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Submission to the Waste Authority
Draft Waste Strategy for Western Australia
December 2009

Table of Contents

Background – Encycle Consulting	3
Introduction	3
1. Strategic Principles.....	6
1.1 Strategic Focus.....	6
1.2 Values	6
1.3 Baseline status	7
1.4 Methodology for Strategy Development	7
1.5 Targets and performance measurement	8
1.6 Governance	9
1.7 Reporting.....	10
2. Strategic focus areas within the Waste Strategy.....	11
2.1 Community engagement and education	11
2.2 Market Development	11
2.3 Waste Avoidance Targets	11
2.4 The Bigger Waste Picture: Resource Efficiency	12
Appendix A	14
Targets and Monitoring	14
Appendix B	17
Recycling of Construction and Demolition (C&D) waste	17



Background – Encycle Consulting

Encycle is an environmental consultancy specialising in waste and recycling, based in Perth, WA. Encycle work across both the public and private sectors in WA and nationally, providing advice on waste and recycling systems, policy, data collection and reporting, Environmental Management Systems (for ISO 14001 certification), and carbon liability for landfill owners and operators.

Encycle was formed in February 2008 by directors Jenny Campbell and Dr Anne-Marie Bremner. Jenny Campbell has excellent experience from across Australia and has worked for EcoRecycle Victoria (now Sustainability Victoria) and several environmental/waste management consultancies. Dr Anne-Marie Bremner has worked in the environmental/waste sector since 1990. Bremner worked for several years in the Policy and Evaluation Division of WRAP, guiding UK government policy development for recycling collection programmes and advising on media relations, research and evaluation of performance against targets. Both Campbell and Bremner have worked in the Waste Management Branch of the Department of Environment and Conservation and feel that they have a detailed understanding of the situation in Western Australia against a national and global policy backdrop.

Introduction

This document provides feedback from Encycle Consulting on the draft Waste Strategy for Western Australia. Section 1 discusses the broad principles for developing a meaningful strategy and suggests ways that the draft Waste Strategy could be improved upon. Section 2 provides a discussion of the key focus areas that are currently absent or under-represented in the draft Waste Strategy.

Encycle notes that specific questions are posed in relation to the draft Strategy. For the most part however, the questions miss some fundamental considerations that must be addressed before discussing the detail such as the magnitude of targets. For example, the questions relating to the size and timeframes for targets cannot be answered when there is no explanation about the current baseline, how the strategies might work to achieve these targets and what the mechanisms are for ensuring robust and accurate measurement or evaluation. Targets should be set that can be measured accurately and that are aligned to specific strategies. In addition, a commitment should be made to implement better monitoring, evaluation and information management systems with appropriately resourced staff to meet the needs of credible performance reporting.

Two appendices are attached to this document. Appendix A provides a discussion on setting and monitoring targets. The Appendix B discusses some of the findings from a series of focus group sessions on construction site recycling conducted by Encycle Consulting in October 2009 with stakeholders in the construction and recycling industries. The focus group sessions formed part of a project funded by a Strategic Waste Initiative Scheme (SWIS) grant from the Waste Authority to develop a resource kit for on-site segregation of recyclable materials from commercial construction sites.



Executive summary – Encycle Submission on the draft Waste Strategy for WA

Encycle considers the current draft Waste Strategy to be a useful starting point. Encycle agrees that the development of targets relating to the achievement of the strategic goals of the Waste Authority will provide much needed focus for the sector. Regular reporting of performance against the targets is critical and should be of sufficient detail and accuracy to be credible. Unfortunately, appropriate governance structures to provide accountability, responsibility, focus or sufficient power to act are not in place and this lack of governance will severely impact upon the likelihood of success for any statutory body such as the Waste Authority¹.

