New South Wales
TREASURY

EASTERN CREEK ALTERNATIVE WASTE TREATMENT FACILITY PROJECT: POST-IMPLEMENTATION REVIEW

Office of Financial Management

Research & Information Paper

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PREFACE

This NSW Treasury Research & Information Paper – *Eastern Creek Alternative Waste Treatment Facility Project Post Implementation Review* - is the outcome of a Review conducted under the *Working with Government: Guidelines for Privately Financed Projects* (November 2001).

Under the Guidelines, Post Implementation Reviews of Privately Financed Projects (PFPs) should be initiated approximately 12 months after the infrastructure commences operations. The Eastern Creek Facility began operating in September 2004 and this Post Implementation Review commenced February 2005.

The purpose of the Review was to assess the processes associated with how the project met the Guidelines, the performance of the facility, and stakeholder feedback.

The lessons learnt from this Review will assist with:

- Delivery of future projects,
- Refining existing Guidelines, and
- Development of new policy.

The participation in this Review of all agencies and private sector bodies was beneficial and greatly appreciated.

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EXECUTIVE SUMMARY

THE PROJECT

The Eastern Creek Alternative Waste Treatment Facility (the Facility) is Sydney's first alternative waste technology facility for household waste. Features of the Facility include:

- Capacity to process the equivalent of up to 175,000 tonnes of household waste per year - diverting from landfill up to 11 per cent of Sydney's total putrescible waste (ie, waste that readily decomposes, such as food scraps);
- Mechanical and manual sorting of the recyclable materials (in addition to those recovered in kerbside recycling) that go into landfill, recovering for recycling up to 17,000 tonnes of plastic, glass, paper and metals each year;
- Biological treatment of organic material that would otherwise go into landfill to produce both compost and biogas for the production of electricity, generating up to 17,000 megawatt hours of electricity to be used to power the Facility.

The Facility aims to divert up to 80 per cent of waste from landfill. Outputs of the process at the Facility include the production of up to 23,500 tonnes of compost annually and the generation of "green" electricity for up to 2,250 homes.

The Facility is the first of its kind in the world. The uniqueness of the project lies in the combination of waste treatment processes to produce reusable products. The project has been designed to accept unsorted household waste as input, maintain a positive energy balance, achieve a zero water footprint, and produce acceptable compost as output. Given the unique nature of this project its procurement followed an atypical and lengthy process.

ABOUT THIS REVIEW

In February 2005, NSW Treasury began its Post Implementation Review of the Eastern Creek Alternative Waste Treatment Facility project.

The purpose of the Review was to assess the processes associated with how the project met the *Working with Government Guidelines on Privately Financed Projects* (the Guidelines), the facility's performance and stakeholder feedback. The lessons learnt from this Review will assist with:

- Delivery of future projects,
- Refining existing Guidelines, and
- Development of new policy.

Cabinet endorsed the Review's terms of reference which were taken from the Guidelines (see Appendix 3) and set the Review's focus on:

- How the project met the Guidelines;
- How the Facility has performed; and
- Stakeholder feedback.

The Review looks at the process of development of the project - from inception through to the investment decision and project procurement - and compares these processes against the requirements of the Guidelines. This Review does not include a full assessment of the Facility's operations and its outcomes because the Facility had been operating for only seven months when NSW Treasury began its review. This report does, however, discuss some aspects of the Facility's performance and stakeholders' feedback to date.

The Review recommends changes to the Guidelines where such changes would have assisted this project or will improve value-for-money on future projects. Where there is no such clear benefit, the Review simply notes whether the procurement process satisfied the Guidelines. The Review also identifies areas for improvement. If these are accepted, NSW Treasury should develop a strategy to implement those recommendations and agencies, including WSN, should note the requirements for future PFP projects.

The feedback from the project team, GRL, stakeholders and the Facility users was invaluable.

FINDINGS

This Review was conducted under the *Working with Government: Guidelines for Privately Financed Projects* (the Guidelines). The Guidelines became NSW Government policy in 2001. Waste Services NSW (WSN), now called WSN Environmental Solutions, began the procurement process for this project one year before the release of the Guidelines. Hence the procurement of the Eastern Creek Alternative Waste Treatment Facility does not strictly follow the procedures prescribed by the Guidelines for privately financed projects (PFPs).

Despite this the Guidelines were used as the key reference for this Post Implementation Review because they are current best practice for agencies procuring a PFP. To ensure timely delivery of projects, the requirements in the Guidelines relating to procurement planning and the preparation of draft project agreements in particular should be followed.

A number of recent reviews and inquiries into PFPs have pointed to the need to take into consideration the public interest in developing and assessing PFPs. For example, the *Review of Future Provision of Motorways in NSW* (December 2005) found that protecting the public interest is a crucial consideration in such projects, even for amendments made after a contract is signed. Requirements of the Guidelines regarding public interest testing must be followed.

How the project met the Guidelines

This project was not a typical example of capital procurement. Firstly, procurement of the project commenced before the current Guidelines became accepted Government policy. Secondly, some unique circumstances affected the procurement process, including the necessity for WSN to compete against private-sector providers while being required to achieve legislated corporate objectives that the other providers do not have. This is further discussed in section 1. 2.

Usually the Government specifies the **asset class** it is procuring. In this instance, however, due to the unique issues associated with procuring waste projects, Government specified the **outcome** it was seeking – reduction of the amount of putrescible household waste going to landfill. Consequently, there was much wider latitude in terms of choice of design and production technology for this project than is typical of other capital projects.

Ultimately, while the Eastern Creek Alternative Waste Treatment project procurement process was not standard, it did align with public-private partnership objectives. This Post Implementation Review, however, highlights areas where amendments to the Guidelines could improve the process for future PFPs – for example, ensuring that a procurement plan is in place from the start.

In November 2000, WSN released a worldwide call for Expressions of Interest (EOI) for the provision of alternative waste technologies (AWTs). WSN received 48 responses and short-listed seven responses. Contracts for the UR-3R Facility at Eastern Creek were signed with Global Renewables Limited (GRL) in February 2003. The Facility began operating in September 2004. The procurement process - from EOI to contract signing - took over two years, which is longer than the 12 to 18 months typical of other PFPs. A procurement plan and draft project agreements could have shortened this time frame.

While Budget Committee approved WSN entering into detailed negotiations and made the final decision to execute contracts, the WSN Board undertook the approval role with respect to all other relevant stages of the procurement.

The Guidelines, however, are not clear on whether the boards of state-owned corporations (SOCs) like WSN should obtain Budget Committee approval at critical stages. The Government's procurement process would benefit from making the Guidelines clearer on the approvals process that SOCs should follow in procuring PFPs. This would also make the Guidelines consistent with the NSW Treasury Policy and Guidelines Paper *Guidelines for Assessment of Projects of State Significance* (TPP02-4), issued July 2002. The latter clearly state when boards of SOCs must obtain Budget Committee approval for major projects.

The structure of the WSN's procurement project team followed the Guidelines. However, the project would have benefited from the early advice of external financial advisers with specific experience on PFPs.

