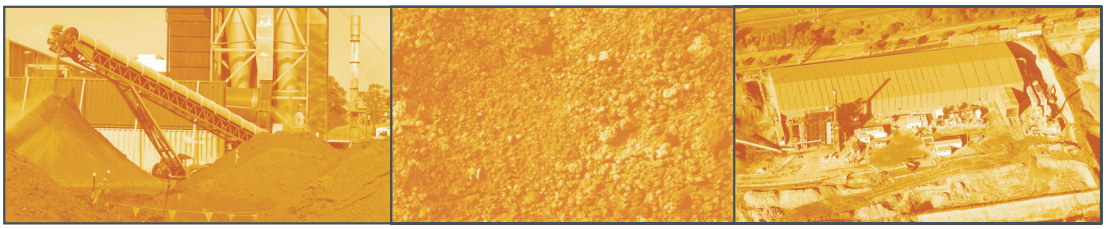

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community consultation report

Community Consultation Report

Remediation of Car Park Waste Encapsulation

May 2007

Prepared by Orica Australia Pty Ltd

1 Introduction

This document reports on the community consultation undertaken to date for the proposal to remediate the Car Park Waste Encapsulation (CPWE), which is located in the north-eastern portion of Botany Industrial Park (BIP). Consultation has been led by the Orica (Orica Australia Pty Ltd) Community Relations Team with input from the CPWE Project Team at all steps along the way.

Since its inception in 1997, the Community Participation Review Committee (CPRC) has been provided with information on investigations for remediating the CPWE. Since late 2004, the group has been engaged in discussions regarding a number of thermal options as well as research on the possibility of using bioremediation to remediate the CPWE. From this time until the most recent workshop in August 2006, the various options were explored with the CPRC and one by one Orica narrowed the shortlist to the two options of DTD and bioremediation.

In August 2006 at the CPRC meeting and the community workshop, Orica informed the community that as the bioremediation trials had not proved conclusive; it had identified DTD technology as the preferred option for remediation of the CPWE. Following that decision, further consultation was undertaken focussing on the DTD remediation proposal.

Records of community consultation on the remediation of the CPWE date back to 1999. However, this report focuses on the communication/consultation activities that relate to the remediation of the CPWE, by Orica from November 2004 to early 2007. There has been other community consultation activity regarding short-term remediation of the CPWE (carried out in mid 2005) and the ongoing management of the CPWE. These consultation activities have not been fully described herein.

In addition to this introduction, this report provides the following sections:

- Section two outlines the communications objectives and approach used in consultation with the community.
- Section three identifies the community/stakeholders.
- Section four summarises the face to face consultation undertaken with stakeholders.
- Section five records the questions/issues raised by the community/stakeholders during face-to-face consultation events and provides a response to each query.
- Section six records the written communications distributed as part of the consultation program.
- Section seven outlines the next steps in consultation for the project.

2 Communication Objectives and Approach

There are five overall communication objectives for the management of the CPWE project:

1. Improve stakeholder and community awareness of the technical and/or environmental issues associated with the CPWE project.

2. Achieve stakeholder and community input into evaluation of options for the remediation of the CPWE.

3. Identify, with stakeholder and community input, a preferred remediation option that is socially acceptable and environmentally responsible.

4. Achieve stakeholder and community input and support for the selected remediation option.

5. Improve relationship between the community, other stakeholders and Orica.

Orica aims to ensure that sustainable environmental and social outcomes are achieved for Orica and for the community. Developing and nurturing our relationships with the local community and other stakeholders will contribute to that objective.

To achieve its overall objectives, Orica's approach has been:

a) to engage in open and transparent communication by **informing and involving** the CPRC, immediately adjacent landowners/users and the broader community on this project and **encouraging participation** at all project stages. This approach has assisted in ensuring that the community is informed and that Orica has understood and considered community concerns.

b) to provide the CPRC and the broader community with an appropriate level of **timely and accurate** information to assist in understanding and evaluating the remediation options.

c) to work with the CPRC and the broader community to ensure **that their feedback, concerns and issues were incorporated** into the evaluation of the remediation options and considered in Orica's selection of the proposed option.

