



PACKAGED SEWAGE
TREATMENT PLANTS



▼ **Over 150 installations and a world of expertise**



- ▼ Roadtrain® packaged plants by Hydroflux Epco have been in operation since the late 1960's. Applications include sewage treatment for towns, villages, resorts, mine sites and gas exploration fields.

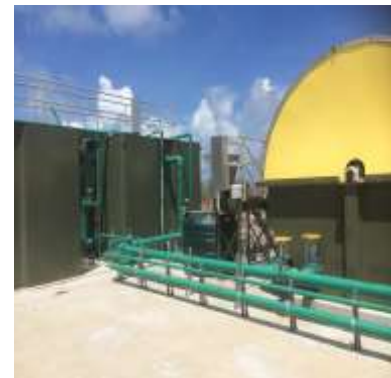
The systems are designed to operate with a minimum level of site attendance and are ideally suited to remote locations.

Design Configurations

▼ Roadtrain® packaged plants are available in three process designs as follows:

- Extended Aeration Activated Sludge Process
- Rotating Biological Contactor
- Membrane Bioreactor

The selection of the most appropriate process is dependant upon the available footprint, site location and discharge requirements



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Key Features



- ▶ Extensive expertise with specific designs for remote locations
- ▶ Robust construction, proven throughout Australia, the Middle East, Pacific Islands and South East Asia
- ▶ Unattended operation
- ▶ High discharge water quality (options for Class A reuse)
- ▶ Special bolted designs for very remote locations
- ▶ Easily shipped to anywhere in the world
- ▶ Remote monitoring available with HyConnect®

Plug and Play Arrangements

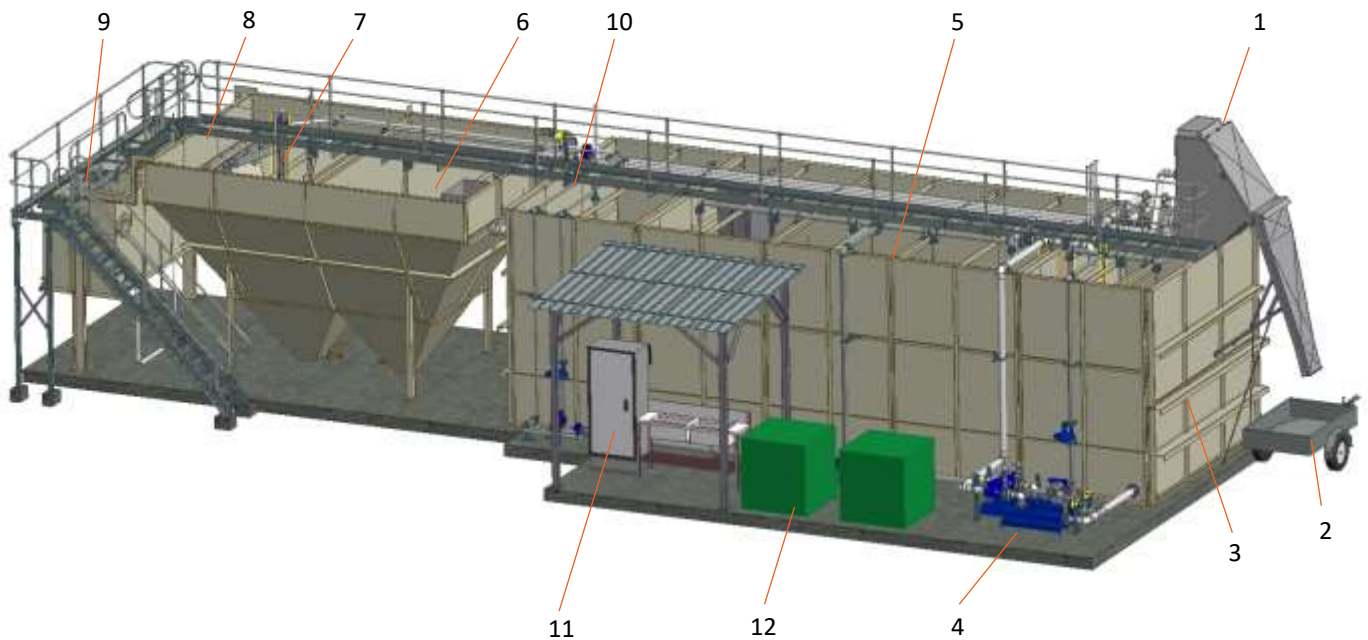


Applications

- ▼ Towns and Villages
- ▼ Resorts
- ▼ Mining Accommodation Camps
- ▼ Oil Exploration Fields
- ▼ Development Estates



Typical Components



▼ Roadtrain® Packaged Sewage Treatment Plant

- | | |
|-----------------------|---|
| 1. Inlet Screen | 7. Airlift Driven Sludge & Scum Returns |
| 2. Screenings Trailer | 8. Effluent Trough |
| 3. Balance Tank | 9. Chlorine Detention Tank |
| 4. Forward Flow Pumps | 10. Waste Activated Sludge Digester |
| 5. Aeration Tank | 11. Control Panel |
| 6. Clarifier | 12. Blowers |

