

AdvanTex® Wastewater Treatment Systems for Campgrounds, Parks and Conferences Centers

A Cost Effective and Resilient Solution

Project Examples



Campgrounds, parks and conferences centers are known for being very busy for short periods of the year, followed by periods of no use.

Having a wastewater system that is designed to perform highly despite intermittent usage, as well as making no noise or smell, is critical to appropriately service such sites.

Innoflow has designed, installed and maintained many wastewater systems around New Zealand, Australia and the Pacific Islands, and this document shows just a few examples. One technology Innoflow supplies (AdvanTex® recirculating packed bed reactors) provides a number of key advantages to campgrounds, parks and conference centers, including;

- simple design, largely passive, and resilient to fluctuating use
- scalable construction, allowing for system to expand as sites become busier or if there are plans for future development
- easy retrofit options for sites with existing wastewater tanks or infrastructure
- very low ongoing operating costs
- high quality components with long warranties (e.g. 5-year warranty on system)
- minimal visual impact and no noise
- produces consistently high quality treated effluent for effective reuse and land irrigation

Please contact Innoflow on +64 9 426 1027 or info@innoflow.co.nz should you require a design and cost for a wastewater system.



Tawharanui Regional Park (Stage 1) (Auckland, New Zealand)

Installation date: 2020

Usage and design summary:

- Occupancy: 1,500-day visitors and 320 stayers at campground
- Peak volume: 21,400 L/day
- Required effluent quality:
BOD₅ :<20mg/L
TSS:<30 mg/L
- Land application method:
highly treated effluent applied to 7,130 m² pressure compensating dripline field

Wastewater system components:

- 3 x 25,000 L pumped septic tanks at toilets, to provide primary treatment
- 800m of liquid only pressure sewer
- AdvanTex AX300 wastewater treatment plant, to provide secondary treatment
- 7,130 lineal meters of pressure compensating dripline, laid on surface through bush



Kiwi Corral Country Backpackers (Bay of Plenty, New Zealand)

Installation date: 2018

Usage and design summary:

- Occupancy: lodgings for 500 people
- Peak volume: 60,000 L/day
- Required effluent quality:
BOD₅ :<10mg/L
TSS:<10 mg/L
E. coli: <1,000 cfu/100mL
- Land application method:
highly treated effluent applied to 1,650 m² (high infiltration) shallow pressurised dispersal trenches

Wastewater system components:

- 3 x 25,000 L pumped septic tanks, to provide primary treatment
- AdvanTex AX1200 wastewater treatment plant, to provide advanced secondary treatment
- Ultraviolet disinfection unit, to provide tertiary treatment
- 175 lineal meters of 0.3m wide, high infiltration, shallow pressurised dispersal trenches





Karamatura Falls Track (Auckland, New Zealand)

Installation date: 2019

Usage and design summary:

- Occupancy: 200-day visitors
- Peak volume: 2,000 L/day
- Required effluent quality:
BOD₅ :<15mg/L
TSS:<15 mg/L
- Land application method:
highly treated effluent applied to 667 m² pressure compensating dripline field

Wastewater system components:

- 1 x 25,000 L septic/buffer tanks at toilets, to provide primary treatment
- AdvanTex AX40 wastewater treatment plant, to provide secondary treatment
- 667 lineal meters of pressure compensating dripline, mole-ploughed in paddock



Photo credit: Ourauckland.aucklandcouncil.govt.nz



Mahurangi Regional Park (Auckland, New Zealand)

Installation date: 2016

Usage and design summary:

- Occupancy: 1,200-day visitors, 40 stayers at campground, rangers dwelling and workshop
- Peak volume: 14,200 L/day
- Required effluent quality:
BOD₅ :<15 mg/L
TSS:<15 mg/L
- Land application method:
highly treated effluent applied to 4,730 m² pressure compensating dripline field

Wastewater system components:

- 2 x 25,000 L pumped septic tanks at toilets, to provide primary treatment
- 100m of liquid only pressure sewer
- AdvanTex AX200 wastewater treatment plant, to provide secondary treatment
- 4,730 lineal meters of pressure compensating dripline, laid on surface through bush



Whangapoa Beach Public Toilets (Coromandel, New Zealand)

Installation date: 2019

Usage and design summary:

- Occupancy: 1,000-day visitors
- Peak volume: 10,000 L/day
- Required effluent quality:
BOD₅ :<20 mg/L
TSS:<30 mg/L
- Land application method:
highly treated effluent applied to 400 m² deep trenches