This approach has been implemented through a Communications Plan. Orica has used the following types of communication and consultation tools for the CPWE project:

- Letterbox drop to local residents;
- Regular *Southern Courier/St George and Sutherland Shire Leader* columns;
- Community newsletters;
- Community workshops;
- Site tours;
- CPRC meetings;
- Face-to-face Individual briefings to key stakeholders (as and when required);
- HCB (Hexachlorobenzene) web-site;
- 1800 freecall community hotline; and
- Response to email inquiries.

3 Stakeholders

The key stakeholder group for the CPWE remediation project is the independently chaired CPRC which has been operating since 1996/1997. Its role is guided by the HCB Waste Management Plan (ANZECC, 1996).

Another key group of stakeholders are the industries located adjacent to the CPWE and users of Hensley Athletics Field. Additional stakeholders have been identified through the development of the project and Orica has analysed their needs for the project. A list of stakeholders that Orica has been consulting with to date on the project is provided in **Table 3.1**.

Table 3.1 Stakeholder Identification

Stakeholder type	Stakeholder
Govt/regulators	• City of Botany Bay (CoBB) Council • Department of Environment & Conservation (DEC) • Department of the Environment & Water Resources (DTEWR) • Department of Planning (DoP) • Independent Review Panel (IRP) • NSW Health • Randwick City Council (RCC)
Political	• CoBB Councillors • Member for Kingsford Smith • Member for Heffron • Member for Maroubra
Local community	• Botany Bay & Catchment Alliance (BBCA) • Botany Environment Watch (BEW) • Eastlakes Community Groups • Australian Environmental School.com • Botany and Eastern Region Environmental Protection Agency (BERAPA) • Third Ward Rockdale • CPRC • BIP businesses, i.e. Qenos Pty Ltd (Qenos), Huntsman Chemical Company Australia (Huntsman) and ABB Ltd (ABB) • Hensley Athletics Field users (e.g. soccer, athletics, schools, Hensley Athletics Field Users Taskforce) • Local residents • Adjacent industry (in Corish Circle and Baker Street) • Other local industry (e.g. Pacific National Pty Ltd (Pacific National), Solvay Interox, Kelloggs (Kelloggs Australia Pty Ltd), Denison Street businesses)
Environmental advocacy NGOs	• Greenpeace • National Toxics Network
Media	• Local newspapers • Sydney and State wide newspapers and radio as required
Broader community	• Any interested community

4 Stakeholder Involvement

4.1 CPRC

The CPRC was established by the federal government under the HCB waste Management Plan. The purpose of the CPRC is to enable information to flow

between Orica and the wider community and to disseminate information to a broad base of neighbouring residents and businesses.

Participation in CPRC meetings reflects a wide cross section of the broader community including local MPs, councillors and council officers, local residents and businesses, green groups, local environmental interest groups, regulatory authorities and Orica.

The CPRC has regular and extraordinary meetings to receive updates about Orica's HCB related environmental remediation projects at Botany and to provide stakeholder feedback to Orica. Meetings times and locations are publicised in regular monthly columns in local newspapers and on the Orica HCB website. A regular newsletter from the CPRC is distributed to the broader community (over 5,500 copies) by Orica. Over the years, the CPRC has been an effective conduit for information to be shared with the wider community.

Since its inception, CPRC members have shown long-term commitment, dedication and involvement in the HCB and related projects, thus ensuring that community needs are understood and considered by Orica in project planning. Orica has provided the CPRC with information on the assessment of options available for remediating the CPWE and the CPRC has provided questions, suggestions and feedback on community needs, interests and concerns in an effort to achieve the best outcome for the project.

4.2 Discussion with the CPRC and community

In addition to regular and extraordinary CPRC meetings, Orica has held workshops with the community, largely represented by the CPRC, about the options for remediating the CPWE. The sessions were advertised in the local newspapers, newsletters, on the Orica HCB website, and letterbox drops were conducted to approximately 5,500 of the nearest neighbours. At the end of most sessions a report was compiled by Orica and distributed to all attendees (see **Section 6** for a list of reports).

A summary of the discussions held with the CPRC and wider community is provided in **Appendix A**.

4.3 Discussion with Department of Planning

The DoP is a member of the CPRC and has participated in meetings and CPWE community workshops. The DoP has presented information on the approvals process at CPRC meetings and community workshops. Orica, together with its consultant HLA-Envirosciences Pty Ltd (HLA), which prepared the EA, has liaised with the DoP to seek procedural information on submitting the EA proposal. The main submission to DoP to date is the Environmental Assessment Scoping Report (EASR), dated 20 July 2006, which provides initial scoping of the proposal and considers the various options for the project.

