

***COMMUNITY ATTITUDES  
TOWARDS WASTE MANAGEMENT –  
STAGE 2 SURVEY RESULTS***

***PREPARED FOR: EASTERN METROPOLITAN REGIONAL COUNCIL***

***CLIENT CONTACT: STEVE FITZPATRICK***

***PATTERSON CONTACT: KEITH PATTERSON/CARMEN GOODRIDGE***

***DATE: JULY 2006***

# *TABLE OF CONTENTS*

1.0	SNAPSHOT .....	1
1.1	KEY FINDINGS STAGE 1 VERSUS STAGE 2 .....	2
1.1.1	COMPREHENSION OF WHAT COUNCIL DOES WITH HOUSEHOLD WASTE .....	2
1.1.2	PROMPTED AWARENESS OF RUBBISH COLLECTION SERVICES AVAILABLE .....	2
1.1.3	IMPORTANCE THAT COUNCIL MINIMISES ENVIRONMENTAL IMPACTS .....	3
1.1.4	SATISFACTION WITH STEPS COUNCIL TAKES TO MINIMISE ENVIRONMENTAL IMPACT .....	3
1.1.5	OPTIONS THAT COUNCIL COULD CONSIDER TO REDUCE ENVIRONMENTAL IMPACTS .....	3
1.1.6	PREPAREDNESS TO BEAR COSTS .....	4
1.1.7	AWARENESS AND ATTENDANCE OF COMMUNITY SESSIONS .....	4
1.1.8	SATISFACTION WITH OPPORTUNITIES TO BE INVOLVED IN THE PLANNING PROCESS TO REDUCE IMPACT OF WASTE GOING TO LANDFILL .....	5
1.1.9	SUMMARY OF CHANGES STAGE 1 VERSUS STAGE 2 .....	5
1.2	KEY FINDINGS STAGE 2 .....	6
1.2.1	THE IMPORTANCE OF THE LOCATION FACTORS IN PLANNING FOR THE SELECTION OF THE SITE FOR THE RESOURCE RECOVERY FACILITY .....	6
1.2.2	PERCEPTION OF THE IMPORTANCE OF CONSIDERATIONS IN TERMS OF THE TECHNOLOGY TO BE USED IN THE RESOURCE RECOVERY FACILITY .....	7
1.2.3	AN OVERVIEW OF THE AREAS OF MOST IMPORTANCE WHEN PLANNING FOR THE SITE AND TECHNOLOGY OF THE FACILITY .....	9
2.0	RESEARCH APPROACH .....	10
2.1	SURVEY METHOD .....	12
2.1.1	SEQUENCE EFFECTS .....	12
2.1.2	MULTIPLE SURVEY COMPLETION OPTIONS .....	13
2.2	PROJECT OBJECTIVES .....	14

*CONTINUED OVERLEAF...*

## ***TABLE OF CONTENTS CONTINUED...***

3.0	DETAILED FINDINGS – STAGE 1 VERSUS STAGE 2 .....	15
3.1	COMPREHENSION OF WHAT COUNCIL DOES WITH HOUSEHOLD WASTE .....	16
3.2	PROMPTED AWARENESS OF RUBBISH COLLECTION SERVICES AVAILABLE .....	17
3.2.1	BASSENDAN .....	18
3.2.2	BAYSWATER .....	19
3.2.3	BELMONT .....	20
3.2.4	KALAMUNDA .....	21
3.2.5	MUNDARING .....	22
3.2.6	SWAN .....	23
3.3	IMPORTANCE THAT COUNCIL MINIMISES ENVIRONMENTAL IMPACTS .....	24
3.4	SATISFACTION WITH STEPS COUNCIL TAKES TO MINIMISE ENVIRONMENTAL IMPACT .....	25
3.5	OPTIONS THAT COUNCIL COULD CONSIDER TO REDUCE ENVIRONMENTAL IMPACTS .....	26
3.6	PREPAREDNESS TO BEAR COSTS .....	28
3.7	AWARENESS AND ATTENDANCE OF COMMUNITY SESSIONS .....	30
3.8	SATISFACTION WITH OPPORTUNITIES TO BE INVOLVED IN THE PLANNING PROCESS TO REDUCE IMPACT OF WASTE GOING TO LANDFILL .....	31
4.0	DETAILED FINDINGS – STAGE 2 .....	33
4.1	THE IMPORTANCE OF THE LOCATION FACTORS IN PLANNING FOR THE SELECTION OF THE SITE FOR THE RESOURCE RECOVERY FACILITY .....	33
4.2	PERCEPTION OF THE IMPORTANCE OF CONSIDERATIONS IN TERMS OF THE TECHNOLOGY TO BE USED IN THE RESOURCE RECOVERY FACILITY .....	36
4.3	AN OVERVIEW OF THE AREAS OF MOST IMPORTANCE WHEN PLANNING FOR THE SITE AND TECHNOLOGY OF THE FACILITY .....	40

Appendix A – Questionnaire

Appendix B – Data Analysis Tables

## **1.0 SNAPSHOT**

This project is the second stage of research that Patterson Market Research has completed on behalf of the Eastern Metropolitan Regional Council (EMRC). Stage 1 was completed in May 2005 and Stage 2 (the main focus in this report) was completed in May/June 2006.

The survey objectives were:

- To provide a measure of community understanding of and attitudes towards the waste management practices delivered by the councils within the Eastern Metropolitan Regional Council.
- To provide a statistically sound basis for assessing the relative importance of the range of factors to be considered in the assessment of the alternative processes and locations that may be contemplated for the resource recovery solution for the EMRC.

The survey was conducted by means of a two stage simple random dial telephone survey of adults aged 18 years and over across the six council precincts that make up the eastern region. The six council areas being:

- Bassendean
- Bayswater
- Belmont
- Kalamunda
- Mundaring
- Swan.

The first stage of the 2006 survey was designed to provide an accurate assessment of community attitudes across the total catchment area of the EMRC, and to also provide a reliable basis for comparing attitudes within each of the council districts. To achieve this outcome, the survey was designed to interview about 135 residents from within each of the six council districts (totalling 823 stage one interviews in all). A sample of 135 for each council district exercise produces a survey error of approximately +/- 8.4% within each of the six council districts, and a "total survey" survey error of approximately +/- 3.4%.

The first part of the survey was also designed as a means of recruiting respondents to take part in the very detailed stage two of the research, designed to enable the community assessment of the importance of the criteria to be used when evaluating alternative solutions to the management of residential wastes. This second component of the survey was conducted by a hybrid design of self completion on the web, self completion by hard copy and by follow-up telephone interview. See Section 2 for details of the survey method, including response rates for Stage 2.

To correct the apparent over sampling of Bassendean, Belmont and Mundaring (and the relative under sampling of Bayswater, Kalamunda and Swan), the data was weighted to accurately reflect the true population profile as shown in the second row of the above table. The survey process in fact uses a 24 cell weights matrix based on age, gender and council precinct to arrive at a very good representation of each of the council districts in isolation, and for the total region aggregated together (note, Section 2 has further details on the profile of the population).

The second part of this research project (referred to as the follow-up survey) resulted in an overall sample size of 519. However, the main part of the follow-up interview involved respondent's ranking the importance of the items either in reference to the location considerations (N=262) or technical considerations (N=257) for the Resource Recovery site. Therefore the follow-up sample was essentially split in half.

## **1.1 KEY FINDINGS STAGE 1 VERSUS STAGE 2**

Following are the key results from the initial survey completed in the second stage of the research (N=823), including comparisons to Stage 1 results (N=609, May 2005).

### *1.1.1 COMPREHENSION OF WHAT COUNCIL DOES WITH HOUSEHOLD WASTE*

Respondents were asked to indicate what they understood council does with the household waste that is "collected weekly from the rubbish bin". This was an unprompted question, and simply allowed respondents to indicate their understanding of what council does with the waste it collects each week. Common responses included:

- 51% "Goes to landfill / the tip" (versus 48% in Stage 1)
- 29% "Some is recycled" (versus 29%)
- 40% "Don't know" (versus 42%).

### *1.1.2 PROMPTED AWARENESS OF RUBBISH COLLECTION SERVICES AVAILABLE*

Respondents were asked to indicate which of a list of rubbish collection services that councils provide, are available to them in their household. Following were the results:

- 99% Wheelie bin for general household rubbish (versus 97% Stage 1)
- 99% Separate wheelie bin for recyclable materials (versus 96%)
- 63% Verge collections of junk or bulk waste (versus 61%)
- 55% Verge collections of green waste (versus 56%)
- 33% Tip passes to Redhill or other location (versus 35%).
- 32% A skip provided by council (versus 32%)
- 23% Special wheelie bin for green waste (versus 25%)

### *1.1.3 IMPORTANCE THAT COUNCIL MINIMISES ENVIRONMENTAL IMPACTS*

Respondents were asked to indicate how important it was to them that council minimises the environmental impact of waste disposal:

- 69% specified it was “very important” (versus 74% in Stage 1)
- 26% “quite important” (versus 19%)
- 2% “neither one nor the other” (versus 3%)
- 2% “quite unimportant” (versus 0%)
- 1% “very unimportant” (versus 3%)
- 0% “don’t know/can’t say” (versus 1%).

Therefore, most respondents (95%) considered minimising the environmental impact of waste disposal to be important. However, there was a decrease in the proportion who rated it as “very important” when comparing Stage 2 (69%) to Stage 1 (74%).

### *1.1.4 SATISFACTION WITH STEPS COUNCIL TAKES TO MINIMISE ENVIRONMENTAL IMPACT*

Respondents were asked to rate their satisfaction with council efforts to minimise the environmental impact of rubbish:

- 14% were “very satisfied” (versus 14% in Stage 1)
- 48% “quite satisfied” (versus 42%)
- 15% “neither one nor the other” (versus 22%)
- 4% “quite dissatisfied” (versus 8%)
- 1% “very dissatisfied” (versus 2%)
- 17% “don’t know” (versus 12%).

