EASTERN WASTE MANAGEMENT AUTHORITY
ORDINARY BOARD MEETING

Thursday 29 April 2021

Notice is hereby given that a meeting of The Board of the Eastern Waste Management Authority will be held in the **Mayor's Parlour, at City of Norwood, Payneham & St Peters, 175 The Parade, Norwood**, on Thursday 29 April 2021, commencing at 5:30pm.

ROB GREGORY
GENERAL MANAGER

Acknowledgement of Country

We would like to acknowledge this land that we meet on today is the traditional lands for the Kaurna people and that we respect their spiritual relationship with their country.

We also acknowledge the Kaurna people as the custodians of the Adelaide region and that their cultural and heritage beliefs are still as important to the living Kaurna people today.

EASTERN WASTE MANAGEMENT AUTHORITY

AGENDA
ORDINARY MEETING OF THE BOARD OF MANAGEMENT

Meeting to be held on Thursday 29 April 2021 commencing at 5:30pm
at the Mayor's Parlour, City of Norwood, Payneham & St Peters,
175 The Parade, Norwood

1. PRESENT

2. ACKNOWLEDGMENT OF COUNTRY

3. APOLOGIES

4. CONFLICTS OF INTEREST

5. CONFIRMATION OF THE MINUTES

RECOMMENDED:

1. That the Minutes of the Eastern Waste Management Authority Board Meeting held on Thursday 25 February 2021, be received confirmed, and adopted.

2. That the Minutes of the Eastern Waste Management Authority Audit and Risk Management Committee Meeting held on Wednesday 21 April 2021, be received, confirmed, and adopted.

3. That the Minutes of the Eastern Waste Management Authority Audit and Risk Management Committee Meeting held on Wednesday 17 February 2021, be received, confirmed, and adopted.

6. MATTERS ARISING FROM THE MINUTES

7. QUESTIONS WITHOUT NOTICE

8. REPORTS

9. CONFIDENTIAL REPORTS

9.1 STAFF MATTER (VERBAL)

10. OTHER BUSINESS

11. NEXT MEETING OF THE BOARD

The next Board Meeting is scheduled to be held on:
Thursday 24 June 2021, commencing 5:30pm, at the City of Norwood, Payneham & St Peters, 175 The Parade, Norwood

12. CLOSURE OF MEETING

MINUTES OF THE ORDINARY BOARD MEETING OF THE
EASTERN WASTE MANAGEMENT AUTHORITY

Held on Thursday 25 February 2021 at the Mayor's Parlour, City of Norwood Payneham & St Peters, 175 The Parade, Norwood

Meeting opened 5:37pm.

1. ACKNOWLEDGEMENT OF COUNTRY

2. PRESENT

Directors:

Mr F Bell	Independent Chairperson
Mayor H Holmes-Ross	City of Mitcham
Cr M Stock	City of Norwood, Payneham & St Peters
Cr L Green	Adelaide Hills Council
Cr R Ashby	Corporation of the Town of Walkerville
Mr S Bradley	City of Prospect

In Attendance:

Mr R Gregory	General Manager
Mr S Raymond	Manager, Corporate Services
Ms K Vandermoer	Finance & Executive Administration Officer
Mr B Krombholz	Manager, Operational Services
Mr J Jovicevic	Dean Newbery & Partners

3. APOLOGIES

Cr J Carbone	City of Burnside
Mr P Di Iulio	Campbelltown City Council

4. CONFLICTS OF INTEREST

Nil

5. CONFIRMATION OF THE MINUTES

Moved Mr Bradley that the Minutes of the Eastern Waste Management Authority Board Meeting held on 26 November 2020, be received confirmed, and adopted.

Seconded Cr Ashby **Carried**

Moved Cr Green that the minutes of the meeting of the Audit & Risk Management Committee held on Wednesday 17 February 2021, first be confirmed by the Audit & Risk Management Committee at the April meeting, prior to the adoption by the Board.

Seconded Mr Bradley **Carried**

6. MATTERS ARISING FROM THE MINUTES

Nil

7. QUESTIONS WITHOUT NOTICE

Nil

8. REPORTS

8.1 FINANCIAL REPORT - BUDGET REVIEW TWO

RECOMMENDATION 1

Moved Cr Ashby that the Board reaffirms adherence to the *East Waste Budget Framework Policy,* including the Financial Target of a 1-2% Return on Revenue.
Seconded Mayor Holmes-Ross **Carried**

RECOMMENDATION 2

Moved Mr Bradley that the Board notes and accepts the net surplus of $292,000 associated with the 2020/21 Budget Review Two.
Seconded Mayor Holmes-Ross **Carried**

RECOMMENDATION 3

Moved Cr Green that the Board, in compliance with the East Waste Budget Framework Policy, a financial target of 1% return on revenue is applied and following application, the balance of the 2019/20 net surplus be returned to Member Councils in line with their 2019/20 Common Fleet percentages.
Seconded Mr Bradley **Carried**

8.2 DRAFT 2021/22 ANNUAL PLAN & BUDGET

RECOMMENDATION

Moved Mr Bradley that the Board:

1. Endorse the East Waste 2021/22 Annual Plan, as presented in Attachment A;
2. Endorse the associated draft budget and proposed Member Council Fees;
3. Authorise the General Manager to distribute to each Member Council for review and comment, the *Draft* 2021/22 *Annual Plan* in Attachment A, as amended i along with the proposed fees.
4. Instructs Administration to undertake a review of the Budget Framework Policy and present to the Board prior to the end of the current financial year.

Seconded Mayor Holmes-Ross **Carried**

8.3 ANNUAL PLAN PROGRESS REPORT

RECOMMENDATION

Moved Cr Green that the report be received and noted.
Seconded Mr Bradley **Carried**

8.4 RESPONSE TO 'RIGHT TO REPAIR' CONSULTATION

RECOMMENDATION

Moved Br Bradley that the Board note the response, as presented in Attachment A, to *the Productivity Commission's Right to Repair Inquiry.*
Seconded Cr Ashby **Carried**

9. CONFIDENTIAL REPORTS

9.1 CONTRACT REVIEW

RECOMMENDATION 1

Moved Cr Green that pursuant to Section 90(2) and (3) of the Local Government Act, 1999 the East Waste Board orders that the public, with the exception of the East Waste staff present, be excluded from the meeting on the basis that the East Waste Audit & Risk Management Committee will receive, discuss and consider:

(k) tenders for the supply of goods, the provision of services or the carrying out of works;

and the East Waste Board is satisfied that, the principle that the meeting should be conducted in a place open to the public, has been outweighed by the need to keep the receipt/discussion/consideration of the information confidential.
Seconded Mr Bradley **Carried**

RECOMMENDATION 3

Moved Cr Green that under Section 91(7) and (9) of the Local Government Act 1999 the East Waste Board orders that the attachment and discussion be kept confidential for a period not exceeding 12 months, after which time the order will be reviewed by the East Waste Board.
Seconded Mayor Holmes-Ross **Carried**

10. OTHER BUSINESS

Mr Jovicevic declared a perceived conflict of interest in the matter and left the meeting at 6:52pm.

RECOMMENDATION 1

Moved Cr Green that pursuant to Section 90(2) and (3) of the Local Government Act, 1999 the East Waste Board orders that the public, with the exception of the East Waste staff present, be excluded from the meeting on the basis that the East Waste Audit & Risk Management Committee will receive, discuss and consider:

(k) tenders for the supply of goods, the provision of services or the carrying out of works;

and the East Waste Board is satisfied that, the principle that the meeting should be conducted in a place open to the public, has been outweighed by the need to keep the receipt/discussion/consideration of the information confidential.
Seconded Cr Ashby **Carried**

RECOMMENDATION 3

Moved Cr Stock that under Section 91(7) and (9) of the Local Government Act 1999 the East Waste Board orders that the attachment and discussion be kept confidential for a period not exceeding 12 months, after which time the order will be reviewed by the East Waste Board.
Seconded Mayor Holmes-Ross

***Mr Bradley left the meeting at 7:01pm*.**

11. NEXT MEETING OF THE BOARD

The next ordinary Board Meeting is scheduled to be held on:
Thursday 29 April 2021, commencing 5:30pm at the City of Norwood, Payneham & St Peters, 175 The Parade, Norwood.

12. CLOSURE OF MEETING

There being no further business the meeting closed at 7:16pm.

DATE: _____ CHAIRPERSON: _____

MINUTES OF THE MEETING OF THE AUDIT & RISK MANAGEMENT COMMITTEE

OF THE EASTERN WASTE MANAGEMENT AUTHORITY

held on Wednesday 21 April 2021 at Tirkanthi Kuu Board Room, Payinthi,
128 Prospect Road, Prospect.

Meeting opened at 8:30am.

1. **ACKNOWLEDGEMENT OF COUNTRY**

2. **PRESENT**

Mr F Bell	Independent Chairperson
Cr L Green	Adelaide Hills Council
Mr V Cammell	City of Prospect
Ms E Hinchey	Independent Member
Ms S Di Blasio	Independent Member

IN ATTENDANCE

Mr R Gregory	General Manager
Ms K Vandermoer	Finance & Executive Administration Officer
Mr J Jovicevic	Dean Newbery & Partners

3. **APOLOGIES**

Mr S Bradley	City of Prospect
Mr S Raymond	Manager, Corporate Services

4. **CONFLICTS OF INTEREST**

Nil

5. **CONFIRMATION OF THE MINUTES – 17 FEBRUARY 2021**

Moved Ms Hinchey that:

1. The Minutes of the previous meeting held on Wednesday 17 February 2021 be received and noted.
2. The Confidential Minutes of the previous meeting held on Wednesday 17 February 2021 be received and noted.

Seconded Ms Di Blasio **Carried**

6. **MATTERS ARISING FROM THE MINUTES**

Nil

7. **QUESTIONS WITHOUT NOTICE**

Nil

8. REPORTS

8.1 FINANCIAL REPORT: MARCH QUARTER + BUDGET REVIEW THREE FY2021

RECOMMENDATION

Moved Cr Green that the Committee Notes and accepts the net surplus of $324,000 associated with the 2020/21 Budget Review Three and recommends for presentation to the Board for endorsement.

Seconded Ms Hinchey **Carried**

8.2 REVIEW OF BUDGET FRAMEWORK POLICY

RECOMMENDATION

Moved Ms Di Blasio that The Committee notes and accepts the revised Budget Framework Policy as presented in Attachment A, with amendments, and recommends for presentation to the East Waste Board.

Seconded Cr Green **Carried**

8.3 REBATE AND DISTRIBUTION POLICY

RECOMMENDATION

Moved Ms Hinchey that the Committee notes and accepts the Rebate & Distribution Policy as presented in Attachment A, with amendments, and recommends for presentation to the East Waste Board.

Seconded Cr Green **Carried**

8.4 REVIEW OF TREASURY MANAGEMENT POLICY

RECOMMENDATION

Moved Ms Hinchey that the Committee notes and accepts the revised Treasury Management Policy as presented in Attachment A and recommends for presentation to the East Waste Board.

Seconded Ms Di Blasio **Carried**

8.5 NATIONAL COMPETITION POLICY STATEMENT

RECOMMENDATION

Moved Mr Cammell That the Committee notes and accepts the Draft National Competition Policy Statement as presented in Attachment A and recommends for presentation to the East Waste Board.

Seconded Ms Di Blasio **Carried**

9. CONFIDENTIAL REPORTS

Nil

10. OTHER BUSINESS

Nil

11. NEXT MEETING OF THE AUDIT AND RISK MANAGEMENT COMMITTEE

The next Audit and Risk Management Committee Meeting is scheduled to be held on:

June 16 2021, commencing 8:30am, at Tirkanthi Kuu Board Room Payinthi, 128 Prospect Road, Prospect SA 5082.

12. CLOSURE OF MEETING

There being no other business the meeting closed at 9:35am.

PRESIDING MEMBER _____

DATE _____

MINUTES OF THE MEETING OF THE AUDIT & RISK MANAGEMENT COMMITTEE

OF THE EASTERN WASTE MANAGEMENT AUTHORITY

held on Wednesday 17 February 2021 at Tirkanthi Kuu Board Room, Payinthi, 128 Prospect Road, Prospect.

Meeting opened at 8:32am.

1. **ACKNOWLEDGEMENT OF COUNTRY**

2. **PRESENT**

Mr F Bell	Independent Chairperson
Ms E Hinchey	Independent Member
Ms S Di Blasio	Independent Member
Mr S Bradley	City of Prospect
Cr L Green	Adelaide Hills Council (via Zoom)

IN ATTENDANCE

Mr R Gregory	General Manager
Mr S Raymond	Manager, Corporate Services
Mr Jovicevic	Dean Newbery & Partners

3. **APOLOGIES**

Ms K Vandermoer	Finance & Executive Administration Officer

4. **CONFLICTS OF INTEREST**

Nil

5. **CONFIRMATION OF THE MINUTES – 18 NOVEMBER 2020**

Moved Ms Di Blasio that the Minutes of the previous meeting held on Wednesday 18 November 2020 be received and noted.

Seconded Cr Green **Carried**

6. **MATTERS ARISING FROM THE MINUTES**

Nil

7. **QUESTIONS WITHOUT NOTICE**

NIL

8. **REPORTS**

8.1 FINANCIAL STATEMENTS – BUDGET REVIEW TWO

RECOMMENDATION

Moved Ms Di Blasio that the Committee:

1. Notes and accepts the operating surplus of $204,100 associated with the 2020/21 Budget Review Two and recommends for presentation to the Board for endorsement.

2. Recommends to the Board the 2019/20 Operating Surplus amount of $193,000 be returned to the Member Councils in line with their 2019/20 Common Fleet percentages.

Seconded Ms Hinchey **Carried**

8.2 DRAFT 2021/22 ANNUAL PLAN & BUDGET

RECOMMENDATION

Moved Mr Bradley that the Committee supports:

1. That the East Waste Board review the applicability and currency of the East Waste Budget Framework Policy.

2. The draft 2020/21 Draft Budget Key Assumptions are noted and supported for presentation to the Board.

3. That the Operating Surplus requirement of the Budget Framework Policy is applied to the draft 2021/22 Budget as determined by the Board following the Board's consideration set out in resolution 8.2.1.

Seconded Ms Di Blasio **Carried**

Cr Green left the meeting at 9.15am.

9. CONFIDENTIAL REPORTS

9.1 EXTERNAL AUDITOR CONTRACT EXTENSION

RECOMMENDATION 1

Moved Mr Bradley that pursuant to Section 90(2) and (3) of the Local Government Act, 1999 the East Waste Audit & Risk Management Committee orders that the public, with the exception of the East Waste staff present, be excluded from the meeting on the basis that the East Waste Audit & Risk Management Committee will receive, discuss and consider:

(k) tenders for the supply of goods, the provision of services or the carrying out of works;

and the East Waste Audit & Risk Management Committee is satisfied that, the principle that the meeting should be conducted in a place open to the public, has been outweighed by the need to keep the receipt/discussion/consideration of the information confidential.

Seconded Ms Di Blasio **Carried**

RECOMMENDATION 3

Moved Mr Bradley that under Section 91(7) and (9) of the Local Government Act 1999 the East Waste Audit & Risk Management Committee orders that the attachment and discussion be kept confidential for a period not exceeding 12 months, after which time the order will be reviewed by the East Waste Board.
Seconded Ms Hinchey **Carried**

10. OTHER BUSINESS

NIL

11. NEXT MEETING OF THE AUDIT AND RISK MANAGEMENT COMMITTEE

The next Audit and Risk Management Committee Meeting is scheduled to be held on:

Wednesday 21 April 2021, commencing 8:30am, at Tirkanthi Kuu Board Room Payinthi, 128 Prospect Road, Prospect SA 5082.

12. CLOSURE OF MEETING

There being no other business the meeting closed at 9.17am.

PRESIDING MEMBER _____

DATE _____

8.1: FINANCIAL REPORT – BUDGET REVIEW THREE

REPORT AUTHOR: General Manager
ATTACHMENTS: A: Budgeted Statement of Comprehensive Income
B: Budgeted Balance Sheet
C: Budgeted Statement of Cash Flow
D: Budgeted Statement of Changes in Equity
E: Budgeted Uniform Presentation of Finances Statement

Purpose of the Report
To provide the Board with an opportunity to review the third review undertaken of the budgeted statutory Financial Statements (Budget Review Three) for the financial year ending 30 June 2021 as prescribed by the Regulations.

Background
At the meeting held 25 June 2020, the East Waste Board resolved (in part):

2020/21 ANNUAL BUSINESS PLAN & BUDGET

Moved Mr Bradley that the Board endorses the 2020/21 Annual Business Plan and revised Budget as presented in Attachment A, noting that an increase to the Education budget is to be considered through the quarterly budget review process.
Seconded Cr Carbone ***Carried***

Report
Following several adjustments (detailed below), Budget Review Three is forecasting a revised FY2021 Net Surplus of $255,000 which is $244,000 increase on the FY2021 Adopted Budget (budget movement compared to the adopted FY2021 Budget Review 1). Key financial risks and most material budget items continue to be closely monitored and tracked by the Administration.

With the end of the financial year in sight, Administration have made a number of calculated assumptions and variations to individual budget lines in order to deliver a more accurate end of year result. The key movements are detailed in Table 1 below as at 31 March 2021 against full year budget along with commentary regarding the proposed budget variations.

The figures were presented to the Audit & Risk Committee at their meeting on 21 April 20231 and they resolved:

FINANCIAL REPORT: MARCH QUARTER + BUDGET REVIEW THREE FY2021

Moved Cr Green that the Committee Notes and accepts the net surplus of $324,000 associated with the 2020/21 Budget Review Three and recommends for presentation to the Board for endorsement.
Seconded Ms Hinchey ***Carried***

The Board will note the net surplus amount resolved by the Audit and Risk Committee is $69,000 greater than the figure presented in the attached financial statements. This results from recognising the FY2019/20 net surplus payment to Member Councils, which will be paid as a rebate as part of Q4 invoices.

Table 1: Key Budget Item Year to Date and End of Year Forecast (BR3)

Item	YTD Actuals (as at 31/03/2021)	Proposed Budget Variation	Notes
Bin Supply & Maintenance	$0.524M	$0.162M	Increase in orders of bins, compostable bags and caddies as a result of the competitive East Waste Head Contract accessible by Member Councils. Increased income balanced by matching increase in costs.
Processing Fees- Green Organics & Hard Waste	$1.775M	$0.500M	Increased yields against budget have seen higher than expected processing fees for both streams. Increase in processing fees offset, by increased income from Member Councils.
Fuel, Gas & Oil	$0872M	-$0.135M	Fuel prices have risen and are expected to continue to increase as demand for air travel rises. Despite this, savings result from the depressed world oil markets in the first 6 months of the financial year.
Recycling Processing Fee	$1.844M	1$0.500M	A continued favourable rise and fall rate (comparative to budget), driven largely on the back of a recovering fibre market results in a reduced cost. Reduction in costs balanced by reduced income. Importantly overall favourable result for Member Councils.
Maintenance Fleet	$1.148M	$0.104M	A number of significant and unexpected maintenance activities required across the fleet has resulted in increased expenditure against budget.
Wages & Salaries (incl. Casual Staff)	$4.066M	$0-	Reallocation of funds between wages and salaries and casual staff to better reflect staff configuration for remainder of the year. This has resulted principally from a number of unrelated resignations.