As it currently stands, the draft Waste Strategy currently reflects the mood of the Waste Authority with a strong focus upon the local government perspective and with many of the strategies focussing upon continuation of the current situation. The Waste Authority has an opportunity to move the discussions of waste into a new era and to raise the political awareness of the important environmental issues surrounding waste. Concepts such as sustainable production and conception, resource efficiency and energy savings leading to climate change benefits are currently missing from the draft Waste Strategy.

The main focus areas that appear to be missing from the draft Waste Strategy include:

- A strategic engagement and education plan for all waste generators
- A commitment to develop a sound understanding of the full, current situation in WA with respect to waste and to build upon this with clear strategies
- The setting of targets that align closely to the strategies for the Waste Authority and can be used to demonstrate performance, identify areas where the strategies are not working and develop future business planning with an emphasis upon continuous improvement
- Engagement with the commercial and industrial waste industry and generators
- Coordinated actions that will support the development of the construction and demolition waste recycling industries
- Consideration of waste as not simply landfill feedstock but as an embodiment of wasted energy and resources that will be needed to create new products and defining the link between waste and climate change including landfill gas and embodied energy considerations

The Waste Strategy would be made significantly more meaningful if good governance structures are applied to the Waste Authority. Clear governance principles will provide stakeholders with clarity about the responsibility for the Waste Strategy and Waste Authority's extent of remit, accountability and focus. The current situation is one of uncertainty and lack of transparency. Western Australia has many fantastic opportunities for improving upon the current waste and recycling situation. The opportunities for waste must be identified, targeted and progress reported. By applying sound governance principles, the Waste Authority will have the power to realise the opportunities available.

¹ Commonwealth of Australia (2003). *Review of the corporate governance of statutory authorities and office holders*



The Encycle Consulting recommendations for the Waste Strategy for WA are listed here:

Strategy area	Recommendation
1 'Aim'	Consider an Aim for the Waste Strategy such as: <i>"To drive Western Australia in achieving greater resource efficiency whilst minimising environmental impacts of waste"</i>
2 Values - Sustainability	The current definition of sustainability in the draft Waste Strategy makes no reference to needs of future generations. This should be updated; preferably to the widely accepted Brundtland definition.
3 Baseline status	A set of robust baseline data should be collected that accurately describes the current situation and will enable accurate performance monitoring to be undertaken. These data should be collected as part of a full monitoring and evaluation strategy
4 Methodology for strategy development	Using the baseline data available, conduct an analysis of the situation and identify where opportunities exist for either the Waste Authority to intervene to improve the situation or for impacts to be made by other stakeholders in the waste sector.
5 Methodology for strategy development	The Waste Strategy should commit to a programme of research to understand real barriers and identify priority areas for achieving best value for money outcomes that improve waste and recycling activity in WA.
6 Targets and performance measurement	Set targets that relate to areas where the relevant information is already available. Where suitably accurate data do not exist, set a goal to develop methods for accurate measurement of the target area(s).
7 Targets and performance measurement	Set strategies that directly relate to the achievement of the Waste Strategy targets.
8 Targets and performance measurement	Formulate a monitoring, evaluation and information management programme for the measurement and reporting against Waste Strategy targets and gaining a better understanding of the WA waste sector.
9 Governance	The Waste Strategy should be set within a robust governance structure so that there is clarity of roles, delivery expectations and accountability.
10 Governance	Use the implementation of the Waste Strategy as an opportunity to develop and implement processes that will protect and build the credibility of the Waste Authority and the waste management industry in WA
11 Reporting	The Waste Authority should commit to clear, regular reporting against each target to demonstrate appropriate and successful management of the money received from the landfill levy.
12 Community engagement and education	Strong commitment is given in the Waste Strategy to a WA-wide communications strategy that has consistent messaging based upon research to understand WA residents' and business' attitudes, motivations and barriers to recycling.
13 Waste Avoidance	Waste avoidance targets should be developed that relate to very specific products or sectors to enable the Waste Authority to be able to measure real outcomes with credibility
14 Resource efficiency	The principles of resource efficiency are included as a fundamental premise of the Waste Strategy; reinforcing the link between use of recycled content products as avoided energy use and carbon emissions.