In summary, satisfaction increased by 5% when comparing Stage 1 (56%) to Stage 2 (61%) and there was an associated decrease in dissatisfaction (down 4%, from 10% in Stage 1 to 6% in Stage 2).

### *1.1.5 OPTIONS THAT COUNCIL COULD CONSIDER TO REDUCE ENVIRONMENTAL IMPACTS*

Respondents were asked an unprompted question about what they believed council could do to improve environmental impact of the rubbish it collects from household and commercial premises. In Stage 2, 57% of the population were unable to think of any options council should consider, which is an increase of 13% on the benchmark survey (ie Stage 1 result was 44%). The most common responses were increase recycling, green waste pick up, educating residents about recycling and more composting (these are consistent with the common responses from Stage 1).

### *1.1.6 PREPAREDNESS TO BEAR COSTS*

Respondents were asked to indicate how much extra they would be prepared to pay to reduce the environmental impact of waste disposal:

- 23% Just the \$150 a yr or \$3 a week – no increase & no reduction in environmental impact (versus 20% in Stage 1)
- 9% would pay an extra \$10 a yr (20c per week) (versus 12%)
- 12% would pay an extra \$25 a yr (50c per week) (versus 17%)
- 26% would pay an extra \$50 a year (\$1 per week) \*
- 24% would pay an extra \$75 a year (\$1.50 per week) \*
- 6% indicated “don’t know / can’t say” (versus 4%).

\* Combining the two highest options shows that 50% would pay at least an extra \$50 a yr (\$1 per week) (versus 48%).

### *1.1.7 AWARENESS AND ATTENDANCE OF COMMUNITY SESSIONS*

Most respondents were not aware of the three different community sessions that were run by EMRC. Specifically:

- 92% were not aware of their local council briefing session which was held by their individual local councils
- 96% were not aware of the regional workshops at Burswood (held in October 2005)
- 96% were not aware of the regional workshops at Midland (held in February 2006).

At the most, 3% of respondents actually attended these sessions.

### *1.1.8 SATISFACTION WITH OPPORTUNITIES TO BE INVOLVED IN THE PLANNING PROCESS TO REDUCE IMPACT OF WASTE GOING TO LANDFILL*

Respondents were asked to rate how satisfied they were with the opportunities to provide community input into the planning process so as to reduce the impact of waste going to landfill:

- 3% were “very satisfied”
- 27% “quite satisfied”
- 32% “neither one nor the other”
- 17% “quite dissatisfied”
- 4% “very dissatisfied”
- 16% “don’t know”.

There were some key age differences for this question. Generally, the older the respondents were the more likely they were to be satisfied with the opportunities to provide input (See Section 3.8, Table T3.7b).

### *1.1.9 SUMMARY OF CHANGES STAGE 1 VERSUS STAGE 2*

When comparing the results from the benchmark survey (Stage 1, May 2005) with those from the most recent research (Stage 2, May/June 2006) it is apparent that most results remained consistent (ie only 2-3% shifts, within survey error).

The most significant shifts were:

- 5% decrease in rating ‘very important’ (now 69% in Stage 1 it was 74%) that council minimises environmental impact of waste disposal (but overall importance no change).
- 5% increase in satisfaction with Council’s efforts to minimise environmental impact of rubbish.
- 13% increase in “don’t know” response to unprompted assessment of options Council considers to reduce impact (up to 57% from 44% in Stage 1).

## **1.2 KEY FINDINGS STAGE 2**

Following are the key results from the follow-up survey completed in the second stage of this research project (May/June 2006). The main part of the follow-up interview involved respondent's ranking the importance of the items either in reference to the location considerations (sample size N=262) or technical considerations (sample size N=257) for the Resource Recovery site. Prior to ranking each consideration attribute the following was explained to respondents:

*Please use a scale of 0 -10, to indicate the importance you place on a factor.*

- *You would use a score of "0" for something that is of no importance to you at all.*
- *Use a score of "1" if something is of very little importance to you.*
- *You would use a 5 score if something is 5 times as important as a 1 score, and a score of 10 if something is 10 times as important as the "1" score.*
- *You can use any number from "0" to "10" to indicate the importance you place on something*

Results within this section of the report provide an overview of the index score for each consideration. The index score is the average result out of 10 converted to a score out of 100 (so a percentage) for ease of interpretation.

### *1.2.1 THE IMPORTANCE OF THE LOCATION FACTORS IN PLANNING FOR THE SELECTION OF THE SITE FOR THE RESOURCE RECOVERY FACILITY*

The most important location factors to consider when planning for a site were:

- Minimal impact on the local community (85%)
- Ensuring the site is well separated from areas such as schools, reserves and recreation (84%)
- Ensuring the site is well separated from residential areas (83%)

The items of the least importance out of all the planning location factors were:

- Site being readily accessible to towns and suburbs it services (71%)
- Rail or truck access mostly by main roads (74%).

Three environmental location factors were considered by respondents. Following are the importance index results:

- 90% having minimal impact on environmental important wetlands
- 89% ability to meet relevant environmental standards
- 85% minimal impact on the remnant native bushland.

Following are the importance index results for the three economic considerations respondents ranked in relation to planning for the location of the resource recovery site:

- 79% buy or secure a long term access well into the future
- 71% low transportation costs to and from the site
- 68% low cost to buy and service the site.

#### *1.2.2 PERCEPTION OF THE IMPORTANCE OF CONSIDERATIONS IN TERMS OF THE TECHNOLOGY TO BE USED IN THE RESOURCE RECOVERY FACILITY*

The most important environmental factors to consider when planning for the technology to be used in the resource recovery facility were:

- Low risk of air pollution (91%)
- Provide environmental benefits by replacing raw materials with recovered products or materials (86%)
- Being able to obtain relevant WA government approvals (84%).

The least important environmental consideration was:

- Low risk of water or ground pollution (75%).

Respondents were asked the rank the importance of a number of different social considerations in relation to selecting the technology to be used for the resource recovery facility. The following social factor was of the most importance to respondents:

- Technology selected should have minimal health risk for the operators and the surrounding community (94%)

The next highest index score being 78% for the social attributes was *compatible with the local state and federal waste management policies* and that the *technology is acceptable to the local community*. Having *a low visual impact on the local environment* was the social attribute with the lowest index score at 74%.

Respondents were asked to rank the importance of five economic considerations when selecting the technology for the resource recovery facility. Following were the importance index score results:

- 77% low ongoing operating costs
- 75% produces end products that have an existing market
- 70% costs to treat waste is not dependent on prices of any saleable end products
- 69% has low set up costs when averaged over its lifespan
- 66% has small cost per unit variation if there are any changes to the volumes to be processed.

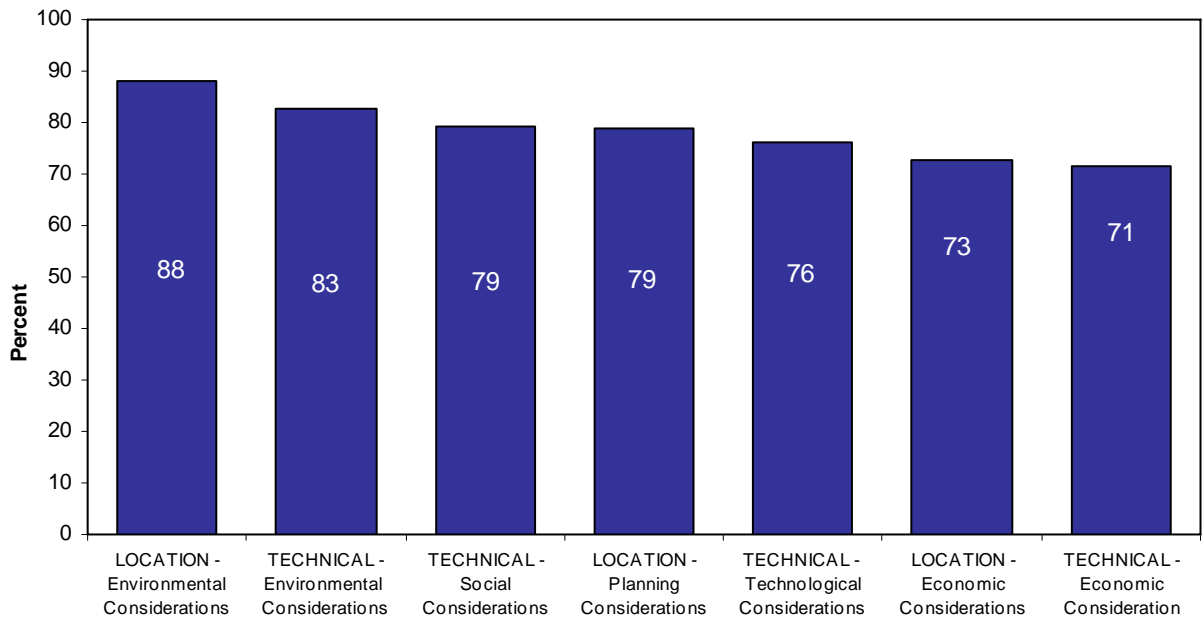
Finally respondents were asked to rank the importance of six different technical considerations when selecting the technology for the resource recovery facility. Following were the importance index score results:

- 81% flexibility to handle different volumes of waste
- 79% adaptable to the future changing market opportunities
- 79% handle variations in the quality of solid waste
- 77% expertise to operate technology is available in Australia
- 74% uses proven technology
- 66% avoids complex construction and operating processes.

1.2.3 AN OVERVIEW OF THE AREAS OF MOST IMPORTANCE WHEN PLANNING FOR THE SITE AND TECHNOLOGY OF THE FACILITY

Figure 1.1 provides an overview of the average index score for each consideration segment, showing that environmental issues are clearly of the greatest priority to residents, followed by social and planning considerations and technology considerations. Economic considerations feature as being of the least importance to EMRC residents.