Forecast Cash Reserves

East Waste's operating cash balance is favourable, with a March closing cash balance of $2.83M. This balance is consistent with previous years and provides a sound positive basis through until the end of the financial year. As per previous years, this figure is expected to draw down significantly in July 2020, prior to first quarter payments being received from Member Councils.

RECOMMENDATION

The Board notes and accepts the net surplus of $255,000 associated with the 2020/21 Budget Review Three.

EAST WASTE

PROJECTED STATEMENT OF COMPREHENSIVE INCOME (BUDGET)

for the Financial Year Ending 30 June 2021

FY2020 Audited Actuals $'000		FY2021 Adopted Budget $'000	FY2021 BR1 $'000	FY2021 BR2 $'000	FY2021 BR3 $'000
	INCOME				
16,756	User Charges	17,635	17,635	17,655	17,655
21	Investment income	9	9	3	3
-	Grants, subsidies and contributions	30	30	-	-
677	Other	794	794	788	975
17,454	**TOTAL INCOME**	**18,467**	**18,468**	**18,446**	**18,632**
	EXPENSES				
5,851	Employee Costs	5,890	5,980	6,130	6,130
9,120	Materials, contracts & other expenses	9,935	9,845	9,865	10,088
2,069	Depreciation, amortisation & impairment	2,347	2,347	2,009	2,009
281	Finance costs	335	335	275	275
17,321	**TOTAL EXPENSES**	**18,506**	**18,507**	**18,279**	**18,502**
133	**OPERATING SURPLUS / (DEFICIT)**	**(39)**	**(39)**	**167**	**130**
60	Asset disposals & fair value adjustments	50	76	125	125
193	**NET SURPLUS / (DEFICIT)**	**11**	**37**	**292**	**255**
-	Other Comprehensive Income	-	-	-	-
193	**TOTAL COMPREHENSIVE INCOME**	**11**	**37**	**292**	**255**

EAST WASTE

PROJECTED BALANCE SHEET (BUDGET)

for the Financial Year Ending 30 June 2021

FY2020 Audited Actuals $'000		FY2021 Adopted Budget $'000	FY2021 BR1 $'000	FY2021 BR2 $'000	FY2021 BR3 $'000
	ASSETS				
	CURRENT ASSETS				
2,322	Cash & Cash Equivalents	2,156	2,314	2,232	2,195
1,019	Trade & Other Receivables	717	1,019	1,019	1,019
-	Other Financial Assets	-	-	-	-
3,341	**TOTAL CURRENT ASSETS**	**2,873**	**3,333**	**3,251**	**3,214**
	NON-CURRENT ASSETS				
7,652	Infrastructure, Property, Plant & Equipment	8,093	8,096	8,317	8,317
7,652	**TOTAL NON-CURRENT ASSETS**	**8,093**	**8,096**	**8,317**	**8,317**
10,993	**TOTAL ASSETS**	**10,966**	**11,429**	**11,568**	**11,531**
	LIABILITIES				
	CURRENT LIABILITIES				
1,205	Trade & Other Payables	771	1,224	1,224	1,224
1,929	Borrowings	2,176	2,287	2,287	2,287
597	Provisions	633	642	642	642
3,731	**TOTAL CURRENT LIABILITIES**	**3,580**	**4,153**	**4,153**	**4,153**
	NON-CURRENT LIABILITIES				
6,221	Borrowings	6,192	6,153	6,037	6,037
77	Provisions	156	122	122	122
6,298	**TOTAL NON-CURRENT LIABILITIES**	**6,348**	**6,275**	**6,159**	**6,159**
10,029	**TOTAL LIABILITIES**	**9,928**	**10,428**	**10,312**	**10,312**
964	**NET ASSETS**	**1,038**	**1,001**	**1,256**	**1,219**
	EQUITY				
964	Accumulated Surplus	1,038	1,001	1,256	1,219
964	**TOTAL EQUITY**	**1,038**	**1,001**	**1,256**	**1,219**

EAST WASTE

PROJECTED STATEMENT OF CASH FLOWS (BUDGET)

for the Financial Year Ending 30 June 2021

FY2020 Audited Actuals $'000		FY2021 Adopted Budget $'000	FY2021 BR1 $'000	FY2021 BR2 $'000	FY2021 BR3 $'000
	CASH FLOWS FROM OPERATING ACTIVITIES				
	RECEIPTS				
17,136	Operating Receipts	18,408	18,458	18,444	18,630
16	Investment Receipts	9	9	3	3
	PAYMENTS				
(5,795)	Employee costs	(5,890)	(5,890)	(6,040)	(6,040)
(8,677)	Materials, contracts & other expenses	(9,845)	(9,845)	(9,865)	(10,088)
(291)	Interest Payments	(300)	(335)	(275)	(275)
2,389	**NET CASH PROVIDED BY (OR USED IN) OPERATING ACTIVITIES**	**2,382**	**2,397**	**2,267**	**2,230**
	CASH FLOWS FROM INVESTING ACTIVITIES				
	RECEIPTS				
81	Sale of Replaced Assets	50	95	145	145
	PAYMENTS				
(2,297)	Expenditure on Renewal/Replaced Assets	(2,730)	(2,790)	(2,675)	(2,675)
-	Expenditure of New/Upgraded Assets	-	-		-
(2,216)	**NET CASH PROVIDED BY (OR USED IN) INVESTING ACTIVITIES**	**(2,680)**	**(2,695)**	**(2,530)**	**(2,530)**
	CASH FLOWS FROM FINANCING ACTIVITIES				
	RECIEPTS				
65	Capital Contributed by Member Councils	-	-	-	-
2,171	Proceeds from Borrowings	2,400	2,400	2,284	2,284
	PAYMENTS				
(220)	Repayment of Lease Liabilities	(265)	(265)	(265)	(265)
(1,834)	Repayment of Borrowings	(1,845)	(1,845)	(1,845)	(1,845)
182	**NET CASH PROVIDED BY (OR USED IN) FINANCING ACTIVITIES**	**290**	**290**	**174**	**174**
355	**NET INCREASE (DECREASE) IN CASH HELD**	**(8)**	**(8)**	**(89)**	**(127)**
1,967	**CASH & CASH EQUIVALENTS AT BEGINNING OF PERIOD**	**2,163**	**2,322**	**2,322**	**2,322**
2,322	**CASH & CASH EQUIVALENTS AT END OF PERIOD**	**2,155**	**2,314**	**2,233**	**2,195**

EAST WASTE

PROJECTED STATEMENT OF CHANGES IN EQUITY (BUDGET)

for the Financial Year Ending 30 June 2021

FY2020 Audited Actuals $		FY2021 Adopted Budget $'000	FY2021 BR1 $'000	FY2021 BR2 $'000	FY2021 BR3 $'000
706	**BALANCE AT END OF PREVIOUS REPORTING PERIOD**	1,026	964	964	964
193	Net Surplus / (Deficit) for Year	11	37	292	255
65	Contributed Equity	-	-	-	-
-	Distribution to Councils	-	-	-	-
964	**BALANCE AT END OF REPORTING PERIOD**	**1,037**	**1,001**	**1,256**	**1,219**

EAST WASTE

PROJECTED UNIFORM PRESENTATION OF FINANCES STATEMENT (BUDGET)

for the Financial Year Ending 30 June 2021

FY2020 Audited Actuals $'000		FY2021 Adopted Budget $'000	FY2021 BR1 $'000	FY2021 BR2 $'000	FY2021 BR3 $'000
17,454	Income	18,467	18,467	18,446	18,632
(17,321)	Expenses	(18,506)	(18,506)	(18,279)	(18,502)
133	**Operating Surplus / (Deficit)**	**(39)**	**(39)**	**167**	**130**
	Net Outlays on Existing Assets				
(2,297)	Capital Expenditure on Renewal and Replacement of Existing Assets	(2,730)	(2,790)	(2,675)	(2,675)
2,069	Depreciation, Amortisation and Impairment	2,347	2,347	2,009	2,009
81	Proceeds from Sale of Replaced Assets	50	95	145	145
(147)		**(333)**	**(348)**	**(521)**	**(521)**
	Net Outlays on New and Upgraded Assets				
-	Capital Expenditure on New and Upgraded Assets	-	-	-	-
-	Amounts Specifically for New and Upgraded Assets	-	-	-	-
-	Proceeds from Sale of Surplus Assets	-	-	-	-
-		-	-	-	-
(14)	**Net Lending / (Borrowing) for Financial Year**	**(372)**	**(387)**	**(354)**	**(391)**

8.2: REVIEW OF BUDGET FRAMEWORK POLICY

REPORT AUTHOR: **General Manager**
ATTACHMENTS: **A: Draft Budget Framework Policy**

Purpose of the Report
To provide the Board with an opportunity to review and comment of the revised East Waste Budget Framework Policy, prior to adoption.

Background
The Budget Framework Policy was developed in 2018, to provide a consistent and transparent process and for the retention of corporate knowledge and consistency across financial years in the accounting treatment and disclosure applied to services and events undertaken by the Authority.

In the setting of the FY 2021/22 Budget, through the Audit & Risk Committee, it was identified that the Policy had not been revised in line with the revision schedule. The Board, at the meeting held 24 February 2021, subsequently resolved (in part):

8.2 DRAFT 2021/22 ANNUAL PLAN & BUDGET

4. Instructs Administration to undertake a review of the Budget Framework Policy and present to the Board prior to the end of the current financial year.
Seconded Mayor Holmes-Ross ***Carried***

Report
The Budget Framework Policy has, and remains, an effective document to guide the establishment and delivery of the East Waste Annual Budget and reporting process. The Policy further enhances the governance structure surrounding the management and reporting of the Authority's budget activities, which are detailed in the *East Waste Charter, Local Government Act 1999 S.123 and the Local Government (Financial Management) Regulations 2011.*

With the Policy having operated for three (3) years, there are several proposed amendments to the document in order to provide greater clarity and guidance to the Board, Administration and Member Councils. These amendments are highlighted via tracked changes in the attached document (refer Attachment A).

Of note:

- A number of changes have been made to definitions to provide greater clarity;
- The Financial Performance Target (Financial Target 1) has been refined for greater clarity; and
- An additional Principle (No.2) has been added to provide scope for increasing Common Fleet Costing Charges, in the event this is required.

The Policy was presented to the Audit and Risk Committee April 2021 meeting and following some minor amendments (included within the tracked changes in Attachment A), the committee resolved:

8.2 REVIEW OF BUDGET FRAMEWORK POLICY

Moved Ms Di Blasio that The Committee notes and accepts the revised Budget Framework Policy as presented in Attachment A, with amendments, and recommends for presentation to the East Waste Board.

Seconded Cr Green **Carried**

Further detail and explanation will be provided at the meeting in relation to these changes.

RECOMMENDATION

The Board endorses the revised Budget Framework Policy as presented in Attachment A.

BUDGET FRAMEWORK POLICY

Type	Governance
Category	Finance
First Issued/Adopted	Board:13 December 2018
Minutes Reference	
Review Period	~~12~~ 24 months
Last Reviewed	N/A
Next reviewed	~~December~~ November ~~2019~~2022
Applicable Legislation	• *Local Government Act 1999* • *Local Government (Financial Management) Regulations 2011*
Related Documents	• East Waste Charter • East Waste ~~Business Plan 2015-2024~~Strategic Plan 2030 • East Waste Long Term Financial Plan
Consultation Undertaken	Audit & Risk Management Committee
Responsible Officer	Manager, Corporate Services

SIGNED: …… ……

General Manager Chairperson

Date: ___/____/_____ Date: ___/____/____

Purpose

East Waste as a Regional Subsidiary seeks to be accountable in all aspects of the budget development process and meet Member Council expectations of transparency, clarity, consistency, responsible financial management and reporting.

Importantly the Framework will assist with the retention of corporate knowledge and consistency across financial years in the accounting treatment and disclosure applied to services and events undertaken by the Authority.

As detailed below it is important to note that the Framework does not, and will not, abdicate from any applicable legislative or regulatory requirements (including ~~for applicable~~ Australian Accounting Standards where applicable). The Policy is intended to further enhance the governance structure surrounding the management and reporting of the Authority's budget activities, which are detailed in *the East Waste Charter*, *Local Government Act 1999 S.123* and the *Local Government (Financial Management) Regulations 2011*.

Background

The *East Waste Charter* and specifically *Sections 51-55*, set out the annual requirements for the Development of an Annual Plan and Budget. In summary:

- The Authority must, each financial year have an Annual Plan which supports and informs the budget;
- The Draft Annual Plan must be provided to Constituent Councils and consented to by an absolute majority of Constituent Councils before 31 May each year;
- The Authority must advise Constituent Councils of the proposed fees for the following Financial Year by April 1 of the preceding financial year.

The budget must also comply with the standards and principles prescribed by the *Local Government Act 1999* and applicable Regulations. The budget shall include budgeted financial statements, which must be presented, in a manner consistent with the Model Financial Statements.

Definitions

Common Fleet Costing Charge	The charge to each Member Council which represents all direct and administrative costs associated with the delivery of waste collection, fleet maintenance, waste management administration, education & promotions activities, regulatory compliance and funding debt servicing obligations related to common fleet plant & equipment related activities. The actual charge is apportioned based on the Common Fleet Percentage of the Member Council. The Common Fleet Costing Charge also incorporates an additional charge to Member Councils to incorporate any Return on Revenue targets imposed by this Policy.
Common Fleet Costs	Common Fleet Costs represent all direct and administrative costs associated with the delivery of waste collection, fleet maintenance, waste management administration, education & promotions activities, regulatory compliance and funding debt servicing obligations related to common fleet plant & equipment related activities.
Common Fleet Percentage	Calculated from GPS data collected from each East Waste Fleet Truck over the previous 12 months. The Common Fleet Percentage (CFP) is the portion of time taken to undertake the 5 core services (household kerbside collections (waste, recycling & organics), street & reserve litter bins and hard rubbish) for each Member Council. This is represented as a percentage of the total time, for the previous 12 months and is used as a basis for the Common Fleet Costing Charge. ~~CFP data is reviewed and updated each month.~~ Revised CFP allocations are applied to Common Fleet Cost charges annually or when significant variations occur (eg. new service added or new Council enters).
Constituent Council Share	As detailed in *S.57* of the *East Waste Charter*, all Member Councils hold an equal equitable ownership interest share in East Waste.
Corporate Administration Fee	Set fee charged equally across all Member Councils. Refer to latter section titled *Corporate Administration Fee* for explanation.
Local Government Price Index	The Local Government Price Index (LGPI) measures price movements faced by Local Government in South Australia in respect of their purchases of goods and services. As the mix of goods and services purchased by Local Councils/Regional Subsidiaries is quite different from that typically consumed by households, overall price movements faced by Local Councils may differ markedly from those faced by households.
Member Councils	Also known as Constituent Councils, are those Councils which are referred to in *Section 1* of the *East Waste Charter*.

Model Financial Statements	Refers to the Model Financial Statements described in Regulation 4(3) of the *Local Government (Financial Management) Regulations 2011.*
Net Surplus	Refers to the Net Surplus as calculated on the Statement of Comprehensive Income per the Model Financial Statements.
Non-Member Councils	Councils, Organisations or waste related services, provided outside of existing Constituient Councils (as referred to in *Section 1* of the *East Waste Charter).* A differential rate is to be applied to activities provided to non-Member Councils.
Proposed Fees	The indicative Common Fleet Costing Charge, Corporate Administration Fee, waste and processing fees (where applicable) and any other charges which the Authority intends to charge Member Councils in the subsequent Financial Year.
~~Return on Revenue~~	~~Calculated as~~ ~~A Return on Revenue is calculated on the basis of a % charge above that required to recover all estimated Common Fleet Costs.being the total Net surplus generated on common fleet costing fees charged to Constituent Councils for common fleet waste collections activities provided.~~

Preparation Schedule

The following timetable is to be annually applied in the development of the Annual Budget:

Month	Activity
November:	Review Budget Framework Policy if required
December/January:	Develop Draft Annual Plan
January:	Develop Draft Annual Budget
February:	Board consideration and endorsement of Draft Annual Plan & Budget
March:	Draft Annual Plan & Budget sent to Member Councils for consideration
April/May:	Member Council endorsement of Draft Annual Plan
June:	East Waste Board adoption of Annual Plan & Budget
June/July:	Member Councils formally notified of Fees and provided endorsed copy of Annual Plan.

Budget Reviews

Legislation requires a budget update at least twice per year and a mid-year budget review. East Waste will present to the Audit & Risk Management Committee and Ordinary Board Meeting (and subsequently Member Councils), quarterly budget reviews at the meetings immediately following the following period ended:

- 30 September;
- 31 December; and
- 31 March

Preparation and presentation of budget information will be consistent with the Board's requested demands to ensure users are provided with the necessary information to discharge their duties and Member Council reporting requirements. Budget work papers will also ensure to comply with any reporting legislative requirements relating to the presentation and timing of budget revisions conducted, whilst at the same time acknowledging and protecting the financial integrity of East Waste operating in a commercially competitive environment

Financial Targets

1. Financial Performance Target~~Operating Result~~: 1~~- 2%~~ % ~~Return on Revenue (based on~~of Common Fleet Costing Charge).

2. Working capital requirements: retention of cash reserves equal to funding one quarter of estimated operational expenses requirements (including loan repayments).

3. Authority to maintain a $1m bank overdraft facility for emergency purposes only.

4. The Authority shall remain in a positive Net Asset/Equity position at all times.

5. The Authority is to ensure it complies with the principles contained within the adopted Treasury Management Policy when considering the development and revision of the budget.

Principles

The following Principles underpin the Budget Development and budget review process.

1. Projected operating income is set to ensure sufficient funds are raised to meet all financial obligations (operating and capital) for the relevant financial year, taking into account the activities listed in the draft Annual Plan.

2. Should East Waste's annual adopted Common Fleet Costing Charges not be sufficient to recover projected costs for the financial year, at each budget review, the Board will determine whether Common Fleet Costing Charges are required to be increased to meet working capital requirements for the financial year. Any changes to Common Fleet Costing Charges are to be done in accordance with the principles set within the East Waste Charter and the *Local Government Act 1999.*

~~1.~~3. All expenditure decisions will align with the East Waste 10-~~-~~year Strategic Plan.

~~2.~~4. Zero-based budget approach is to be adopted for the development of the annual budget in order to ensure each activity allocation remains relevant for the coming year.

5. A full cost recovery model to be employed for all services and activities. Budgets will be based on meeting agreed service levels or program activity commitments.

~~3.~~6. The Budget is to be established and reported upon according to the following four (4) key Business Units:

Common Fleet Activities ~~Costing~~: Represents all direct and Administrative costs associated with the Delivery of waste collection, fleet maintenance, waste management administration, education & promotions activities, regulatory compliance activities and funding debt servicing obligations related to common fleet plant & equipment (across 5 streams). Charged in accordance with common fleet allocation.

Bin Maintenance Activities: A cost recovery service charged to each individual Council for services directly associated with bin renewal, replacement and maintenance.

Waste Disposal Activities: A cost recovery activity against each individual Council for disposal costs incurred. Occurs only where the Member Council is not invoiced directly.