1. Strategic Principles

The Waste Authority has asked 11 specific questions relating to the draft Waste Strategy, however in attempting to respond many more overarching principles relating to development of a strategy are raised.

This submission will attempt to answer the questions so far as possible. However, in attempting to answer the 11 Draft Waste Strategy questions well, many more questions are raised. The concepts that require consideration before answers for the 11 Draft Waste Strategy questions are possible include:

- Aim/fundamental focus
- Operating principles/values – see section 4
- Current situation (baseline setting)
- Methods
- Targets and monitoring

1.1 Strategic Focus

The broad requirements of any management strategy are that it provides sound guidance on the direction that an organisation wishes to move in and the framework within which it will achieve its principal objectives.

The draft Waste Strategy sets an 'Aim' which is so vague as to offer very little guidance or focus: *The aim of the Waste Strategy is to drive a decade of significant improvement in the management of waste in Western Australia.*

Recommendation 1: Consider an Aim for the strategy such as: *“To drive Western Australia in achieving greater resource efficiency whilst minimising environmental impacts of waste”*

1.2 Values

The Draft Waste Strategy sets out Values that define the Waste Strategy which are generally useful and appropriate. However, the definition of 'sustainability' is very poor (wrong). The generally accepted definition of sustainability comes from the Brundtland Report (1987)²:

“Meeting the needs of the present generation without compromising the ability of future generations to meet their needs”

Recommendation 2: The current definition of sustainability in the Draft Strategy makes no reference to needs of future generations. This should be updated; preferably to the widely accepted Brundtland definition.

² Brundtland, G.H. (1987) Report of the World Commission on Environment and Development: *Our Common Future*



1.3 Baseline status

The draft Waste Strategy does provide a short background section which is useful. However, we cannot set targets when we have little idea what the current baseline is (indeed – we may be already achieving some of the suggested targets, but for the most part we just don't know), what the major factors controlling that parameter are (do we have any control over this situation?) and little to no strategies that are likely to change this situation (the strategies provided don't appear to tackle the targets in any logical way).

Good data that allow measurement of targets in a credible way are urgently needed. Current estimates of many parameters are not of a sufficiently high standard to allow measurement of improvement. For instance, the total waste sent to landfill in WA is only estimated (for outside metropolitan Perth). Any change in total waste to landfill as a result of this Waste Strategy is likely to be unmeasurable as it would be lost in the 'noise' of the error margins of the figures.

Recommendation 3: A set of robust baseline data should be collected that accurately describes the current situation and will enable accurate performance monitoring to be undertaken. These data should be collected as part of a full monitoring and evaluation strategy (discussed later).

1.4 Methodology for Strategy Development

At the moment, the strategies set out in the draft Waste Strategy document do not appear to follow a coherent focus but are pulled out based upon 'gut feel'. While gut feel can often be a power force, even a small amount of work to identify the gaps and barriers in the work that is currently happening would help to demonstrate where we need to be applying more pressure/assistance.

The draft Waste Strategy does not mention the need for research into the barriers to increased recycling in WA or the identification of the most suitable methods for overcoming these barriers. The Waste Authority is in an excellent position to commission research and to establish itself as the ultimate holder of intelligence about the waste and recycling sector in WA.

Even a broad analysis of the current situation will show that very little work is carried out in either the commercial and industrial (C&I) or the construction and demolition (C&D) sectors, both of which produce significant quantities of recyclable material that is currently being sent to landfill. A gap analysis will identify the opportunities for improvement and also assist with the prioritisation of the needs of the waste sector in WA and allow 'quick wins' to be established for immediate action.

Recommendation 4: Using the baseline data available, conduct an analysis of the situation and identify where opportunities exist for either the Waste Authority to intervene to improve the situation or for impacts to be made by other stakeholders in the waste sector.

Recommendation 5: The Strategy should commit to a programme of research to understand real barriers and identify priority areas for achieving best value for money outcomes that improve waste and recycling activity in WA.