As per statutory requirements, the draft EA was also submitted to the DoP for an adequacy review. The EA has been prepared in response to the Director-General's Environmental Assessment Requirements (EARs) and was updated prior to finalisation based on feedback detailed in the DoP Adequacy Review.

4.4 Discussion with Department of Environment and Conservation

The DEC is a member/observer of the CPRC and has participated in meetings and CPWE community workshops. The DEC has presented information on the licensing process at CPRC meetings and community workshops. Orica also regularly reports to the DEC on the ongoing management of the CPWE.

4.5 Discussion with Local Government

The CoBB Council is a member of the CPRC and has participated in meetings and CPWE workshops. RCC, through its officers and Councillor Bellieli, receives all documentation relating to CPRC meetings and community workshops and has attended CPWE workshops and CPRC meetings held over the past year. The issues raised in **Section 5** below include any matters raised by both local government organisations during the process to date.

Facilitated by the CoBB Council, information has also been distributed to the Hensley Athletics Field Users Taskforce (HAFUT).

4.6 Discussion with Hensley Athletics Field Users

Not all users of the Hensley Athletics Field attend the HAFUT meetings so Orica has liaised directly with the key sporting contacts that use the ground for competition and training. These are the Eastern Suburbs Soccer Football Association, Randwick-Botany Harriers and Randwick-Botany Little Athletics. The athletics clubs have provided a communication channel to pass information to schools using the field on a casual basis.

4.7 Discussion with Industrial Neighbours

A number of industrial neighbours either participate in CPRC meetings or have attended the CPWE workshops, such as Kelloggs, Solvay Interox, Qenos and Pacific National. Accordingly, issues raised by industrial neighbours are also included in **Section 5** of this report.

Orica representatives have also engaged in door knocking campaigns in the commercial complexes adjacent to the CPWE (in Corish Circle and Baker Street) to provide information and respond to questions about our plans to remediate the CPWE. Information relating to ongoing management has also been provided to these groups in the past.

In addition, there have been several meetings with industrial neighbours within the BIP, such as Qenos, ABB and SGS (SGS Australia Pty Ltd) to review the proposal and in particular the suggested access route from the CPWE to the proposed DTD Plant through Qenos land. These discussions have covered the impact on their operations and mitigating measures for the duration of the project, focusing on:

- new supply of services including natural gas and electricity;
- stockpiling of the treated soil;
- employee car parking access during the project;
- noise and vibration management;
- emissions control to avoid human exposure;
- reinstatement of the car park on completion of the project; and
- continued communication between these businesses and Orica.

Participants have reflected a willingness to co-operate with Orica's project requirements.

4.8 Discussion with the Broader Community

Whilst formal communication about the project has been engaged in at CPRC meetings and CPWE workshops (which are always advertised and open for anyone to attend), there has been a significant amount of information provided to the community via many other communication vehicles such as:

- regular Orica local newspaper columns covering the range of remediation projects underway at the Orica site (*Southern Courier/St George and Sutherland Shire Leader*);
- CPRC newsletters that provided information on the various remediation technology options;
- fact sheets about community consultation for the project, history, remediation technologies investigated, bioremediation and DTD technology;
- newspaper advertisements providing details of CPWE community workshops;
- letters and flyers during 2005 and 2006 advertising the workshops;
- a dedicated, maintained HCB website where there is information about the project, its history and its progress;
- door knock visits to adjacent business park neighbours to provide an update on the project; and
- emails to the CPRC between meetings to keep members informed of progress briefings to other community groups relevant to the site such as BEREPA and the BIP Community Consultative Committee.

5 Community issues/questions raised

A summary of the issues raised and discussed by Orica, the CPRC and the wider community during the course of formal CPRC meetings and a series of workshops focussed on remediation of the CPWE is provided in **Table 5.1**.

Please note that if additional information, relating to specific community questions or issues, has become available since the meetings or workshops, the original answers have been enhanced or modified to provide clarification as necessary. All original questions and answers are contained in the reports on the workshops that are listed in **Section 6** of this report. Full copies of those reports have been shared with participants, posted on the Orica HCB website and are available from Orica upon request.