Corporate Administration: A set Administrative Fee charged equally amongst Member Councils (further detail below), along with ancillary income (interest, grants, asset sales etc).

Should East Waste expand its services offering to Constituent Councils and/or Non Member Council customer in future years, additional business units may need to be established and recognised in the next update of this Policy when required.

7. External borrowings ~~Loans~~ will be used to fund the acquisition/construction of long-term assets ~~creation~~ used to provide services and not to fund or support recurrent service delivery costs.

8. Fleet and Motor Vehicle acquisition costs ~~Capital Expenditure~~ is to be funded ~~solely~~ via external loan borrowings. An annual review of this principle is to be confirmed by the Board through the budget adoption process.

9. Capitalisation threshold for all assets to be set for items that cost greater than $3,000;

10. Term of loan borrowings to be taken over a period equal to the expected useful life of the asset. ~~or f~~For any items with an indefinite useful life, the ~~a~~ period of the loan is to ~~as~~ be determined by the Board.

11. Assets depreciation is to be set over the expected life of the assets in accordance with Australian Accounting Standards (AASB) 116 Property, Plant and Equipment. Residual values will be applied to assets where there is an estimated 'salvage or trade-in' value for the asset at the end of its expected useful life.

12. The Corporate Administration Fee, along with the Common Fleet Costing charge for the five key services (kerbside collection, hard rubbish and street and reserve litter bins), to Member Councils is to be processed quarterly in advance based on the adopted Fees and Charges. All other charges to Member Councils are for reimbursement of costs incurred by the Authority which are invoiced at the end of the month incurred, following reconciliation. All invoices issued to Member Councils have payment terms of ~~30~~ 14 days payable from the date of the invoice issued.

13. The Common Fleet C~~c~~osting Charge is determined based on the ~~usage~~ servicing time of the previous financial year. Where there is a new service or incomplete data (i.e. the service was not undertaken for a full 12 months), an evidence-based approach will be used to calculate the Common Fleet percentage.

14. Where applicable the provision of non-core services to non-member Councils are to include a margin which reflects the risk, asset renewal and fair and reasonable administrative charges incurred.

Corporate Administration Fee

East Waste operates on a full cost recovery model for all services and activities. This is either direct recovery (e.g. disposal and processing fees) or via the common fleet percentage (e.g. collection fees and maintenance costs). The exception is the Corporate Administration Fee which is split equally (Constituent Council Share) across Member Councils.

For the 2019/20 budget process, the established base Administration Fee of $225,000 is to be applied. For future years, the Administration Fee is to be annually increased by the Local Government Price Index (LGPI), or the annual average percentage movement in the Common Fleet Costing Charge, whichever is greater. The Corporate Administrative Fee is to be reviewed through each Annual Budget process.

END.

8.3: REBATE AND DISTRIBUTION POLICY

REPORT AUTHOR: **General Manager**
ATTACHMENTS: **A: Draft Rebate & Distribution Policy**

Purpose of the Report

To provide the Board with an opportunity to review and comment on the proposed East Waste Rebate & Distribution Policy, prior to adoption.

Background

For most years in recent history, through the continued identification and implementation of efficiencies, East Waste has been in the fortunate position to provide a financial return to Member Councils. While this will not always be possible, in returning funds it has become clear that there is a need to provide a clearer and more consistent decision making and delivery process for doing so.

Report

The East Waste Charter is clear in stating that all surplus funds must be returned to Member Councils. Section 61 of the Charter states:

> **61. DISTRIBUTIONS TO CONSTITUENT COUNCILS**
> *The Authority must pay or credit surplus funds to the Constituent Councils in proportion to their Shares to the extent the Board determines the Authority can afford to pay having regard to future expenditure the Business Plan anticipates be incurred.*

Member Council Shares as per Section 57.1 of the East Waste Charter are equal (equating to 14.2857%).

> ***57.1*** *At the date of operation of this Charter the Constituent Councils' shares in the Authority are equal.*

As Member Councils have an equal share in the assets, liabilities and revenue of the Authority, it is appropriate that any significant distributions are done so equally.

A net surplus has been common in recent years and therefore necessitated the need to return this to Member Councils. It has been the view of Administration and the Board that the original funds that contributed to the net surplus were provided by the Councils based on their Common Fleet Costing Charge which has significantly variation. For example, the Town of Walkerville has a Common Fleet Costing percentage of $3.4% and Adelaide Hills Council has a Common Fleet Costing percentage of 21.3%. In simple terms this means that at the start of the financial year the net surplus was derived from, out of every $100 spent, Adelaide Hills Council contributed $21.30 and Town Walkerville of $3.40.

As such from an equity perspective it has been deemed that any funds to be returned should also be provided on this basis and it is this framework that has been used.

From an accounting perspective a Distribution (paid equally) is reflected as a cash payment and does not impact on the financial performance of East Waste in the period it is paid. A rebate either can be provided as either a reduction in future Common Fleet Costing Charges or by a physical payment of funds. A rebate is reflected as operating expense to East Waste in the financial year it is either paid and/or applied against Common Fleet Costing Charges and will be an unbudgeted expense.

The draft Rebate and Distribution Policy as presented in Attachment A (refer Attachment A), provides the necessary clarity, transparency, flexibility and consistency in process and scenarios for the return of net surpluses to Member Councils.

The Policy was presented to the Audit and Risk Committee April 2021 meeting and following some minor amendments (included in Attachment A), the committee resolved:

8.3 REBATE AND DISTRIBUTION POLICY

Moved Ms Hinchey that the Committee notes and accepts the Rebate & Distribution Policy as presented in Attachment A, with amendments, and recommends for presentation to the East Waste Board.

Seconded Cr Green **Carried**

RECOMMENDATION

The Board adopts the Rebate & Distribution Policy as presented in Attachment A.

MEMBER COUNCIL REBATE & DISTRIBUTION POLICY

Type	Governance
Category	Finance
First Issued/Adopted	Board:
Minutes Reference	
Review Period	24 months
Last Reviewed	N/A
Next reviewed	April 2023
Applicable Legislation	• *Local Government Act 1999* • *Local Government (Financial Management) Regulations 2011*
Related Documents	• East Waste Charter • East Waste Strategic Plan 2030 • East Waste Long Term Financial Plan
Consultation Undertaken	Audit & Risk Management Committee
Responsible Officer	Manager, Corporate Services

SIGNED: …… ……

General Manager Chairperson

Date: ___/____/_____ Date: ___/____/____

Purpose

This Policy establishes a framework when applying rebates to Constituent Councils waste management charges and/or paying of distributions. It serves to provide guidance to Constituent Councils, the Board and Administration of East Waste to determine on what grounds a Member Council is entitled to receive a rebate and/or distribution.

This Policy outlines the matters to be considered by East Waste when determining whether a rebate and/or distribution is to be applied.

Background

Each year East Waste sets a budget for the following financial year in accord with the Charter and Budget Framework Policy. Despite the rigorous process and diligent management, external factors, cost overruns and/or the implementation of efficiencies will result in end of year variations.

Section 61 of the Charter states:

> **61. DISTRIBUTIONS TO CONSTITUENT COUNCILS**
> *The Authority must pay or credit surplus funds to the Constituent Councils in proportion to their Shares to the extent the Board determines the Authority can afford to pay having regard to future expenditure the Business Plan anticipates be incurred.*

As Member Councils have an equal share in the assets, liabilities and revenue of the Authority, it is appropriate that any significant distributions are done so equally.

Where net surpluses are derived, these are provided by the Councils on their Common Fleet Costing Charge and therefore any return should be on the same basis.

Definitions

Common Fleet Costing Charge	The charge to each Member Council which represents all direct and administrative costs associated with the delivery of waste collection, fleet maintenance, waste management administration, education & promotions activities, regulatory compliance and funding debt servicing obligations related to common fleet plant & equipment related activities. The actual charge is apportioned based on the Common Fleet Percentage of the Member Council. The Common Fleet Costing Charge also incorporates an additional charge to Member Councils to incorporate any Return on Revenue targets imposed by this Policy.
Common Fleet Costs	Common Fleet Costs represent all direct and administrative costs associated with the delivery of waste collection, fleet maintenance, waste management administration, education & promotions activities, regulatory compliance and funding debt servicing obligations related to common fleet plant & equipment related activities.
Common Fleet Percentage	Calculated from GPS data collected from each East Waste Fleet Truck over the previous 12 months. The Common Fleet Percentage (CFP) is the portion of time taken to undertake the 5 core services (household kerbside collections (waste, recycling & organics), street & reserve litter bins and hard rubbish) for each Member Council. This is represented as a percentage of the total time, for the previous 12 months and is used as a basis for the Common Fleet Costing Charge. Revised CFP allocations are applied to Common Fleet Cost charges annually or when significant variations occur (eg. new service added or new Council enters).
Constituent Council Share	As detailed in *S.57* of the *East Waste Charter*, all Member Councils hold an equal equitable ownership interest share in East Waste.
Distribution	Refers to cash payments made by East Waste to Constituent Councils which represent a return on equity. Distributions are paid to Constituent Councils based the principles set out in Section 61 of the East Waste Charter.
Member Councils	Also known as Constituent Councils, are those Councils which are referred to in *Section 1* of the *East Waste Charter*.
Model Financial Statements	Refers to the Model Financial Statements described in Regulation 4(3) of the *Local Government (Financial Management) Regulations 2011.*
Net Surplus	Refers to the Net Surplus as calculated on the Statement of Comprehensive Income per the Model Financial Statements.
Non-Member Councils	Councils, Organisations or waste related services, provided outside of existing Constituent Councils (as referred to in *Section 1* of the *East*

	Waste Charter). A differential rate is to be applied to activities provided to non-Member Councils.
Proposed Fees	The indicative Common Fleet Costing Charge, Corporate Administration Fee, waste and processing fees (where applicable) and any other charges which the Authority intends to charge Member Councils in the subsequent Financial Year.
Rebate	Represents a reduction in waste collection fees charged to Constituent Councils. Rebates can be represented by either a reduction in future Common Fleet Costing Charge or by a physical payment of funds. A rebate is reflected as operating expense to East Waste in the financial year it is either paid and/or applied against Common Fleet Costing Charges.

Principles

The Board will assess at each budget review whether:

- Adopted Common Fleet Charges are appropriately set to recover all costs in accordance with the principles set in the Budget Framework Policy.
- Whether there are surplus cash funds held by East Waste for which consideration should be given to returning those funds to Member Councils.

Distributions paid must conform with the requirements of the Charter.

A rebate may be returned to the Member Councils in line with the most appropriate set of Member Council Common Fleet percentages.

In assessing whether East Waste has a deemed surplus cash reserve which can be returned to Member Councils, the following at minimum should be considered:

1. Assessment of Projected Current & Future Working Capital Requirements

The Board will review the projected short-term and long-term working capital requirements of East Waste giving regard to the adopted budget and LTFP to ensure that at all times, East Waste has appropriate levels of cash reserves to meet all current and future financial (actual and anticipated) obligations (this includes for loan repayments and for future capital expenditure not funded via loan borrowings).

2. Compliance with East Waste Policies

Prior to any return of cash funds, assessment as to East Waste's compliance with other applicable Policies is to be considered. In particular, compliance with Treasury Management and Budget Framework Policies is to be factored in the decision-making process.

3. Adopted Budget & Long Term Financial Plan (LTFP)

In assessing whether East Waste has the financial capacity to return any surplus cash funds reserves held, consideration of the financial impact of such a payment on the adopted budget and/or the LTFP is to be assessed depending on the nature of the payment.

At minimum, the following will be considered as part of the Board's decision-making process:

- For the payment of a rebate, an assessment of the financial impact on the adopted budget will be required.
- For the payment of a rebate, an assessment of the financial impact on the adopted budget and the LTFP will be required.

END.

8.4: REVIEW OF THE TREASURY MANAGEMENT POLICY

REPORT AUTHOR: General Manager
ATTACHMENTS: A: Draft Treasury Management Policy

Purpose of the Report

To provide the Board with an opportunity to review the revised *East Waste Treasury Management Policy*, prior to adoption.

Background

The Treasury Management Policy was developed in 2018, to provide clear direction on the how required borrowings will be raised, if relevant, when, and how reserves are created and maintained and how cash and investments will be managed to fund East Waste operations. The policy is overdue for review and given the review of the related policies at this meeting, namely the *Budget Framework Policy* and the proposal of a *Member Council Rebate & Distributions Policy* it is appropriate it is considered in the holistic review.

Report

The revised Treasury Management Policy is presented in Attachment A (refer Attachment A), inclusive of tracked changes to easily draw the Board's attention to changes. The suggested changes assist in providing greater clarity and/or consistency with other like policies. None of the proposed amendments fundamentally change the intent or direction of the Policy.

The Policy was presented to the Audit and Risk Committee April 2021 meeting and the committee resolved:

8.4 REVIEW OF TREASURY MANAGEMENT POLICY

Moved Ms Hinchey that the Committee notes and accepts the revised Treasury Management Policy as presented in Attachment A and recommends for presentation to the East Waste Board.

Seconded Ms Di Blasio **Carried**

RECOMMENDATION

The Board adopts the revised Treasury Management Policy as presented in Attachment A.

TREASURY MANAGEMENT POLICY

Type	Governance
Category	Finance
First Issued/Adopted	Board:
Minutes Reference	
Review Period	24 months
Last Reviewed	February 2018
Next reviewed	April 2023
Applicable Legislation	• *Local Government Act 1999* • *Local Government (Financial Management) Regulations 2011*
Related Documents	• East Waste Charter • East Waste Strategic Plan 2030 • East Waste Long Term Financial Plan
Consultation Undertaken	Audit & Risk Management Committee
Responsible Officer	Manager, Corporate Services

SIGNED: …… ……

General Manager Chairperson

Date: ___/____/_____ Date: ___/____/____

Purpose

The Treasury Management Policy sets the principles and criteria with regard to East Waste's treasury function and assists with decision-making ~~(cash) management in~~ regarding the financial operations as included in the ~~context of the Annual Plan and Budget~~ annual budget, Long Term Financial Plan (LTFP) and associated projected and actual cash receipts and outlays. It outlines how required borrowings will be raised, if relevant, when and how reserves are created and maintained and how cash and investments will be managed to fund East Waste operations.

East Waste is committed to operating at all times in a financially sustainable manner.

This Treasury Management Policy establishes a decision framework to ensure that:

- Funds are available as required to support approved outlays; and
- Interest rates and other risks are acknowledged and responsibly managed; ~~and~~
- ~~The net interest costs associated with borrowing and investing will be selected to deliver the best value for East Waste over the longer term.~~

This policy applies to all financial assets/liabilities and reserves, including finance leases except for the following specific exclusions:

- Creditors and Provisions; and
- Bank Guarantees.

Background

The Eastern Waste Management Authority (herein referred to as East Waste) recognises its obligation to continuously improving management systems, as an integral process in its Officers meeting due diligence requirements.

As such, the organisation is committed to implementing this process and assisting its Officers to meet due diligence requirements through the organisations long term/annual plan and budget.

This policy provides a framework relating to the treasury requirements of the organisation.

Definitions

Refer to the East Waste Charter, Budget Framework Policy and Australian Accounting Standards for definitions where required.

Principles

1. Investments

The following statement is made with consideration to, and in accordance with, the requirements of Clause 61 of the East Waste Charter – Distributions to Constituent Councils. Clause 61 states:

'The Authority must pay or credit surplus funds to the Constituent Councils in proportion to their shares to the extent the Board determines the Authority can afford to pay having regard to future expenditure the Business Plan anticipates be incurred.'

Any funds that are not immediately required for operational needs and cannot be applied to either reduce existing borrowings or avoid the raising of new borrowings will be invested in accordance with this Policy.

Investments will be made in a prudent manner having regard for the prevailing economic climate, projected interest rate movements and future cash requirements.

Cash investments are to be limited to:

- Deposits with the Local Government Finance Authority.

Unless it is financially advantageous to do so, the maturity date for fixed term investments should not exceed a point in time where the funds could otherwise be applied cost effectively to either defer the need to raise new borrowings, access existing overdraft facilities or reduce the level of East Waste's existing borrowings.

All investments are to be made exercising care, diligence and skill in the consideration of:

- The purpose of the investment;
- The likely income return and timing of income return;
- The period in which the investment is likely to be required;
- The cost of making and maintaining the investment;
- An assessment on future interest rate movements;
- The liquidity and marketability of the proposed investment; and
- An assessment of future cash flow requirements.

~~**2. Surplus Funds**~~

~~Clause 61 of the East Waste Charter – Distributions to Constituent Councils sets out the requirements East Waste must adhere to with respect to the treatment of surplus funds. Clause 61 states:~~

~~*'The Authority must pay or credit surplus funds to the Constituent Councils in proportion to their shares to the extent the Board determines the Authority can afford to pay having regard to future expenditure the Business Plan anticipates be incurred.'*~~

~~If and when a sufficient surplus is realised and subject to a decision of the East Waste Board in accordance with Clause 61, surplus is to return to Constituent Councils.~~

~~3.~~2. ~~4.3~~ Borrowings

Borrowings are not a form of revenue and do not replace the need for East Waste to generate sufficient operating revenue to service daily ~~its~~ operating requirements. ~~Undertaking borrowings gives rise to both an asset (the cash it provides) and a liability (the obligation to repay the money borrowed).~~

Borrowings are a useful and valid mechanism to:

- Acquire and/or construct ~~Establish~~ new long term assets that will be used to provide services ~~Constituent Councils and their residents~~; and
- Manage short-term timing differences between operating cash inflows and outflows.

~~East Waste may borrow in accordance with Clause 10.11 of the East Waste Charter which states East Waste may:~~

~~*'borrow or raise money within borrowing limits.'*~~

East Waste manages its funds holistically within the constraints of the Annual Plan and Budget and ~~Long Term Financial Plan.~~LTFP.

All borrowings are to be made exercising care, diligence and skill in the consideration of:

- Current risk profile;
- Current economic factors;
- The period over which the funds are likely to be required;
- Expected short and long term view of interest rate trends;
- East Waste's overall debt maturity profile and mix;
- Cost of funding;
- Cost differentials between fixed and variable facilities;
- Long term capacity of repayment of loans;
- The rationale for the borrowings; and
- The cost of making and maintaining the borrowing.

~~4.~~3. ~~4.4~~ Authority to Borrow

In accordance with Clause 11.3 of the East Waste Charter, the Board may not delegate the power to borrow money or obtain any other form of financial accommodation unless authorised in an Annual Plan.

Budgeted borrowings that are not taken out within the financial year for which they are approved are not carried over into the following year and the delegated authority to borrow those funds lapse. A new budgeted borrowings limit is then established as part of the following year's budget.

~~5.~~4. ~~4.5~~ Quotations

East Waste will utilise the Local Government Finance Authority as its primary supplier when undertaking new borrowings or investing surplus cash. The Local Government Finance Authority provides significant support to the industry and applies bonus return payments to Councils and Subsidiaries from its profits.

From time to time, at intervals of no more than every two years, at least two competitive quotes will be sourced, compared and documented against the Local Government Finance Authority to ensure they continue to deliver the value to the community (after taking into account all relevant factors, including bonus amounts paid and bonus discounts received).

