

Improved Landfill Management

Water Management and Leachate

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Key messages in water management

- Keep clean and dirty water separate
- Minimise generation of dirty water/leachate
- Beneficially reuse where possible:
 - Dust suppression
 - Irrigation of rehabilitation areas
 - Recirculation in bioreactor
- Monitor releases
- Treat as required

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Large catchment upslope of landfill requires significant stormwater diversion



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Stormwater diversion around landfill



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Vegetated stormwater diversion swale



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Stormwater diversion and sediment control



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Stormwater management



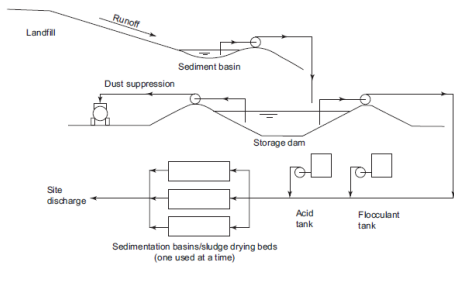
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Stormwater pond (water tested pre-release)



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Stormwater management schematic



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Stormwater management plan

- Initial site layout

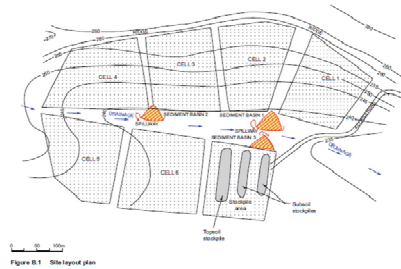


Figure B.1 Site layout plan

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Stormwater management plan

- Year 5

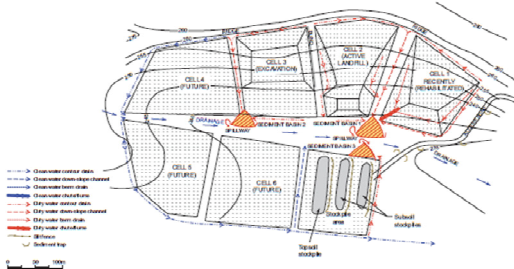


Figure B.2 Site layout and drainage plan - year 5

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Stormwater management plan

- Year 10

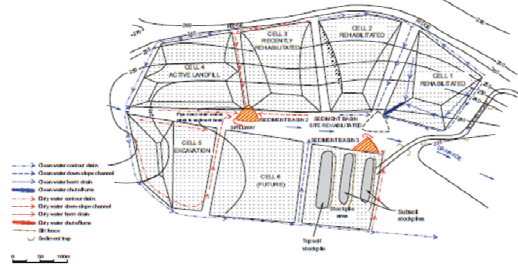


Figure B.3 Site layout and drainage plan - year 10

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Stormwater management plan

- Year 15

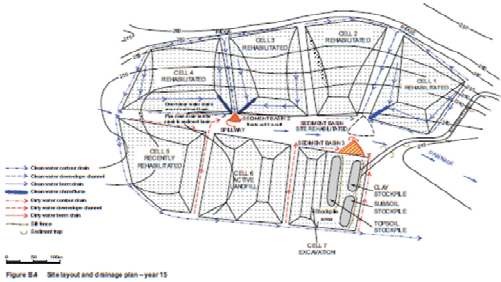


Figure 8.6 Site layout and drainage plan – year 15

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Leachate seepage into stormwater drain - stormwater must be treated as leachate



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Leachate pump well



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Final HDPE cell cover and leachate pond



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Leachate pond, Lucas Heights landfill

- Access for sampling and flocculation



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Irrigation of rehabilitation area



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Buttonderry landfill, NSW – irrigation of rehabilitated area



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Heat exchanger captures heat from leachate



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