Figure 1.1 Importance index for each Area of Consideration



## **2.0 RESEARCH APPROACH**

The survey was conducted by means of a two stage simple random dial telephone survey of adults aged 18 years and over across the six council precincts that make up the eastern region. The six council areas being:

- Bassendean
- Bayswater
- Belmont
- Kalamunda
- Mundaring
- Swan.

The first stage of the 2006 survey was designed to provide an accurate assessment of community attitudes across the total catchment area of the EMRC, and to also provide a reliable basis for comparing attitudes within each of the council districts. To achieve this outcome, the survey was designed to interview about 135 residents from within each of the six council districts (totalling 823 stage one interviews in all). A sample of 135 for each council district exercise produces a survey error of approximately +/- 8.4% within each of the six council districts, and a "total survey" survey error of approximately +/- 3.4%.

The first part of the survey was also designed as a means of recruiting respondents to take part in the very detailed stage two of the research, designed to enable the community assessment of the importance of the criteria to be used when evaluating alternative solutions to the management of residential wastes. This second component of the survey was conducted by a hybrid design of self completion on the web, self completion by hard copy and by follow-up telephone interview. See Section 2.1 for details of the survey method.

The fact that the six councils are not of the same size in terms of population numbers was readily corrected by weighting the survey data to accurately reflect the true population profile of the six council precincts. For example, note from Table 2.0 below that the Town of Bassendean has only 10,000 people aged 18 years and over (according to the ABS data of 2001 projected through to 2005). Bayswater has four times as many adults (43,000) which is approximately double the number of Belmont (22,700). Kalamunda has 33,000, Mundaring 23,700, and Swan has 56,800.

The total adult population across the six councils that comprise the Eastern Metropolitan Regional Council is 189,500.

	<b>Bassen-dean</b>	<b>Bays-water</b>	<b>Belmont</b>	<b>Kala-munda</b>	<b>Mund-aring</b>	<b>Swan</b>	<b>TOTAL</b>
Males 18-39	2,000	9,400	5,000	6,300	4,300	13,300	40,300
Females 18-39	2,100	9,200	4,900	6,500	4,500	14,300	41,500
Males 40 +	2,800	11,700	6,100	9,800	7,200	14,300	51,900
Females 40 +	3,100	12,700	6,700	10,700	7,700	14,900	55,800
<b>Total</b>	<b>10,000</b>	<b>43,000</b>	<b>22,700</b>	<b>33,300</b>	<b>23,700</b>	<b>56,800</b>	<b>189,500</b>

Table T2.0a following shows the proportional sample distribution for a survey of 823 respondents (which was the actual sample achieved in the “recruit interview” part of the survey) according to the population proportions across the six council precincts. It shows for example in the third row of figures that in the Town of Bassendean, a proportional sampling of 823 would produce 44 interviews, in Bayswater we would have 187, 98 in Belmont, 144 in Kalamunda, 104 in Mundaring and 247 in Swan (totalling 823). The fourth row shows the resultant survey error for each of those towns/council districts in isolation. Using the correct proportional representation for the council area, we would have just 44 interviews for Bassendean, resulting in a sample error of  $\pm 14.8\%$ , which is too great for us to be able to conduct a meaningful comparison of the feedback from that council’s constituents with the other groups. However, by boosting the sample to 136 we achieve a survey error of  $\pm 8.4\%$  which provides a much more reliable basis for comparison of results from one council to another.

	<b>Bassen-dean</b>	<b>Bays-water</b>	<b>Belmont</b>	<b>Kala-munda</b>	<b>Mund-aring</b>	<b>Swan</b>	<b>TOTAL</b>
Total Adult Population	10,000	43,000	22,700	33,300	23,700	56,800	<b>189,500</b>
Population Proportions (%)	5.31%	22.7%	11.9%	17.5%	12.6%	29.99%	<b>100%</b>
Resultant Proportional sample	44	187	98	144	104	247	<b>823</b>
Survey Error on Proportional sample	$\pm 14.8\%$	$\pm 7.2\%$	$\pm 9.9\%$	$\pm 8.2\%$	$\pm 9.6\%$	$\pm 6.2\%$	<b><math>\pm 3.4\%</math></b>
Actual Sample	136	137	136	135	135	144	<b>823</b>
Survey Error at actual Sample in each district	$\pm 8.4\%$	$\pm 8.4\%$	$\pm 8.4\%$	$\pm 8.4\%$	$\pm 8.4\%$	$\pm 8.2\%$	<b><math>\pm 3.4\%</math></b>

In the final row of the above table, we have shown the survey error that has resulted from the actual sample generated for each of the council precincts in isolation. This process achieves effectively a 8.4% survey error in each of the six council areas, though overall, the survey error of 3.4% remains unchanged.

To correct the apparent over sampling of Bassendean, Belmont and Mundaring (and the relative under sampling of Bayswater, Kalamunda and Swan), the data was weighted to accurately reflect the true population profile as shown in the second row of the above table. The survey process in fact uses a 24 cell weights matrix based on age, gender and council precinct to arrive at a very good representation of each of the council districts in isolation, and for the total of Eastern Metropolitan Regional Council aggregated together.

## **2.1 SURVEY METHOD**

As indicated above, the survey was conducted by means of a two stage research design.

The initial phase of the research was a random dial telephone survey of adults in the EMRC catchment area. As indicated elsewhere, approximately 135 interviews were sought in each of the six council precincts, with a view to completing a second phase survey with as many respondents as possible. That is, the “recruitment” interview was conducted with a random dial of 823 respondents, and an information pack about the factors and variables that need to be considered when assessing the options for the resource recovery facility was mailed to all “stage one” survey participants.

The range of material to be covered in the second phase of the survey programme was considerable. The total task involved respondents being asked to assess both the location and technology aspects of the possible resource recovery facility, and this involved providing important assessments for a total of 39 criteria. This was judged to be much too great a task to be completed by means of a random dial telephone interview. In fact, the task was considered so significant, that it was decided to divide the sample in two, asking each sub-set (of approximately 250 respondents) to provide assessments of either the technological issues, or the location issues to be considered when reviewing possible solutions to the resource recovery facility. This means that the final assessments that were made of the importance of the various to be considered in the assessment of the resource recovery solution were based on 250 interviews, which produces a survey error of plus or minus 6.2%.

### *2.1.1 SEQUENCE EFFECTS*

Given the long list of factors that respondents were asked to consider the researchers were concerned over the possibility of a “sequence effect” contaminating the survey results. This effect is brought about by the relatively task that respondents are asked to complete. Even with an allocation of 14 location criteria or 25 technological criteria to be considered, we were concerned that a sequence effect might have some impact on contaminating the survey results towards the end of each of these lists.

To counter this effect, the order in which the criteria were assessed was rotated to randomise any sequence effect. The potential for the sequence effect to in some way contaminate the importance of some of the factors was thereby removed. This randomisation of the order of presentation was achieved by varying the order in which the topics were presented to respondents. Two versions of the “technology issues” lists were developed, as were two versions of the “location issues”. Copies of the material that was sent to respondents may be found in Appendix B to this report.

### *2.1.2 MULTIPLE SURVEY COMPLETION OPTIONS*

The survey task of encouraging respondents to take part of the second stage of the survey was daunting. To achieve our objective of 500 completions of the second phase of the interview, we needed to achieve a response rate in the order of 50% of those who had taken part in the first stage of the survey programme. Our final response rate that was achieved was 63%, in that we managed to secure 519 completed “stage 2” interviews from a mail out of 823 respondents who had taken the recruitment phase of the survey programme. This was achieved by including in the material mailed out to respondents the option of conducting a survey either by means of self completion (the questionnaire was mailed to respondents), either as a hard copy response or by means of an online survey. This was also supplemented by a telephone contact with respondents who failed to complete and return the survey questionnaire either by means of an online response or a self-completion hard copy response.

The information pack sent to respondents included a letter from the researchers offering them the option of the self-completion online or hard copy or simply wait for a telephone interview. In either event, they were encouraged to review the range of topics included in their information pack, so that they would have some higher exposure to the issues and factors that they would be asked to assess during the course of the survey.

The strategy adopted turned out to be extremely successful. 50% of the “stage two” respondents complied with our request to self-complete and return the completed survey questionnaire by means of a provided reply paid envelope. A further 7% of respondents completed a survey questionnaire online, leaving 41% of respondents to be contacted by means of a telephone survey.

The above figures relate to the proportion of responses received. The true response rates should be judged in terms of the proportion of the mailed out stage two survey questionnaires. That is based on the full 823 respondents who took part in the phase one recruitment interview. On that basis the response rates by the various survey mechanisms were:

- 32% by self completion returned mail;
- 4% by means of self completion online;
- 26% by means of the follow up telephone interview.

These total the overall response rate of 63%.

It is important to recognise when considering the efficacy of the above mechanisms that sample frame that was mailed the information pack which included the option of self completion was of itself from a database of people who had been recruited and taken part in the first stage of the survey questionnaire. A simple random mailing on the population would not achieve anywhere near the response rates quoted here.

## **2.2 PROJECT OBJECTIVES**

The survey objectives were:

- To provide a measure of community understanding of and attitudes towards the waste management practices delivered by the councils within the eastern region.
- To provide a statistically sound basis for assessing the relative importance of the range of factors to be considered in the assessment of the alternative processes and locations that may contemplated for the resource recovery solution for the EMRC.

### **3.0 DETAILED FINDINGS – STAGE 1 VERSUS STAGE 2**

The survey asked some questions to establish residents':

- current understanding of the waste management practices that their council follows,
- their attitudes towards the notion of reducing the environmental impact of waste management practices,
- an indication of their preferences for the paths that councils should take in balancing environmental impact and financial impost on residents,
- and their involvement in the process to develop new waste management technologies and practices and satisfaction with the opportunities to be involved.