Bioremediation and the three thermal treatment remediation options were discussed with the CPRC in detail, but given the decision to pursue DTD technology, the issues summarised below only reflect discussion on this option. The full documents reflecting the discussion and issues relating to the other remediation options are listed in **Section 6** of this report (and as noted above are available on the Orica HCB website or on request).

Table 5.1 Summary of Issues or Questions

ISSUE/QUESTION	ORICA RESPONSE
HUMAN HEALTH IMPACT ASSESSMENT (HHIA)	
Is vapour / airborne dust the most significant risk to human health?	Vapour and contaminated dust from site works (i.e. excavation and movement of soil) typically account for most of the risk from site remediation works. Such risks can be minimised if site works are undertaken in an enclosed building. On projects involving thermal desorption on the Rhodes Peninsula, it was estimated that emissions from the thermal plant typically contribute less than 1% to total human health risk. A similarly small contribution from the DTD Plant proposed at the CPWE would also be anticipated. Nonetheless, ongoing continuous and periodic air monitoring would occur during treatment operations.
An HHIA is important to the community. Would Orica prepare one?	Yes, the consulting firm URS Australia Pty Ltd (URS) has prepared a Human Health Impact Assessment (HHIA) as part of the EA.
What process will URS follow in the preparation of the HHIA?	Preparation of the HHIA for the CPWE followed a similar approach to that used for the Groundwater Treatment Plant (GTP) Human Health Risk Assessment. A similar suite of chemicals were considered.
Do you assess the health of residents?	The HHIA considered risks to on-site and off-site receptors e.g. the BIP workers, Hensley Athletics Field and the nearest residents.
What testing/monitoring would occur as part of the HHIA?	The ambient air risk assessment considers background levels of chemicals in ambient air based on existing monitoring results.
What HHIA data exists for other sites where this technology has been used?	The HHIA drew upon comprehensive data from numerous United States (US) projects, and some recent data from the Rhodes Peninsula relating to the performance of the DTD technology.
The community feels that it is important for NSW Health to be involved in the planning.	Orica will liaise closely with NSW Health and DEC during the HHIA preparation process. Copies of workshop reports, meeting invitations and CPRC papers have been forwarded to NSW Health.
WORKERS' SAFETY	
What training is provided for remediation workers?	Training of the workers involved in the remediation is a very important part of the project. Training in the application of safe work methods including the correct use of protective equipment will be undertaken at the commencement of the project and periodically during the course of the works. In addition, there will be extensive training of DTD Plant operators by personnel with directly relevant experience.

ISSUE/QUESTION	ORICA RESPONSE
How are risks for remediation workers reduced?	The main hazard faced by remediation workers will be exposure to contaminants within the Excavation and Feed Soil Buildings. Worker exposure will be controlled in three ways. First, each building will be provided with an emissions control system to draw fresh air into the building, thereby reducing the build up of contaminants. Second, air quality within the buildings will be monitored on a full time basis, and third, personal protective equipment, including respiratory protection will be used at all times when working inside the buildings.
The conditions in the shed are very hot and uncomfortable. Can the work be undertaken by robots/remote devices rather than humans?	The technology to undertake the works necessary within the buildings remotely or by robots is not readily available. In addition, there is considerable site decision making required during the work, which machines cannot provide. A range of safe work practices will be in place to protect workers including high levels of supervision, a "buddy" system for workers, full time monitoring of air quality, use of personnel protective equipment including respirators, decontamination units, and management practices to avoid heat stress e.g. shorter working shifts, frequent breaks, high level liquid intake etc.
Are workers appropriately attired?	Yes. Personal protective equipment, including respiratory protection will be used at all times when working in the buildings, as well as for certain other tasks, where the potential for exposure to contaminants exists. They will also have access to a full-time hygienist on site. Air will be monitored inside the building and the EA will contain an outline of the health and safety plan, with a detailed plan to be prepared prior to commencing works on site.
Where will the clothing be destroyed?	It is anticipated that used protective equipment will be suitable for disposal to landfill. Where this is not the case, it would be shredded and treated on site in the DTD Plant.
What involvement by WorkCover will occur during initial consultation stage?	A copy of this report has been forwarded to WorkCover NSW (WorkCover) and Orica will keep them updated. Close liaison with WorkCover will occur during the detailed design and planning phase prior to mobilisation to ensure that on-site risks are assessed and managed to their satisfaction.
Will base line blood samples of workers be taken before and after the project?	Yes, blood samples of workers will be taken. This is explained in the Remedial Action Plan (RAP), included in the EA.
When will safeguards/measures be implemented?	As a minimum, Orica must comply with the Occupational Health and Safety (OH&S) Act 2000, regulations and various standards and codes of conduct which requires Orica to implement appropriate safeguards for workers. A detailed and site specific OH&S plan will be produced, and workers will be trained in its requirements prior to work starting on site.