~~6.~~5. ~~4.6~~ Maintain Sufficient Funds to Meet Liabilities

In order to ensure liabilities are met as and when they fall due and to maintain business continuity, East Waste ~~Executive Administration~~ shall maintain a suitable balance of funds held in any operating account on an 'at call' basis to meet current period projected financial obligations. These limits shall be considered when preparing the Annual Plan and Budget, Budget Reviews and ~~Long Term Financial Plan~~LTFP.

East Waste's Executive Management team will monitor the level of cash and working capital requirements ~~equivalents~~ on a weekly basis.

~~7.~~6. ~~4.7~~ Reporting

On or before 30 November each year, the East Waste Board shall receive, via the Audit and Risk Management Committee, a specific report regarding treasury management performance relative to the criteria specified in this policy.

This report will highlight:

- The amount of each East Waste borrowing and investment, its interest rate, maturity date and any changes in holdings since the previous report; and
- If applicable, the proportion of fixed interest rate and variable interest rate borrowings at the end of the reporting period.

END.

8.5: NATIONAL COMPETITION POLICY STATEMENT

REPORT AUTHOR: General Manager
ATTACHMENTS: A: Draft National Competition Policy Statement

Purpose of the Report

To provide the Board with an opportunity to review and comment on the proposed East Waste National Competition Policy Statement, prior to adoption.

Background

The East Waste Charter (refer part 10) requires East Waste to have a current National Competition Policy Statement at all times, if it is undertaking non-core Activities.

> ***PART 10—COMPETITIVE NEUTRALITY***
>
> ***36. COMPETITIVE NEUTRALITY***
>
> *36.1 For the purposes of Schedule 2, Clause 32 of the Act, the Authority is not involved in a significant business activity in undertaking its Core Activity.*
>
> *36.2 In respect of any Non-core Activity that is a significant business activity, the Authority must at all times have current a National Competition Policy Statement in relation to competitive neutrality which it will adhere to in undertaking that Non- core Activity.*

East Waste currently does not have a National Competition Policy Statement, nor does it carry out any non-core activities. Notwithstanding, opportunities may arise in the future where East Waste tenders for work deemed to be a non-core activity. As such it is appropriate to have the right framework adopted.

Report

The National Competition Policy Statement (NCPS) effectively prescribes when the requirements of the Clause 7 Statement (*Revised Clause 7 Statement on the Application of Competition Principles to Local Government under the Competition Principles Agreement*) are to be applied and how.

The concept of competitive neutrality is that an organisation's market competitiveness should not be unfairly strengthened or weakened on account of its public sector ownership. Competitive neutrality concerns exist where all the following conditions apply:

- a difference exists between a public sector business and a private sector business providing a particular good or service; and
- the difference (for example exemption from certain taxes) is due solely to the government ownership of the public sector organisation; and
- the difference constitutes an advantage or disadvantage for the public sector organisation in providing the good or service in the market.

For East Waste this only applies to works which are under the Charter re listed as non-core activities. Essentially this means any work that we conduct, outside of existing Member Councils (ie. Contract work). Currently East Waste does not undertake any non-core activities and as such the statement has no effect. However, there may be beneficial opportunities for existing Member Councils in the future, where non-core activities triggering the principles of Competitive Neutrality and as such it is appropriate to have a policy

implemented and maintained. The draft National Competition Policy Statement is attached for review and comment (refer Attachment A).

A number of principles are required to trigger competitive neutrality, and these are detailed within the Policy. Most significantly, is whether the activity is listed as a Significant Business Activity (refer Attachment A, pg.4). East Waste has the discretion to determine whether a business activity is a 'significant business activity', taking into account a number of factors. As an example, a business activity can be categorised as a significant business activity if it has an annual revenue in excess of $2 million or employing assets in excess of $20 million. Should a business activity satisfy this financial threshold (or any of the other factors), it would be a significant business activity to which the principles of competitive neutrality apply.

At this point, East Waste then has the discretion to determine, based off a number of cost-benefit factors, whether a method of compliance is required to be implemented to ensure there is competitive neutrality.

While East Waste's Charter does require a NCPS to be implemented and maintained, as noted above, the process of implementing methods of compliance of competitive neutrality are largely at East Waste's discretion. The NCPS sets out the factors and requirements that East Waste will need to take into consideration each time it undertakes a new Non-Core Activity, but there is no absolute obligation to implement methods of compliance as the final cost-benefit analysis can ultimately find that a method is not required.

RECOMMENDATION

The Board adopts the Draft National Competition Policy Statement as presented in Attachment A.

NATIONAL COMPETITION POLICY STATEMENT

Type	Governance
Category	Finance
First Issued/Adopted	Board:13 December 2018
Minutes Reference	
Review Period	36 months
Last Reviewed	N/A
Next reviewed	April 2024
Applicable Legislation & Documents	• *Local Government Act 1999* • *Government Business Enterprises (Competition) Act 1996* (SA) • *Revised Clause 7 Statement on the Application of Competition Principles to Local Government under the Competition Principles Agreement* • Competition Principles Agreement – 11 April 1995 (As amended to 13 April 2007)
Related Documents	• East Waste Charter • East Waste Strategic Plan 2030 • East Waste Long Term Financial Plan
Consultation Undertaken	Audit & Risk Management Committee
Responsible Officer	Manager, Corporate Services

SIGNED: …… ……

General Manager Chairperson

Date: ___/____/_____ Date: ___/____/____

Purpose

This *National Competition Policy Statement* (NCPS) is implemented for the purposes of *Section 36.2* of the E*astern Waste Management Authority's Charter* (gazetted 26 September 2017).

The object of this NCPS is to outline when the requirements of the Clause 7 Statement apply to East Waste and how East Waste will apply the principles of competitive neutrality.

Interpretation

Act means the *Government Business Enterprises (Competition) Act 1996* (SA).

Clause 7 Statement means the *Revised Clause 7 Statement on the Application of Competition Principles to Local Government under the Competition Principles Agreement.*

Constituent Council means at any time a constituent council in relation to East Waste and on the date of publication of the Eastern Waste Management Authority's Charter in the South Australian Government Gazette means Adelaide Hills Council, City of Burnside, City of Campbelltown, City of Norwood Payneham and St Peters, City of Mitcham, City of Prospect, Corporation of the Town of Walkerville.

Core Activity means collection, recycling and/or disposal of waste produced within the area of one or more of the Constituent Councils.

CPA means the Competition Principles Agreement – 11 April 1995 (As amended to 13 April 2007).

East Waste means the Eastern Waste Management Authority.

Non-Core Activity means an activity that is not a Core Activity.

NCP means National Competition Policy.

NCPS means this National Competition Policy Statement.

NCP Obligation

Clause 7 of the CPA requires States and Territories to apply the obligations in the CPA to Local Government. The South Australian Government has passed the Act and issued the Clause 7 Statement setting out the application of competition principle to Local Government.

Clause 32, Schedule 2 to the *Local Government Act 1999* provides:

> ***32 - Principles of competitive neutrality***
>
> *If a regional subsidiary is declared by its charter to be involved in a significant business activity, the charter must also specify the extent to which the principles of competitive neutrality[1] are to be applied to the activities of the subsidiary and,* to the extent that may be relevant, the reasons for any non-application of these principles.

Note - 1 See Part 4 of the Government Business Enterprises (Competition) Act 1996

Competitive Neutrality

The concept of competitive neutrality is that an organisation's market competitiveness should not be unfairly strengthened or weakened on account of its public sector ownership. Competitive neutrality concerns exist where all the following conditions apply:

- a difference exists between a public sector business and a private sector business providing a particular good or service; and
- the difference (for example exemption from certain taxes) is due solely to the government ownership of the public sector organisation; and
- the difference constitutes an advantage or disadvantage for the public sector organisation in providing the good or service in the market.

Notwithstanding the above, there will remain competitive advantages and disadvantages that exist between public and private sector organisations, such as workforce skills and managerial competence which fall outside the ambit of competitive neutrality.

Examples of potential competitive advantages a public sector organisation may receive include (but are not limited to):

- an operational structure that does not separate commercial and non-commercial activities;
- being able to operate without the pressure of business risk e.g. no fear of liquidation;
- exemptions from various government taxes, such as goods and services tax, payroll tax, fringe benefit tax, land tax and council rates;
- access to cheaper finance; or
- exemption from certain legislation that only applies to private sector organisations.

Examples of potential competitive disadvantages a public sector organisation may receive include (but are not limited to):

- restrictions on financial structure and financial management which have no equivalent in the private sector;
- less flexibility or discretion in managing operations arising from the policies and/or practices of central or public-sector wide supervisory agencies; or
- provision of non-commercial goods and/or services which it would not otherwise provide, at the direction of the government without compensation.[1]

[1] Department of Treasury and Finance South Australia, A Guide to the Implementation of Competitive Neutrality Policy, 2010.

Competitive neutrality requires these publicly owned businesses to be subject to the same rules and regulations as private businesses, including the application of similar costs for taxes and borrowings.[2]

The principles of competitive neutrality are defined in the Act as:

> *'Principles designed to neutralise any net competitive advantage that a [State] government or local government agency engaged in significant business activities would otherwise have, by virtue of its control by the [State] government or local government, over private businesses operating in the same market.'*

Business Activity

Competitive neutrality principles should be applied, where appropriate, to a significant business activity carried out by a council. Whether a business activity is significant business activity will depend on its size and influence in the relevant market.[3]

Pursuant to Section 5.1 of the Clause 7 Statement, a business activity is defined as follows:

A business activity includes any activity undertaken:

(a) which falls within the Australian Bureau of Statistics classification of 'Public Trading Enterprise' and 'Public Financial Enterprise'; or

(b) where:

(i) the activity is primarily involved in producing goods and services for sale in the market; and

(ii) the activity has a commercial or profit-making focus; and

(iii) there is user charging for goods and/or services; and

(iv) the activity is not primarily funded from rate or grant revenue; or

(c) where the local government agency submits a tender as part of a tendering process in competition with the private sector.

For the purposes of Section 5.1(a) of the Clause 7 Statement, the following definitions apply to the terms contained therein (as defined in Appendix 1 of the Clause 7 Statement):

- *Public trading enterprises - Commonwealth, State/Territory and local government undertakings which aim at covering most of their expenses by revenue from sales of goods and services, including major commodity marketing authorities.*

- *Public financial enterprises - Commonwealth, State/Territory and local government bodies primarily engaged in financial transactions in the market involving both incurring liabilities and acquiring financial assets.*

[2] Government of South Australia, *Revised Clause 7 Statement on the Application of Competition Principles to Local Government under the Competition Principles Agreement,* 2002.
[3] Government of South Australia, *Revised Clause 7 Statement on the Application of Competition Principles to Local Government under the Competition Principles Agreement,* 2002.

Section 5.1 of the Clause 7 Statement provides two exceptions from the definition of business activity:

> *… an activity will not be a business activity if:*
>
> *(d) it provides goods or services to the local government agency and for reasons of policy or law there is no competition with alternative suppliers; or*
>
> *(e) it is clear that the intention of the local government agency is that the activity's predominant role is regulatory or policy-making, or where the achievement of community benefits is the main priority of the activity.*

East Waste will review each Non-Core Activity it undertakes to determine whether it satisfies one (or more) of the three requirements of a business activity pursuant to Section 5.1(a) – (c) of the Clause 7 Statement. Following this review:

- in the event that one (or more) of the three requirements of a business activity applies to a Non-Core Activity, East Waste will then determine whether that Non-Core Activity fall within one (or more) of the two exceptions pursuant to Section 5.1(d) – (e) of the Clause 7 Statement;
- if the Non-Core Activity falls within one (or more) of the two exceptions, the Non-Core Activity will not be deemed a 'business activity' and no further action will be taken;
- if the Non-Core Activity does not fall within one (or more) of the two exceptions, the Non-Core Activity will be deemed a 'business activity'. East Waste will then determine whether the Non-Core Activity is a 'significant business activity'.

Significant Business Activity

East Waste will determine whether or not a business activity is a 'significant business activity' to which the principles of competitive neutrality apply. In making its determination, East Waste will take into account the following factors (pursuant to Section 5.1 of the Clause 7 Statement):

- the intent of National Competition Policy;
- whether the business activity possesses sufficient market power to create a competitive impact in the market that is more than nominal or trivial;
- whether the size of the business activity relative to the size of the market as a whole is more than nominal or trivial.

Significant business activities are categorised as follows:

Category 1: business activities with an annual revenue in excess of $2 million or employing assets in excess of $20 million.

Category 2: all other significant business activities.

East Waste will determine whether a Non-Core Activity, that is a business activity, is also a 'significant business activity' for the purposes of Section 5.1 of the Clause 7 Statement in accordance with the following:

- if a Non-Core Activity is not a significant business activity, the competitive neutrality principles will not apply to that Non-Core Activity and no further action will be taken; or
- alternatively, if East Waste determines that a Non-Core Activity is a significant business activity, then the competitive neutrality principles will apply and East Waste will consider the competitive neutrality measures.

COMPETITIVE NEUTRALITY IMPLEMENTATION

Methods of compliance

Competitive neutrality can be achieved through the implementation of one of the following methods:

- corporatisation;
- commercialisation, or;
- cost reflective pricing.

East Waste acknowledges that whether or not a method is implemented will depend on whether the benefits to the public outweigh the costs of the implementation. Further, the appropriate method to be applied to a significant business activity will depend on a number of cost-benefit factors including:

- the costs and benefits of implementation;
- the organisational context of the activities exposed to competition;
- broad economic and regional development considerations;
- the level of resources used in the supply of the good or service;
- impact on competitors and the local community; and
- any special requirement such as increased accountability or a greater emphasis on efficiency.[4]

East Waste may obtain expert economic and financial advice to ensure the extent of implemented method is sufficient to achieve competitive neutrality.

[4] Government of South Australia, *Revised Clause 7 Statement on the Application of Competition Principles to Local Government under the Competition Principles Agreement,* 2002.

Corporatisation

Corporatisation will generally involve the adoption of a corporate model (which may be in relation to the significant business activity) (a separate legal entity). The new entity will be characterised by:

- clear and non-conflicting objectives;
- managerial responsibility, authority and autonomy;
- effective performance monitoring; and
- effective reward and sanctions related to performance.

Commercialisation

Commercialisation means the application of commercial practices to the significant business activity without requiring establishing a separate legal entity. A range of practices for the purposes of commercialisation (as prescribed in Section 4.2 of the Clause 7 Statement), can be implemented including:

- the clear definition and delineation of commercial and non-commercial activities, generally through a business plan;
- separate accounting for and funding of non-commercial activities;
- clear commercial performance targets;
- the separation of regulatory functions from any commercial activity;
- the valuation of all assets used in the specific business activity on a deprival value basis;
- the determination of an appropriate return on investment based on the assets employed in the business activity;
- the application of a tax equivalent regime;
- the application of debt guarantee fees;
- clear reporting requirements;
- separate financial recording and reporting; or
- arrangements for the allocation of 'profits' from the business activity.

Cost Reflective Pricing

Cost reflective pricing is the process of ensuring goods and services of a significant business activity fully reflect the costs incurred in their production or provision.

If cost reflective pricing is implemented, the price will be calculated to take into account (in accordance with Section 4.3 of the Clause 7 Statement):

- the actual costs of providing the good or service on a full-cost basis;
- the cost advantages of local government ownership (e.g. non-payment of taxes, lower

cost of finance, mix of commercial and non-commercial activities, exemption from the operation of legislation);

- the cost disadvantages of local government ownership (e.g. increased accountability and administration, higher award rates or costs associated with enterprise agreements, higher superannuation contributions); and
- return on investment and dividend payments to local government owners.

Complaints

Affected persons may complain if East Waste determines not to apply (or allegedly misapplies) the principles of competitive neutrality. Complaints can be made either:

- pursuant to the Act, to the Minister responsible for the Act (namely, the Premier); or
- pursuant to Section 6 of the Clause 7 Statement, addressed to the Competitive Neutrality Complaints Secretariat in the Department of Premier and Cabinet, 200 Victoria Square, Adelaide, SA 5000.

The complaint will then be referred to East Waste for investigation, response and possible resolution in accordance with the *East Waste Complaints Handling Policy*.

Annual report

East Waste will include any significant business activity in its Annual Reports in accordance with Section 7 of the Clause 7 Statement. The following information in respect of any significant business activity will be, where relevant, summarised and included in the Annual Reports:

- the commencement or cessation of significant business activities controlled by East Waste;
- the competitive neutrality method of compliance applied to each significant business activity controlled by East Waste; and
- complaints received alleging a breach of competitive neutrality principles by East Waste.

END.

8.6: Annual Plan Progress Report

REPORT AUTHOR: General Manager
ATTACHMENTS: A: Annual Plan Implementation Summary

Purpose of the Report
To provide the Board with an update on the implementation of the activities endorsed in the 2020/21 Annual Plan.

Background
At the June 2020 Board meeting the Board resolved (in part):

2020/21 ANNUAL BUSINESS PLAN & BUDGET

Moved Mr Bradley that the Board endorses the 2020/21 Annual Business Plan and revised Budget as presented in Attachment A, noting that an increase to the Education budget is to be considered through the quarterly budget review process.
Seconded Cr Carbone ***Carried***

Report

The attached matrix (refer Attachment A) provides a snapshot update as to the progress of the Annual Plan activities.

This is a standing item on the Board Agenda.

Recommendation

That the report be received and noted.

Attachment A –Annual Plan Implementation Summary Matrix

Activity Code	Activity	10YR Business Plan Link	Metric	Status
G1	Implementation of a compliant Records Management System	2.3.3	*State Records Act 1997* Compliant Records Management System integrated into business activities.	Project Progressing towards completion by September 2021.
OM1	Continue & Expand Existing Core Services	1.3 2.4.1	Expansion of existing Service Provisions are investigated and undertaken in a financially sustainable & beneficial manner to existing Member Councils.	Completed - Ongoing Assessment & offerings
OM2	Upgrade Fleetmax to Waste Track2 and computer hardware/cloud server	2.4.2	Systems installed to deliver optimal Customer Service and reporting capabilities.	Preliminary Waste Track2 functions being rolled out and utilised.
OM3	Purchase of replacement RACVs	2.4.7	Replacement of collection vehicles in accord with AMP to ensure operational needs are met.	Completed. All truck received. • 5 & diesel-powered RACVs • 1x small rear loader (Litter bin truck)
OM4	Investigate opportunities for increased reuse of Hard Waste material	2.4.5	Presentation to Member Councils of financially sustainable & environmentally responsible contract offer which meets their business needs.	Trial with a Member Council being investigated

Activity Code	Activity	10YR Business Plan Link	Metric	Status
C1	Implementation of Kerbside Services Plan	2.5.2	Implementation of Year 1 Actions of endorsed a of a long-term integrated behavior change Program, designed to reduce waste to landfill and contamination levels.	On hold until completion of Education Review (C3).
C2	Continued implementation of 'Why Waste It?' Program	2.5.2	Rollout of *Why Waste It?* campaign to complement statewide education and service the needs of Member Councils.	Ongoing
C3	Review of East Waste's Education Program	2.5.2	Review undertaken and report presented to Council for consideration ahead of 2021/22 budget setting.	Refer Agenda Item 8.8 April 2021.
C4	Advocacy/Leadership	2.4.6	Tangible advocacy and leadership examples across the year on waste matters of significance to Member Councils.	GM Member of National Local Government Waste Advisory Group GM & Education Coordinator presenting at Nation Waste Conference (& GM Chairing x3 sessions)
WS1	Independent Truck Fleet Audit	2.6.2	All trucks audited and identified issues corrected to ensure safe and compliant fleet.	Completed – no major defects identified.
WS2	Implementation of the 2019 Risk Management Evaluation Plan	2.3.3	All actions implemented in timely manner.	Risk Management Policy and Risk Management Framework, endorsed – actions for completion underway.
FM1	Cost benefit analysis of services	2.3.4	Review undertaken and report presented to Council for consideration ahead of 2021/22 budget setting.	Delay with final report. To be presented to June Board Meeting.