1.5 Targets and performance measurement

The draft Waste Strategy document asks about which data need collecting. This is really not tackling the problem. The problem is that there are not sufficient staff with responsibility for collecting and managing data or for taking responsibility for the numbers that are published by the Waste Authority. Not controlling published figures is a massive area of reputational risk.

The Waste Authority has released a draft Waste Strategy with a request to comment upon the magnitude of targets but without providing accurate figures for the current baseline³.

Section 8 of the draft Waste Strategy has recognised the need for an upgraded data management system. The Waste Authority might well be nervous about being set spurious targets when there is currently very little information about the current situation or understanding of the ways that any target might be realistically achieved. Encycle fully supports the need for greater credibility and the move towards more stringent measures for data management by the Authority.

One key way to engage stakeholders is to report regularly on recent performance and upon the impact their efforts are having.

It is one thing to collect data but another altogether to make these numbers form part of a monitoring plan that will describe how well performance targets are being met or where problems with implementation of projects and programmes might lie. A process of collecting verifiable, accurate data and analysing the information so that evaluation is possible is needed.

Monitoring the relevant indicators and evaluating the performance of initiatives and programmes is a critical part of good management. The rationale for monitoring and evaluation is probably summarised best by this quote from the World Bank:

“Monitoring and evaluation of activities provides government officials, managers and civil society with better means for learning from past experience, improving service delivery, planning and allocating resources and demonstrating results as part of accountability to key stakeholders”⁴.

Further discussion about target-setting and measurement is provided in Appendix A.

Recommendation 6: Set targets that relate to areas where the relevant information is already available. Where suitably accurate data do not exist, set a goal to develop methods for accurate measurement of this figure.

Recommendation 7: Set strategies that directly relate to the achievement of the Strategy targets.

Recommendation 8: Formulate a monitoring, evaluation and information management programme for the measurement and reporting against Waste Strategy targets and gaining a better understanding of the WA waste sector.

³ Some of the figures provided are contradictory to other publications and even contradictory within the same document – contrast the recycling rates given on pages 7 and 13 in the Draft Waste Strategy.

⁴ World Bank, 2004. Monitoring and Evaluation: Some Tools, Methods and Approaches



1.6 Governance

There is an assumption throughout the draft Waste Strategy that it will be implemented through the development of programmes and activities although it is not clear who will take responsibility for delivering these initiatives. There is an assumption that the long-term success of the Waste Authority will be ensured through the direction and organisation of the Authority members. However, the definitions of purpose, ownership and extent of power to act are absent both from this Waste Strategy and from any terms of reference for the Waste Authority.

It is not clear whether the Waste Authority have staff of their own to deliver this Waste Strategy or if the confusing and ineffective situation with Department of Environment and Conservation (DEC) will prevail. Since this is the Waste Authority's draft Waste Strategy it would seem that they should take responsibility for delivery against the strategy. Without accountability for delivery, the Waste Strategy is meaningless and no-one will be able to act as a 'champion' to drive the State towards the ultimate Aim. The Waste Strategy provides a commitment from the Waste Authority to report annually but does not specify reporting against the targets and overall performance of waste management in the State, or a requirement to demonstrate how the Waste Strategy targets are being met. This is an oversight as this evidence can be used to prove that the Authority should receive continued (and even increased) funding from the landfill levy revenue.

Some of the strategies discussed in the draft Waste Strategy relate to areas that are currently the responsibility of the DEC. DEC will require support from the Waste Authority to develop resources that will assist in successful delivery of the Waste Strategy, such as sufficient staff to police illegal dumping and licence compliance at landfill sites. It is not clear how the Waste Authority can or will support the DEC in fulfilment of these roles.