References

- ▶ Masig Is, QLD Australia
 - 135 m³/d capacity
 - Marine discharge to Great Barrier Reef with partial reuse
 - Based on RBC technology
- ▶ Lihir Is, PNG
 - 600 m³/d capacity
 - Based on circular bolted design with central clarifier
 - Environmental discharge
- ▶ Marmul Oilfield, Oman
 - 350 m³/d capacity
 - Extended aeration process
- ▶ Channel Is Power Station, NT Australia
 - 1 x 30 m³/d system
 - Extended aeration packaged plant



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System Designs



▼ Roadtrain® - Rectangular Design

- Extended aeration process. Can be configured for nutrient removal
- Optional bolted design to allow flat packing and shipment to very remote locations.
- Simple onsite installation
- High quality effluent discharge with optional tertiary systems for reuse
- Remote monitoring with HyConnect®

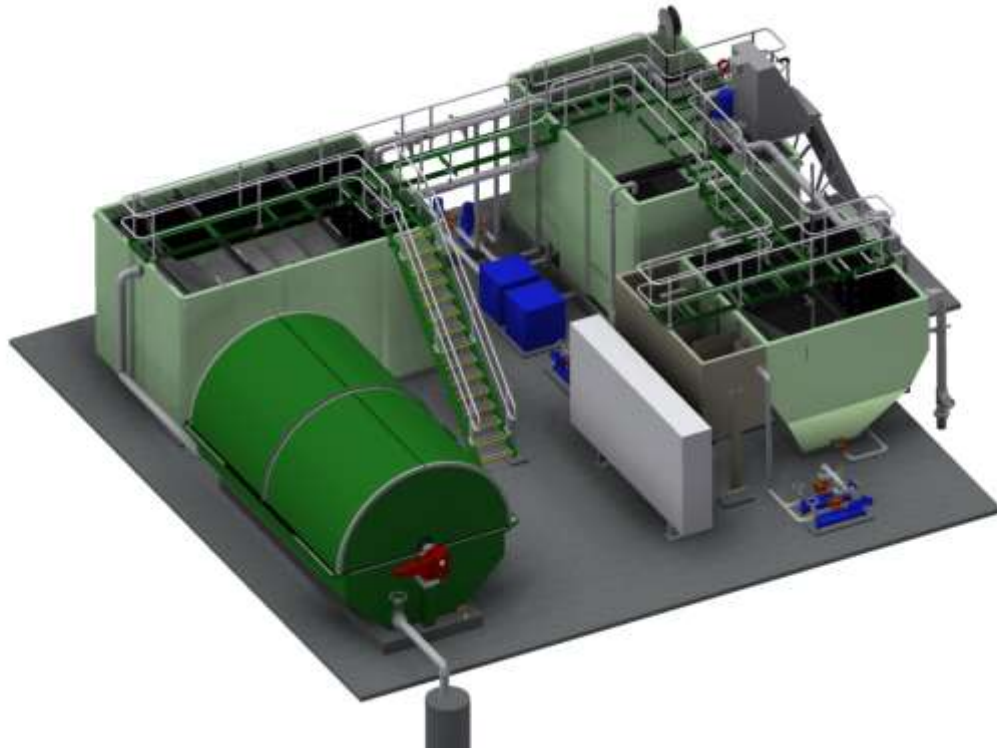
System Designs



▼ Roadtrain® - Circular Design

- Extended aeration process. Can be configured as MLE process for nutrient removal
- High Capacities up to 5000EP
- Optional bolted design to allow flat packing and shipment to very remote locations.
- Simple bolted connection onsite
- High quality effluent discharge with optional tertiary systems for reuse
- Remote monitoring with HyConnect®

System Designs



▶ Roadtrain® - Rotating Biological Contactor Design

- Ideally suited for unattended sites in remote locations
- Inclusive of primary and secondary clarification steps
- Can be configured for nutrient removal
- High quality discharge with optional tertiary treatment
- Low operating costs

For any remote location



Optional Features

▶ Inlet Works Screening

Raw sewage is either screened using a static screen, or an automatic mechanical screen.

Grit removal can be incorporated in the mechanical screen package



▶ Aeration Systems

Typically fine or medium bubble submerged diffusers.



▶ Sludge Management

Typically pumped to a storage tank for offsite disposal, or to drying beds for dewatering and drying.

Options for digestion and mechanical dewatering are also available.

▶ Water Reuse

Tertiary treatment with sand or membrane filtration can allow reuse for fire fighting, toilet flushing or irrigation

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Build Specification

- ▶ Roadtrain® packaged plants are typically fabricated from painted steel, in either fully welded or bolted configurations.

The following table summarises the major components and their materials. Variations on the material specifications can be made, please consult Hydroflux Epco for further detail.

SECTION	SPECIFICATION
Inlet Screen	Stainless steel
Balance Tank	Painted steel tanks
Reactor Tanks	Painted steel tanks
Pipework	PVC/ABS
Diffusers	Stainless steel/PVC
Clarifier Internals	Stainless steel wetted parts
Sludge Drying Beds	Concrete

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Hydroflux Epco is GRS Certified to the following standards



ISO 9001 QUALITY MANAGEMENT SYSTEM

ISO9001:2015 Certified by GRS under certificate number 4779001610007.



ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM

ISO 14001:2015 Certified by GRS under certificate number 47714001610007.



OHSAS 18001 & AS/NZS 4801 SAFETY MANAGEMENT SYSTEM

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