



## Economic Review Waste Facility Future Options

Shire of Donnybrook-Balingup



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Advice  
Service  
Knowledge

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## EXECUTIVE SUMMARY

The Shire of Donnybrook-Balingup (the Shire) engaged ASK Waste Management (ASK) to complete a comprehensive economic review of future options to manage waste received at the Donnybrook Waste Management Facility (DWMF).

These Options include:

- Option 1a: DWMF Extension – Phase 1
- Option 1b: DWMF Extension – Phase 1 & 2
- Option 2a: Construction of a transfer station and disposal at BHRC as customer
- Option 2b: Construction of a transfer station and disposal at BHRC as member Council
- Option 2c: Construction of a transfer station and disposal at Cleanaway as customer.

### Estimated waste tonnage

The DWMF does not have a weighbridge, therefore the total waste disposed of has been estimated based on the average of three methods of data extrapolation, resulting in an estimated 5,300tpa  $\pm$  20%. N.B. this total does not include the materials recycled via the organics and packaging recyclables MGB service.

Table 1: Estimated tonnage data used

| Waste Quantity                 | Tpa (rounded) |
|--------------------------------|---------------|
| BTS (Domestic drop-off only)   | 500           |
| BTS (Commercial drop-off only) | 0             |
| DWMF Domestic - Drop Off       | 1,250         |
| Domestic - MGBs                | 1,600         |
| Commercial MGB                 | 350           |
| Commercial waste               | 600           |
| C&D Waste                      | 1,000         |
| Asbestos                       | 0             |
| <b>Total</b>                   | <b>5,300</b>  |

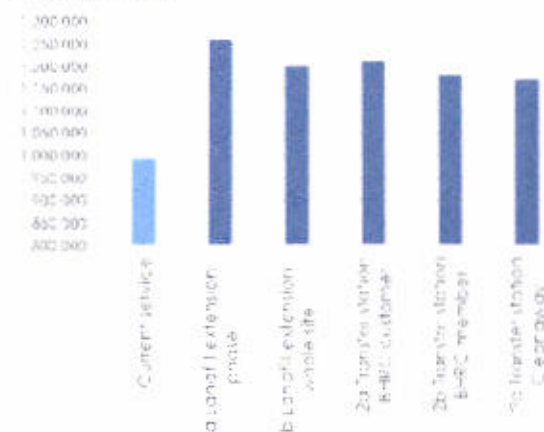
### Findings

The financial model results are shown in Figure E.1 for each Option assessed and show that Option 2c (transfer station) is the most cost-effective option for the Shire, with the lowest cost alternative landfill at Cleanaway (Banksia Road, Dardanup). This option is approximately \$90,000pa lower than Option 1a (extension of landfill phase 1).

While the additional cost of Option 1a is less than expected, other negative factors associated with the landfill extension include:

- a significantly higher capital investment;
- an increase level of management and operational oversight;
- a greater environmental risk (e.g. puncture of the liner or leachate pollution); and
- due to the constraints of the site there is insufficient space for the lined leachate lagoon.

Figure E.1 Total annual cost of current services and potential options



### Recommendations

Based on this assessment the Shire should consider the selection of option 2c, (transfer station and transport of waste to Cleanaway), as the preferred long term disposal option for the Shire.

Additional key recommendations relating to fees, charges and services, include:

- Tip passes; limit the tip passes to 52 x 240L tokens for residents with no kerbside collection and introduce two bulk waste passes.
- Increase gate fees by 40%, however, if tip pass changes impact on commercial waste revenue as expected only a 20% increase would be required.
- Increase the fee for the Shire's kerbside commercial waste service (240L MGB) by at least \$40 to achieve breakeven and complete a bin presentation audit to check all bins presented have been paid for.
- The current division of cost for domestic services between the Kerbside Charge and Waste Management Levy is unclear and should be resolved.
- Undertake a review of the operation of both the DWMF & BTS (contractor delivery versus in-house service). Particularly in relation to the Balingup Transfer Station and future transfer station at DWMF, as these types of facility require less oversight than a landfill.
- Review the opening hours of the Balingup Transfer Station in view of providing a service which is more commensurate with its level of usage.
- Review the options of providing a kerbside collection for the whole Shire compared to the provision of the current drop-off facilities. As the cost per tonne for providing the current waste drop-off facilities is high, particularly for the BTS.



## 1 INTRODUCTION

The Shire of Donnybrook-Balingup (the Shire) engaged ASK Waste Management (ASK) to complete a comprehensive economic review of future options to manage waste received at the Donnybrook Waste Management Facility (DWMF).

With limited remaining landfill capacity, the Shire recently received Works Approval from the Department Environment Regulation for expansion of the landfill to a neighbouring lot. The Works Approval had numerous conditions on the expansion, and as such the decision on whether to proceed with expansion required a comprehensive economic review to cost this expansion against other disposal options available to the Shire.

In order to understand the financial implications of the future options to manage waste received at the DWMF, ASK developed a comprehensive model to estimate the economic impact of each future option for waste disposal in the Shire. Essentially all the capital and operational cost data for both options, together with the waste quantity data was used to provide an economic comparison of the two options. The key inputs such as tonnages, gate fee prices, distances to alternative facilities and available voidspace at DWMF was built into the model to ensure sensitivity analysis of these factors can be completed.

This report details:

- Current waste management practices
- Future disposal options available to the shire
- Conceptualised design criteria for landfill and transfer station options
- Model inputs
- Financial results
- Social, economic and political assessment
- Evaluation of outcomes
- Future funding options

The report concludes with a series of recommendations for consideration by the Shire to guide and inform a waste management solution that is aimed at maintaining a high level of service to the residents of the Shire in an efficient, equitable and cost effective manner.

### 1.1 REPORT OBJECTIVES

This report has been produced to meet the following objectives.

1. To provide the Shire with a detailed costing for:

- Option 1: Extending the existing landfill operations at the DWMF based on the works approval conditions and continuing with the Shire's current waste services; and
- Option 2: Establishing a resource recovery facility at the DWMF that would incorporate a transfer station for "drop off" domestic waste, a tip shop, processing of green waste, collection of scrap metal and recyclables and the also a separate costing for the processing of concrete; and
- The capping and closure of the current waste disposal area.

2. Provide recommendations to fund the costs of the above.