8.8: EAST WASTE EDUCATION PROGRAM COST BENEFIT ANALYSIS

REPORT AUTHOR: General Manager
ATTACHMENTS: A: *The Impact of EWMA's 'Why Waste It?' Waste and Recycling Education Campaign* **FINAL REPORT**

Purpose of the Report
To provide the Board with a copy of the final Cost Benefit Analysis report of East Waste's Education Program.

Background
East Waste has run it's own stand-alone education program for the past four (4) years. Through the 2020/21 Annual Plan, East Waste committed to undertaking a review of East Waste's Education Program, principally with a view to determining the return on investment (Cost Benefit Analysis). Following an open tender process, BDO EconSearch were engaged to undertake the review.

Report
A representative of BDO will attend the Board meeting to conduct a presentation and answer any questions.

Measuring the true value/benefit of any educational program is challenging and none more so than waste education, where a process of awareness and behaviour change is first needed before actual results can be realised. Typically, this is not instantaneous and can often be a long protracted implementation. Furthermore, true success is defined by long-term behaviour change, not short-term reactionary approaches.

For this study, the three main components of the cost-benefit analysis, included:

- total program costs;
- the net economic impact from changes in diversion rates of green organics from the landfill; and
- the net economic impact from changes in the amount of green organics recycled at the composting facility.

Pleasingly, but unsurprisingly, the minimum benefit-cost ratio (BCR) of the investment is equivalent to $**3.10-$5.20 for every $1.00 of investment expenditure incurred** in implementing the education program. Important to note, this ROI is based solely on green organics diversion and does not consider the benefits associated with reduced recycling contamination rates (relative to greater Adelaide) that the majority of East Waste's Member Councils have, or include energy savings, GHG emissions, air and water quality, biodiversity protection and water conservation. Inclusion of these would result in a far higher ROI.

A sperate social media analysis was undertaken, with the main finding being, the main strength in the East Waste Facebook strategy is instrumental in providing peer-to-peer information sharing. This led to the conclusion that the East Waste's Facebook page provides opportunities to change community members' perceptions of social norms by providing people with information about how many people recycle, how often people in the community recycle, how positively the community feels about recycling, and how many people in the community feel positively about recycling.

Overall, implementation of East Waste's education program was estimated to yield a net benefit of between $3.7 million, under conservative future adoption rate assumptions, and $7.3 million under expected future adoption rate assumptions.

A series of conclusions and further recommendations are outlined on pages 14-15 of the report (refer to Attachment A for a copy of the full report) and while a more detailed cost benefit analysis would result in an improved return on investment, Administration are of the view that this will provide little additional value to what ultimately matters, most which is the changing of behaviours.

RECOMMENDATION

The Board:

1. **Receives and notes the BDO "*The Impact of EWMA's 'Why Waste It?' Waste and Recycling Education Campaign*" Report and specifically the favourable return on invest the program has provided.**

2. **Reaffirms commitment to the East Waste education program and social media campaigns as a valued component of East Waste's service offering.**

THE IMPACT OF EWMA'S 'WHY WASTE IT?' WASTE AND RECYCLING EDUCATION CAMPAIGN

A Report for East Waste Management Authority

21 April 2021

Prepared by

BDO EconSearch

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ABBREVIATIONS

BCR	benefit-cost ratio
CBA	Cost-benefit analysis
CPI	Consumer Price Index
EPA	Environmental Protection Agency
EWMA	East Waste Management Authority
FY	financial year
GISA	Green Industries SA
GHG	Greenhouse gasses
NPV	present value net benefit value
PVTC	Present value total cost
PVTB	Present value total benefit

DOCUMENT HISTORY AND STATUS

Doc Version	Doc Status	Issued To	Qty elec	Qty hard	Date	Reviewed	Approved
1	Draft	Rob Gregory	1 PDF	-	07/04/21	HB	JBM
2	Final	Rob Gregory	1 PDF	-	21/04/21	JBM	JBM

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Project Manager:	John Kandulu
Principal Author/s:	John Kandulu & Meagan Magnusson
Name of Client:	East Waste Management Authority
Name of Project:	The Impact of EWMA's 'Why Waste It?' Waste and Recycling Education Campaign
Document Version:	2
Job Number:	ES2101

EXECUTIVE SUMMARY

East Waste Management Authority (East Waste) developed an education program (the program) for its Member Councils in 2016 to improve waste management behaviours, attitudes and practices. The education program began as the 'Which Bin?' campaign but has subsequently been renamed the 'Why Waste It?' Waste and Recycling Education Campaign. Since its launch in 2017, East Waste has invested considerable resources to support the program, raise awareness of landfill diversion and reduce waste disposal costs for its Member Councils. Preliminary analyses of kerbside solid waste collection data before and after program implementation indicated that the program was having an impact. East Waste engaged BDO EconSearch to evaluate the economic and social impact of the program and provide recommendations on approaches for carrying out social and environmental impact assessments and benchmarking the performance of the program against best-practice education programs. The objective of this report is to present methods, results, conclusions and recommendations from economic and thematic social impact analyses of the education program and recommend best-practice social and environmental impact assessment methods and benchmarking approaches.

Cost-benefit analysis

BDO EconSearch conducted a cost-benefit analysis (CBA) estimated the net economic return on investment for East Waste's 'Why Waste It?' Waste and Recycling Education Campaign. The largest benefit was considered to result from the increase in the amount of green organics diverted from the landfill and recycled at the composting facility. The three main components of the cost-benefit analysis, included total program costs, the net economic impact from changes in diversion rates of green organics from the landfill and the net economic impact from changes in the amount of green organics recycled at the composting facility. These costs and benefits were estimated by analysing kerbside solid waste collection data under a base case 'without program' scenario and two 'with program' scenarios, including a conservative 'with program' scenario and an expected 'with program' scenario. Overall, implementation of East Waste's education program was estimated to yield a minimum net benefit of $3.7 million. The minimum benefit-cost ratio (BCR) of the investment was estimated at 3.10, or a minimum return on investment equivalent of $3.10 for every $1.00 of investment expenditures incurred. Our findings are consistent with results from similar cost-benefit analyses of education programs for improving waste management outcomes in South Australia and Victoria. BDO EconSearch recommend a follow-up CBA with updated kerbside collection tonnage data in future to improve on estimates of the return on the investment for the education program. Further, up-to-date time series data on per-household kerbside solid waste collections by council would enable a more detailed economic evaluation of the economic impact of the program and improve the reliability of net return and BCR estimates.

Social media analysis

The objective of the social media analysis was to draw out key themes related to social performance indicators of the program. To do this, thematic analysis of 789 comments was undertaken on a sample of 34 Facebook posts, spanning a three year period from 08/03/2019 to 01/02/2021. The key result that emerged from the thematic analysis was that the main strength in the East Waste Facebook strategy is the platform it provides for peer-to-peer information sharing. This led to the conclusion that the East Waste's Facebook page provides opportunities to change community members' perceptions of social norms by providing people

with information about how many people recycle, how often people in the community recycle, how positively the community feels about recycling, and how many people in the community feel positively about recycling. To harness this strength, BDO EconSearch recommend use of posts that intend to facilitate information sharing between users. This kind of post may also help shape community member perceptions of social norms about recycling in a positive way, giving the impression that responsible waste disposal and recycling is highly prevalent in the community and encouraging others to bring their behaviour in line with that social norm. To provide a complete analysis of the program performance and its behavioural change outcomes, an online survey that elicits specific information relating to the social indicators of the program would be required.

Review of environmental impact analysis methods

The objective of the environmental impact analysis component was to provide recommendations and guidance for the process of selecting appropriate cost-effective methods for evaluating expected environmental impact of waste management advocacy campaign activities. BDO EconSearch reviewed 30 scientific case studies on experiences with applying various approaches to evaluate the environmental impact of various activities for improving waste management practices. Environmental impact assessment approaches commonly employed to support decisions regarding waste management, include lifecycle assessment, multi-criteria evaluation and cost-benefit analysis. These methods utilise empirical observational data to quantify relationships between improvements in various waste management outcomes and environmental impacts. Most commonly quantified environmental impacts of improvements in waste management practices, include energy savings, GHG emissions, air and water quality, biodiversity protection and water conservation. Our CBA does not include broader environmental benefits from increased amounts of green organics diverted from the landfill and recycled at the composting facility because this was outside the scope of this analysis. Omitting environmental benefits underestimated expected program net present value (NPV) and BCR. A comprehensive CBA would quantify broader environmental benefits underpinned by lifecycle assessment (LCA) and material flow modelling. Benefits transfer techniques can be applied to cost-effectively estimate environmental benefits in the absence of LCA and material flow models, which can be prohibitively expensive.

Review of social impact evaluation methods

In this component, BDO EconSearch reviewed commonly applied methods for quantifying the external influence of advocacy campaigns, in particular, the contribution of advocacy programs in bringing about positive social change in waste management knowledge, attitudes and behaviour. Industry best practice in advocacy impact evaluation involves collection of longitudinal follow-up surveys based on diary entry data on matched pairs of households in 'treatment' and 'control' groups using self-reported actions and utilisation of statistical methods to control for various socioeconomic and demographic factors to establish causality. Treatment groups represent households that are aware and that participate actively in an advocacy campaign program. The total number of sampled households typically ranges between 136 and 1,000. An alternative, less costly, approach involves utilisation of a panel or cross-sectional household dataset and kerbside bin audit data to investigate whether or not there are significant differences in waste management indicators between households that are aware of, and participate in, an advocacy campaign program and households that are not aware of the program. Existing publically available datasets are incorporated to kerbside data to define treatment and control groups to assess program impacts. For

example, non-resident itinerant workers can be used as the control group and permanent residents as the treatment group to carry out a cost-effective impact assessment using ABS census data.

Review of benchmarking methods for waste management performance

Our review of the state-of-the-art approaches for benchmarking operational efficiency and productivity in waste collection services revealed that there are two most common approaches for assessing efficiency and benchmarking productivity performance in waste collection. The first approach involves estimation of values for commonly used performance indicators in the waste collection industry. The second method involves applying statistical techniques to calculate efficiency and productivity scores reflecting the ratio of resource inputs to outputs. Our recommendation is to employ benchmarking using performance indicators because of its simplicity and cost-effectiveness in a preliminary analysis to determine if there will be value added in carrying out further in-depth benchmarking analysis. However, with adequate data and computation resources, in-depth efficiency indicators can be employed.

1. INTRODUCTION

1.1. Background

East Waste Management Authority (East Waste) developed an education program (the program) for its Member Councils in 2016 to improve waste management behaviours, attitudes and practices. The education program is called 'Why Waste It?' Waste and Recycling Education Campaign. Since its launch in 2017, East Waste has invested considerable resources to support the program, raise awareness of landfill diversion and reduce waste disposal costs for its Member Councils. Preliminary analyses of kerbside solid waste collection data before and after program implementation indicated that the program was having an impact.

East Waste engaged BDO EconSearch to evaluate the economic and social impact of the program and provide recommendations on approaches for carrying out social and environmental impact assessments and benchmarking the performance of the program against best-practice education programs.

1.2. Purpose and Scope of the Study

The objective of this report is to present methods, results, conclusions and recommendations from economic and thematic social impact analyses of the education program and recommend best-practice social and environmental impact assessment methods and benchmarking approaches.

The analysis was organised into four main components involving:

1. conducting a benefit-cost analysis (CBA) evaluation to quantify the net economic benefit of the program;
2. carrying out qualitative thematic analysis to draw out key themes related to social indicators of program performance;
3. providing recommendations on approaches for carrying out a feasible social and environmental impact assessment based on a review of industry best practice; and
4. providing recommendations on feasible advocacy impact assessment, and benchmarking approaches for East Waste based on a review of industry best practice.

The CBA was conducted to estimate the net economic return of the program. Two program scenarios, a conservative and an expected scenario, were analysed.

A social media analysis was carried out to draw out key themes related to social performance indicators of the program underpinned by Facebook posts, spanning a three-year period from 08/03/2019 to 01/02/2021. In addition, BDO EconSearch reviewed commonly applied methods for quantifying the external influence of advocacy campaigns, in particular, the contribution of advocacy programs in bringing about positive social change in waste management knowledge, attitudes and behaviour. Further, various approaches for evaluating expected environmental impact of waste management advocacy campaign activities and benchmarking operational efficiency in waste collection services were reviewed.

1.3. Report Structure

The rest of the report is organised as follows:

- Section 2 – Description of the method and data, results and conclusions of the cost-benefit analyses
- Section 3 – Description of the method and data, results and conclusions of the social media analysis
- Section 4 – Description and review of environmental impact analysis methods
- Section 5 – Description and review of social impact evaluation methods
- Section 6 – Description and review of benchmarking operational efficiency in waste collection services
- Section 7 – Conclusions and recommendations

2. COST-BENEFIT ANALYSIS

A CBA was carried out to estimate the net return on investment for East Waste's 'Why Waste It?' Waste and Recycling Education Campaign. The largest benefit was considered to result from the increase in the amount of green organics diverted from the landfill and recycled at the composting facility. The cost and benefit of managing recyclables was not considered in this analysis as, although anecdotally, it appears that there has been an improvement in recycling contamination. It is difficult to attribute changes in costs and benefits of managing recyclables to the education campaign because of the greater influence of external market factors such as China's National Sword Policy on recycling behaviour.

Accordingly, the main components of the CBA were:

1. the total present value cost of the program,
2. the total present value cost and benefit from changes in the amount of green organics collected and,
3. the total present value cost and benefit from changes in the amount of solid landfill waste.

Two 'with program' scenarios were compared against a base case scenario. The costs and benefits described above were estimated under the three scenarios:

1. Base case scenario: without the education program where the amount of green organics that would have been collected without the program between financial year 2018 (FY18) and FY31 was estimated based on records for the three years prior to program implementation (FY15-FY17) and assuming an annually increase beyond FY21 at the same rate as the population growth rate (DPTI, 2019)[1]
2. With program (conservative) scenario: with the program assuming conservative future adoption rates where the observed rates of reduction in landfill and green organics collections in each council between FY18 and FY20 (Appendix Figure 4-1) were assumed to continue at the same rate to FY31
3. With program (expected) scenario: with the program assuming future rates of change future collections (FY21-FY31) that are consistent with Rogers' model for the typical rate of change of adoption rates of educational innovations over time (Appendix Figure 4-2) (Rogers, 2003). Specifically, yearly multipliers in Appendix Figure 4-2 were used to adjust the observed changes in landfill waste and green organics collections in each council between FY18 and FY20 in Appendix Figure 4-1 and project FY21-FY2031 collections.

Nominal cost and price values were converted to FY21 Australian dollar equivalents to standardise values used in net benefit[2] calculations. Current value equivalents of past program expenditures were calculated using Reserve Bank of Australia's Inflation Calculator[3] and adjusted for inflation using the Reserve Bank of Australia's Consumer Price Index (CPI) data[4]. Present value equivalent of past program expenditures were calculated using real interest rates using the Reserve Bank of Australia's data.

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1 Considering a three-year distribution takes seasonal fluctuations, for example due to differences in annual rainfall, into account.

2 Incremental benefits and costs of the options relative to those generated by the 'Base Case' scenario.

3 https://www.rba.gov.au/calculator/

4 https://www.rba.gov.au/statistics/frequency/commodity-prices/2021/icp-0321.html

Net present values were calculated over a period of 10 years between FY21 and FY31. Future costs and benefits were discounted using a discount rate of 7 per cent and a sensitivity analysis was undertaken with discount rate values ranging from 5 per cent-9 per cent.

The evaluation criteria used in the CBA to assess the performance of the program included the net present value (NPV) and benefit-cost ratio (BCR). NPV is the difference between the present value of benefits and costs after discounting to take into account different time profiles of benefits and costs. BCR is the discounted value of total benefits divided by the discounted value of the total costs.

The following sections describe how program costs and benefits were estimated under the three scenarios. Results from the CBA and a sensitivity analysis are also provided in subsequent sections.

2.1. Program Costs

The present value of total program costs from FY17 to FY19 were calculated using data on monthly program expenditures incurred between October, 2016 and May, 2019 provided by East Waste (Appendix Figure 4-3). Future annual program costs from FY20 to FY31 were assumed to be $148,455. These costs were based on FY18 expenditures for which complete records of program expenditures were available.

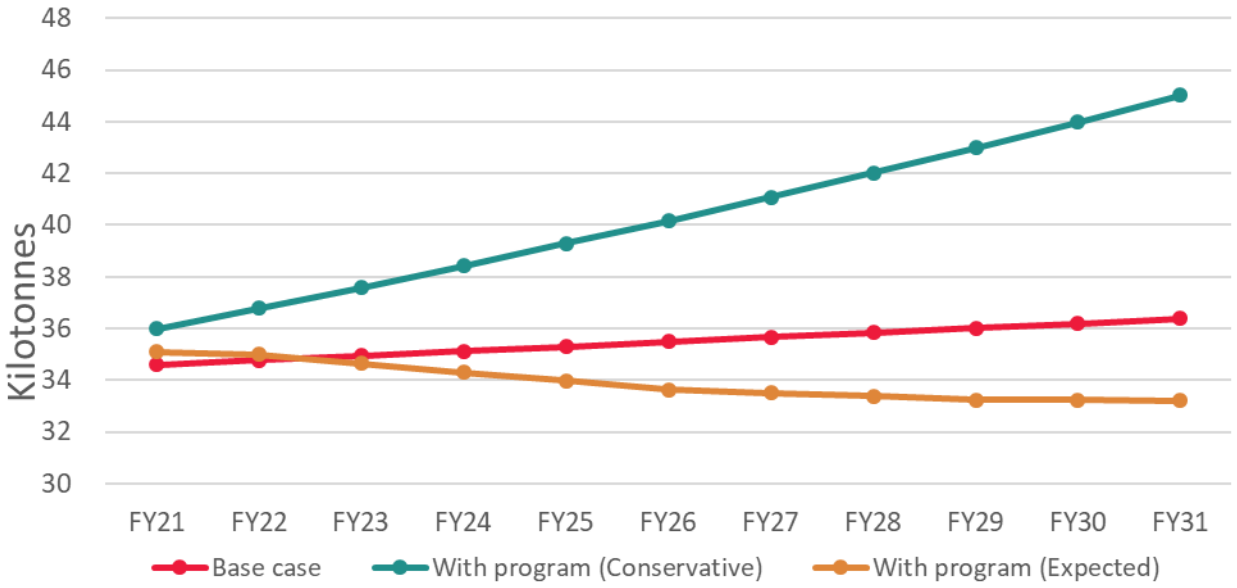
The FY21 present value equivalent for the total cost of the program was only considered under the two 'with program' scenarios. No program costs were assumed under the base case scenario.