How the Facility has performed

WSN chose GRL to combine internationally proven technologies for separating, cleaning and concentrating raw materials to create an engineering process for domestic waste disposal—the UR-3R Process® (see Appendix 2). The project's interface of technologies and processes was unprecedented and presented the greatest risk. GRL accepted all this risk, which it mitigated through its parent companies - GRD Limited and GRD Minproc. These parent companies were deemed well equipped to take on this risk, as GRD Limited operates in global mineral commodities and waste disposal markets while GRD Minproc has a competitive advantage in process engineering.

The UR-3R Facility's performance has not yet met business model forecasts for the sale of recovered products because unanticipated contamination of the waste stream hindered the Facility's production of organic material. The recovered organic material, however, is now certified as compost, meeting Australian Standard 4454-2003: *Composts, soil conditioners and mulches*. Recovery levels for all plastic, paper, aluminium and ferrous materials are slightly less than forecast, although GRL is finding markets for these.

The Facility was designed to have a zero water footprint[1] on average over the long term, and it has both drawn on and exported to the electricity grid. The Facility is producing energy from biogas at 70 per cent of forecast electricity supply levels, which is offset by it consuming less electricity than forecast.

The NSW Government, through the Department of Environment and Conservation (DEC), is aiming to put into place policies to separate organic material from the general waste stream. GRL has expressed concern about how this will affect both the economics and operation of the Facility and alternative waste technology. NSW Treasury plays an important role in helping Government to fully understand the economic costs and benefits of its decisions to amend policy or legislation. Government decision-making should not be constrained by its existing contracts and NSW Treasury should continue to provide this important service.

Stakeholder feedback

The Fairfield City Council was the foundation council customer for the UR-3R Facility. Since February 2005 Council has supplied the Facility with about 220 tonnes of waste a day. Council is satisfied with the dry recycling and the quality of the standard compost product recovered from the waste stream, and anticipates a range of long-term benefits during its 20-year contract term with the Facility

The Commonwealth Bank of Australia (CBA) considers the project a success because CBA actively collaborated with GRL in negotiating the contractual terms with WSN and subsequently with NSW Treasury. CBA described the tender process as frustrating and 'non linear' with numerous hurdles and stop-start progress. CBA saw WSN as a state-owned corporation and standing apart from Government, and did not accept WSN's payment risk on this basis. Therefore CBA required and received a Treasurer's guarantee under the *Public Authorities (Financial Arrangements) Act 1987* (PAFA). The PAFA guarantee secures the performance of WSN.

CBA took an active role in the project during construction. For example, CBA reviewed the project each month, provided a site engineer and had a technical advisor who also reported on the Project for WSN. Although this is not usual bank practice and is not typically required by Government, CBA's oversight and financial commitment were essential for minimising project delivery risk.

The Department of Environment and Conservation (DEC) provides the regulatory framework for GRL and the Facility. DEC recently amended the legal definition of waste, and there is some uncertainty over the notion of 'reprocessed' waste. GRL is currently producing compost consistent with Australian Standard 4454-2003. DEC, however, has asked for the standards to be reviewed because it is concerned about potential contaminants in municipal solid waste going to land.

DEC has expressed support for a NSW Treasury sponsored review of the Facility's performance once it has reached sustainable operations at full capacity.

[1] A water footprint is defined as the total volume of fresh water that is used to produce the foods and services consumed by an individual, business or nation (depending on the unit of analysis). A water footprint is generally expressed in terms of the volume of water use per year.

AREAS FOR IMPROVEMENT

The analysis of the procurement process for the Facility against the current Guidelines identified areas where agencies, including State owned corporations (SOCs), must ensure compliance on all future PFP projects. The areas identified for improvement listed below are drawn from lessons learned from this project, or represent areas where Government has reiterated its commitment in other contexts[2].

- Agencies should undertake a public interest evaluation.
- Agencies should meet all Guideline requirements before calling for EOIs.
- Agencies should engage specialist PFP financial and commercial advisors early to help deliver PFPs.
- Agencies should produce a probity plan prior to the issue of a call for EOIs.
- Agencies should prepare a procurement plan for all projects.
- NSW Treasury should continue in its important role of helping Government to fully understand the economic costs and benefits of its decisions, including proposed policy or legislative changes.

RECOMMENDATIONS

The analysis of WSN's performance against the current Guidelines identified areas where the Guidelines need to be amended.

- The Guidelines should be amended to require agencies, as part of their request for detailed proposals (RDP) for future PFPs, to prepare a draft project agreement for release with the RDP documentation.
- The application of the Guidelines to state-owned corporations, particularly Budget Committee approval requirements, should be clarified to ensure consistency with the *Guidelines on Projects of State Significance*.

[2] For example, in the context of the Government's procurement policy reforms announced in 2004; in various reviews and inquiries on privately financed projects that were conducted during 2005-06; and in the forthcoming update of the *Working with Government Guidelines* to incorporate policy developments and lessons learnt in PFP procurement since 2001.

1. HOW THE PROJECT MET THE GUIDELINES

The Eastern Creek Alternative Waste Treatment Facility project (the Facility) is the first of its kind in the world. The uniqueness of the project lies in the combination of waste treatment processes to produce reusable products.

The Facility has been designed to:

- Accept unsorted household waste as input,
- Maintain a positive energy balance,
- Achieve a zero water footprint, and
- Produce acceptable compost as output.

Given the unique nature of this project, its procurement followed an atypical and lengthy process. The production technology of the project is further described in Appendix 4.

In procuring the Facility, Waste Services NSW (WSN), now called WSN Environmental Solutions, met some but not all of the requirements outlined in the Guidelines.

This was partly because the Guidelines were not yet Government policy when WSN began the project and because the Facility had some unique attributes. For example, WSN had to compete against private-sector providers while meeting legislated corporate obligations that these other providers did not have. The Government usually specifies the **asset class** it is procuring. In this project WSN specified the **outcome** it was seeking - which was to reduce the amount of putrescible household waste going to landfill.

1. 1 UNIQUE INFLUENCES ON THE PROJECT

Under section 5 of the *Waste Recycling and Processing Corporation Act 2001,* WSN has a statutory obligation to:

- Operate a successful business at least as efficiently as any comparable business
- Maximise the net worth of the state's investment
- Minimise adverse health and environmental impacts from its waste management and resource recovery activities.

Waste policy

WSN saw a market opportunity potentially emerging from Government changes to waste policy. The *Report of the Alternative Waste Management Technologies and Practices Inquiry* by Mr Tony Wright in April 2000 (the Wright Inquiry) made key recommendations that fed into the Strategic Policy Review of the *Waste Minimisation and Management Act 1995.* The recommendations included:

- That Government policy should guide and facilitate the take-up by the commercial waste management sector of a portfolio of technologies
- That Government's Strategic Waste Management Policy framework should include integrated waste management.

When WSN released a call for Expressions of Interest (EOI) for the project in 2000, WSN was seeking to establish itself as a market leader in alternative waste technology. It was uniquely placed to do this because of its ability to aggregate waste supply. It was at the time also probably the only party in metropolitan Sydney that could provide a secure waste stream, or feedstock, at the tonnage needed to economically justify an alternative waste treatment (AWT) facility.

The WSN Board identified that WSN needed to establish commercial relationships to capitalise on an opportunity to become the leading provider of alternative waste technology services. The Board also knew that the opportunity could pass quickly and so it released a call for EOIs to identify partners with whom it could:

- Deliver an AWT asset; and
- Draw on an AWT portfolio to respond to future market tenders.