The survey questionnaire is appended to this report, and the key results are reported below. The full set of data tables used for analysis is also appended to this report.

### 3.1 COMPREHENSION OF WHAT COUNCIL DOES WITH HOUSEHOLD WASTE

Respondents were asked to indicate what they understood council does with the household waste that is “collected weekly from the rubbish bin”. This was an unprompted question, and simply allowed respondents to indicate their understanding of what council does with the waste it collects each week. As Table T3.1 below indicates, whilst 51% nominated the “landfill” solution to household waste (compared to 48% in the benchmark survey), note that 40% didn’t know what council did with the material it collects from the weekly collections (compared to 42% in the benchmark survey).

**Table T3.1  
Unprompted Awareness of How Waste is Disposed\***

	STAGE 2 COUNCIL RESULTS							TOTAL 2005
	TOTAL 2006	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %	N=609 %
Goes to landfill / the tip	51	55	46	36	49	60	56	48
Some is recycled	29	36	43	27	16	21	29	29
Composting of green waste	4	3	15	-	-	1		5
Other	3	2	3	1	4	3	2	1
Composting organic wastes	1	1	1	1	-	-	1	1
Don't know	40	36	37	51	45	34	38	42

\*The table adds beyond 100% due to multiple response

Note that Mundaring had the greatest proportion of respondents indicating that the household waste that is collected weekly by their council goes to landfill/the tip (60% versus the next highest proportion at 56% among Swan and the lowest proportion 36% among Belmont). Note also that Mundaring respondents have the smallest proportion of don't know responses (34% compared to the next lowest at 36% among Bassendean). Bayswater respondents were much more likely to indicate that some of their household waste that is collected weekly is recycled (43% compared to the next largest proportion of 36% among Bassendean respondents, and the smallest proportion of 16% among Kalamunda). Bayswater were far more likely to indicate that their household waste is also composted in terms of the green waste (15% compared to the next largest proportion of 3% among Bassendean respondents).

It is interesting to note that younger respondents (ie. 18-39 years) and female respondents were more likely to be unsure as to what their council does with their household waste which is collected on a weekly basis.

### 3.2 PROMPTED AWARENESS OF RUBBISH COLLECTION SERVICES AVAILABLE

Respondents were asked to indicate which of a list of rubbish collection services that councils provide, are available to them in their household. As Table T3.2 below indicates, there is effectively saturation awareness of the general wheelie bin for household rubbish, and the separate wheelie bin for recyclable materials. It would be anticipated that awareness of the availability of these services would vary from one council precinct to another depending on the specific services offered by the relevant council.

For example, awareness of the verge collections for junk or bulk waste varied from a low of 8% in Belmont and 14% in Bayswater to 97% in Bassendean and 99% in Kalamunda. The service is only available in Bassendean, though there is a combined Bulk waste (junk) and Green waste collection twice a year in Kalamunda. The 2006 trends, based on the council in which respondents live in, are consistent with the trends found in the benchmark (2005) survey.

**Table T3.2  
Prompted Awareness of Collection Services\***

	STAGE 2 COUNCIL RESULTS							TOTAL 2005 N=609 %
	TOTAL 2006	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %	
Wheelie bin for general household rubbish	<b>99</b>	100	97	99	100	96	100	97
Separate wheelie bin for recyclable materials	<b>99</b>	100	100	98	100	96	99	96
Special wheelie bin for green waste	<b>23</b>	2	93	2	-	1	4	25
Verge collections of junk or bulk waste	<b>63</b>	97	14	8	99	90	84	61
Verge collections of green waste	<b>55</b>	96	8	5	98	45	81	56
A skip provided by council	<b>32</b>	3	88	85	1	4	5	32
Tip passes to Redhill or other location	<b>33</b>	67	43	12	3	80	26	35

\*The table adds beyond 100% due to multiple response

The following series of tables shows the awareness of specific services across the six council areas, flagged by the actual range of services available to residents within each area. It also compares the awareness found in the benchmark (2005) survey with the level of awareness ascertained in 2006.

### 3.2.1 BASSENDEAN

The Town of Bassendean has the standard “two bin” household waste collections, plus an annual verge side Junk Collection, and a separate Bulk green waste collection. Residents are also provided with 4 tip passes a year. The awareness of the services for Bassendean are summarised in Table 3.2.1 below.

**Table T3.2.1**  
Bassendean reported Resident awareness

	Services Provided?	2006	2005
		N= 136 %	N=100 %
Wheelie bin for general household rubbish	YES	100	100
Separate wheelie bin for recyclable materials	YES	100	99
Verge collections of junk or bulk waste	YES	97	91
Verge collections of green waste	YES	96	95
Tip passes to Red hill of other location	YES	67	58
A skip provided by council	NO	3	11
Special wheelie bin for green waste	NO	2	6

Note that all Bassendean respondents were aware of the two main wheelie bin verge collection services. Similarly awareness of the verge bulk waste collection is very high at 97%, and 96% for junk and green collections respectively. Two thirds (67%) are aware of the tip passes (this would be related to the proportion that actually use the tip passes), which shows growth on the benchmark survey result of 58%. Only 3% think that Council provides Bulk bins (Skips) and 2% think that council provides a special wheelie bin for green waste.

### 3.2.2 BAYSWATER

Bayswater council provides the main two bin collection system, and up to three bulk bins (Skips) may be ordered a year. It also provides up to 3 tip passes a year in lieu of the bulk bin collections, and a regular verge collection of Green waste in a special brown “wheelie bin” (the only council to do this). As Table 3.2.2 below indicates, Bayswater residents have high awareness of the high visibility services, about 4 in 10 (43%) are aware of Tip passes (which probably approximates the rate of tip pass usage) though about one in ten think that they have verge collections of green and bulk (junk ) waste collections. This may well be affected by them noticing such collections in nearby suburbs.

**Table T3.2.2**  
Bayswater reported  
Resident awareness

	Services Provided?	2006	2005
		N= 137 %	N= 100 %
Wheelie bin for general household rubbish	YES	97	97
Separate wheelie bin for recyclable materials	YES	100	98
Verge collections of junk or bulk waste	NO	14	24
Verge collections of green waste	NO	8	26
Tip passes to Red hill of other location	YES	43	44
A skip provided by council	YES	88	79
Special wheelie bin for green waste	YES	93	88

3.2.3 BELMONT

Belmont council provides the main two bin collection system, and up to four bulk bins (Skips) may be ordered a year. It also provides up to up to 4 tip passes a year in lieu of the bulk bin collections. As Table 3.2.3 below indicates, Belmont residents have high awareness of the main services that council does provide, though the awareness of the tip passes is quite low (it may be that most opt for the ordered skips instead).

**Table T3.2.3 Belmont reported Resident awareness**

	Services Provided?	2006	2005
		N= 136 %	N= 100 %
Wheelie bin for general household rubbish	YES	99	97
Separate wheelie bin for recyclable materials	YES	98	98
Verge collections of junk or bulk waste	NO	8	19
Verge collections of green waste	NO	5	12
Tip passes to Red hill of other location	YES	12	21
A skip provided by council	YES	85	85
Special wheelie bin for green waste	NO	2	14

The 5% reported awareness of the bulk Green Verge collection, could be confusion with other suburbs. The 8% reported awareness of the Special green waste (brown) "wheelie bin" may be confusion over what is allowed into the regular bin collection service.

### 3.2.4 KALAMUNDA

Kalamunda council provides the main two bin collection system, and there are two scheduled combined green and bulk waste collections each year. Residents may also buy a tip pass if they wish. As Table 3.2.4 below indicates, Kalamunda residents have high awareness of the main services that council does provide, though the awareness of the tip pass is quite low (it may be that the two combined bulk verge collections are adequate for resident's needs).

**Table T3.2.4**  
Kalamunda reported  
Resident awareness

	Services Provided?	2006	2005
		N= 135 %	N= 100 %
Wheelie bin for general household rubbish	YES	100	100
Separate wheelie bin for recyclable materials	YES	100	100
Verge collections of junk or bulk waste	YES	99	96
Verge collections of green waste	YES	98	92
Tip passes to Red hill of other location	YES*	3	22
A skip provided by council	NO	1	2
Special wheelie bin for green waste	NO	-	2

\*Tip passes may be sold to residents who request them.

### 3.2.5 MUNDARING

Mundaring council provides the main two bin collection system, and there are two scheduled combined green and bulk waste collections each year. Residents may alternatively be provided with up to 3 tips passes if there is no verge collection available, or one such pass if the verge collection is available. As Table 3.2.5 below indicates, Mundaring residents have high awareness of the main services that council does provide, and it is interesting to note the awareness of the tips passes is highest in this area than in any other of the surveyed council precincts.

**Table T3.2.5**  
Mundaring reported Resident awareness

	Services Provided?	2006	2005
		N=135 %	N=100 %
Wheelie bin for general household rubbish	YES	96	96
Separate wheelie bin for recyclable materials	YES	96	96
Verge collections of junk or bulk waste	YES	1	67
Verge collections of green waste	YES	90	45
Tip passes to Red hill of other location	YES*	45	74
A skip provided by council	NO	4	3
Special wheelie bin for green waste	NO	80	4

*\*One to Three tip passes provided according to availability of verge collections.*

### 3.2.6 SWAN

The Shire of Swan council provides the main two bin collection system, and there are three scheduled combined green and bulk waste collections each year. Residents may alternatively be provided with tip passes if there is no verge collection available. As Table 3.2.6 below indicates, Swan residents have high awareness of the main services that council does provide. Note however the relatively low awareness of the verge bulk collections, and the high awareness of the Tip passes. This may indicate a level of confusion amongst residents.

