



Tonkin & Taylor

Biosolids disposal and energy recovery

The term biosolids covers the many forms of high liquid wastes from sewage treatment plants, and the characteristics of these biosolids affect methods of disposal and the potential for energy recovery. To reduce potential impacts on the food chain and groundwater resources disposal to the marine environment has been greatly reduced, as has spreading of biosolids on agricultural land.

Consequently, biosolids disposal methods have developed and changed over the years. Different methods have been developed including: landfill monofills, co-disposal with municipal solid waste, anaerobic digestion and incineration. Each has advantages and disadvantages, and choices are dependent upon the regulatory environment, sustainability considerations, and practicality.

Expertise

Tonkin & Taylor offers expertise in:

- Generation assessments based on population and treatment methods
- Disposal options and sustainable practices and planning
- Energy recovery from biosolids.

Experience

Our experience covers various facets of biosolids disposal:

- Disposal options in an international context
- Dewatering and stabilisation

- Monofill landfill design and operation
- Co-disposal with municipal solid waste and its effect on
 - Landfill gas production
 - Leachate quality and quantity
 - Waste degradation rates
 - Geotechnical stability
 - Landfill operations
- Large scale trials investigating the effects
- Anaerobic digestion coupled with energy recovery.

Key projects

Wellington - Biosolids Co-composting plant AEE and design

Auckland - Biosolids landfill and gas collection

Whangarei - Anaerobic digestion of meatworks waste

Pacific islands - Biosolids generation and energy recovery assessment

Hong Kong - Biosolids co-disposal to landfill

New Zealand landfills - Assessments of biosolids handling and stability issues.

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