To become market leader, WSN had the option of either commissioning a facility itself, or establishing commercial relationships with other entities to deliver an AWT asset.

One-to-one relationships

It is WSN's strong belief that it should mirror the private sector's approach to securing access rights for specific AWTs. One possibility considered by WSN was entering into a joint venture or partnership arrangement with various AWT providers.

WSN argues that unlike other NSW Government statutory authorities, it must compete against private-sector providers to supply waste management services. It must also compete with them to access AWTs, which are often patented or proprietary technologies. The advantage of a joint venture or a partnership arrangement is that the collaborative nature of these contracts could have allowed WSN to work together with a private sector party who had access to patented and proprietary technology to develop a waste solution. This jointly developed waste solution could then be marketed to other potential customers. This same opportunity would not be available under a PFP - where the private party entity would have had to develop the solution by itself.

Unlike PFPs, however, joint ventures involve sharing risks equally as they emerge, rather than defining contractually up front the allocation of risks between the parties. Joint ventures tend to create open-ended budgeting uncertainty. For this reason Government prefers to avoid such arrangements or enter them only very carefully.

Procuring an outcome, not an asset

Although the procurement process for this project was atypical for the Government, the project met the objectives of a PFP arrangement. In releasing the call for EOIs, WSN wanted to take advantage of a commercial opportunity by accessing the world's best proprietary alternative waste technology providers. WSN wanted proponents to offer varied technologies and solutions from which choices could be made to build a portfolio of waste management technologies. As a result WSN specified the **outcome** it was seeking.

Most other capital projects have more detailed specifications which typically include the **asset class** being procured (such as a school or a road), the project site, the production or service delivery technology, project design and Government's financial or non-financial contribution.

If WSN had specified the asset class rather than the outcome, WSN argues that it would have narrowed the options that its approach ultimately opened up. This approach was supported by the Wright Inquiry, which did not recommend any preferred technology and/or asset solution for WSN.

The approach of seeking outcomes is atypical, but not inconsistent with the PFP principles of specifying outputs and promoting innovation.

Comparing proponents

The Government, in the early stages of assessing EOIs, typically focuses on the capability of consortia and project design, and attempts to define the:

- Project opportunity and a reference project; and
- Project documents, including the output specification.

The challenge with this project was to compare and evaluate proposals that had no asset in common. Although there were no common design or performance criteria, there were comparative environmental indicators. One key indicator was the volume of putrescible household waste diverted from landfill. Another key indicator was the financial contribution that the Government would need to make.

WSN also had the option of signing up more than one proposal or none, so it looked at individual AWTs rather than EOI consortia. Because the proposals had to satisfy common evaluation criteria and offer value-for-money, the evaluation criteria that WSN used included:

- Commercial viability and capability — included examining the market opportunities for WSN if it could access a particular technology at a particular price.
- Compatibility — included ensuring that the new technology was compatible with technology in which WSN had already invested. Commercial viability depended on this.
- Deliverability — technology with a proven track record. The proposals had to show that the technology could deliver the promised outcomes and that the waste stream used in a proposal shared characteristics of the Sydney metropolitan waste stream.
- Sustainability—outcomes that achieved landfill diversion and other environmental indicators.

WSN's financial evaluation of proposals also differed from that of other Government projects. WSN explained:

> "*On typical projects, before tendering for a project, Government will estimate the cost to Government of procuring a project based on the* ***Government-designed*** *output specification*."

Because there was no single reference project, WSN would have had to anticipate and estimate risk-adjusted financial benchmarks for each possible response prior to receiving the proposals. It was simply not cost-efficient, or perhaps even possible, to do so.

> *"For this project, at the Request for Detailed Proposal (RDP) stage, WSN estimated the cost to Government to deliver the project based on the specification as set out in the proponent's proposal."*

WSN's detailed assessment of value-for-money came late in the procurement process. It undertook due diligence on the short listed proponents' financial models, including whether the cost assumptions built into the financial model reflected a realistic and competitive assessment of the costs to be incurred on the project. The basis for competition was not directly competing proponents, but the Government's financial benchmark and the do-nothing option if proposals did not give value-for-money.

1. 2 PROJECT DEFINITION

Area for Improvement

Consistent with the current Guidelines, agencies - including State Owned Corporations (SOCs) - should undertake a public interest evaluation on all future PFP projects.

Strategic planning

At the time it released the EOI document, WSN was not a state-owned corporation (SOC) and had no legislative mandate to deliver alternative waste technology services. However, its strategic planning process appears to have closely paralleled that of a typical SOC, including assessment of cross-agency and environmental, social and economic context for the project.

Both the Wright Inquiry and the Strategic Policy Review of the *Waste Minimisation and Management Act 1995* supported WSN establishing a portfolio of alternative waste technologies. The Wright Inquiry recommendations included the following:

- Waste management policy should change from waste disposal to resource management;
- Municipal sector should adopt purpose-specific emerging technologies on a planned commercial basis with private sector funding;
- Private sector should take process, project and business risks to deliver projects and finance such technologies.

The Strategic Policy Review recommended replacing the Act with the *Waste Avoidance and Resource Recovery Act 2001* and making WSN a SOC under the *Waste Recycling and Processing Corporation Act 2001*.

This would allow WSN to:

- Operate effectively in an increasingly competitive market;
- Enter commercial partnerships or joint ventures with companies
- Move into resource diversion and reprocessing;
- Have a portfolio of technologies that minimise risk and maximise environmental outcomes;
- Commit to alternative waste technology; and
- Shift its core business from landfill disposal to technology-based waste management.

This was the context and these were the objectives that WSN aimed to fulfil through the procurement of this project.

Initial project development

Noting that the current WWG guidelines were not in place at the commencement of this particular project, WSN did not do most of the initial project development activities required by the Guidelines:

- Identifying and evaluating feasible project options for its full life, including the environmental, social and economic contexts;
- Cross-agency impacts;
- Public interest evaluation with proposed actions;
- Value management assessment;
- Economic appraisal;
- Preliminary financial appraisal and fiscal impact;
- Preliminary assessment of loan council treatment;
- Preliminary summary of proposed accounting treatment.

WSN could not do a **feasibility study** because it was not seeking a specific asset for this project. A feasibility study implies investigating a specific asset.

WSN did not assess **cross-agency impact** before releasing the EOI. The Guidelines require this and state-owned corporations should do one for future PFPs.

WSN did not conduct a **public interest evaluation** before releasing the EOI. Agencies are required to evaluate the impact on public interest by examining:

- Criteria for the project's effectiveness
- Impact on stakeholders
- Accountability and transparency
- Public access and equity issues
- Consumer rights, security and privacy issues.

The Government has recently reiterated the importance of protecting the public interest in PFP projects. For example, the *Review of Future Provision of Motorways in NSW* (the Richmond Review) of December 2005 reinforces the notion that public interest is a crucial consideration in such projects, even for amendments made after a contract is signed.

WSN was not procuring a specific asset, and because of this it could not complete the following Guideline requirements before releasing the EOI:

- Value management assessment;
- Economic appraisal;
- Preliminary financial appraisal and fiscal impact;
- Preliminary assessment of loan council treatment;
- Preliminary summary of proposed accounting treatment.