**Table T3.2.6**  
Swan reported Resident awareness

	Services Provided?	2006	2005
		N=144 %	N= 100 %
Wheelie bin for general household rubbish	YES	<b>100</b>	96
Separate wheelie bin for recyclable materials	YES	<b>99</b>	96
Verge collections of junk or bulk waste	YES	<b>84</b>	67
Verge collections of green waste	YES	<b>81</b>	45
Tip passes to Red hill of other location	YES*	<b>26</b>	74
A skip provided by council	NO	<b>5</b>	3
Special wheelie bin for green waste	NO	<b>4</b>	4

*\*Tip passes provided to households who do not have the bulk verge side collections.*

### 3.3 IMPORTANCE THAT COUNCIL MINIMISES ENVIRONMENTAL IMPACTS

Respondents were asked to indicate how important it was to them that council minimises the environmental impact of waste disposal, and as Table T3.3 below indicates, 95% overall rated it as being “important” (69% for “Very” or 26% for “Quite” important), and only 3% described it as being “unimportant”. As apparent from review of Table T3.3 below, the current (2006) results are quite similar to 2005 survey findings.

**Table T3.3  
Importance  
That Council  
Minimises  
Environmental  
Impact of  
Waste  
Disposal\***

	STAGE 2 COUNCIL RESULTS							TOTAL 2005
	TOTAL 2006	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %	
Very important	<b>69</b>	69	77	64	70	69	63	74
Quite important	<b>26</b>	26	21	32	27	26	27	19
Neither one nor the other	<b>2</b>	2	-	2	1	3	3	3
Quite unimportant	<b>2</b>	3	1	-	2	2	3	0
Very unimportant	<b>1</b>	1	1	2	-	1	3	3
NET IMPORTANT	<b>95</b>	95	98	96	96	95	91	93
NET UNIMPORTANT	<b>3</b>	4	2	2	2	3	6	3
Don't know / can't say	<b>0</b>	-	-	-	1	-	1	1

\* Minor rounding errors may cause the “Net” figures to vary from the addition within the table

The overall level of importance of council minimising the environmental impact of waste disposal was consistent across council areas varying from 91% to a high 98% (Swan and Bayswater respectively). However looking at the unimportant results we see a result of 6% among Swan residents and 4% among Bassendean residents as the highest proportions. These council areas also have the smallest proportion of very important ratings along with Belmont and Mundaring (Swan at 63%, Bassendean at 69%, Belmont at 64% and Mundaring at 69%).

### 3.4 SATISFACTION WITH STEPS COUNCIL TAKES TO MINIMISE ENVIRONMENTAL IMPACT

Overall 61% of respondents were either very (14%) or quite (48%) satisfied with the steps that council takes to minimise the environmental impact of household and commercial rubbish. This compares to a 'net satisfied' result of 56% as recorded in the benchmark survey, as shown in Table T3.4 below. However, the fact that once again only 14% are "very satisfied" overall suggests that either respondents are unsure about the steps that council takes, or that there is some room for improvement in this area of council management of municipal activities.

**Table T3.4  
Satisfaction  
with Council  
Efforts to  
Minimise  
Environmental  
Impact of  
Rubbish\***

	STAGE 2 COUNCIL RESULTS							TOTAL 2005
	TOTAL 2006	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %	
Very satisfied	<b>14</b>	10	23	15	10	10	10	14
Quite satisfied	<b>48</b>	51	49	50	40	45	50	42
Neither one nor the other	<b>15</b>	12	10	14	24	17	14	22
Quite dissatisfied	<b>4</b>	4	3	4	6	6	4	8
Very dissatisfied	<b>1</b>	1	2	-	1	2	2	2
NET SATISFIED	<b>61</b>	61	72	65	50	56	61	56
NET DISSATISFIED	<b>6</b>	4	4	4	7	8	6	10
Don't know / can't say	<b>17</b>	22	13	17	19	20	19	12

\* Minor rounding errors may cause the "Net" figures to vary from the addition within the table

Note from Table T3.4 above that the "net satisfied" figure varies from a high of 72% in Bayswater down to a low of 56% in Mundaring and 50% in Kalamunda. This variation would be influenced by both the delivery on this measure by council and the expectation / demands of residents across the six Shires. The trends are consistent with those found in the benchmark (2005) survey.

It appears that the older age group is slightly more likely to express satisfaction on this measure than are the younger counterparts, and that males are slightly more likely to be satisfied than females. This is consistent with the 2005 sub-group trends.

### **3.5 OPTIONS THAT COUNCIL COULD CONSIDER TO REDUCE ENVIRONMENTAL IMPACTS**

Respondents were asked an unprompted question about what they believed council could do to improve environmental impact of the rubbish it collects from household and commercial premises. As Table T3.5 (overleaf) indicates, 57% of the population were unable to think of any options council should consider, which is an increase of 13% on the benchmark survey. However, 15% suggested improved recycling and 8% mentioned providing a green waste pick up or wheelie bin and supplying mulch to residents. Other suggestions were mentioned by 4% of respondents or less, as summarised overleaf.

**Table T3.5  
(Unprompted)  
Options Council  
Could Consider  
to Reduce  
Environmental  
Impact \***

	STAGE 2 COUNCIL RESULTS							TOTAL 2005
	TOTAL 2006	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %	
Increase recycling	15	21	14	9	15	18	15	25
Green waste pick up / wheelie bin & supply mulch to residents	8	9	1	7	11	8	11	6
Educate residents on recycling / disposal	4	4	7	1	6	3	4	10
More composting	4	5	2	4	5	8	3	9
Bulk/kerbside/skip bins	4	5	2	2	2	4	7	3
Provide separate bins for each type of recycling	2	2	1	-	2	5	3	1
New tech resource recovery systems	2	1	2	1	1	2	3	5
Reduce landfill	1	2	2	3	1	2		5
Provide tip passes/reduce cost of tip entry	1	1	-	-	4	1	1	-
Council is already doing its best	1	-	4	1	2	-	-	1
Reduce size of household bins	1	2	2	1	1	-	1	-
Increase frequency of collection	1	1	-	1	3	2	-	1
Inform community of what happens to recycled items/make sure it gets recycled	1	1	1	-	1	1	2	-
Collection of dangerous waste	1	2	1	2	1	0	1	2
Furnace / incinerators	1	-	1	1	1	1	1	2
Positioning of landfills	1	1	-	1	1	1	1	1
Provide incentives to recycle	1	-	1	-	-	1	2	2
Use green waste/mulch/give back to community	1	-	1	-	1	1	1	-
White goods pick ups	1	-	1	2	-	-	1	-
Others	5	7	3	4	7	6	5	6
Don't know	57	53	64	65	53	51	53	44

\*The table adds beyond 100% due to multiple response

### 3.6 PREPAREDNESS TO BEAR COSTS

Respondents were asked to indicate how much extra they would be prepared to pay to reduce the environmental impact of waste disposal. As Table T3.6 below indicates, just over one in five (23%) respondents wanted no increase in their costs at all with no attempt at improvement in the environmental impact of waste disposal. However, 9% indicated they would be prepared to pay an extra \$10 per year, 12% would pay an extra \$25 per year, 26% would pay an extra \$50 per year, and 24% indicated that they would be prepared to pay an extra \$75 a year.

It is not straightforward to compare this result with the result from Stage 1, as the highest category available for respondents in Stage 1 was ‘\$50 per year’. The strong response of 48% to that option in Stage 1 prompted the inclusion of the ‘\$75 per year’ option in the Stage 2 survey.

The most meaningful comparison between Stage 1 and Stage 2 results is based on the combined result for ‘\$50 per year’ and ‘\$75 per year’. In Stage 2, 50% would pay at least ‘\$50 per year, which is comparable to the 48% who indicated in Stage 1 that they would be prepared to pay ‘\$50 per year’.

A higher percentage of residents in Mundaring, Kalamunda and Bassendean indicated a willingness to pay an extra \$75 per year (24%).

**Table T3.6**  
**Preparedness to Pay More to Achieve Better Environmental Outcomes**

	STAGE 2 COUNCIL RESULTS							TOTAL 2005
	TOTAL 2006	Bassendean n	Bayswater	Belmont	Kalamunda	Mundaring	Swan	
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %	
Just the \$150 a yr or \$3 a week – no increase & no reduction in environmental impact	23	24	28	28	22	17	19	20
An extra \$10 a yr (20c per week)	9	4	7	16	11	9	7	12
An extra \$25 a yr (50c per week)	12	13	11	20	10	11	11	17
(At least) An extra \$50 a yr (\$1 per week)	50	50	46	33	53	55	56	48
An extra \$50 a yr (\$1 per week)	26	23	24	15	25	23	36	n/a
An extra \$75 a yr (\$1.50 per week)	24	28	23	18	28	32	20	n/a
Don't know/can't say	6	8	9	4	6	8	6	4

It appears that Swan residents and those in Mundaring and Kalamunda councils were more likely to pay more in order to reduce the environmental impact of waste disposal. That is all of these council areas had at least half of their respondents indicating that they were prepared to pay at least an extra \$50 a year (56% among Swan, 55% among Mundaring and 53% among Kalamunda).

Further half of Bassendean residents indicated that they were prepared at least an extra \$50 a year to reduce the environmental impact of waste disposal. In contrast those within the Bayswater and Belmont council areas were more likely to indicate that they would like no increase at all in terms of reducing the environmental impact of waste disposal (28% for both groups versus the next largest proportion of 24% among Bassendean and the lowest at 17% among Mundaring).

### 3.7 AWARENESS AND ATTENDANCE OF COMMUNITY SESSIONS

As summarised in Table T3.7 below most respondents were not aware of the three different community sessions that were run by EMRC. More specifically 92% were not aware of their local council briefing session which was held by their individual local councils. Most (96%) were not aware of the regional workshops at Burswood (held in October 2005). And most (96%) were not aware of the regional workshops at Midland (held in February 2006). At the most, 3% of respondents actually attended these sessions.