Wastewater system components:

- 2 x 25,000 L pumped septic tanks at toilets, to provide primary treatment
- 100m of liquid only pressure sewer
- AdvanTex AX200 wastewater treatment plant, to provide secondary treatment
- 10 x 20m long by 0.3m wide by 1.5m deep trenches



Hot Water Beach Public Toilets (Coromandel, New Zealand)

Installation date: 2018

Usage and design summary:

- Occupancy: 1,000-day visitors
- Peak volume: 10,000 L/day
- Required effluent quality:
BOD₅ :<20 mg/L
TSS:<30 mg/L
- Land application method:
highly treated effluent applied to 1,250 m² pressure compensating dripline

Wastewater system components:

- 1 x 15,000 L buffer tank
- AdvanTex AX200 wastewater treatment plant, to provide secondary treatment
- 1,250 lineal meters of pressure compensating dripline, laid on surface through bush





Glendhu Bay Holiday Park (Otago, New Zealand)

Installation date: 2011

Usage and design summary:

- Occupancy: 420 campsite and lodging for 60 people
- Peak volume: 150,000 L/day
- Required effluent quality:
BOD5 :<20mg/L
TSS:<20 mg/L
TN:<25 mg/L
E. coli: <100 cfu/100mL

Wastewater system components:

- Grease traps at kitchen
- Pumped septic tanks at toilet blocks around site, to provide primary treatment
- AdvanTex AX-MAX wastewater treatment plant, to provide secondary treatment with nitrogen removal process (including chemical dosing)
- Ultraviolet disinfection units, to provide tertiary treatment
- 6,000 m³ of low-pressure effluent disposal trenches



Glentanner Holiday Park (Canterbury, New Zealand)

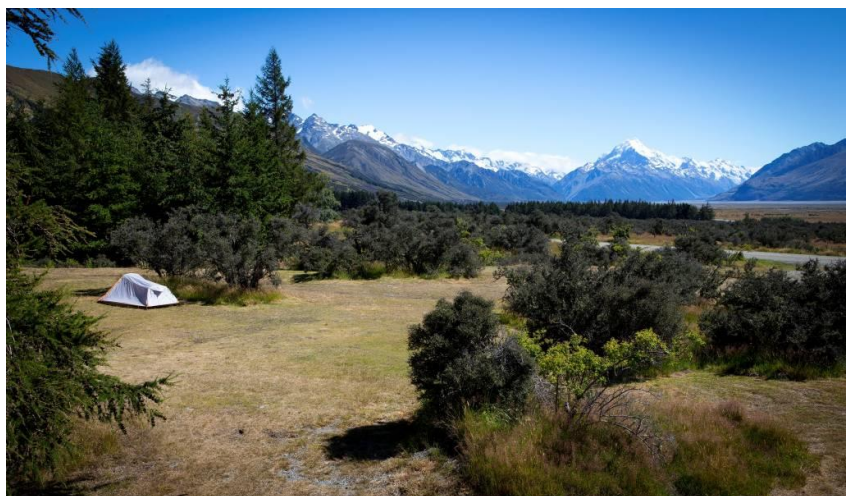
Installation date: 2017

Usage and design summary:

- Occupancy: 246 campers
- Peak volume: 16,000 L/day
- Required effluent quality:
BOD5 :<20mg/L
TSS:<30 mg/L

Wastewater system components:

- AdvanTex AX300 wastewater treatment plant, to provide secondary treatment
- 80 m³ of conventional beds





The Galston Gorge Conference & Recreation Centre (New South Wales, Australia)

Installation date: 2018

Usage and design summary:

- Occupancy: conference center users and campers
- Peak volume: 30,000 L/day
- Required effluent quality:
BOD5 :<20mg/L
TSS:<30 mg/L
TN:<30 mg/L
E. coli: <30 cfu/100mL



Wastewater system components:

- Grease traps at kitchen
- 1 x 55,000 L buffer tank
- Pumped septic tanks at toilet blocks around site, to provide primary treatment
- AdvanTex AX400 wastewater treatment plant, to provide secondary treatment with nitrogen removal process (including chemical dosing)
- 7 x 55,000 L treated effluent storage/buffer tanks
- Ultraviolet disinfection units, to provide tertiary treatment
- Highly treated effluent discharged to a combination of pressure compensating dripline and Wisconsin mounds for further land treatment

Contact Innoflow for Design and Pricing Information

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