2.2. Program Benefits

The amount of landfill waste and green organics collected and processed under each of the two 'with project' scenarios were compared to amounts that would have been collected without the program as a basis for estimating the net incremental costs and savings that can be attributed to the program.

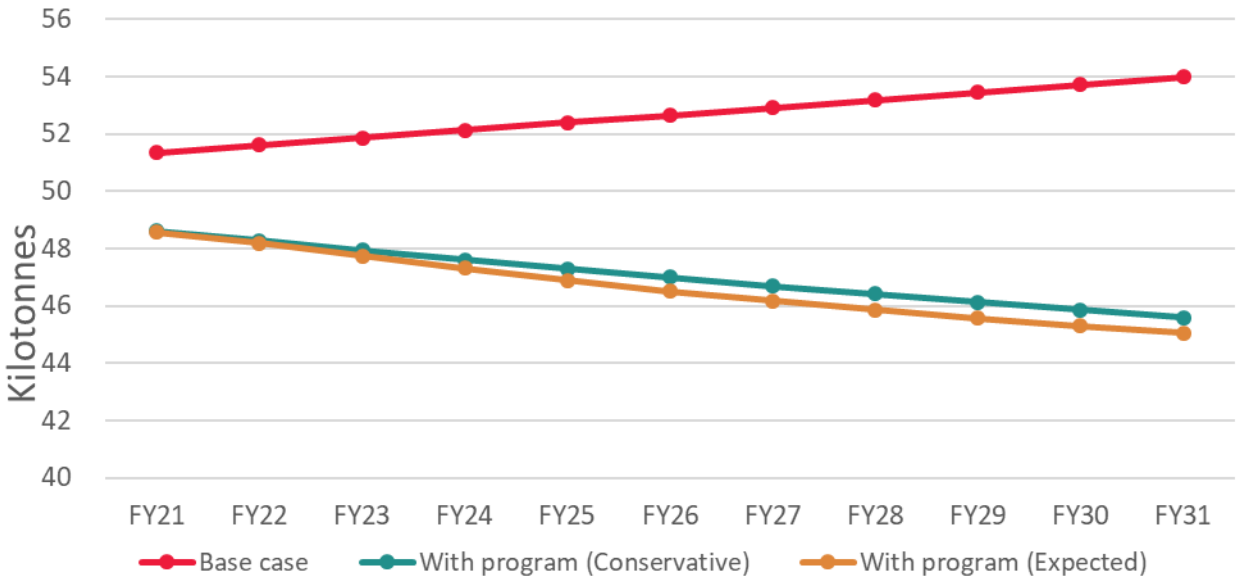
Figure 2-1 and Figure 2-2 show projections of East Waste's green organics and landfill waste collections between FY21 and FY31 under the base case scenario and under the two 'with-project' scenarios, including the conservative and expected change in future adoption rates.

Figure 2-1 Projections of East Waste's future collections of green organics



Source: East Waste tonnage data and projections based on scenarios of future adoption rates

Figure 2-2 Projections of East Waste's future collections of landfill waste



Source: East Waste tonnage data and projections based on scenarios of future adoption rates

The key benefit of the program is expected to result from savings due to reductions in landfill waste collections when compared with the base case scenario due to an increase in diversions from the landfill to the organic composting facility.

Net program benefits would be attenuated by increasing green organics collections under the conservative 'with program' scenario, when compared with the base case scenario. A decrease in green organics

collections under the expected 'with program' scenario, when compared with the base case scenario, would likely further increase expected net program benefits.

Net program benefit values were estimated by calculating the difference between incremental costs and benefits of switching from the 'without program' base case scenario to each of the two 'with program' scenarios considering changes in:

1. total landfill waste collections;
2. total green organics collections;
3. the present value total cost (PVTC) of processing green organics;
4. the PVTC of landfill waste collection fees, including the Environment Protection Act (EPA) landfill levy and landfill gate fees; and
5. sensitivity of PVTC estimates to variability in parameter values used to calculate PVTC values.

Appendix Figure 4-4 and Appendix Table 4-1 provide parameters, parameter values and sources for all the parameters used in the CBA.

2.3. CBA Results

Table 2-1 shows CBA results, including present value total costs (PVTC), present value total benefits (PVTB), present value net benefit value (NPV) and benefit-cost ratio (BCR), under the base case scenario and under the two 'with program' scenarios. From FY17 to FY31, the PVTC of the program was estimated at $1.8 million and the PVTB ranged between $5.5 million and $9.1 million consecutively for the scenarios with conservative and expected adoptions rates.

Table 2-1 CBA results comparing costs and benefits ($ million) with and without East waste's education program

CBA component	Scenario		
	Base case	With Program - Conservative adoption rates	With Program - Expected adoption rates
PVTC - Program	0.0	1.8	1.8
PVTC - organics	*13.8*	*16.3*	*13.2*
PVTC - landfill	*115.0*	*105.3*	*104.7*
PVTC - organics and landfill	128.8	123.3	119.7
Incremental PVTB	-	5.5	9.1
Incremental PVTC	-	1.8	1.8
NPV ($m)	**-**	**3.7**	**7.3**
BCR	**-**	**3.10**	**5.20**

BDO EconSearch analysis

Overall, implementation of East Waste's education program was estimated to yield a net benefit of between $3.7 million, under conservative future adoption rate assumptions, and $7.3 million under expected future adoption rate assumptions. The benefit-cost ratio (BCR) of the investment was estimated at between 3.10

and 5.20, or a return on investment equivalent to $3.10-$5.20 for every $1.00 of investment expenditures incurred in implementing the education program.

Whilst not implementing the program would have saved East Waste from incurring program expenditures estimated at $1.8 million and additional green organics processing fees of up to $2.5 million, savings of up to $10.3 million can be realised, with the program, from avoided landfill levy and gate fees due to reductions in landfill waste collections.

Our findings are consistent with results from similar CBAs of education programs for improving waste management outcomes. BCR values of greater than one and positive NPVs were reported in the published literature that was reviewed meaning that the benefits are most likely to be greater than the costs (CIE 2014, GISA 2020 and PwC 2011). Conservative NPVs from implementation of effective education activities were estimated at between $4.0 million by the City of Whittlesea (2012) in Victoria and $6.7 million for Metropolitan Adelaide Councils (GISA 2017).

BDO EconSearch recommend a follow-up CBA with updated kerbside collection tonnage data in future to improve estimates of the return on the investment for the education program. Further, time series data on per-household kerbside solid waste collections by council would enable a more detailed economic evaluation of the economic impact of the program and improve the reliability of net return and BCR estimates.

The following section provides a description of how uncertainty and variability in parameter values was addressed using sensitivity analysis.

2.4. Sensitivity Analysis

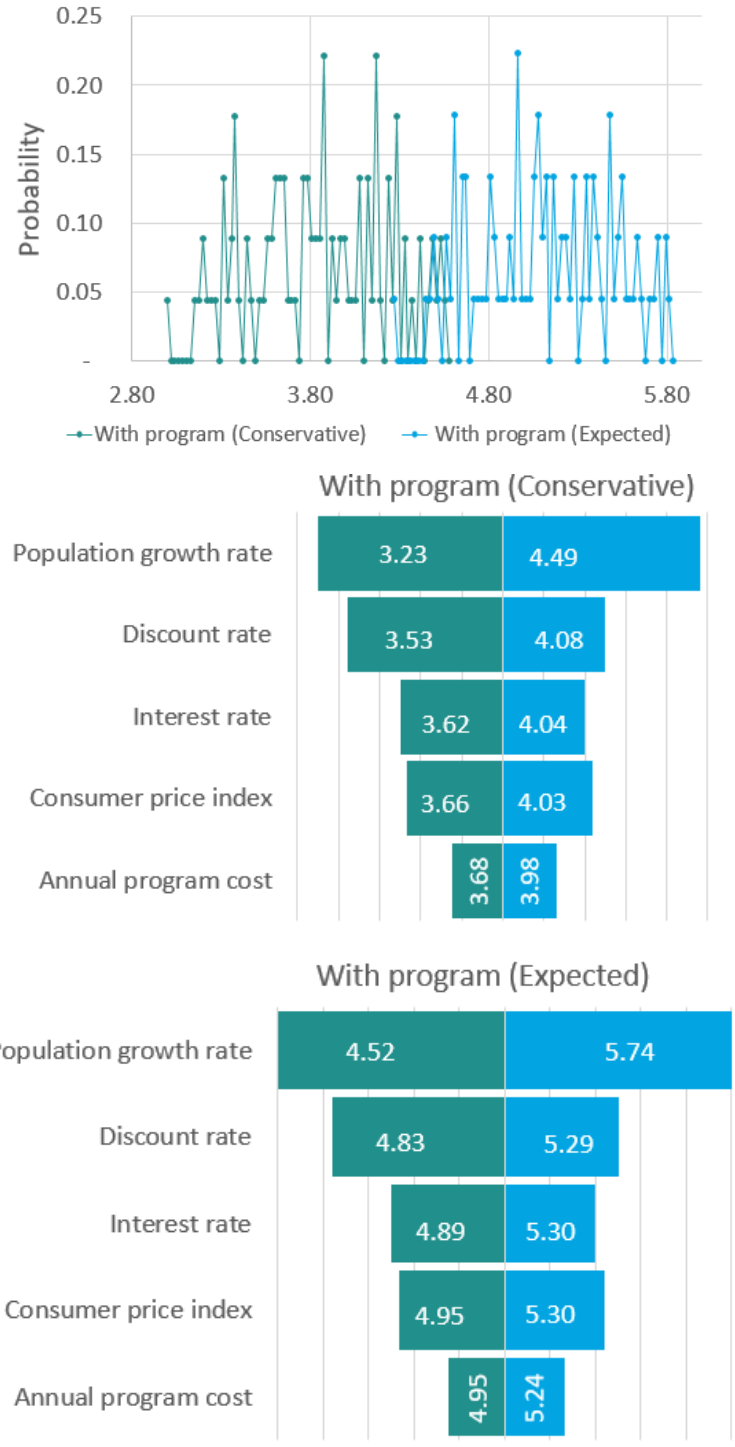
The first sensitivity analysis involved estimation of net benefit and BCR values under two alternative 'with project' scenarios to enable assessment of CBA results under varying projections of future information adoption rates.

In addition, a sensitivity analysis was carried out to quantify the sensitivity of net benefit and BCR estimates to variability in parameter values used to calculate PVTC and PVTB by systematically varying each variable parameter, in turn, within its range of probable values while holding all other uncertain parameters at their median values.

Specifically, Monte Carlo simulation was conducted to assess the contribution of variable parameters to variability BCR estimates. Figure 2-3 presents results from the sensitivity analysis showing that overall, the BCR value ranged between 3.23 and 4.49 under the conservative 'with program' scenario and between 4.52 and 5.74 under the expected 'with program' scenario with population growth assumptions. The BCR value was most sensitive to population projection assumptions and least sensitive to variability in projections on future annual program costs.

Figure 2-3 shows the frequency distribution and tornado graphs of BCR values calculated using random samples from probability density functions of variable cost and benefit parameter values (see Appendix Table 4-1). BCR estimates were highly variable, but greater than one under both of the 'with Program' scenarios.

Figure 2-3 BCR Sensitivity analysis results under conservative and expected 'with program' scenarios



Source: BDO EconSearch analysis

Variability in values, including the most sensitive parameters, was not found to be important enough to alter the key result and conclusion that a positive BCR can be expected from the education program. For example, varying population growth rate projections, the most sensitive parameter, across the full range of plausible values (0.3-1.5%), while holding all other parameter values at their median values, varies the BCR value estimates between 3.23 and 4.49 under the conservative 'with program' scenario and between 4.52 and 5.74 under the expected 'with program' scenario.

3. SOCIAL MEDIA ANALYSIS

Qualitative thematic analysis utilised East Waste's social media data to draw out key themes related to social performance indicators of the program. BDO EconSearch also reviewed grey and academic literature, to draw out key themes relating to social indicators on the performance of the program using qualitative thematic analysis approaches. Specifically, qualitative information was organised into key themes and summarised to gauge how the social media platforms have impacted users since program implementation.

3.1. Social Media Presence

East Waste's social media presence provides information to its followers including weekly tips, relevant events and information published. The East Waste Facebook page dominates the social media presence of the *'Why Waste It?'* campaign and for this reason, is the focus of the analysis. However, the East Waste social media presence does span the following platforms:

Facebook

East Waste Facebook page: https://www.facebook.com/EastWasteSA/

The East Waste social media presence is dominated by the East Waste Facebook page. The average monthly reach on Facebook is around 27,000 with 5,900 engagements. However, this figure underestimates the reach of the Facebook presence as it does not include the additional reach provided by the seven member Councils social media platforms who also post and share the weekly tips and other social media content. It has been active since the 5th of June 2017.

Twitter

@East_Waste twitter page: https://twitter.com/East_Waste

The East Waste twitter page receives a much lower level of interaction with public than Facebook.

LinkedIn

East Waste - Eastern Waste Management Authority: https://www.linkedin.com/company/east-waste---eastern-waste-management-authority/posts/?feedView=all

The East Waste LinkedIn page receives a limited level of commenting. This is because it is mainly used for higher level professional promotion rather than interaction with the general public and the targets of the campaign.

YouTube

WhichBin? YouTube channel: https://www.youtube.com/channel/UCdoGNt1GqaQL-ZNXgjuhSQQ.

This platform was excluded from the thematic analysis because comments are disabled on posts and therefore provide no textual data to analyse.

Non-social media methods of communication

- **Which Bin? website and tips** promoted by Green Industries SA (GISA) with a new '*Which Bin? Just ask Vin*' campaign.

- **Weekly waste reduction and recycling tips** delivered through the My Local Services app at 6pm on 'bin night' – allowing delivery of education at point behaviour. As of 1 Feb 2021, 14 953 East Waste residents now receive the tips each week with their weekly bin collection reminders. This program was initiated and is driven by East Waste on a state-wide scale.
- **Community event education stalls and bin monitoring.** An estimated total of around 4000 people access the information at education stalls set up at around 20 events each year.
- **Which Bin? Wednesdays Radio segment on Coast FM**. Current listening audience exceeds 87,000 weekly listeners.
- **Council Newsletter and E-News** regular articles are featured in quarterly newsletters for 5 member Councils (those who still print them) as well as in monthly and weekly E-news bulletins.
- **Speaking events** such as Plastic Free July and National Recycling Week info sessions. An estimated total of around 1000 people a year attend around 25 presentations.
- **Printed resources** such as flyers, bin stickers and signage, factsheets, calendars and magnets.
- **Bus shelters and street signage.**

3.2. Method Description

Thematic analysis was used to code and categorise the Facebook comments.

3.2.1. Thematic analysis

Thematic analysis is a flexible method that focusses on identifying themes and patterns across a data set (Aronson 1995). It identifies both implicit and explicit ideas within the data (Guest et al. 2012). This method of analysis was chosen as it is not only the most commonly used method of analysis in qualitative research, but it is also particularly useful for capturing the complexities of meaning in textual data (Guest et al. 2012). The primary goal of thematic analysis is to 'describe and understand how people feel, think and behave within a particular context relative to a specific research question' (Guest et al. 2012).

Facebook data mining limitations meant that it was not possible to extract a complete dataset of comments from the social media platform. This meant that it was necessary to conduct the analysis on a sample of 34 Facebook posts, which spanned a three year period from 08/03/2019 to 01/02/2021. Although the East Waste Facebook page was established on the 5th June 2017, Facebook post data prior to 03/08/2019 used different methods of collection, creating an inconsistent sample. A total of 789 comments were included in the analysis.

Three types of posts were included, 68 per cent (23 posts) were informational posts about which bin to put different waste items in, 26 per cent (9 posts) were promotional posts such as International E-Waste Day and 6 per cent (2 posts) were myth busting posts to clarify media stories.

Any posts that had a reach of 5,000 users or more were included within the three year sample period. The post with the greatest reach was seen by 35,789 users and was a myth busting post which sought to clarify a media story about recycled waste being sent to landfill.

Although this provided a workable textual data source for identifying themes that organically emerged on the social media platforms, to provide a complete analysis of the program performance and its behavioural

change outcomes, an online survey that elicits specific information relating to the social indicators of the program would be required. Some of the ways that this could be achieved are presented in Section 5 of this report.

As suggested by Guest et al. (2012), the data analysis process involved three stages: (i) reading the social media comments, (ii) identifying possible themes, and (iii) comparing and contrasting themes while identifying structure among them. An inductive approach was taken, meaning that rather than using predetermined categories or themes, the coding and theme development were indicated by the data. Once themes were established, each comment was categorised to quantify the most important ways the social media page was used.

3.2.2. Identified themes and descriptions

Peer-to-peer information sharing

The most common theme identified in the analysis of social media comments was information sharing between users about their recycling practices, Council-specific information and other sources of information. Of the posts included in the analysis, 57 per cent of comments were peer-to-peer information sharing. In addition to the direct sharing of information and experiences, many of the comments added to this information sharing through tagging users to draw attention to the issues East Waste had raised.

The peer-to-peer information sharing was further extended by the high prevalence of tagging other users in specific posts. Of the posts included in the analysis, 21 per cent of comments were tags drawing the attention of other users to specific recycling information.

Seeking additional information

Another common theme identified in the analysis was requests for additional information about specific recycling practices. Just under 80 per cent of these requests were responded to by East Waste, with just 20 per cent going unanswered.

The desire for more action and appreciation for the action taken

The desire for more education, additional services such as recycling drop-off points or collections or wider availability of green bins in other Council areas were another prevalent theme. Of the posts included in the analysis, 6 per cent of comments were expressions of the desire for more action.

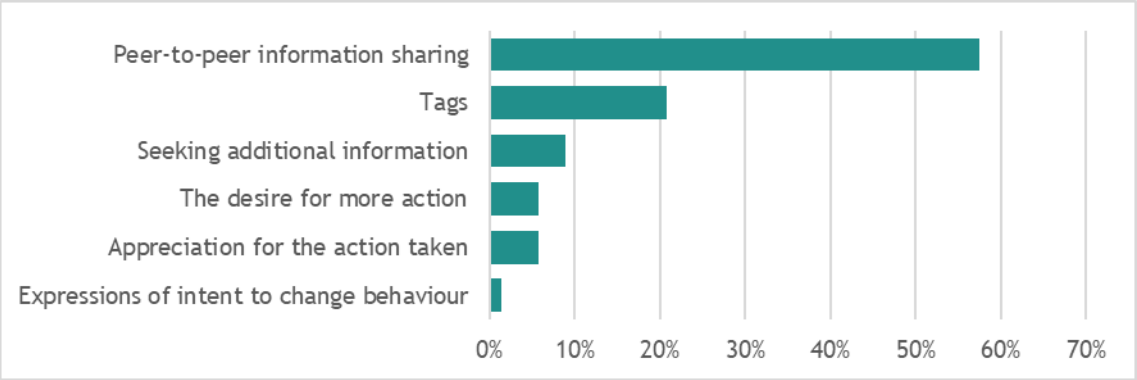
Expressions of thanks for East Waste taking the initiative to provide the community with information was another common theme. Of the posts included in the analysis, 6 per cent of comments were thanking East Waste for doing the work they were involved in.