ISSUE/QUESTION	ORICA RESPONSE
Will there be change rooms with showers inside and are they located close to the plant? Do the workers require special soap?	Decontamination units will be present during the works. The units comprise a 'clean' side and 'dirty' side. In areas where contaminated material is present, an exclusion zone is established along with a transition zone where personal protective equipment is put on/taken off. Some details on this procedure are included in the RAP. Orica will ensure that details on these procedures will be included in the OH&S Plan, which will be prepared after approval of the EA and prior to work commencing on site. Special soap is not required to be used by the workers.
ODOUR	
Will there be odour?	As site excavation and pre-treatment works would be conducted within enclosed buildings, the potential for odorous emissions would be minimised. Gaseous emissions from these buildings would be captured by the emission control system in activated carbon. Similarly, odours from the DTD Plant are not anticipated to be significant given the extensive off-gas treatment process integral to the Plant. Trucks carrying the material from one building to another will also be covered to minimise odorous emissions from this activity.
In terms of the impact of odour, what time of the year will processing take place?	Summer, proposed to commence January 2008.
How bad is the smell?	The material in the CPWE is recognised as being odorous, but it is difficult to quantify how offensive this odour is as each person responds differently to different odours. A range of controls will be implemented to mitigate odour and air quality impacts, such as conducting site excavation and pre-treatment works within enclosed buildings, minimising the potential for odorous emissions and capturing gaseous emissions from these buildings by the emission control system in activated carbon. In addition, trucks carrying the material from one building to another will also be covered to minimise odorous emissions from this activity.
There have been odour issues at Rhodes. Will there be the same here at Botany?	Odorous emissions from the works at Rhodes were well documented in the various environmental assessments and Commissions of Inquiry held for those projects. However, the nature of the works at Rhodes is significantly different from that proposed at the CPWE. The Rhodes projects involves open-air excavation of very large quantities of contaminated material (over 600,000 m^3), whereas the excavation of the CPWE will be entirely within a building, and will only represent about 10 to 15% of the Rhodes excavation quantity. Accordingly, Orica anticipates far less odour impact.

ISSUE/QUESTION	ORICA RESPONSE
NOISE/VIBRATION	
How loud will the noise be?	Modelling shows that the noise levels will exceed the DEC guideline levels. However it should be noted that noise mitigation measures will be considered during the detailed design stage. Much of the site works would involve the use of excavators, loaders and trucks within the enclosed buildings. Most of the mobile equipment, excluding a front-end loader would be operated during normal business hours. The building emission control systems and DTD Plant exhibit a low droning noise associated with the induced draft fans. This is not expected to be intrusive.
Will the fans on the air emissions systems be noisy?	The building emission control systems and DTD Plant exhibit a low droning noise associated with the induced draft fans. A range of measures including silencers and acoustic enclosures would be provided to mitigate these sources to the extent practicable.
Is it likely that we won't know the impacts of noise until the project starts?	This is partially true due to limitations in the noise models currently available. However, the modelling and design work undertaken to date has been supplemented by recent experience from Thiess Services Pty Ltd (Thiess) operations on the Rhodes Peninsula. This information and experience are likely to be directly relevant to the CPWE.
How will noise be managed?	Every noise source has been considered in the preliminary design and taken into account in the noise modelling. A range of mitigation measures will be implemented, including undertaking the excavation and pre-treatment works inside buildings, careful location of the emissions control systems and DTD Plant behind buildings, construction of noise screening mounds, use of silencers and acoustic enclosures for fans and stacks, and maintenance of silencing equipment to mobile plant items.
Will noise monitoring be required?	Yes. Particular emphasis would be placed on noise monitoring during the early parts of the project, following commencement of thermal treatment operations. Once compliance with noise goals had been demonstrated, the frequency of noise monitoring would be reduced for the duration of the project.
Does Orica have a noise licence for the CPWE site?	The existing Environment Protection Licence (EPL) for the BIP sets noise limits for the site operations.
Will vibrations from the rail line impact on this project?	No. The proposed remediation works are not sensitive to vibration.
The Statement of Commitments in the draft EA refers to noise standards and these need to be specified.	The Statement of Commitments (SoC) refers to Orica's EPL No. 2148 and the EPL noise criteria is discussed in the EA. Orica included a reference in the SoC in the EA for clarity.