WSN, however, did analyse individual short listed proposals at the RDP stage.

Public Sector Comparator

The Guidelines require the construction of a public sector comparator (PSC) for a reference project that identifies the:

- Most efficient likely method of traditional public sector delivery;
- Risk-adjusted, whole-of-life cost of the reference project; and
- PSC information to be disclosed.

With no specific asset solution and therefore no single reference project, WSN would have had to anticipate and estimate risk-adjusted financial benchmarks for each possible response **before** it received proposals.

WSN did assess the UR-3R Facility financial model's due diligence and value management extensively at the request for detailed proposals (RDP) stage.

Procurement plan

The Guidelines require a procurement plan for this phase of the project that:

- analyses all feasible options and identifies the preferred option;
- identifies regulatory issues that may constrain private sector providers;
- is a preliminary assessment of opportunities for local industry participation;
- proposes a project management structure;
- has reporting mechanisms; and
- has a probity plan.

WSN did not prepare a procurement plan before releasing the EOI document. The tender process lasted over two years - a much longer timeframe than a streamlined procurement process should require. A procurement plan that clearly communicated the process and timelines to Government and bidders might have helped the project.

Figure 1: Approvals Process

Date	Approval Sought	Authority
2 November 2000	Approval to release EOI	WSN Board
November 2001	Approval to release RDP to shortlist	WSN Board
22 May 2002	Appointment of the final 2 preferred proponents	WSN Board
5 July 2002	Approval to enter into detailed negotiations	BCC
8 October 2002	Approval of the final contractual terms and conditions; Delegation to the Treasurer of final approval to sign contracts	BCC
14 July 2003	PAFA approval granted	Treasurer

1. 3 THE EOI DOCUMENT

Area for Improvement

Noting that the current WWG guidelines were not in place at the commencement of this particular project, agencies proposing to procure a PFP should meet all Guideline requirements before calling for an EOI for the project.

The WSN Board Minute that recommended releasing the EOI did not cover all the Guideline topics, but did include information on:

- the target private-sector companies;
- the EOI's purpose and outcomes;
- the short listing process;
- the proposed appointment of a probity advisor;
- a high-level overview of the evaluation criteria;
- the proposed timetable for the EOI process.

Noting that procurement of this project commenced before the issuance of the current WWG Guidelines, specific Guideline requirements that WSN did not follow related to:

- appointment of an evaluation panel with external financial and technical advisors;
- draft EOI documentation;
- EOI and short-listing phasing and planning; and
- an EOI evaluation plan.

Appointing an evaluation panel

To fulfil the Guidelines' requirement about the appointment of an evaluation panel, WSN set up:

- A Reference Group of other Government agencies affected by the project, senior WSN Board and executive members, the Project Director and the probity auditor. The Reference Group advised on the project's strategic directions and evaluation process.
- A Commercial Committee of senior WSN officers and external advisors to evaluate commercial information in the proposals.
- A Technical Committee of senior WSN officers and external advisors to evaluate technical information in the proposals.

WSN also engaged external advisors in policy, technical, operations, probity, legal and finance areas.

Call for Expressions of Interest

The EOI document that WSN produced contained information about the:

- EOI decision-making processes and procurement timetable;
- Criteria for evaluating the EOIs;
- Relevant background information; and
- Limits on EOI responses.

However, (bearing in mind that procurement of this project commenced before the issuance of the current WWG Guidelines), WSN did not meet the following Guideline requirements:

- Preliminary market assessment;
- Maximum scope for private-sector innovation;
- Government's preferences and key issues such as risk sharing, service pricing, net community benefits, government contributions and other regulatory aspects;
- Australian and New Zealand industry and technology development issues;
- Environmental and land-use planning studies, assessments and parameters;
- Identified intellectual property.

EOI and short listing phase plan

Although WSN had a procurement timetable it did not design the procurement process fully. The timetable in the EOI had a due date but did not detail the selective tender and negotiation processes for the short listing phase.

EOI evaluation plan

The Guidelines require an EOI evaluation plan. WSN did not produce a plan, although it did prepare a final evaluation report. This report included:

- Project's background;
- EOI assessment process;
- EOI assessment criteria;
- EOI shortlist of proponents;
- Summary assessment for the EOI; and
- Probity plan (developed for the RDP stage). Under the current Guidelines this should have been undertaken prior to the issue of the EOI.

1. 4 DETAILED PROPOSALS AND ASSESSMENT

Recommendation

Agencies should, as part of their request for detailed proposals (RDP) for PFPs, prepare a draft project agreement for release with the RDP documentation.

In November 2000, WSN called for EOIs and received 48 submissions by December 2000. WSN then short listed seven consortia and issued RDPs to short listed consortia in November 2001.

From the detailed proposals it received by February 2002, WSN assessed five as offering potential value for money. After presentations by these proponents, WSN carried out further technical due diligence on four proponents. In May 2002 the Reference Group, on the Commercial and Technical committees' advice, selected three proponents to proceed to the detailed commercial negotiations stage.

Full assessment

For the full assessment of the detailed proposals, the Reference Group advised on the project's strategic directions and evaluation process. The Commercial and Technical committees reported their respective findings to the Reference Group for a decision. The Committees assessed:

- Environmental policy and past environmental performance;
- Management of environmental issues;
- Community acceptance of the proposed technology;
- The design and how it delivers the required outcome; and
- Probity.

To meet the guidelines, the full assessment should have also:

- Updated and finalised studies and analysis;
- Assessed loan council treatment; and
- Summarised accounting treatment and taxation opinion.

Unbundling financial models

The Guidelines require project proponents to submit a financial model supporting their bid. At the RDP stage, WSN asked proponents to submit:

- Detailed financial model covering the economic life of the proposed technology with detailed assumptions, full cash flow analyses for the design and construction and operational periods, financial analysis, sensitivity analysis, and projected inflation rates;
- Detailed risk schedule for all project phases and parts, with proposed risk allocation;
- Clear demonstration of how proponents would deliver the proposal and guarantee certainty.

The information submitted was adequate for WSN to evaluate the proposals against the Guidelines.

The evaluation panel assessed:

- Viability of the proposals, including the financial modelling, revenue, and underpinning cost forecasts and assumptions;
- Certainty of private-sector funding;
- Type and extent of WSN financial and other support;
- Profit-sharing arrangements;
- Financial strength of the proponents and their members, and whether they could support the project through all phases;
- Proposals' value for money to WSN and the Government; and
- Risk management at all phases, and minimising risk to WSN.

Issuing a draft project agreement

Issuing a draft project agreement with the RDP documentation has become convention for recent PFPs.

Although the Guidelines do not explicitly require the preparation of draft project agreements, such agreements allow the Government to establish its preferred risk allocation as the starting point for subsequent negotiations. Draft project agreements also reduce bidding costs and streamline the negotiation process, particularly where there is more than one preferred tenderer.

WSN believed a draft project agreement would not benefit this project because the technological and commercial solutions it sought would probably be diverse. WSN also preferred to carry minimal or no risk in the project, aside from the inherent sponsor risk.