Expressions of intent to change behaviour as a result of new knowledge

The final theme identified in the analysis was expressions of intent to change behaviour as a result of new knowledge gained from the social media websites. Of the posts included in the analysis, 1 per cent of comments expressed the intention to change behaviour. This, however, does not necessarily indicate that few people accessing the information on the site will change their behaviour, simply that it was expressed by a small number of people.

Figure 3-1 illustrates the prevalence of each theme in the East Waste Facebook page comments.

Figure 3-1 Theme prevalence in East Waste Facebook page comments



Source: BDO EconSearch analysis

3.3. Discussion

The themes identified above indicate that the East Waste Facebook page provides a platform for what Reddick et al. (2017) describe as a consultative, single-loop model. This provides opportunities for citizens to provide input and feedback on the program, though leaves them in a passive role in which they largely are the receptors of information. This model is a two-way interaction that is directed by East Waste but shaped by citizen input.

The key strength in the East Waste Facebook strategy is the platform it provides for peer-to-peer information sharing. Providing this platform may contribute to changing community member perceptions of social norms surrounding recycling. Psychologists have recognised that humans demonstrate a tendency to bring their behaviour in line with social norms (Asch 1952; Sherif 1936). Social norms can be defined as the perception of what is typical or desirable in a group or in a situation (Miller & Prentice 1996).

The East Waste Facebook page provides opportunities to change community member's perceptions of social norms by providing people with information about how many people recycle, how often people in the community recycle, how positively the community feels about recycling, and how many people in the community feel positively about recycling (Tankard & Paluck 2016). Providing this information may not change the actual norm of recycling but change community member's subjective perception of the norm. In this way, changing perceptions of the social norms around recycling can lead individual community members to align their behaviour with what they believe to be the social norm.

4. CONCLUSIONS AND RECOMMENDATIONS

Key findings and recommendations from the CBA, social media analysis and reviews of social and environmental impact assessment methods and benchmarking techniques are presented in this section.

Cost-benefit analysis

Overall, implementation of East Waste's education program was estimated to yield a minimum net benefit of $3.7 million. The minimum benefit-cost ratio (BCR) of the investment was estimated at 3.10, or a minimum return on investment equivalent of $3.10 for every $1.00 of investment expenditures incurred. Our findings are consistent with results from similar cost-benefit analyses of education programs for improving waste management outcomes in South Australia and Victoria. BDO EconSearch recommend a follow-up CBA with updated kerbside collection tonnage data in future to improve estimates of the return on the investment for the education program. Further, time series data on per-household kerbside solid waste collections by council would enable a more detailed economic evaluation of the economic impact of the program and improve the reliability of net return and BCR estimates.

Social media analysis

The key strength in the East Waste Facebook strategy is the platform it provides for peer-to-peer information sharing. East Waste's Facebook page provides opportunities to change community member's perceptions of social norms by providing people with information about how many people recycle, how often people in the community recycle, how positively the community feels about recycling, and how many people in the community feel positively about recycling. Posts with the intention of facilitating information sharing between users may be especially appealing to users who interact with the page. This kind of post may also help shape community member perceptions of social norms about recycling in a positive way, giving the impression that responsible waste disposal and recycling is highly prevalent in the community and encouraging others to bring their behaviour in line with that social norm. To provide a complete analysis of the program performance and its behavioural change outcomes, an online survey that elicits specific information relating to the social indicators of the program would be required.

Environmental impact analysis methods

Environmental impact assessment methods commonly employed to support decisions regarding waste management include lifecycle assessment, multi-criteria evaluation and CBA. These methods utilise empirical observational data to quantify relationships between improvements in waste outcomes and environmental impacts. Most commonly quantified environmental impacts of improvements in waste management practices, include energy savings, GHG emissions, air and water quality, biodiversity protection and water conservation. Our CBA does not include broader environmental benefits from increased amounts of green organics diverted from the landfill and recycled at the composting facility because this was outside the scope of this analysis. Omitting environmental benefits underestimated expected program NPV and BCR. A comprehensive CBA would quantify broader environmental benefits underpinned by lifecycle assessment (LCA) and material flow modelling. Benefits transfer techniques can be applied to cost-effectively estimate environmental benefits in the absence of LCA and material flow models, which can be prohibitively expensive.

Social impact evaluation methods

Industry best practice in advocacy impact evaluation involves collection of longitudinal follow-up surveys based on diary entry data on matched pairs of households in 'treatment' and 'control' groups using self-reported actions and utilisation of statistical methods to control for various socioeconomic and demographic factors to establish causality. Treatment groups represent households that are aware and that participate actively in an advocacy campaign program. An alternative, less costly, approach involves utilisation of a panel or cross-sectional household dataset and kerbside bin audit data to investigate whether or not there are significant differences in waste management indicators between households that are aware of, and participate in, an advocacy campaign program and households that are not aware of the program. Existing publically available datasets are incorporated to kerbside data to define treatment and control groups to assess program impacts. For example, non-resident itinerant workers can be used as the control group and permanent residents as the treatment group to carry out a cost-effective impact assessment using ABS census data.

Benchmarking methods for waste management performance

The most common financial performance indicators used to benchmark waste collection utilities, include the cost of solid waste collected per tonne per capita and savings from collecting and sorting waste per tonne per capita. Performance indicators are commonly used due to their simplicity, in terms of computation and interpretation, and flexibility with incorporating economic, environmental, and social performance indicators. A key limitation with benchmarking using performance indicators is difficulty with adequately taking context dependent factors into account. Use performance indicators to benchmark East Waste Councils' kerbside performance against other councils, would need to take into account contextual differences, such as demographic and socioeconomic profiles of communities and relative composition of standard residential dwellings and multi-unit dwellings.

Efficiency indicators use statistical approaches to calculate efficiency and productivity scores reflecting the ratio of resource inputs (quantities and costs) to outputs such as volumes of waste collected. Waste management utilities with the same level of input of resources, including labour and physical capital, are benchmarked against a reference utility with the highest level of output for the given level of resource inputs. Efficiency and productivity scores are normalised performance indicators estimated based on relative unit costs of collecting waste in dollars per tonne, or tonnes of waste collected per unit cost of labour and capital in tonnes per dollar. Using this approach provides a means to correct for context bias when benchmarking performance. However, efficiency analysis methods have a few challenges. They can be computationally demanding and data intensive to perform and non-transparent and unintuitive to interpret.

Our recommendation is to employ benchmarking using performance indicators because of its simplicity and cost-effectiveness in a preliminary analysis to determine if there will be value added in carrying out further in-depth benchmarking analysis. However, with adequate data and computation resources, an in-depth efficiency indicators can be employed.

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The nature and scope of work has been determined by agreement between BDO and the Client. This consulting engagement does not meet the definition of an assurance engagement as defined in the 'Framework for Assurance Engagements', issued by the Auditing and Assurances Standards Board, Section 10.

Except as otherwise noted in this report, BDO EconSearch did not performed any testing on the information provided to confirm its completeness and accuracy. Accordingly, BDO EconSearch does not express such an audit opinion and readers of the report should draw their own conclusions from the results of the review, based on the scope, agreed-upon procedures carried out and findings.

APPENDIX 1 Environmental Impact Analysis Methods

The objective of this section is to provide guidance towards selecting cost-effective methods for evaluating environmental impacts of waste management advocacy campaign activities. BDO EconSearch reviewed peer-reviewed 30 scientific case studies on experiences with applying various approaches to evaluate the environmental impact of various activities for improving waste management practices. This included a review study that assessed 151 case study evaluations of environmental impacts of several activities for improving environmental outcomes of various solid waste management (Appendix Table 4-2).

Environmental impact assessment approaches commonly employed to support decisions regarding waste management include lifecycle assessment, multi-criteria evaluation and CBA. These methods utilise empirical observational data to quantify relationships between improvements in waste outcomes and environmental impacts. Most commonly quantified environmental impacts of improvements in waste management practices, include energy savings, greenhouse gas (GHG) emissions, air and water quality, biodiversity protection and water conservation.

An alternative approach to estimating environmental impacts of planned waste management activities is mathematical programing and simulation modelling. This method simulates how education programs result in changes in attitude and how differences in interaction behaviours and social influences among various profiles of households can influence the effectiveness of education programs. This method is not among the most commonly used approaches in evaluations of environmental impacts of waste management strategies largely because they are expensive and computationally intensive. Further, results from mathematical simulation approaches can be unintuitive and difficult to interpret, calibrate and justify.

1.1 Lifecycle assessment

Lifecycle assessment quantifies environmental impacts of an effective intervention. For example, advocacy campaigns are assessed by linking reductions in unsafely recycled solid waste and increases in material recovery rates to avoided environmental consequences. This is done by mapping processes throughout the life cycle of various products, from raw material acquisition through production, use, end-of-life treatment, recycling, and final disposal.

Lifecycle assessments have the advantage of being comprehensive in their consideration of material and energy input-output flows under various waste management scenarios. However, the main contention with lifecycle assessments is that it requires a large number of assumptions to be made regarding, for example, expected reductions in energy consumption, and assumptions vary greatly between various lifecycle assessments. Further, results of lifecycle assessments are highly sensitive to the long list of assumptions underpinning the assessment and are thus subject to considerable uncertainties.

1.2 Multi-criteria evaluation

Multi-criteria evaluation is a decision-making tool that facilitates choosing the best alternative among several interventions for improving waste management outcomes and their associated environmental impacts. This approach compares and ranks different options for improving waste management by evaluating

their environmental consequences according to a set of predetermined criteria and pre-assigned evaluation criteria weights.

A major advantage with multi-criteria evaluation approaches is that multi-dimensional aspects of alternative waste management interventions can be simultaneously taken into account, including various social, economic and environmental aspects. However, results from multi-criteria evaluations can be difficult to interpret because the choice of criteria and weights assigned to the each criterion are highly subjective. Further, multi-criteria evaluation does not incorporate possible changes in weights assigned to evaluation criteria over time because multi-criteria evaluations do not use discounting techniques to compare environmental impacts expected to occur in different time periods.

Application of multi-criteria evaluation in assessment of education campaigns is most useful for ranking education interventions against alternative activities in terms of expected social, environmental impacts based on weighted criteria such as water-, air- and soil pollution, biodiversity, cultural and economic impacts, human health impacts and GHG emissions. Thus multi-criteria evaluation is not appropriate for evaluating the impact of one activity.

1.3 Cost-benefit analysis

CBA has been applied to evaluate social, economic and environmental impacts of waste management options by converting the various impacts into monetary value equivalents and comparing the net benefit under alternative waste management scenarios. CBA is flexible in its application and can be utilised to evaluate the impact of a single intervention by comparing monetised environmental impacts under 'with' and 'without' intervention scenarios.

CBA enables monetising of environmental performance indicators occurring at different time periods using discounting techniques thus providing a standard basis for comparing waste management interventions and environmental impacts with different time profiles. CBA provides a suite of evaluation metrics that have an intuitive interpretation, including net benefit values, benefit-cost ratios and internal rates of return on investments. Further, CBA enables treatment of uncertainty in parameters and parameter values using sensitivity analysis.

CBA offers flexibility with its application depending on available financial resources. Specifically, various market- and non-market valuation techniques for monetising environmental impacts of waste management options can be utilised depending on available financial resources. For example, non-market valuation techniques that require collection of primary data from potentially impacted households can be employed with sufficient financial resources whilst benefit transfer techniques underpinned by secondary data from similar evaluations of waste management interventions can be utilised on a limited budget.

A major criticism with CBA is the potential for bias which can affect credibility of results if the process of choosing which costs and benefits to include and which parameters and parameter values to use in estimating costs and benefits is not documented transparently. This can be addressed by justifying the scope, values, assumptions and findings of CBA applications based on similar peer-reviewed applications in the Australian waste management sector.

APPENDIX 2 Social Impact Evaluation

A review of methods used to quantify the external influence of advocacy campaigns, in particular, the contribution of advocacy programs in bringing about positive social change in waste management knowledge, attitudes and behaviour is provided in this section. Literature review findings are described in detail in **Error! Reference source not found.**).

The most common social research methods for collecting primary data for carrying out advocacy impact evaluations, include structured surveys questionnaires administered through random multi-stage stratified sampling procedures; key-informant interview; and field observational panel data from kerbside waste audits. A recurring theme in most advocacy impact evaluations is that causality and attribution are difficult to establish in the absence of adequate primary data.

Industry best practice in advocacy impact evaluation involves collection of longitudinal follow-up surveys based on diary entry data on matched pairs of households in 'treatment[5]' and 'control' groups using self-reported actions and utilisation of statistical methods to control for various socioeconomic and demographic factors to establish causality (e.g. Grodzinska-Jurczak et al. 2003, Hartley et al 2015 and Rhodes et al. 2014). The total number of sampled households typically ranges between 136 and 1,000.

An alternative, less costly, approach involves utilisation of a panel or cross-sectional household dataset and geospatial kerbside bin audit data to investigate whether or not there are significant differences in waste management indicators between households that are aware of, and participate in, an advocacy campaign program and households that are not aware of the program (e.g. Arafat and Khatib 2007, Campbell et al. 2014 and Nmere et al. 2020). Existing datasets can be incorporated to kerbside data to define treatment and control groups to assess program impacts to carry out a cost-effective impact assessment. For example, an advocacy impact evaluation in Queensland focussed on littering behaviour and evidence of awareness of local advocacy campaign programs using non-resident itinerant workers as the control group and permanent residents as the treatment group to assess program impacts (Campbell et al. 2014).

5 Representing households that are aware and participate actively in an advocacy campaign program

APPENDIX 3 Waste Management Benchmarking

This section provides findings from a review of the state of the art on approaches for benchmarking operational efficiency in waste collection services (**Error! Reference source not found.** and **Error! Reference source not found.**). Recommendations on the most cost-effective method of benchmarking of East Waste Councils' kerbside performance against other Councils were provided based on a review of industry experience with employing different approaches.

The two most common approaches for assessing efficiency and benchmarking performance in waste collection, include:

1. estimating values for context-dependent financial and other performance indicators; and
2. applying statistical approaches to calculate efficiency and productivity scores reflecting the ratio of resource inputs (quantities and costs) to outputs such as volumes and values of waste collected.

3.1 Performance indicators

The most common financial performance indicators used to benchmark waste collection utilities, include the cost of solid waste collected per tonne per capita and savings from collecting and sorting waste per tonne per capita (**Error! Reference source not found.**). Several variations of these two indicators are used to take into account several context-specific factors in comparing the performance of solid waste collection utilities, including:

- Total tonnes and percentages of total municipal solid waste generated that is collected and delivered to an official facility, including commingled recyclable waste material transferred to resource recovery facilities, general waste disposed at the landfill and the amount of food and garden organics transported to composting facility;
- Unit measures of effort allocated to solid waste collection, including distance travelled by the collection vehicle per tonne, time spent per tonne of waste collected and fuel consumed per tonne of waste collected
- Unit measures of GHG reductions, energy savings and carbon footprint (in carbon dioxide equivalents) per tonne of waste collected due to reductions in unsorted solid waste.

Performance indicators are commonly used due to their simplicity, in terms of computation and interpretation, and flexibility with incorporating economic, environmental, and social performance indicators.

A key limitation with benchmarking using performance indicators is difficulty with adequately taking context dependent factors into account. Use performance indicators to benchmark East Waste Councils' kerbside performance against other councils, would need to take into account contextual differences, such as demographic and socioeconomic profiles of communities and relative composition of standard residential dwellings and multi-unit dwellings. See **Error! Reference source not found.** for a summary of the literature review of waste management benchmarking using performance indicators completed for this study.

3.2 Efficiency indicators

Efficiency indicators use statistical approaches to calculate efficiency and productivity scores reflecting the ratio of resource inputs (quantities and costs) to outputs such as volumes of waste collected. Waste management utilities with the same level of input of resources, including labour and physical capital, are

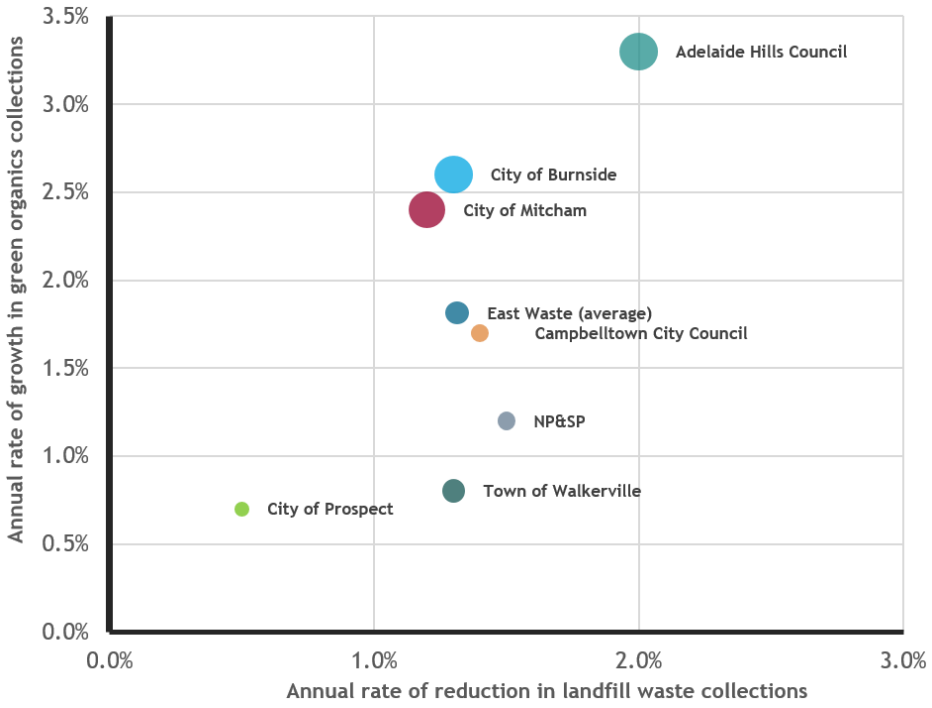
benchmarked against a reference utility with the highest level of output for the given level of resource inputs. Efficiency and productivity scores are normalised performance indicators estimated based on relative unit costs of collecting waste in dollars per tonne, or tonnes of waste collected per unit cost of labour and capital in tonnes per dollar. An efficiency score equal to one is assigned to the reference utility and other utilities with the same level of resource input are assigned an efficiency score between zero and one, commensurate with each utility's level of output at the given level of resource input[6].

Using this approach provides a means to correct for context bias when benchmarking performance. However, efficiency analysis methods have a few challenges. They can be computationally demanding and data intensive to perform and non-transparent and unintuitive to interpret. See **Error! Reference source not found.** for a summary of the literature review of waste management benchmarking using efficiency indicators completed for this study.

[6] The rationale is that a utility is considered to be performing at the most technically efficient level of service, at a given level of resource input, if it is no longer possible to produce any further output without using more input.