**Table T3.7 Have you been aware of or attended any of the following community sessions?**

	Local Council Briefing Session N=823 %	Regional Workshop at Burswood N=823 %	Regional Workshop at Midland N=823 %
Aware and attended	3	2	2
Aware but did not attend	6	3	3
Not Aware	92	96	96

General respondents living in the Bassendean council area were more likely to be aware of the local council briefing sessions, as were those from the Mundaring areas. However in relation to the other sessions the level of awareness was consistent across the different council areas. There was also no great distinction between the level of awareness based on age or gender (refer to data tables in Appendix B for further information).

### 3.8 SATISFACTION WITH OPPORTUNITIES TO BE INVOLVED IN THE PLANNING PROCESS TO REDUCE IMPACT OF WASTE GOING TO LANDFILL

Table T3.8a provides an overview of how satisfied the respondents were with the opportunities to provide community input into the planning process so as to reduce the impact of waste going to landfill. This question was not asked in the benchmark survey and therefore only 2006 results are shown. As evident there was a large proportion of don't know/can't say responses (16%) and also a large proportion of respondents opting for the neither point on the scale (32%). Nevertheless, 30% of the respondents were satisfied with the opportunities provided up until now for community input. More specifically 3% were very satisfied and 23% were quite satisfied.

However, one in five (22%) were dissatisfied with the opportunities to be involved in the planning process to reduce the impact of waste going to landfill. The highest level of dissatisfaction was apparent among Mundaring respondents as well as those from Bayswater, Belmont and Swan as can be seen from Table T3.8a below.

**Table T3.8a**  
*Satisfaction with Opportunities for local input\**

	STAGE 2 COUNCIL RESULTS						
	TOTAL 2006	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan
	N=823 %	N=136 %	N=137 %	N=136 %	N=135 %	N=135 %	N=144 %
Very satisfied	3	3	3	2	2	2	3
Quite satisfied	27	28	33	24	22	23	29
Neither one nor the other	32	35	27	28	47	22	33
Quite dissatisfied	17	17	21	10	17	21	16
Very dissatisfied	4	2	2	4	5	5	7
NET SATISFIED	30	30	36	26	24	25	31
NET DISSATISFIED	22	19	22	14	22	26	22
Don't know / can't say	16	16	15	32	7	27	13

\* Minor rounding errors may cause the "Net" figures to vary from the addition within the table

There were no distinct differences between the satisfaction of males versus females.

Results based on detailed age groupings are provided in Table T3.8b below. Generally, larger proportion of older respondents (55 years plus) were satisfied with the opportunities to provide input. Higher proportions of neither and don't know responses were apparent among respondents aged 18-54 years. Finally, it is interesting that the highest level of dissatisfaction is apparent among those aged 18-29 years and those aged 40-54 years.

**Table T3.8b**  
**Satisfaction with**  
**Opportunities**  
**for local input \***  
**- AGE**

	STAGE 2 AGE RESULTS					
	TOTAL 2006	18-29 years	30-39 years	40-54 years	55-64 years	65 years and over
	N=823 %	N=90 %	N=152 %	N=269 %	N=152 %	N=160 %
Very satisfied	<b>3</b>	-	1	4	2	6
Quite satisfied	<b>27</b>	16	25	21	40	41
Neither one nor the other	<b>32</b>	39	38	36	24	17
Quite dissatisfied	<b>17</b>	23	14	22	15	11
Very dissatisfied	<b>4</b>	6	5	5	4	2
NET SATISFIED	<b>30</b>	16	26	25	42	47
NET DISSATISFIED	<b>22</b>	30	19	27	19	13
Don't know / can't say	<b>16</b>	15	18	12	15	23

\* Minor rounding errors may cause the "Net" figures to vary from the addition within the table

## 4.0 **DETAILED FINDINGS – STAGE 2**

The main part of the follow-up interview involved respondent's ranking the importance of the items either in reference to the location considerations (N=262) or technical considerations (N=257) for the Resource Recovery site. Prior to ranking each consideration attribute the following was explained to respondents:

*Please use a scale of 0 -10, to indicate the importance you place on a factor.*

- *You would use a score of "0" for something that is of no importance to you at all.*
- *Use a score of "1" if something is of very little importance to you.*
- *You would use a 5 score if something is 5 times as important as a 1 score, and a score of 10 if something is 10 times as important as the "1" score.*
- *You can use any number from "0" to "10" to indicate the importance you place on something*

Results within this section of the report provide an overview of the index score for each consideration. The index score is the average result out of 10 converted to a score out of 100 (so a percentage) for ease of interpretation.

### 4.1 **THE IMPORTANCE OF THE LOCATION FACTORS IN PLANNING FOR THE SELECTION OF THE SITE FOR THE RESOURCE RECOVERY FACILITY**

Overall 262 respondents were asked to rank the importance of various considerations for the location of the Resource Recovery facility.

As summarised in Figure 4.1 overleaf, the most important location factors in terms of planning for a site was to consider having *minimal impact on the local community* with an index score of 85% closely followed by *ensuring the site is well separated from areas such as schools, reserves and recreation* with an index of 84%. *Ensuring the site is well separated from residential areas* was the third most important attribute with an index score of 83%.

Of the least important out of all the planning location factors was the *site being readily accessible to towns and suburbs it services* with an index of 71%. Nevertheless seven out of ten respondents considered each of the individual planning factors, in terms of selecting the location, to be important.

**Figure 4.1 Planning – Location Factors – importance Index**

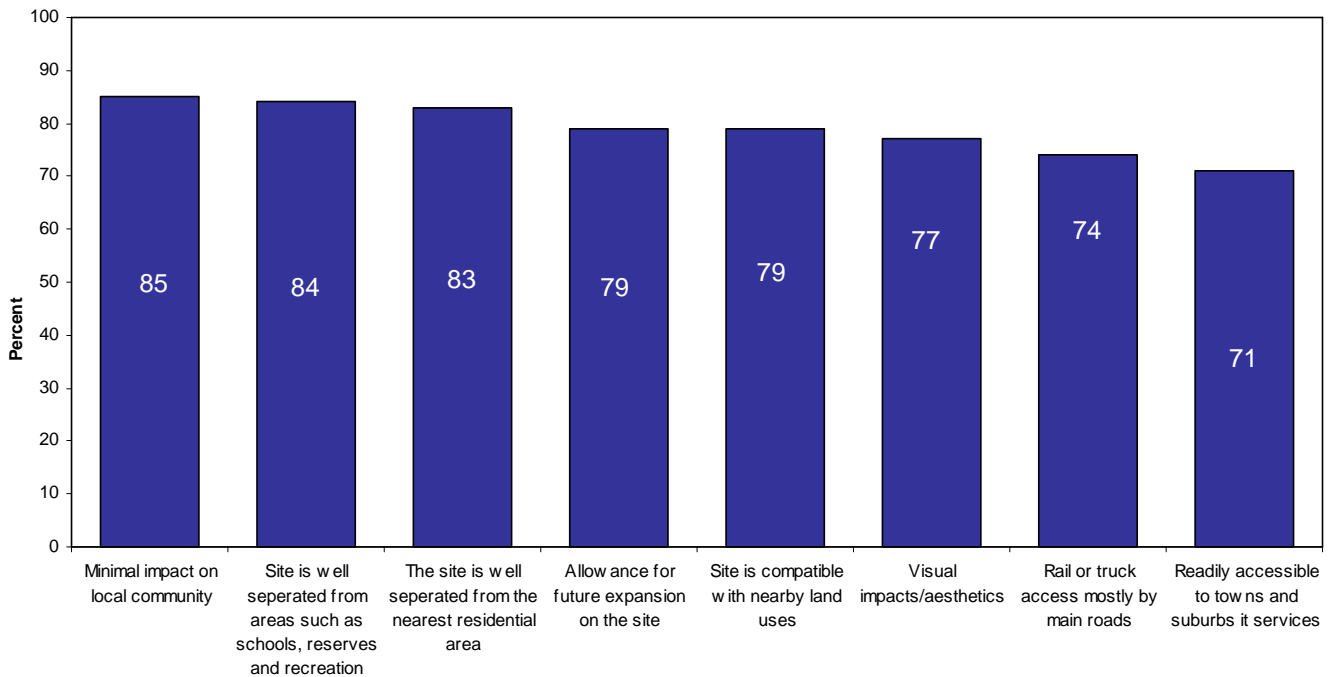
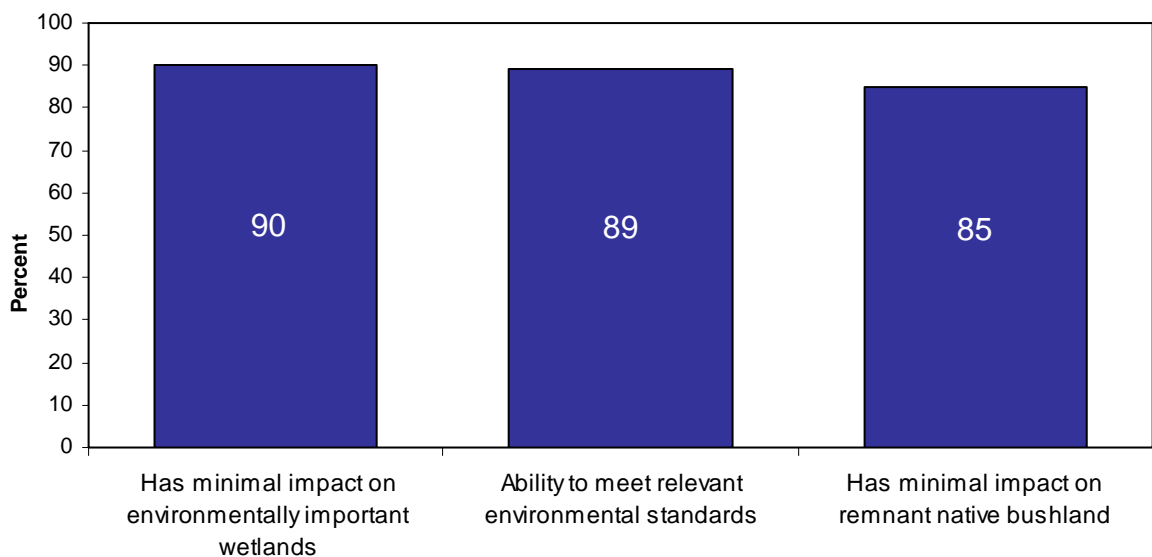