Governance and credibility

Think of an organisation that you hold up to be reliable, responsible, credible and trustworthy. This may well be an independent body such as the Australian Securities Exchange or the Australian Bureau of Statistics, financial institutions or a financial audit company. Now think of an organisation that you consider to be untrustworthy and lacking in credibility; possibly a campaign group or maybe even a newspaper. The primary difference between reputable and disreputable organisations is the way they manage information. Successful and credible organisations would find it unthinkable not to have access to accurate information on each of the parameters against which their success or failure will be measured. It is an old adage but 'you can't manage what you don't measure' applies to every successful organisation.

Any organisation which is entrusted with management of large sums of money will take reputational risk very seriously.

There are a few fundamental concerns with the targets for waste avoidance and resource recovery in the draft Waste Strategy:

- Only one of the targets for avoidance or recovery (target 2) is currently measured by the staff at DEC providing support to the Waste Authority
- The information for some of these targets is available but there is no capacity within current staff to collect, monitor or report this information



- Few of the targets provide baseline data, or are totally clear about what is actually being evaluated
- None of the baseline numbers provided are referenced and therefore raise questions about their reliability (the figure of 45% municipal recycling for Perth is significantly higher than any previously published data)

Recommendation 9: The Waste Strategy should be set against a robust governance structure for the Waste Authority so that there is clarity of roles, delivery expectations and accountability.

Recommendation 10: Use the implementation of the Waste Strategy as an opportunity to develop and implement processes that will protect and build the credibility of the Waste Authority and the waste management industry in WA.

1.7 Reporting

The setting of targets requires not only monitoring and evaluation of performance against these targets but also the reporting on a regular basis of the actions undertaken by the Waste Authority and the outcomes of these actions. Regular reporting of the level of achievement against targets is the only means for the Waste Authority to justify receipt of a greater proportion of the landfill levy funds such that this critical work can not only be continued but can be justified to government.

Recommendation 11: The Waste Authority should commit to clear, regular reporting against each target to demonstrate appropriate and successful management of the money received from the landfill levy.



2. Strategic focus areas within the Waste Strategy

2.1 Community engagement and education

The draft Waste Strategy does not currently provide much detail about a community engagement strategy. Systems and processes are only as good as the people that use them. Achievement of the objectives of the Waste Strategy will be impossible unless the waste generators (both residential and commercial) are engaged, aware and participate in the waste and recycling systems.

Communication will need to be considered for every waste and recycling activity and programme that is undertaken by the Waste Authority or their relevant agents. Effective community engagement and education programmes will need to use clear, consistent messages and be targeted to the relevant sectors of the community.

Many local governments in WA have well-developed waste education programmes in place. Communication will be most effective if the messages and techniques build upon and reinforce a standard approach.

Recommendation 12: Strong commitment is given in the Waste Strategy to a WA-wide communications strategy that has consistent messaging based upon research to understand WA residents' and business' attitudes, motivations and barriers to recycling.

2.2 Market Development

The draft Waste Strategy has described strategies to develop markets for recycled content products. Encycle supports these strategies and the spirit of the Authority in engaging in market development for recycled materials. Without markets (particularly local, reliable markets) for recycled materials, the desire to recycle can be futile. Developing stable markets for recycled content products is the single most effective way to encourage recycling. Research, market development and the funding of case study projects should remain in the Waste Strategy for WA and should be fully pursued by the Authority and DEC.

2.3 Waste Avoidance Targets

Waste avoidance is the ideal scenario that sits at the top of the waste hierarchy. Avoidance is probably the hardest area to tackle since it relates to choices that people make at the point of purchase; a time when the waste sector has very little influence upon behaviour.

Millions of tonnes of waste are generated in WA. The suggested strategies for waste avoidance in the draft Waste Strategy have the potential to avoid only a fraction of a percent of the total material generated. Measuring the quantity of waste avoided by looking at total waste generation is impossible; the change would be so small that it would be lost in the error bars around the data. Any "achievement" measured in this way would be very likely to be actually either a change in the way that data is collected or to the operation of external forces (e.g. a drop in GDP).