APPENDIX 4 Literature Review Findings

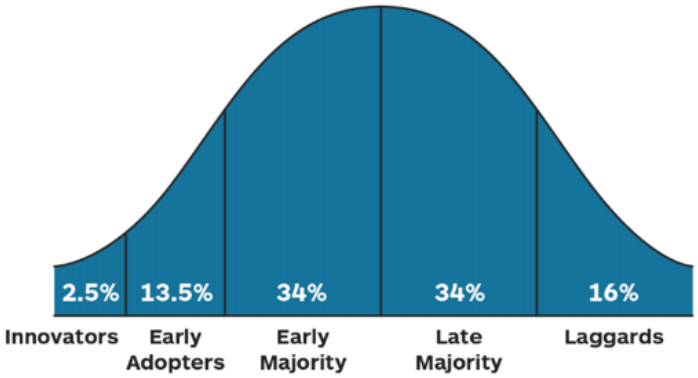
Appendix Figure 4-1 Observed rates of change in landfill and green organics collections (FY18- FY20), East Waste member councils



Source: East Waste tonnage data

Appendix Figure 4-2 Multipliers used to estimate future landfill waste and green organics collections[7]

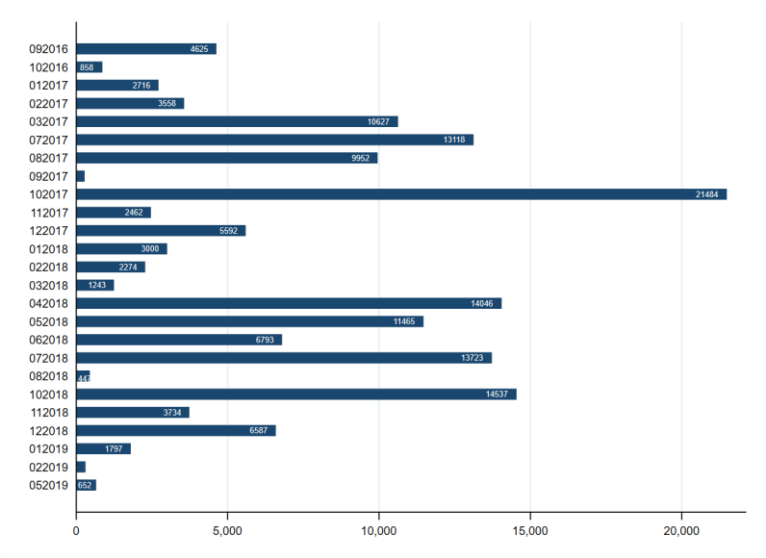
0	1	2	3	4	5	6	7	8	9	10	11	12	13
FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
102.5%	102.5%	113.50%	113.50%	113.50%	134%	134%	134%	134%	116%	116%	116%	102.5%	102.5%



Source: Rogers (2003)

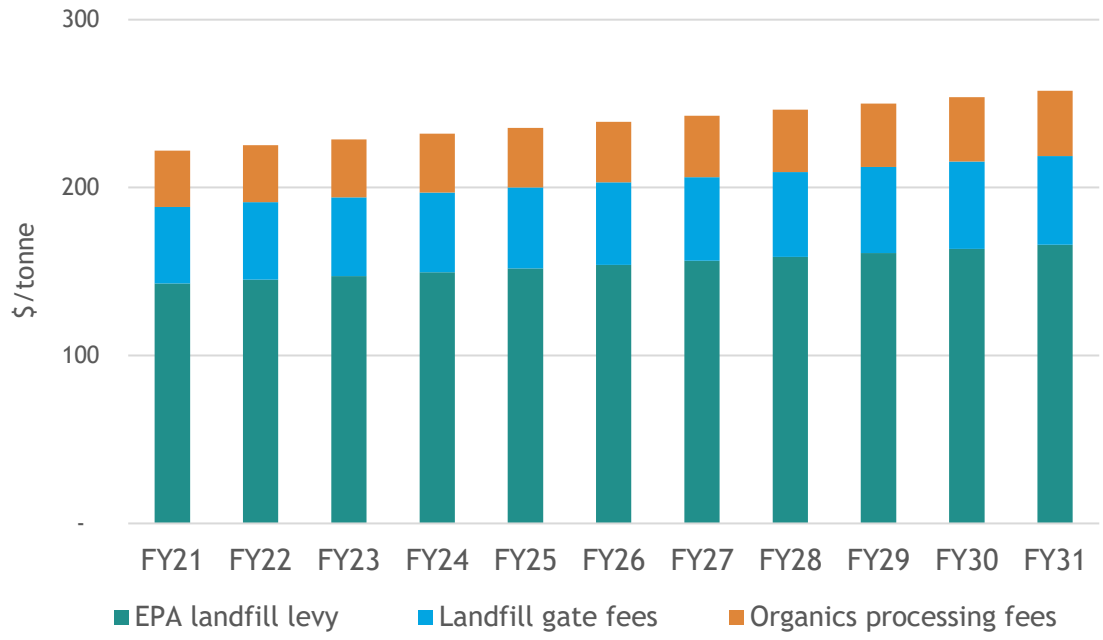
[7] FY2018 was the first full financial year with program implementation

Appendix Figure 4-3 Monthly program costs (units, e.g. nominal dollars) incurred between September, 2016 and May, 2019



Source: East Waste tonnage data

Appendix Figure 4-4 Unit costs of landfill levy and gate fees and green organics processing fees



Source: East Waste financial data

Appendix Table 4-1 Parameters, parameter values and sources for all the parameters used in the CBA

Parameter	Units	values	Sources
General Assumptions			
Discount rate	%	5.00-9.00	PC, 2010; Albelson and Dalton, 2018
Consumer Price Index	%	0.20-1.00	RBA, 2021
Population growth rate	%	0.30-1.50	DPTI, 2019
Interest rate	%	2.00-5.00	RBA, 2021
Program costs			
Annual program expenditures	$/year	140,000-150,000	East Waste financial data
Variable costs			
FY21 EPA landfill levy	$/tonne	135.85-150.15	East Waste financial data
FY21 landfill gate fees	$/tonne	43.23-47.78	East Waste financial data
FY21 organics processing fees	$/tonne	31.83-35.18	East Waste financial data

Appendix Table 4-2 A review of approaches for assessing environmental impacts

Study Title	Description	Approach	Findings
1. Assessment methods for solid waste management: A literature review (Allesch and Brunner, 2014)	Assessed 151 evaluations of environmental impacts of solid waste management strategies to identified most commonly applied methods in the sector	Reviewed peer-reviewed published scientific literature and quantified the frequency of application of various methods for assessing the environmental impact of solid waste management options	Most commonly used methods, include lifecycle assessment, multi-criteria evaluation and CBA with non-market valuation techniques.
2. Defining multi-dimensional aspects of household waste management (Barr et al, 2005)	Examined the relationship between a range of environmental behaviours, including waste management, energy saving and water conservation	Surveyed 1,265 households to collect data for analysing correlations between various environmental behaviours , focusing on waste management, energy saving and water conservation	Impacts on waste management behaviours should be examined in context of wider related environmental actions
3. An agent based environmental impact assessment of waste management (Ding et al, 2016)	Investigated how a change in waste management attitudes can influence the environmental performance of solid waste management in the construction industry	Applied mathematical simulation models of stakeholders' attitudes, relationships, interactions and behaviours to estimate the effectiveness of various waste management strategies on environmental outcomes, including water pollution, energy consumption and greenhouse gas emissions	Results from mathematical simulation approaches can be unintuitive and difficult to interpret, calibrate and justify
4. Environmental performance of household waste management (Bassi et al, 2017)	Estimated potential environmental benefits from improvements in waste sorting and recycling, in particular, the quality and utilization of recovered materials and energy across seven countries in Europe	household waste composition data were collected to analyse environmental impacts of improvements in waste sorting and recycling measured in terms of energy savings, material use and greenhouse gas emissions	Improvements in waste sorting and recycling can yield considerable environmental benefits when recovered materials can substitute input raw materials in industry

Appendix Table 4-2 A review of approaches for assessing environmental impacts - Continued

Study Title	Description	Approach	Findings
5. A life-cycle analysis of municipal solid waste management (Liu et al, 2017)	Estimated energy savings and avoided GHG emission impacts of alternative waste management systems based on expected differences in the quality and quantity of flows of reusable waste material and energy savings from reusing recovered materials	Quantified energy and emission savings from reduced demand and production of reusable products considering all stages of various products' lifecycles from raw materials, production processes and distribution to end users (termed, *end-point life cycle impact assessment*)	LCAs are typically characterised by large uncertainties and several assumptions based on hypothetical scenarios in the absence of adequate empirical data
6. Issues and options in waste management: A social cost-benefit analysis of waste-to-energy (Jamasb and Nepal, 2010)	Assessed the economic and environmental impacts of waste treatment options focusing on waste-to-energy as a renewable resource. Presented a social cost–benefit analysis of selected waste management scenarios for focusing on specific waste management targets and avoided energy costs	Estimate and aggregated a broad range of financial, economic and environmental costs and benefits associated with different waste management options. Calculated and compared the cost equivalent of generating the same amount of recovered energy 'per-tonne-of-treated-waste' under various waste treatment arrangements. Estimated savings from landfill gate fees due to increases in diverted solid waste	CBA enabled a standard way to monetise and compare a wide range of environmental impacts, treat costs and benefits occurring at different time periods using discounting techniques, and treat uncertainty using sensitivity analysis.
7. Multi-criteria evaluation in environmental assessment of a waste management plan (Josimovic´ et al, 2014)	Evaluated environmental impacts of various waste management activities, including water, air, soil pollution, biodiversity, cultural, human health and GHG emissions	Various activities for improving waste management efficiency were ranked based on a weighed score indicating the magnitude (intensity) of the expected environmental impact, the spatial dimension of the impact, the likelihood of the impact occurring, and the expected frequency and duration of the impact	Ranking of activities can be sensitive to the weights assigned to various criteria and the process of assigning weights can be contentious and subjective

Appendix Table 4-3 A review of approaches for quantifying social impacts

Study Title	Description	Approach	Findings
1. How successful are waste abatement campaigns and government policies at reducing plastic waste into the marine environment? (Willis et al, 2018)	CSIRO researched whether or not local governments' investments in recycling, education and Clean Up Australia programs reduced waste along a Australia's coastline (national level)	Regression analysis on the influence of various outreach programs including education on councils' waste management budgets based on survey questionnaire data. Waste managers were interviewed from 40 local councils around Australia on waste abatement strategies and investments implemented in their council. Generalised linear models (GLMs) were used to compare outreach programs	Investments in campaigns led to large reductions of waste in the environment. Councils that invested in a coastal waste management budget had fewer littered or waste items on the coastline within their jurisdictions
2. Littering dynamics in a coastal industrial setting: The influence of non-resident populations (Campbell et al, 2014)	Queensland University Investigated the influence of residency status on waste-management (littering) decisions, choices and behaviour in coastal recreational areas in Gladstone, QLD. In particular, on awareness and engagement with local waste management education programs	Statistical ANOVA tests of between- and within-groups differences based on responses to various socioeconomic, demographic geographical questions administered using a social survey (questionnaire) (N=136)	Awareness and engagement with local waste management education programs was influenced by a respondent's residency status (non-residents are less aware), age, and level of education
3. Marine litter education boosts children's understanding and self-reported actions (Hartley et al, 2015)	This research tested the impact of an educational intervention on school children's waste disposal behaviour across Britain based on some metrics for: awareness, perceptions, beliefs, actions	Comparison of scores for behaviour metrics based on matched surveys of 176 children (8-13) who participated in the educational intervention and completed a pre- and post-intervention questionnaire based on self-reported litter-reducing behaviour	After the intervention, children were significantly more aware of the causes and negative impacts, and reported engaging in more actions to reduce the potential causes of marine litter
4. Influence of socio-economic factors on street litter generation in the Middle East: effects of education level, age, and type of residence (Arafat and Khatib, 2007)	Studied street littering behaviour, including perception and opinion of residents toward littering, prevailing attitudes and practices in Nablus, Palestine	Statistical analysis of the influence of three socio-economic factors; level of education, age, and type of residence, on the littering behaviour of individuals based on interview surveys using ANOVA test approaches (N=1000). An extensive multi-stage sampling procedure for administering survey interviews (survey questionnaires) to collect data from a wide spectrum of social and economic status. Stratified samples according to represent a wide spectrum of social and economic status of respondents	Littering behaviour was largely influenced by individuals' opinion on effective methods to hinder littering and who is responsibility for waste management related to litter control
5. Impact of a Waste Education Programme on Environmental Knowledge, Attitudes and Behaviour (Grodzinska-Jurczak et al, 2003)	An evaluation of a school education programme for improving students' awareness of municipal waste management on knowledge, attitudes, behaviours in Poland	Pre- and post- programme survey questionnaires administered in the form of a test to students' and analysis of changes in: 1) frequencies of correct answers to the knowledge questions before and after the programme; and 2. self-reported waste practices	The programme improved student knowledge and awareness of municipal waste and led to a change in household attitudes and waste practices

Appendix Table 4-3 A review of approaches for quantifying social impacts - Continued

Study Title	Description	Approach	Findings
6. Are mere instructions enough? Evaluation of four types of messaging on community depot recycling (Rhodes et al, 2014)	An evaluation of the impact of participating in a kerbside recycling education program on recycling knowledge, behaviour and attitudes	Evaluation based on data collected through a randomised trial of one hundred and forty-four program participants who responded to a follow-up survey questionnaire on recycling behaviour before, during and after program implementation (N=144)	Participation in kerbside recycling education program improved recycling knowledge, behaviour and attitudes significantly and increased the volume of recycled kerbside waste collected
7. Influence of public relations' media public enlightenment campaign and community participation strategies on waste management (Nmere et al., 2020)	An evaluation of the impact of a public relations media campaign and community participation rates on waste management outcomes	The evaluation was underpinned by survey data obtained through administering a structured questionnaire to 384 residents and employing regression analysis to investigate the relationship between program awareness and participation and household waste management outcomes	Program awareness and participation had a positive and significant influence on household waste management outcomes

Appendix Table 4-4 A review of waste management benchmarking using performance indicators

Study Title	Description	Approach	Findings
1. 'Wasteaware' benchmark indicators for integrated sustainable waste Management in cities (Wilson et al, 2015)	Presented a set if indicators for evaluating performance, comparing and benchmarking waste managers in a city over time	Measure the percentage of municipal solid waste generated that is collected and delivered to an official facility and the percentage of total municipal solid waste generated that is recycled	The indicators have potential for wide application to a broad range of cities with varying levels of income and solid waste management practices
2. Assessment of waste management systems based on sustainable development indicators (Cailean and Teodosiu, 2016)	Used a set of indicators to quantify changes in waste management systems over a period of nine years	Benchmarked waste management systems based on solid waste generation rates, the percentage of generated waste that is treated and the carbon footprint in CO_2e/tonne	The transferability of the indicators used to compare management performance of a waste utility is highly affected by its context
3. Assessment strategies for municipal selective waste collection schemes (Ferreira et al, 2017)	Presented an approach for assessing the efficiency of municipal waste management using performance indicators for landfill waste prevention and recycling rates	Used three performance indicators for benchmarking change in efficiency in recyclable waste collection: distance travelled by the collection vehicle per tonne, Time spent per tonne of waste collected and fuel consumed per tonne of waste collected	Application limited to evaluation of performance related to management of recyclable waste only
4. Assessment of municipal waste management systems: Using different indicators (Green and Tonjes, 2014)	Compared and ranked waste management systems using a set of weighted environmental performance indicators	waste system performance assessments based on weighting of indicators measured as tonnages, percentages, per capita rates, including tonnes recycled, tonnes diverted, diversion rate, recycling rate, landfill waste (t/capita), diversion per capita, GHG reductions and energy savings	Rank orders of waste systems differ substantially when different environmental performance indicators are used
5. Techno-economic performance indicators of municipal solid waste collection strategies (Bertanza et al, 2018)	Developed indicators for measuring the operational efficiency of solid waste collection, including costs of labour, vehicles and containers using commonly monitored data	Solid waste utilities were benchmarked in terms of three main indicators: the ratio of unsorted waste to the total collected waste, annual amount of collected waste per capita and annual amount of man-hours of waste collection per capita - separately for general, food and garden organic and recyclable waste	Indicators suggested in this work simultaneously and cost-effectively consider several aspects, related to the performance of waste collection operations

Appendix Table 4-5 A review of waste management benchmarking using efficiency indicators

Study Title	Description	Approach	Findings
1. Assessing efficiency drivers in municipal solid waste collection services through a non-parametric method (Guerrini et al, 2017)	Used efficiency indicators to compare performances of waste collection services in 40 municipalities controlling for differences in demographic and socioeconomic characteristics across the municipalities	Statistical benchmarking methods were employed to calculate measures of the relative cost efficiency (efficiency scores) of waste utilities considering a range of input, output and unit cost factors, including collection costs, the amount of unsorted waste, recyclable waste and collected waste	High data demands - the analysis utilised a five-year time series dataset on solid waste collection from utilities that are members of a consortium servicing 40 municipalities
2. Cost efficiency in municipal solid waste service delivery. Alternative management forms in relation to local population size (Pérez-López et al, 2016)	Compared the efficiency of different service delivery forms (public, private and intermunicipal firms) with varying characteristics, including technologies adopted, the total population serviced and management strategies adopted	Examined a large time series data set from 771 municipalities and applied statistical methods to calculate cost efficiency scores of firms by benchmarking firms against the most cost efficient firm taking into account differences in several input and output factors	Cost efficiency scores of utilities varied significantly depending on the total population serviced (scale of operation), and technologies and service delivery forms
3. Efficiency evaluation of municipal solid waste management utilities in urban cities using stochastic frontier analysis (Vishwakarma et al, 2012)	Assessed the efficiencies of municipal solid waste management services by comparing municipalities with the municipality that deployed the least amount of resources to deliver the same level of outputs	Utilised statistical methods for calculating efficiency scores based on input-to-output ratios and used the calculated scores to benchmark various municipalities against the most efficient municipality that achieved the same level of output with the least amount of input resources	A key limitation with applying this approach to estimate the efficiencies of solid waste collection utilities is availability of data and non-transparency
4. Measuring the cost efficiency of municipal solid waste collection services (Rogge and De Jaeger, 2012)	Evaluated the cost efficiency of 293 municipalities charged with collection and processing of solid household waste considering differences in scale of operation, demographic and socioeconomic factors across municipalities	Carried out statistical analysis using observational data on 293 municipalities, including waste costs and quantities, collection methods and processing systems adopted to compute collection efficiency scores and rank municipalities based on ratios of resource input volumes and costs to quantities of waste collected as well as environmental indicators	Effective approach for benchmarking the efficiency of urban waste services and including environmental metrics, but data requirements can be prohibitive
5. Evaluating joint environmental and cost performance in municipal waste management systems considering scale effects (Sarra et al, 2016)	Carried out evaluations of various waste management systems to inform the process of reorganising municipal waste management systems to improve economic and environmental performance, reduce public expenditure and meet waste collection targets	Evaluated comparative efficiency of municipality waste management systems using economic (cost) efficiency indicators calculated using statistical techniques and included unsorted waste as an undesired output to be minimized using data for 289 municipalities	Heavily dependent on availability of data that can be used to compute empirical measures of comparative efficiency