This Review accepts this premise, but maintains that a draft project agreement would have helped the project by establishing at the start:

- whether *Public Authorities (Financial Arrangements) Act 1987* (PAFA Act) authorisation was required and whether any PAFA guarantee would be provided;
- the maximum contract term;
- WSN's preparedness to accept site condition and suitability risk if a site had to be made available;
- WSN's preparedness to accept risk on any environmental, planning and other approvals;
- how to deal with Native title and artefacts;
- general design obligations irrespective of a proposal's specific designs and likely fitness for purpose warranties;
- typical provisions for force majeure and default events, although the latter's definition would have been negotiable;
- indemnities, warranties and confidentiality provisions;
- intellectual property provisions.

These and many other issues are a matter of commercial principle and do not necessarily flow from the details of a project or transaction. At the very least, a starting point allows the parties to discuss and resolve issues systematically.

Intellectual property

WSN did not need to buy intellectual property from unsuccessful proponents.

1. 5 NEGOTIATIONS AND CONTRACT

Recommendation

The Guidelines' approval requirements for state-owned corporations, particularly Budget Committee approval requirements, should be clarified to ensure consistency with the *Guidelines on Projects of State Significance*.

WSN finalised the contract with GRL for the Eastern Creek UR-3R Facility in February 2003, with financial close occurring a month later. WSN had also previously considered the Primergy Ltd (Novera/Worley consortium) bid, but ended negotiations with that consortium after finding that its bid was unacceptably risky.

Formulating the Public Sector Comparator

WSN procured the project using the financial model that GRL supplied. WSN used this for both the reference project and the public sector comparator (PSC), which is the Government's best risk-adjusted estimate of the cost to deliver and operate the Facility.

The estimate, however, was theoretical because WSN had to partner with GRL to access the ISKA® Percolation technology for the Facility, as GRL owns the Australian rights for this technology. Because of this, the main purpose of the PSC was to allow WSN to perform commercial due diligence and maintain competitive tension, as discussed below.

Commercial due diligence

WSN negotiated with GRL using the agreed financial model and external advisors. A major sticking point was how to amortise the project's development costs. WSN resolved this to its satisfaction. The one-on-one negotiation also meant WSN reduced the price of some inputs that it did not think were value for money.

The advisers reported that the project's inputs and assumptions were acceptable, and commented on the project's 'deliverability'.

Competitive tension

WSN says that it maintained competitive tension during the negotiations by keeping its options open and only paying for what it believed was value for money.

To determine value for money, WSN:

- Conducted extensive due diligence of the agreed model;
- Compared the GRL option against more conventional alternative waste technologies in similar markets;
- Kept the do-nothing option open; and
- Maintained a maximum price. WSN always had an upper-price threshold that it would be willing to pay.

Meeting Budget Committee requirements

In July 2002, the Budget Committee of Cabinet (BCC) endorsed WSN commencing detailed negotiations for the project. In October 2002 BCC endorsed the final terms and conditions of the contract between WSN and GRL, and delegated to the Treasurer final approval to sign contracts.

The approvals process

Before seeking Budget Committee approval to begin negotiations with a preferred proponent, NSW Treasury and the agency are normally required to prepare the terms and conditions for negotiations of private sector infrastructure projects. This should be the basis of formal advice to the Treasurer on the Government's risks and obligations under the project. Usually, BCC approval follows after an assessment that there are no new issues likely to materially affect public sector risk under the project. If the final contract significantly differs from the detailed proposal, BCC must endorse any changes**.**

The Guidelines, however, are not always clear on the correct approvals process for state-owned corporations. In particular, there is no clear guidance on the procurement stages that require BCC approval, or the circumstances where a Board's approval for a project may serve as a sufficient proxy for BCC approval.

In this case, the WSN Board approved all relevant stages in the project without Budget Committee approval, except for the following stages where BCC approval was sought:

- Commencement of detailed negotiations for the AWT; and
- Endorsement of the final terms and conditions of the contract between WSN and GRL. The Treasurer approved the project even though WSN did not submit a detailed risk matrix as required by the Guidelines.

The Guidelines do not show clearly:

- How the approvals process applies to SOCs and their boards, as this is not covered in Sections 3. 4, 3. 5 and 3. 6 and Table 3. 1 of the Guidelines;
- Critical milestones that SOC boards must meet to obtain BCC approval, as Table 3. 2 of the Guidelines suggests that board approval can be a proxy for BCC approval;
- Whether, and when, SOCs need Budget Committee approval to proceed to RDP. What is clear is that when SOCs do seek BCC approval, they must submit a risk matrix and obtain the Treasurer's approval to enter into the contract;
- The selection process where there is more than one preferred proponent.

Statutory approval

On 14 July 2003 the Treasurer approved WSN entering into a 'joint financing arrangement' as defined under section 20(1) of the PAFA Act, and provided a discretionary guarantee of the Government's obligations under the contract with GRL in accordance with section 22B of the PAFA Act.

Reimbursing reasonable bidding costs

WSN did not terminate the RDP, so did not have to reimburse proponents for reasonable bidding costs. The Guidelines contemplate that in certain circumstances Government may consider reimbursing reasonable bidding costs where the Government terminates the RDP. Where Government makes the decision to reimburse reasonable bidding costs the quantum of any reimbursement will depend on the quality and quantity of information supplied by the Proponents.

Contract disclosure

The parties signed contracts on 12 February 2003, and WSN submitted the contract summary to the Auditor-General. The Minister for the Environment tabled it in Parliament on 17 February 2004. This took longer than the Guidelines require. An agency is normally required to submit a contract summary to the Auditor-General for audit within 30 days of it becoming effective. The responsible Minister should table the audited contract summary in Parliament within 90 days of the document being received by the Auditor-General.

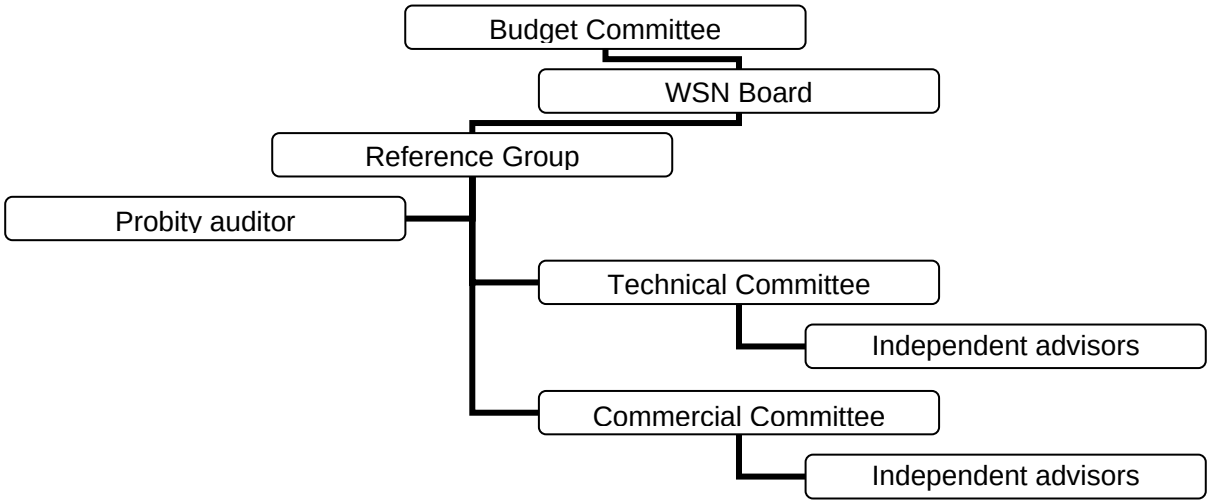
1. 6 MANAGEMENT

Area for Improvement

Agencies should engage specialist PFP financial and commercial advisors early to help deliver PFPs.