Targets for waste avoidance would be more meaningful if they were very specific to certain products or sectors. Research into the opportunities within waste generating sectors in WA should be used to identify the 'quick wins'. Waste avoidance is most likely to be achieved by



engaging with waste generators in certain sectors directly and developing a public commitment from the stakeholders within that sector. Working directly with waste generators is a way of ensuring that waste avoidance is delivered and can be measured using data from those generators.

Recommendation 13: Waste avoidance targets should be developed that relate to very specific products or sectors to enable the Waste Authority to be able to measure real outcomes with credibility.

2.4 The Bigger Waste Picture: Resource Efficiency

Improving waste management has a broad spectrum of environmental, social and economic benefits to WA. The draft Waste Strategy could be an opportunity to set out the ways in which the Waste Authority might measure and communicate the wider impacts of waste upon the environment and upon the lives and well-being of West Australians.

Reducing waste provides a variety of environmental outcomes:

- Conservation of natural resources
- Reduced need for water
- Lower energy consumption
- Reduced generation of greenhouse gases
- Protection of habitats
- Improved soil health

Recycling is generally held to have other sustainability benefits relating to creation of jobs and contribution to the economy.

The United Nations Environment Programme (UNEP) has undertaken significant research and works hard to promote resource efficiency and the concept of sustainable production and consumption⁵. Resource efficiency is about conserving material resources but also about consideration of life cycle impacts of a product or activity.

Strategies and business plan for many other Australian States and other countries draw the link between recycling and climate change (Sustainability Victoria Business Plan 2009-10, NSW WARR Strategy Overview 2007, Zero Waste South Australia Waste Strategy 2008, US EPA 'WARM' Waste Reduction Model, WRAP, UK Business Plan 2008 – 11).

The NSW Department of Environment and Climate Change (DECC) has estimated that a *typical* recycling household saves 928 kilo-Watt hours (kWh) of electricity per year (equivalent to 15% of a typical household's total electricity consumption for a whole year, high recycling households can 'save' the equivalent of a third of their total electricity consumption)⁶. The United States EPA has some excellent materials about the relationship between waste and climate change:

<http://epa.gov/climatechange/wycd/waste/factsheets.html>).

Climate change is a politically salient issue and 'carbon' savings are becoming a major metric for use in environmental policy development. Aligning recycling with the powerful

⁵ www.unep.org/resourceefficiency/

⁶ NSW Waste Avoidance and Resource Recovery Strategy (2007)



climate change messages and with the messages about resource depletion will improve the profile of waste, increasing public and political will to act on this serious environmental issue. Resource efficiency is about sustainable production and consumption and the consideration of whole of life cycle impacts. Mainstream corporations such as Telstra are starting to discuss waste as part of resource efficiency⁷.

A strategy that does not attempt to acknowledge the broader impacts of waste beyond the filling of holes in the ground will miss the opportunity to demonstrate leadership and intellectual rigor of approach. Other parts of the world are firmly establishing the link between 'waste' and wasted resources and energy and are moving language away from the terminology of waste towards concepts of "resources" in order to subtly change attitudes and mind-sets around the concepts of "throwing things away". Western Australia may be a little way from this shift towards resources and away from waste at present but this does not mean that it should not be considered part of a 10 year strategy.

Examples of Resource Efficiency programmes to engage with industry from other Australian State Government Agencies include:

- Department of Sustainability and Environment, Victoria⁸
- Zero Waste South Australia, REAP⁹

Recommendation 14: The principles of resource efficiency are included as a fundamental premise of the Waste Strategy; reinforcing the link between use of recycled content products as avoided energy use and carbon emissions.

