.

RWTS SOLUTION - CUSTOM SOLUTION:

The Griffith University reverse osmosis and demin polishing system uses RO technology to remove dissolved salts from a suitable raw water source.

The system designed and built for Griffith University is configured specifically for slightly variable raw water TDS to accommodate seasonal changes in raw water quality being delivered by Urban Utilities.

The RO water treatment system is designed using a staged approach.

The first stage, "Pre-treatment" removes suspended solids down to 1 micron in size, stripping the total chlorine from the water and removing calcium/magnesium hardness, iron, manganese and aluminum, before the final treated water is fed to the RO system for further treatment.

The reverse osmosis water treatment system is a "double pass" system, with the permeate from the first pass sent through a second pass to produce a high quality permeate that is always less than 1 us/cm in quality and typically averages less than 0.5 us/cm.

The last stage of treatment is ultraviolet disinfection combined with mixed bed demineralisation resin, which removes bacteria and trace solutes such as sodium and chloride down to extremely low levels, to produce a treated water quality that is as low as 0.1us/cm in quality.

CHEMICAL DOSING
SYSTEMS

Chemical dosing systems are designed to provide an accurate, precisely measured delivery of a chemical or nutrient, in liquid or powdered form, to a medium such as water – to meet a specifically required outcome or reaction.

RWTS offers a wide range of chemical dosing systems, from basic pH correction systems to fully automated, complex dosing systems. We harness the latest technology developments in the chemical delivery market, which allows us to provide an extensive selection of system designs for our clients individual project requirements.

OUR CHEMICAL DOSING SYSTEMS COVER:

- Chemical supply, including most standard chemicals
- Dosing pumps and accessories
- Dosing skids
- Chemical bunds
- Chemical tanks
- Dangerous goods containers
- Specialised chemical containers with inbuilt bunding

At RWTS we custom build our dosing skids and containers to suit the requirements of our clients, whether this be a simple dosing system or a unique design integrating multiple dosing pumps and analysers. We understand no two projects are the same.

TAILORED CHEMICAL DOSING SYSTEMS

Our experienced engineers and manufacturing team have the expertise to tailor a system for almost any conceivable application, including:

- Production of potable (drinking) water from surface or underground water sources
- Treatment of wastewater and sewage effluent
- Treatment of industrial waste streams
- Mining and metals processing
- Pharmaceuticals production
- Food processing production and waste treatment
- General water and wastewater treatment
- Treatment of leachate and tailings from mining and refuse facilities
- Remediation of soils and water bodies on contaminated sites
- Advanced destruction of water borne compounds (such as arsenic and cyanide)
- Pathogen and hormone destruction
- Agriculture – nutrient delivery and online fertiliser injection programs for crop yield optimisation
- Advanced oxidation methods for unique applications such as PCB destruction.

yield optimisation

EQUIPMENT HIRE

For a short-term and cost effective solution, we offer a wide range of our state-of-the-art wastewater and water treatment systems for hire. Ensure consistent, reliable operation and optimal performance for your project without any considerable investment.

The RWTS Hire Range includes:

WASTEWATER BIOLOGICAL TREATMENT systems
20 – 1000 man camps

CONTAINERISED DRINKING WATER treatment systems

Containerised **DRINKING WATER COOLING** systems

ULTRAFILTRATION systems

REVERSE OSMOSIS systems

CHEMICAL MONITORING & INJECTION systems

PUMPING SYSTEMS and solutions

Approved containerised **POTABLE WATER STORAGE** solutions

Containerised **BLACK & GREY WATER STORAGE** solutions

ON-SITE
MAINTENANCE

SECURE THE LONG TERM VALUE
OF YOUR WATER TREATMENT INVESTMENT

Servicing and feeding your waste water infrastructure regularly will ensure you are maximising the lifelong protection and sustainability of your water treatment system. RWTS Preventative Maintenance provides added assurance that your asset is regularly monitored and serviced to void any expensive environmental or safety violations. RWTS offer regular wastewater treatment system maintenance and support for array of different types and scales of installations.

24/7 SUPPORT AND EMERGENCY RESPONSE

At RWTS we understand the challenges of supporting and Maintaining water and wastewater treatment infrastructure. Our emergency breakdown and support crew are quick to respond, providing 24-hour emergency response services and ongoing support to ensure consistent, reliable operation and optimal performance of your water treatment systems.

OUR MAINTENANCE COMMITMENT

- **Our NATA Accredited Technicians -** Can ensure that your water treatment system is designed and operating to the highest standard, guaranteeing the quality of treated effluent and, most importantly, the safety of those utilising the water supply.
- **Extensive Diagnosis -** Through an extensive site audit, including a full assessment of the design, overall hardware status, site operating conditions and operational experience of maintenance personnel, RWTS will pin-point the underlying cause of any operational problems and devise a tailored solution to rectify issues and maximise productivity and minimise long term issues that may become quite costly.
- **Ongoing Maintenance -** We set you on a regular service cycle providing reminder calls when your sewage treatment system service is due or we can automatically drop in on the scheduled cycle.
- **Compliance With All Relevant Regulations -** At Remote Water Treatment Services, we are committed to the compliance of all systems with relevant regulations and legislation, including the Australian Drinking Water Guidelines, to provide you with peace of mind. RWTS Preventative Maintenance provides added assurance that your asset is regularly monitored and serviced to void any expensive environmental or safety violations. and, most importantly, the safety of those utilising the water supply.

REMOTE WATER TREATMENT SERVICES

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