The project's governance structure comprised the Board, a Reference Group and various advisory committees. WSN used this structure until it short-listed the three proponents for detailed negotiations in May 2002. Subsequently decision-making power was exercised by the Board and BCC.

Figure 2: Project Governance Structure



The corporatisation of WSN meant that it used its commercial, skills-based Board to oversee the project. The Board, as the decision-making authority over most stages of the procurement, was integral in steering the project.

The Steering Committee

The Guidelines recommend the creation of an inter-agency Steering Committee to oversee project procurement. In this project the WSN Board performed the functions of a Steering Committee. The Board decided on key document content, short listed proponents, selected preferred proponents and finally decided to execute contracts. The Board acted on the advice of project teams and the Reference Group.

The Guidelines recommend that where more than one agency is involved in project service delivery, one agency will be appointed to lead and the others will be represented on the Steering Committee. WSN's Reference Group had representation from Resource New South Wales, a division of the DEC, the agency most interested in the project.

WSN invited NSW Treasury to join the Reference Group but Treasury declined because of a perceived conflict of interest with its role of adviser to the Treasurer and to BCC. At that time the Guidelines did not require Treasury involvement in the procurement of major projects. The Guidelines have since been clarified to define an important role for NSW Treasury in procuring major infrastructure, and that does not create a perceived conflict of interest. Treasury was heavily involved in obtaining the project's final approvals.

Typically on PFPs the Portfolio Minister responsible for oversighting the lead agency in the Steering Committee makes recommendations to the BCC at critical milestones in the process. Ultimate approval resides with the BCC. In this project, at times the WSN Board acted as both Steering Committee and for most stages of the procurement process was the approver. However, as the BCC made the final decision to execute contracts, BCC review rendered the governance arrangements more transparent and independent than they would otherwise have been.

The project manager

The WSN Chief Executive Officer appointed a Project Manager from staff, in line with the Guidelines.

The probity auditor

In line with the Guidelines, WSN engaged a probity auditor to:

- Endorse the project's probity plan;
- Monitor the RDP process; and
- Advise the project team, Reference Group and WSN's Chief Executive Officer.

The project team

The project team structure followed the Guidelines. Specialists from WSN and Government filled some roles while others were external engagements. There were, however, not enough financial advisors with PFP experience on the team. This project would have benefited greatly from early advice on structuring, including risk allocation, tax, accounting and financing arrangements and evaluation techniques for PFP projects.

Budget Committee review

When the WSN Board approved the release of the EOI it did not note the proposed project management structure. This did not meet the Guidelines which recommend that when Government agencies seek approval to issue a call for EOIs they should also submit to BCC the proposed management structure for the project. It should be borne in mind, however, that procurement of this project commenced before the WWG Guidelines were issued.

The Private Projects Branch

The Guidelines require that an agency consult with NSW Treasury's Private Projects Branch early in a project. This did not occur, in part because Treasury did not join the Reference Group.

2. HOW THE FACILITY HAS PERFORMED

The UR-3R Facility at Eastern Creek is designed to deliver sustainable waste management through separating and recovering waste at its highest net resource value. Built to divert four million tonnes of solid waste from landfill over 25 years, it is the first project in the world to combine these particularly technologies and processes. The Facility was completed in September 2004.

The Facility receives and processes municipal solid waste and collects household, commercial and green waste. It aims to:

- Reduce landfill waste by educating the community and identifying the full cost of waste management;
- Reduce greenhouse gas and leachate emissions by processing the putrescible portion of the waste stream; and
- Recover valuable recyclables from the non-putrescible waste stream and convert them into renewable energy and high quality organic growth material. This reduces greenhouse gas emissions, leachate, and closes the 'carbon cycle'.

The Facility uses the UR-3R Process® which involves:

- Waste stream separation;
- ISKA® percolation;
- Composting and refining; and
- Energy recovery.

The Western Region Waste Management Group has appointed GRL preferred bidder for a facility with similar capabilities in Melbourne. Lancashire County in England has also made GRL preferred bidder to build three similar facilities.

2. 1 MANAGING RISK

GRD Limited operates in the global minerals commodities and waste disposal markets. Its wholly–owned subsidiary, GRD Minproc, has 30 years of experience in mining and resources sector process engineering, and processing-plant design and construction. GRL Ltd (GRL) is a jointly-owned subsidiary of GRD Minproc and GRD Limited.

GRL applied GRD Minproc's minerals processing techniques to domestic waste disposal. It sourced what it considered to be the best technology components and combined them in one process. The project's key risk was that there was no successful precedent for this particular combination of technologies.

GRL viewed GRD Minproc's expertise in process engineering as a competitive advantage. Both GRL and GRD Limited did not seek to pass the technology and interface risk down through traditional subcontracting arrangements, although GRL did have guarantees for the technology components and equipment from their suppliers.

When the procurement process began WSN did not have sufficient capability and access to waste-to-resource processes and technologies to develop the project itself.

Despite WSN's preference that it own and operate the Facility rather than GRL, the delivery model suggested that WSN also would not be able to manage the risk. WSN later confirmed this, so it was crucial for WSN to transfer the risk to GRL at the outset.

At the end of 25 years the Facility will be transferred to WSN. In the meantime, WSN has developed and will continue to develop expertise to manage the risks associated with owning and operating the Facility.

2. 2 OPERATIONAL ISSUES

The UR-3R Facility business model envisioned key revenue coming from the extraction of raw materials and goods and their resale at a premium. This was based on assumptions about how much raw material could be extracted from the feedstock and the demand for and sale price of this raw material.

Predicting the volume of extracted material has been GRL's greatest difficulty so far, even though its business model used:

- National and state data for domestic waste streams;
- Significant sampling of the actual waste stream; and
- Waste stream characterisation in different seasons and areas.

The revenue from extracted materials and goods was affected by the unanticipated level of contamination in the waste stream, particularly for hazardous contaminants such as lead acid car batteries. Earlier data samples did not predict this and the batteries remain a problem even though WSN has a take-back program. According to GRL, one lead battery can contaminate up to half a day's production of organic material.

Organic material as garden compost must meet Australian Standard 4454-2003. As a result of the contaminants initially discovered in the waste stream, GRL has done extensive testing and sampling and invested in pre-sorting technologies. GRL is now meeting the standard for its organic material production process.

A further factor affecting revenue was a drop in GRL's anticipated recoverable material. Late in the construction of the Facility, a foundation council customer added an extra recycling bin to its bin collection system. Another tenderer won this service collection, which resulted in GRL receiving less recoverable material from the waste stream than its business model forecast.