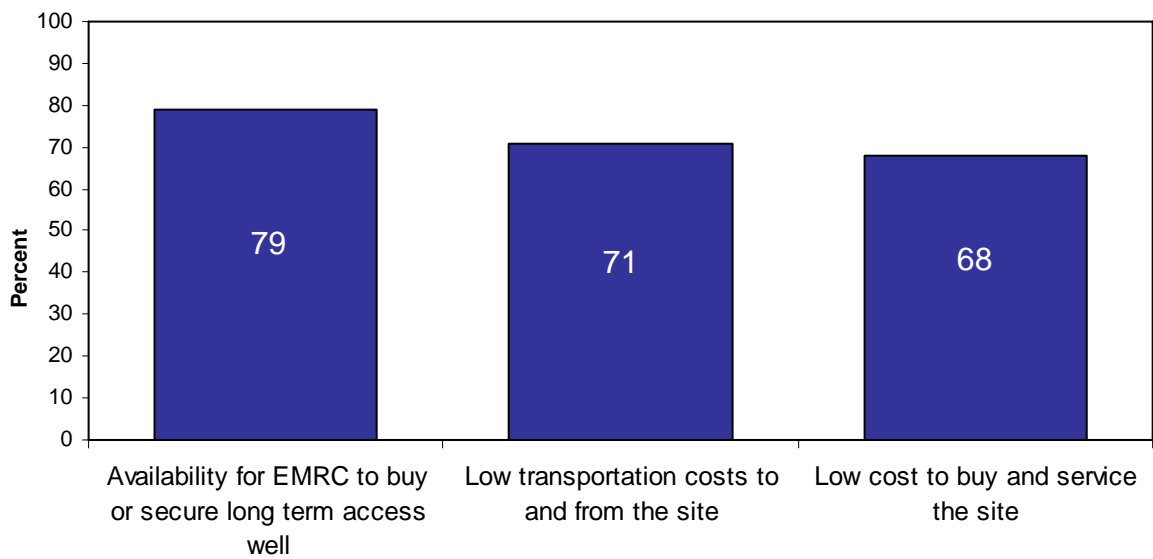
Figure 4.2 provides an overview of the importance ranking for the three environmental location factors. As shown there was an index of 90% in terms of the importance of the location *having minimal impact on environmental important wetlands*. However, almost the same index (89%) was recorded for the importance of *ability to meet relevant environmental standards*. Finally there was a high index of 85% for *has minimal impact on the remnant native bushland*. Therefore over eight out of ten respondents consider environmental factors to be of importance when considering the location for the facility.

**Figure 4.2 Environmental – Location Factors - importance Index**



As summarised in Figure 4.3 the availability for the EMRC to *buy or secure a long term access well into the future* was the most important economic consideration for the location of the facility. As shown in Figure 4.3 the index was 79% for this attribute. However, around seven out of ten respondents considered *low cost to buy and service the site* (68%) and *low transportation costs to and from the site* (71%) to be of importance in terms of the economic considerations for the location of the site.

**Figure 4.3 Economic – Location Factors - importance Index**

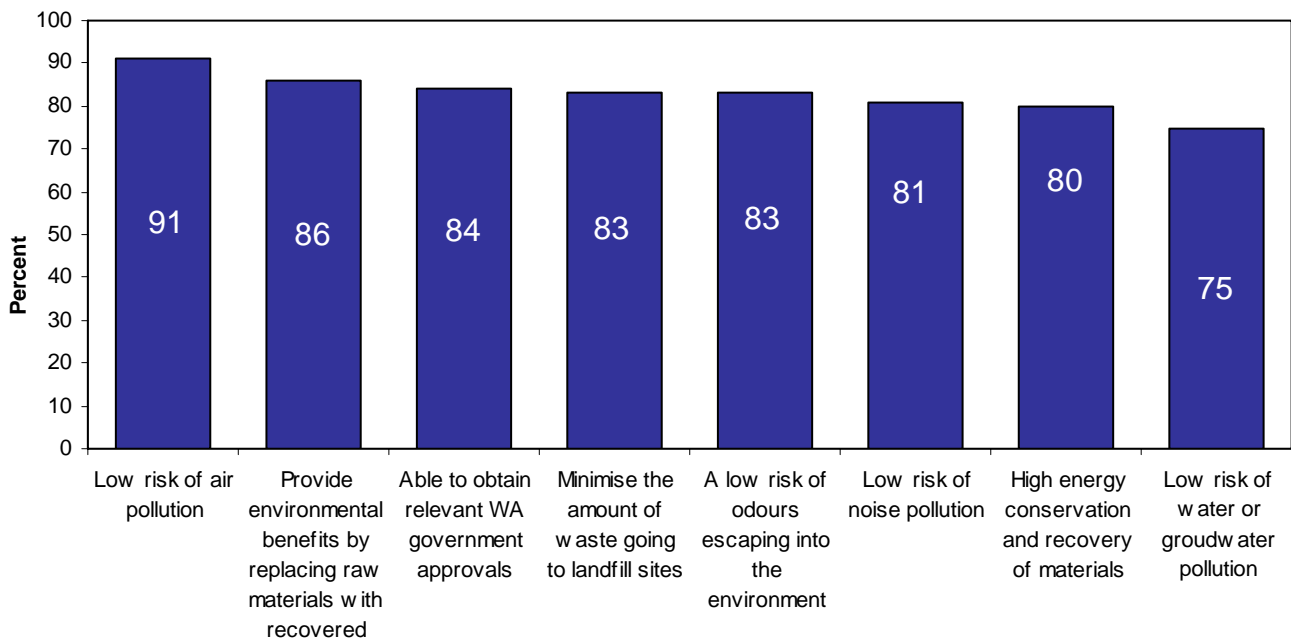


## 4.2 PERCEPTION OF THE IMPORTANCE OF CONSIDERATIONS IN TERMS OF THE TECHNOLOGY TO BE USED IN THE RESOURCE RECOVERY FACILITY

Overall 257 respondents were asked to rank the importance of various technical considerations for the Resource Recovery facility. Figure 4.4 summarises the importance index in relation to environmental technical considerations. *Low risk of air pollution* was of the greatest importance with an index of 91%. The next most important environmental technical consideration was to *provide environmental benefits by replacing raw materials with recovered products or materials* which received an index of 86%. Being able to *obtain relevant WA government approvals* was the next most important attribute in terms of the environmental technical issues with an index of 84%.

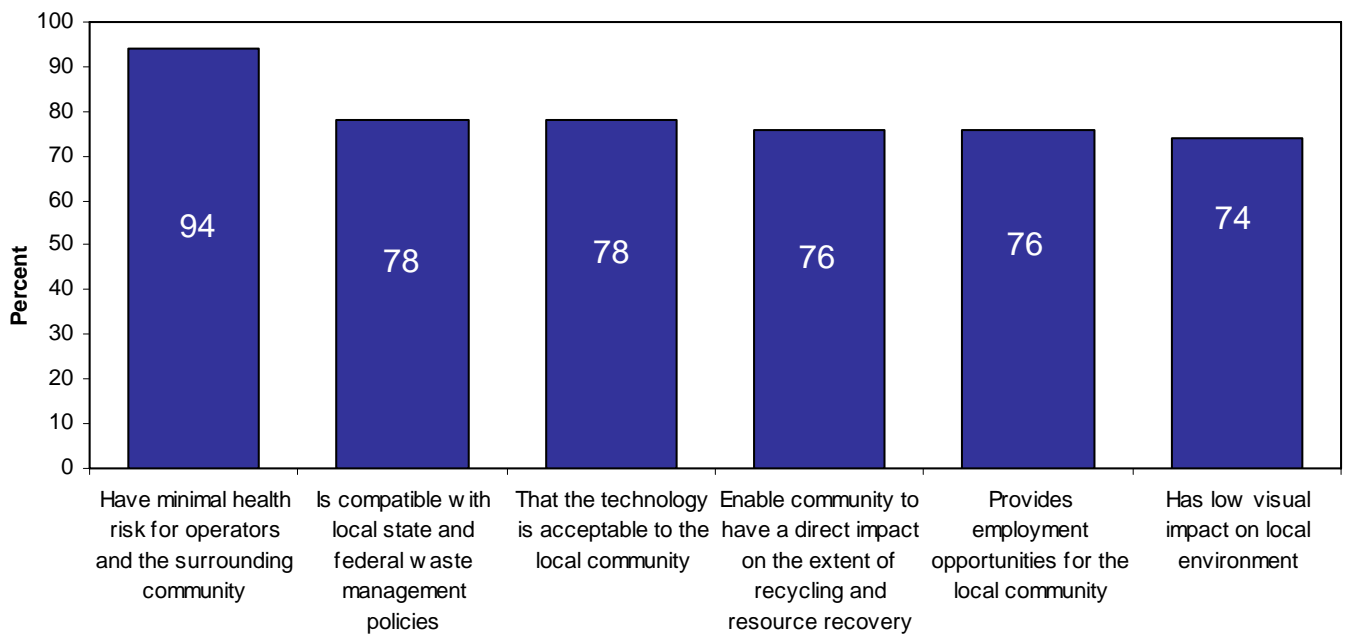
Of the least important was the *low risk of water or ground pollution* with an index of 75%. However, this is still of importance with an index of almost eight out of ten.