⁷ www.telstra.com.au/abouttelstra/csr/environment/resource_efficiency.cfm

⁸ www.dse.vic.gov.au/DSE/nrence.nsf/childdocs/-51B7A26E5FB2257B4A2567CB000310AF-29FF8F075525BD08CA2571F0000156B6?open

⁹ <http://www.zerowaste.sa.gov.au/About.mvc/REAPGrants>



Appendix A

Targets and Monitoring

Target-setting and measurement requires a well-supported, appropriately staffed and resourced monitoring and evaluation programme. DEC need to be adequately resourced to manage all relevant data to measuring performance against the Waste Strategy targets and understand how data should be applied and be able to assist with maintaining a reputation as being 'the authority' on matters relating to waste and recycling in Western Australia. Currently, media releases from The Waste Authority are not well managed and are sent out containing mistakes that undermine their credibility.

Without good monitoring systems, The Waste Authority cannot assess the effectiveness of its programmes and activities. Good monitoring and evaluation systems inform organisations about how well operations and programmes are working or not working and identify where the opportunities for improvement might lie. The results from monitoring can also provide an alert for when systems are not working.

Publishing inaccurate figures or figures that are contradictory of other publications will detract from the credibility and influence of the Waste Authority. Setting up a data management team of staff who can control the correct use of data and limit the reputational risk is essential.

Evaluation reports can be reviewed and the information used to feed into continuous improvement processes. The draft Waste Strategy mentions continuous improvement as a basic principle, this is an excellent premise for a successful strategy.

In general terms, the approach to monitoring and evaluation is to answer some basic questions about a project or programme:

- Did the project achieve what it was designed for?
- Did the approach work?
- Why or why not?
- What should we maintain or do differently next time?

In order to answer these questions, monitoring and evaluation will need to be designed so that appropriate '*performance indicators*' are measured and this information is reviewed and considered carefully to feed back into the improvement of the process and the accurate reporting of outcomes.

When designing the monitoring and evaluation of a programme or project it is important to identify:

- The current baseline
- Whether goals and objectives are clear, well-defined and measurable
- How can we make the monitoring an integral part of the project design so that the cycle of "planning, acting and reviewing" is considered part of the project?



- What are the short term checks and processes for detection and correction of problems during project implementation (not only after project completion)?
- Are we measuring outputs (level of activity) or outcomes (results of that activity)? (Outcomes are harder to record accurately as they are longer-term, but are generally more meaningful).
- Could the data or information gathered be useful for other programmes or other work within WA State Government? (e.g. should we be working with the Australian Bureau of Statistics?)

Key Performance Indicators (KPI) are the measurable variables that are monitored towards the achievement of a target or objective. For instance:

One target in the draft Waste Strategy is: *"In non metropolitan regional centres with a population greater than 25,000 at least a 45% recovery rate for municipal waste by 2015"*

The KPI for this target is recycling rates for regional centres with a population of over 25,000, for each year. The recycling rate should be clearly defined as "the weight of material from households in those centres of WA that is being recycled as a percentage of total waste generated from the same households, [collected in the kerbside system]"

The setting of targets and the identification of key performance indicators for WA needs to be in alignment with relevant policies and strategies for WA and for Australia. Currently, the strategies suggested in the draft Waste Strategy do not appear to be tailored to deliver against the targets. Making a commitment to publish a report of all performance against the Principle Objectives is a good way to focus monitoring and evaluation efforts and ensures that accountability for targets is maintained.

Having set targets and key performance indicators, the Waste Authority will be in a position to determine which data need to be collected, in what format and how regularly (monitoring). By using the data collected from the monitoring programme, the Waste Authority will be able to evaluate whether the required performance has been achieved.

Defining Targets

Targets need to be very clearly defined. For example, when setting a target for recycling rates:

"Recycling rates from household kerbside collections in Western Australia will be 50% by 2018/19"

There needs to be a specific timeframe – either a definitive amount to be achieved by a certain date or an improvement by a future date on current levels in which case this too needs to be clear:

e.g. *"halving waste to landfill by 2020"* does not explain 'half' of what or where...

...a more useful target might be:

"total waste to landfill in all Western Australia in 2020 will be 50% of 1990 levels"



In the same way, the target needs to clearly define exactly which waste we are talking about. Does the proposed target relate to and include: kerbside collection, vergeside collection, both of these, drop off at transfer stations etc.