2. 3 SUSTAINABILITY

Household waste is a volatile feedstock and although contamination impacts were not explicitly expected, they were not entirely unexpected or unpredictable. The digestion system which circulates water through the process was affected by the waste stream composition, including contamination. GRL reported that it has largely resolved early technical difficulties with the water and biogas.

Water usage is stable and GRL has effectively a zero footprint for water.

GRL is producing biogas at 70 per cent of the forecast electricity supply levels. GRL explains that its biogas production is less than forecast because GRL based its forecasts on a German feedstock model. Local feedstock with a different waste composition has produced a different result. This lower biogas production has been offset by GRL using less energy than it forecast. The project has both drawn-on and exported to the electricity grid.

All plastic, paper, aluminium and ferrous material recoverability is slightly below the forecasted levels and GRL has had some difficulty in meeting the right cleanliness targets. Despite this, GRL says that it is finding markets for the goods.

GRL is now meeting the Australian Standard 4454-2003 for its organic material production with a process that can detect and manage contamination. The audit, sampling and testing processes are considered sufficient for product reliability and security.

At times odours have escaped from the circulation and ventilation systems. GRL also reports that it has dealt with this in an open process that has closely involved the DEC and affected residents.

2. 4 FUTURE GOVERNMENT POLICY

Recommendation

NSW Treasury should continue in its important role of helping Government to fully understand the economic costs and benefits of its decisions, including proposed policy or legislative changes.

GRL believe that certain policies the Government is considering to restrict organic material production from a waste source, may significantly affect the viability of alternative waste technology.

Government decision-making should be informed by both its commercial contracts and the wider public interest. Government should be fully informed of the implications of any policy changes it makes, including any impact on existing contracts and industries.

This Review endorses the importance of NSW Treasury's role in whole-of-Government working groups that review proposed policy and legislative changes. NSW Treasury brings an essential in-depth understanding of contracts for major infrastructure projects, whether traditionally procured or privately financed.

3. STAKEHOLDER FEEDBACK

3. 1 ROLES AND RESPONSIBILITIES

Global Renewables built, owns and operates the Facility, including the sale of recovered products.

Waste Services guarantees supply of putrescible household waste to the Facility at an agreed tonnage.

Councils contract with WSN for WSN to take an agreed tonnage of putrescible household waste at an agreed price.

Department of Environment and Conservation is the environmental regulator and monitors the environmental performance of the Facility, including product used at the WSN operated landfill sites.

3. 2 FAIRFIELD CITY COUNCIL

The Fairfield City Council (the Council) was the foundation council customer for the UR-3R Facility. Since February 2005, the Council has sent the Facility about 220 tonnes of waste per day. It is satisfied with the dry recycling and the certified compost product which it endorses.

In signing a 20-year contract the Council negotiated price re-set mechanisms and extra benefits. The anticipated benefits included:

- better sustainable waste management. The Council estimates that approximately 60 per cent of waste is pure organic material. The Facility exploits this waste opportunity by maximising the value of natural capital through reuse, and not excavating virgin materials.
- better balancing of inter-generational equity concerns, particularly over greenhouse gas. The production of carbon credits, the export of 'green-power' to the grid and the project's environmental footprint appealed to the Council.
- a 'closed-system' with no need for a connection to Sydney Water mains supply.
- the logistic efficiencies of a guaranteed long-term waste disposal solution contained in a small area. The Facility is nearby, with trucks able to reach the receiving hall via a hard surface. Council assessed alternatives as potentially more costly and causing possible delays because of being located further away and in high-traffic areas.

The Council regards the Facility as working very well and runs a children's education program with school tours through the Facility.

3. 3 COMMONWEALTH BANK OF AUSTRALIA

The Commonwealth Bank of Australia (CBA) was involved with the project for four years before contracts were signed. CBA considers the project a success because they actively collaborated with GRL in negotiating the contract terms with WSN and subsequently with NSW Treasury.

CBA saw WSN as a state-owned corporation and standing apart from Government, and did not accept WSN's payment risk on this basis. CBA, therefore, required and received a Treasurer's *Public Authorities (Financial Arrangements) Act 1987* (PAFA) guarantee, which secures the performance of WSN under the contract.

Other hurdles were caused by the unproven and complicated nature of the technology and the project not fully aligning with a typical PFP. The project had relatively low gearing, as GRL borrowed $40m with equity contributing the remaining $30m of the total $70m cost.

A further issue was the lack of a deep debt market that was prepared to accept the technology risk the Government was seeking to transfer.

CBA largely attributes winning the contract to its in-house technical capability and says that only banks with this capacity can sufficiently assess and manage risk for such projects. GRD Minproc's reputation for negotiating contracts and their role as GRL's parent company was a key factor in CBA's sign-off. CBA were confident GRL would be able to negotiate a reasonable contract price.

Privately financed project benefits

The Government benefited from CBA's due diligence. During construction, a CBA engineer visited the site monthly. Before financial close CBA appointed a technical advisor to monitor things such as the monthly draw-downs and that progress payments were satisfactory. During negotiations the advisor also investigated the technical process for both WSN and CBA.

CBA often gave GRL technical reports and GRL responded quickly to any concerns it had. CBA, GRL and project advisers reviewed the project each month. Although this is not usual CBA practice and is not typically required by Government, CBA's oversight and financial commitment were essential for minimising project delivery risk.

3. 4 DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Legislative changes

In 2005 the Department of Environment and Conservation (DEC) amended the definition of waste in the *Protection of the Environment Operations Amendment Act 2005* (POEO Act) to include any unwanted or surplus substance (whether solid, liquid or gaseous). Section 157 in Schedule 1 of the Act provides the following new definition:

> "*Waste" includes:*
>
> *(a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or*
>
> *(b) any discarded, rejected, unwanted, surplus or abandoned substance, or*
>
> *(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or*
>
> *(d) any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or*
>
> *(e) any substance prescribed by the regulations to be waste.*
>
> *A substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re-used or recovered*."

This change in waste definition is seen by GRL as a problem because GRL previously did not operate in a defined legislative environment. The POEO Act states that waste becomes non-waste when 'reprocessed' but does not define that term.

Waste cannot be reused until it is certified as non-waste product. Depending on the reuse opportunity, DEC will issue an exemption from the relevant regulatory requirements such as licensing, waste tracking, and the waste levy payment:

- **General exemptions** are where there are numerous generators or processors of a certain type of waste, and/or broad scale use of the resulting material. The exemption is tied to quality control and specification, so that the output is consistent, irrespective of who produces the product.
- **Specific exemptions** apply in more limited situations, such as where a proprietary technology or process transforms the waste.

DEC sees the legislative amendment as benefiting legitimate industry players, and removing genuine resource recovery opportunities from the waste regulatory loop.

Meeting output standards

GRL says that the outputs of the Facility are 'non-waste' which will be produced to the requirements of Australian Standard 4454-2003 under the Biosolids Guidelines.

DEC sees the Biosolids Guidelines as a good starting point, but says that further output specifications are needed so that municipal solid waste going to landfill is not harmful, given the potential contaminants. In 2004 Standards Australia applied the Biosolids standard to compost. DEC has asked Standards Australia to review this amendment.