**Figure 4.4 Environmental – Technical Considerations – importance index**



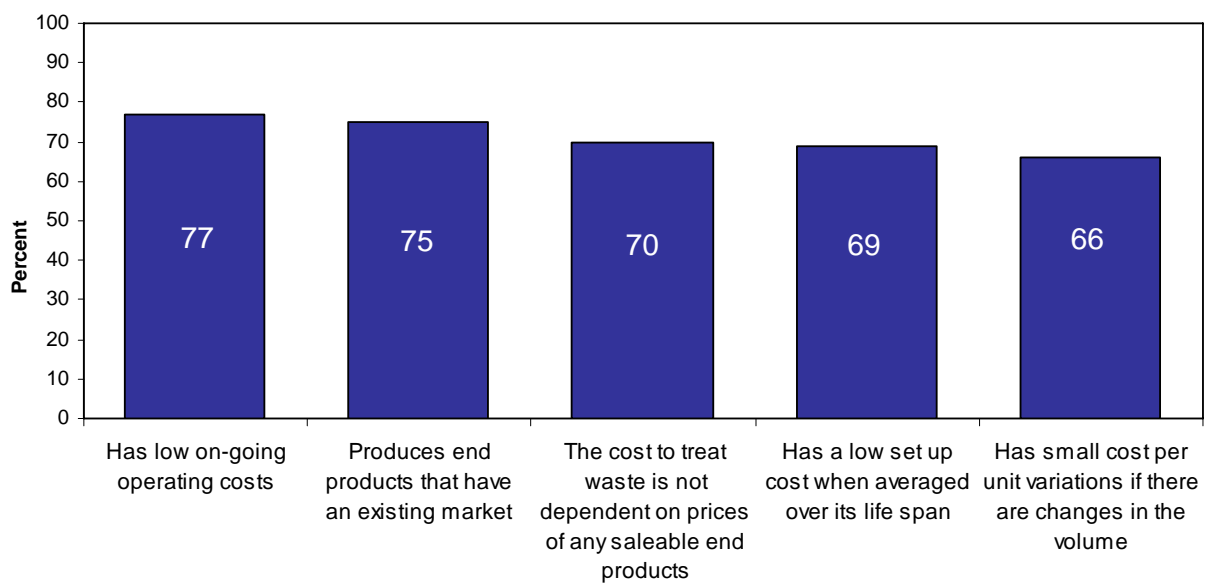
As shown in Figure 4.5 of the greatest importance of all social technical considerations was that the *technology selected should have minimal health risk for the operators and the surrounding community*. This received an index score of 94% with the next highest index score being 78% for the attributes *compatible with the local state and federal waste management policies* and that the *technology is acceptable to the local community*. Having *a low visual impact on the local environment* was the social attribute with the lowest index score at 74%.

**Figure 4.5 Social – Technical Considerations – Importance index**



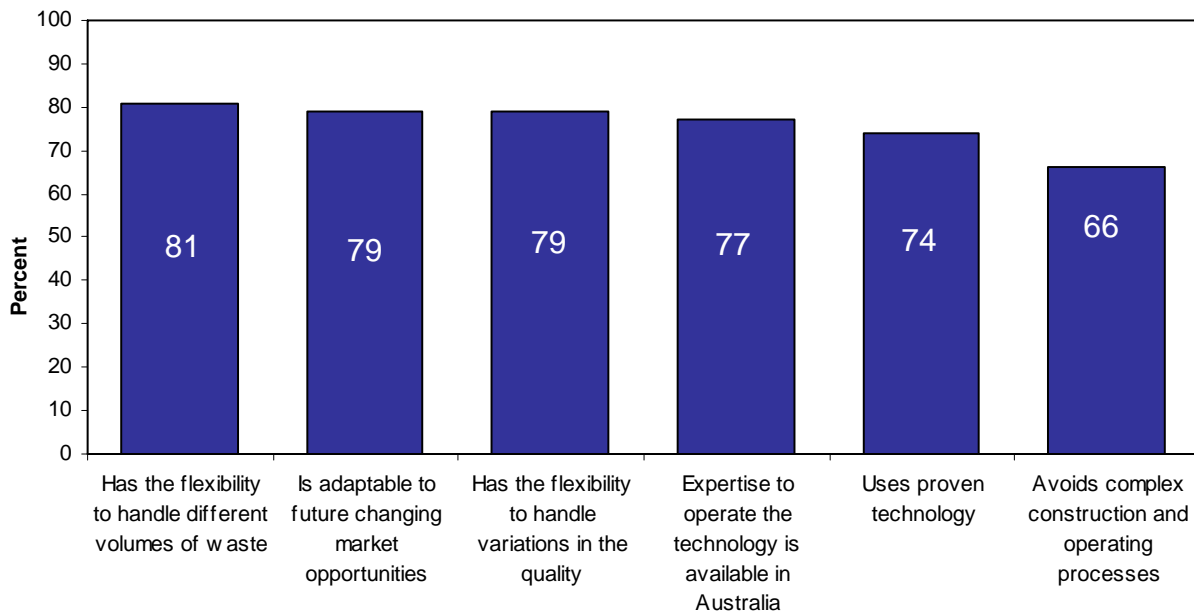
As shown in Figure 4.6 below, the highest importance index, of 77%, was recorded for the economic consideration *has low ongoing operating costs*. This is closely followed by *produces end products that have an existing market* at 75%. The two attributes; “*costs to treat waste is not dependent on prices of any saleable end products*” and “*has low set up costs when averaged over its lifespan*” - both had relatively even importance (index scores of 70% and 69% respectively). The economic consideration that it was of the least of importance, with an index of 66%, was *has small cost per unit variation if there are any changes to the volumes to be processed*.

**Figure 4.6 Economic – Technical Considerations – importance index**



As can be seen from Figure 4.7, two technological considerations were of equal importance, specifically considering that the technology is *adaptable to the future changing market opportunities* and has flexibility to *handle variations in the quality of solid waste* both recorded an index of 79%. However the most important technological attribute was that it has *flexibility to handle different volumes of waste* with an index of 81%. In contrast the technological attribute that has the lowest importance was that it *avoids complex construction and operating processes* with an index of 66%.

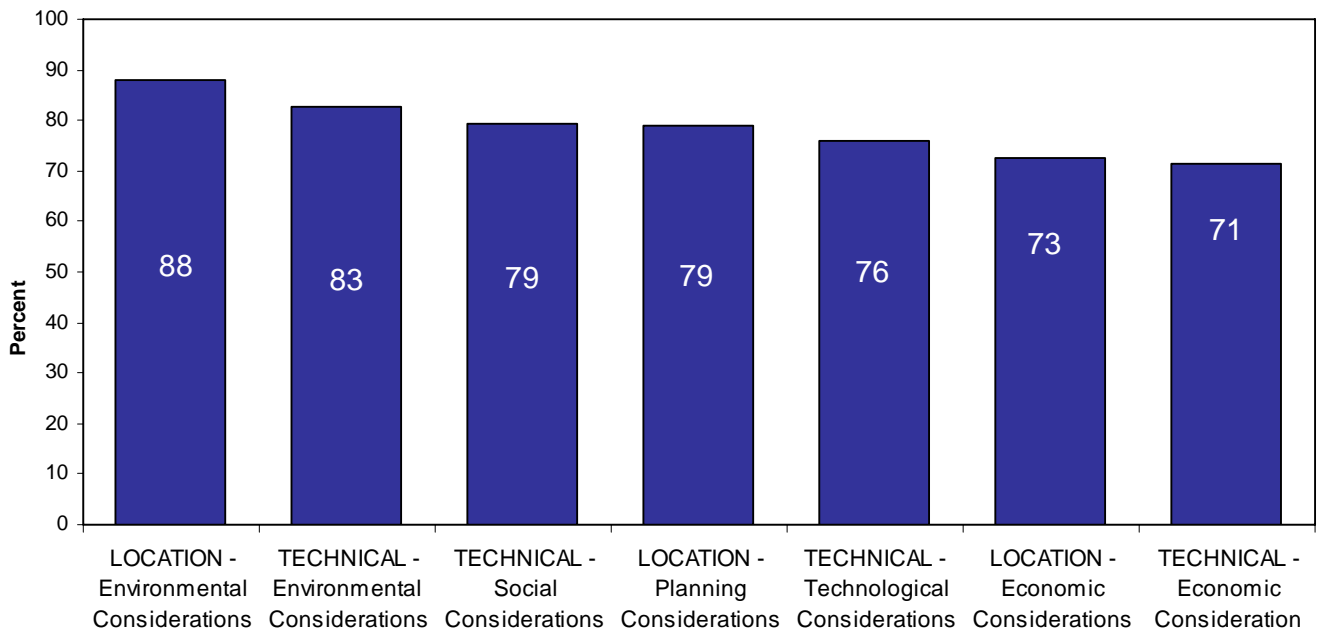
**Figure 4.7 - Technological – Technical Considerations – importance index**



### 4.3 AN OVERVIEW OF THE AREAS OF MOST IMPORTANCE WHEN PLANNING FOR THE SITE AND TECHNOLOGY OF THE FACILITY

Figure 4.8 provides an overview of the average index score for each consideration segment. That is, for all environmental considerations about the choice of location for the Resource Recovery site the average index was 88%. Interestingly, technical environmental considerations had the next highest average at 83%. This means that environmental issues are clearly of the greatest priority to residents. Social and planning considerations are of the next importance, as evident upon review of Figure 4.8 below. This is then followed by technology considerations, with economic considerations featuring as being of the least importance.

**Figure 4.8 Importance index for each Area of Consideration – Location and Technical Based**



## ***APPENDIX A - QUESTIONNAIRES***

## ***APPENDIX B – DATA ANALYSIS TABLES***