



# Landfill Leachate Management and Treatment

Earth Systems has specialist expertise in the management and treatment of landfill leachate and other contaminated effluent streams. We offer an integrated range of water treatment and management solutions, from site assessment and development of effective and cost-efficient treatment strategies, to water quality monitoring, treatment equipment and regulatory approvals.

Earth Systems has a dedicated Water Management Team that has been providing cost-effective and innovative solutions for water quality issues for over 20 years. Our experienced specialists have extensive experience in the development of landfill leachate treatment and management strategies that fulfil compliance requirements while maximising cost-effectiveness and the use of passive treatment and management processes compatible with long-term goals of eventual rehabilitation and closure.

## SERVICES PROVIDED

Some of the services provided by Earth Systems for management of landfill leachate include:

- Evaluation of site water quality issues and development of integrated water management and treatment strategies.
- Comprehensive risk assessment including environmental, operational, technical, social and financial risks.
- Development of effective and cost-efficient water quality monitoring programs with a focus on cost-saving and compliance-improving monitoring approaches and technologies.
- Site water balance and hydrological modelling.
- Holistic site water management and leachate minimisation strategies aimed at minimising the long-term cost of leachate treatment and management.
- Specialist passive bioremediation treatment system design including wetlands and anaerobic and aerobic treatment cells.

## THE EARTH SYSTEMS ADVANTAGE

- A positive working relationship with environmental regulators and government departments in many jurisdictions of Australia.
- Comprehensive understanding of leachate chemistry and treatment mechanics.
- Focus on a scientific basis for treatment system design supported by field testwork and monitoring in order to achieve tailored solutions offering effective results at lowest cost and with high reliability.

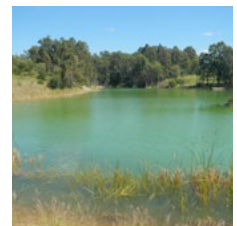


- Easy to understand management advice and recommendations.
- Access to the latest in water quality monitoring technologies and innovative treatment strategies.

## EXPERIENCE

Recent Earth Systems projects involving leachate treatment/management and/or effluent treatment strategy design include:

- Investigation and design of an innovative waste-to-resource and passive wetland-based landfill leachate management and treatment strategy for a municipal landfill in northern Tasmania.
- Design of landfill leachate treatment wetlands for a municipal landfill in southern Tasmania.
- Long-term landfill leachate management for a landfill site in Queensland.
- Odour and leachate management and treatment for a landfill site in Canberra.
- Design of stormwater treatment wetlands for a creek in southern Tasmania.
- Assessment and improvement of the performance of a wetland system at a gold mine in western Tasmania.
- Conceptual design of a water treatment plant for a base metal mine in western Tasmania.



### AUSTRALIA

[earthsystems.com.au](http://earthsystems.com.au)

#### MELBOURNE

14 Church St  
Hawthorn, 3122  
Victoria  
+61 3 9810 7500

#### PERTH

Suite 5  
1200 Hay Street  
West Perth, 6005  
Western Australia  
+61 8 6161 4194

#### BRISBANE

PO Box 541  
Lutwyche, 4030  
Queensland  
+61 7 3129 6075

#### DARWIN

PO Box 1228  
Nightcliff, 0810  
Northern Territory  
+61 423 618 124

### AFRICA

[earthsystemsafrika.com](http://earthsystemsafrika.com)

#### DAKAR

3ème étage  
Route de l'aéroport  
Ngor, Dakar  
Senegal  
+221 3386 83023

#### KIGALI

25 Benjamina St  
(KG412),  
Gacuriro, Kigali  
Rwanda  
+250 787 807 499

### ASIA

[earthsystemsasia.com](http://earthsystemsasia.com)

#### VIENTIANE

Suite 502, 23 Singha  
Road, Ban Nongbone,  
Xaysetha, Vientiane.  
Lao PDR  
+85 621 454 434

### CHINA

[earthsystems.com.cn](http://earthsystems.com.cn)

#### SHANGHAI

19F World Plaza  
855 Pudong South Rd  
Shanghai, 200120  
China  
+86 216 887 2968

### EUROPE

[earthsystemseurope.com](http://earthsystemseurope.com)

#### BRISTOL

Suite 104, CityPoint  
Temple Gate  
Bristol, BS1 6PL  
United Kingdom  
+44 117 373 6153