In order to define a target clearly, it helps to consider how it might be measured. Once the exact data that will need to be collected is clarified and found to be possible then the target is defined more clearly.

For the example of *"In non metropolitan regional centres with a population greater than 25,000 (see Box 4) at least a 45% recovery rate for municipal waste by 2015"* reliable data about the amount of recycling (by weight) collected from household kerbside recycling collections for those centres and the amount of general waste (by weight) collected from households in these regional centres is needed. At the present time, reliable data about the tonnes of recyclables collected from these households is not collected or analysed, although it should be available.

Consideration of target relevance:

KPIs for a target might be skewed or 'falsely' affected by another external factor. For example, construction waste generation is related to number of projects carried out and the size of the projects. A target to reduce C&D waste to landfill might be achieved simply because not many projects occurred (or missed because so many occurred). If a 'skewing' of the results is likely, then it is useful to 'standardise' the figures, or link the KPI to a factor that will negate this effect. For the example of construction and maintenance waste, this factor might be 'number of staff hours spent on construction projects'. In this way the KPI for the target could be 'tonnes of waste generated per staff-hour spent on projects', so that the measure of actual waste diversion is more meaningful.

A good reason to consider the relevance of a target is that it protects the organisation from missing targets for reasons beyond its control, such as a change in the market. Standardising the KPI does not mean that targets and their relevance to the achievement of the principal objectives should not be reviewed, but it does assist in the short term delivery of targets.



Appendix B

Recycling of Construction and Demolition (C&D) waste

In October 2009 Encycle conducted a series of focus group working lunches with stakeholders in the construction and C&D recycling industries. The working lunches were part of a project that was part-funded by a Strategic Waste Initiative Scheme (SWIS) grant from the Waste Authority to develop a resource kit for on-site segregation of recyclable materials from commercial construction sites. Focus group sessions were attended by: recyclers, skip operators, construction managers, site supervisors, developers and environmental consultants (for green building projects).

The table below shows the quantity of waste generated in jurisdictions in Australia and the proportion of this material that is recycled. WA is significantly behind other states. This situation demonstrated to Encycle that there is significant opportunity for the construction industry to recycle more of the waste that is currently being sent to landfill (about 58% of landfilled waste in WA is from the C&D sector¹⁰).

Waste generated by sector and % C&D recycled 2002-03¹¹

State/Territory	C&D generated (megatonnes)	% C&D Recycled
NSW	4.65	71%
Vic	3.58	54%
Qld	1.12	42%
WA	1.20	21%
SA	2.16	67%
ACT	0.25	90%
Total	13.7	

Findings from the C&D recycling working lunches

There are distinct gaps in knowledge about construction waste recycling. These mainly relate to:

- Why recycle? Even the environmental consultants were shocked to discover the quantity of C&D waste going to landfill and the poor performance of WA compared to other states. There is an opportunity here to educate and engage the construction industry about their environmental impact.
- The cost of recycling. General consensus is that it costs more to recycle

¹⁰ Cardno (2008) *Assessment of waste disposal and material recovery infrastructure for Perth towards 2020* for the WA Waste Authority

¹¹ Hyder Consulting (2006) *Waste and Recycling in Australia*,



- It's too hard to organise separate bins on site (lack of space, difficulties of communication etc.). However, other states have overcome site space and communication issues very effectively.
- Is it even possible to recycle in WA? Many construction companies thought that there was little or no recycling infrastructure for C&D waste in the state
- Site workers don't care and will use any bin. Attendees who had worked on sites where on-site segregation was well-communicated described cases where site workers were enthusiastic about recycling and were even proud of their company's environmental commitment.

The findings above are presented to demonstrate the way that even a small research project to look at a situation in WA can uncover an opportunity for the Waste Authority to deliver high profile environmental outcomes and significant tonnage diversion of waste to landfill though addressing simple barriers which relate to common perceptions and myths.