From the information available to this Review it appears that internationally, output derived from municipal solid waste is not generally used for beneficial land uses. The Facility, however, is aiming to produce a genuine waste derived output for land use. Currently, the Facility's 'coarse' output is called Daily Cover and its 'fine' output becomes Organic Growth Material which has a higher commercial value and is preferable in the long run.

DEC wants the Daily Cover to achieve the same environmental performance as Virgin Excavated Natural Materials (VENM), particularly for odour control. It is a landfill license requirement that 15cm of Daily Cover (which is consistent with VENM) be used on each landfill site at the end of a working day. In DEC's trials, the Daily Cover did not meet its odour standards and WSN is contractually obliged to accept the product only if it has been approved by DEC. WSN have since advised that a further Daily Cover trial is in progress, and the material is performing much better than previously.

The Alternative Waste Treatment Derived Organic Rich Fraction Group, a joint industry and Government working group, is trying to design an appropriate standard for land materials derived from mixed municipal waste. It is difficult for the regulator alone to design the relevant standards because industry has key output data, especially waste characterisation data. A national process led by the CSIRO is also looking at which contaminants can be applied to land. The lack of a compost standard that satisfies industry and the regulator continues to be an issue.

Landfill levy

In late 2005 the Government announced the doubling of the landfill levy over the next five years. This was partly driven by a review of the 2014 Waste Avoidance and Resource Recovery Strategy which is not on track to meet its waste targets. This change should help to create a level playing field between AWT and landfill disposal.

The Facility does not pay a levy on waste it receives, only on the residual waste that it disposes to landfill. The current Daily Cover trial extends to 30 June 2006. After this date regulatory change means that all imported Daily Cover will attract the landfill levy.

Environmental management of the Facility

DEC sees its role as continuing to provide the regulatory framework for GRL and the Facility. DEC strongly recommends a full performance review when the Facility is operating steadily and suggests that Treasury do this with the help of experienced DEC staff, perhaps on secondment.

Although DEC acknowledges that there are no 'drastic' environmental management issues at present, it says that the Facility has had commissioning issues. DEC recognises that commissioning can pose difficulties, however it believes that many simple problems, some from the outset, should not have occurred.

DEC reported particular problems with the Facility's:

- Odour control;
- General 'housekeeping' such as the waste receiving hall door being left open;
- A 'dirty water' pond (first flush capture dam) on site which was anaerobic and odorous.

DEC has taken the following actions to help resolve these issues:

- Giving GRL a Clean-up Notice directing it to (among other things) redesign and reconstruct the first flush capture dam, which they did not fully comply with at first, and to stop discharging water with a high nutrient content into an adjacent creek—the water was diverted back into the composting process.
- Investigating how the Facility is achieving its water balance—whether it is a 'closed-system' or drawing on other water sources.
- Speaking with key personnel, both directly and through the Alternative Waste Treatment Derived Organic Rich Fraction Group, about organic outputs being fit for purpose.

DEC supports alternative waste technologies and points to the increase in the landfill levy—which DEC believes significantly benefit the technologies and the Facility by encouraging waste generators to find disposal alternatives—and the *Waste Avoidance and Resource Recovery Act 2001* as evidence of this.

APPENDICES

APPENDIX 1: ACRONYMS AND ABBREVIATIONS

AWT	alternative waste technology
BCC	Budget Committee of Cabinet (also called Cabinet Standing Committee on the Budget)
CBA	Commonwealth Bank of Australia
EOI	Expression of Interest
DEC	Department of Environment and Conservation
GRL	Global Renewables Ltd
The Guidelines	*Working with Government: Guidelines for Privately Financed Projects* (November 2001)
PAFA Act	*Public Authorities (Financial Arrangements) Act 1987*
PFP	privately financed project
POEO Act	*Protection of the Environment Operations Amendment Act 2005*
PSC	Public Sector Comparator
RDP	request for detailed proposals
SOC	State-owned corporation
UR-3R	Urban Resource-Reduction, Recovery and Recycling Process®
WSN	Waste Services NSW, now WSN Environmental Services

APPENDIX 2:

TERMS OF REFERENCE OF THE POST IMPLEMENTATION REVIEW

Scope of the Post Implementation Review covers all processes from project inception and making the investment decision through to procurement, but excludes an assessment of operations.

The **Guidelines** require Post Implementation Reviews to consider, where relevant:

- Project formulation
- Risk exposure/risk sharing
- Industrial relations management
- Project objectives
- Delivery time
- Environmental management
- Brief appropriateness
- Quality
- Community relations
- Design performance
- Budget performance
- Industry development
- Project operations, including service delivery and financing
- Project management/procedures
- Functional competence of infrastructure including networking and interfacing
- Project delivery
- Approvals process

Ownership and responsibility for the final report is jointly held by Treasury and the agency under the direction of a Steering Committee, which has representation from both organisations.

Disclosure of the complete final report is to be to the public.

Approval of the final report for public release is the responsibility of the Budget Committee of Cabinet.

APPENDIX 3: THE REVIEW METHOD

NSW Treasury began its Post Implementation Review of the project in February 2005 led by a Steering Committee. The Review used sources such as WSN Board reports and minutes, file records, participant and user interviews, project documentation and proponent responses, technical due diligence reports and commissioned independent advice.

NSW Treasury especially thanks all those who were interviewed, including representatives of GRL and Blacktown and Fairfield city councils.

The Steering Committee

The Director of Private Projects, NSW Treasury, chaired the Steering Committee, which had representatives from WSN, TCorp and NSW Treasury. The committee met on:

- 28 February 2005
- 4 April 2005
- 30 May 2005
- 9 August 2005

Site visits

The Steering Committee visited the Facility when the then Premier opened it in late 2004.

Interviews

The project manager interviewed key stakeholders, including:

- Chief Executive Officer, WSN
- Managing Director, GRL
- Manager Waste Services, Blacktown City Council
- Manager Waste, Fairfield City Council
- Head Infrastructure Clients, Relationship Executive Energy and Power Team, Executive Manager Engineers, CBA
- Manager, Sydney Waste Specialised Regulation, DEC
- the project team.

The Committee agreed on interviewees and questions before the interviews.

APPENDIX 4: THE UR-3R PROCESS®

The UR-3R Process® can process either loose or compacted waste. It starts with waste delivery and separation. The waste arrives at the receiving hall, which is kept at negative pressure to stop odours escaping. GRL then sorts the waste according to features such as shape, size, density and magnetism, and recovers recyclable products. These include:

- Paper and cardboard
- Plastics
- Glass containers
- Ferrous and non-ferrous metals.

The remaining organic-rich waste stream goes to the next stage—ISKA® percolation and anaerobic digestion. GRL feeds the waste into the ISKA® percolators, which spray it with water. The water percolates through the waste, removing any volatile organic component from the solids.

The percolator discharges the liquid, which is digested anaerobically—without oxygen—to produce biogas with about 70 per cent methane. This goes to a purpose-built power station to produce electricity.

The solids from the percolator go to the enclosed composting building for intensive composting. This occurs in a negatively aerated bay, where GRL can control moisture and air for optimal composting conditions. Then it removes the compost for two weeks' maturation.

GRL passes the remaining organic growth material through a final screening and refining process to remove any glass, stones, plastic or foil. The clean material is then ready for the market.

Source: Global Renewables UR-3R Facility Information Sheet 2004