ISSUE/QUESTION	ORICA RESPONSE
The draft EA does not include anything about the current level of noise?	New plants are required to contribute 10dBa below background levels. There is noise criteria to meet and noise mitigation measures have been suggested, however, these will not be finalised until detailed design of the plant occurs. Orica's EPL states that monthly noise monitoring must be undertaken on and around the site. Through this monitoring Orica has collected a lot of data about background noise levels in the area. This regular monitoring will be used during operation of the DTD Plant to see if requirements are being met. Orica will ensure that results are shared with the CPRC. Orica updated the noise section in the EA to clarify these issues.
Can Orica be sure that once operations begin that noise levels will not show above the limit?	Noise modelling undertaken at the BIP boundary for the EA shows that the limits would not be reached. According to the DEC licence, any new development cannot exceed the BIP criteria. Monitoring will be undertaken to confirm this and if any breach is identified then additional noise controls will need to be used.
Discussion of noise mitigation measures in the draft EA describes measures "…that may be required". Concern was expressed that the measures are not described as "will" be required or incorporated.	Orica advised that some form of noise measures will be required and incorporated but the exact mitigation measure to be used (e.g. shielding) can not be identified until the detailed design of Plant is complete. That's why the term "may" has been used in the EA.
VISUAL IMPACT	
What is the potential visual impact of DTD Plant?	The main visual impact would be the enclosed building located over the CPWE and fronting Corish Circle. The stacks of the DTD Plant and emissions control systems would also be visible from off-site locations. However, in visual terms these are not significantly different to the other structures that currently exist on the BIP. Furthermore, the visual impact is only temporary.
Are there visible flames from burning gas emissions?	No. However, a steam plume will be visible from the DTD Plant stack.
ENVIRONMENTAL RISK	
Will the liner be pierced by the technology?	The top and base liners are likely to be contaminated, so they will require treatment. Accordingly, they will be excavated along with the contaminated soil.

ISSUE/QUESTION	ORICA RESPONSE
In the draft EA, section 3.6 states "…indicates that the liner may be leaking…". The community is concerned that Orica does not know definitely whether or not the liner is leaking.	Orica explained that it is difficult to state with certainty whether leakage into the CPWE liner is occurring. This is because checks for leaks are limited to inspections on the sides as the car park structure lies over the top. Orica suspects that rainwater is leaking into the CPWE and Orica has a program in place to remove the water (through pumping) in the CPWE. Groundwater monitoring also takes place to assess the integrity of the liner and results are shared with the CPRC and the DEC. Orica reviewed and improved the description in the RAP, which is part of the EA.
Do you know if the CPWE liner is split or decayed?	Orica explained that it is difficult to state with certainty as checks for leaks are limited to inspections on the sides as the car park structure lays over the top. From the inspections conducted there does appear to be some chemical degradation of the liner. Some damage was also noted on the western side – repairs were made where possible. As indicated above, Orica suspects that rainwater is leaking into the CPWE and Orica has a program in place to remove the water (through pumping) in the CPWE.
Is there any danger of the CPWE liner splitting and waste going everywhere during excavation?	Yes there is potential for the liner to split, though it is unlikely that waste would go "everywhere" because the excavation would be within an enclosure and involve only a small part of the CPWE at any one time. Work plans will be prepared and will provide proposed management practices and this would control and manage any spillage.
What risk does this pose with regard to further contamination of groundwater and how would it be managed?	It is proposed that a number of sumps will be constructed to near the base of the CPWE on its low side (near the Qenos car park) to enable extraction of any liquid contained within the liner in advance of excavation. The liner would not be excavated until it is certain that free liquids have been removed.
Which part of the technology does a shed cover?	Buildings would cover the excavation process (the Excavation Soil Building) and the feed operations of the DTD Plant (the Feed Soil Building). The DTD Plant would be located outside and adjacent the Feed Soil Building, although the DTD feed conveyor would be partly within the Feed Soil Building.
Is there negative pressure or a vacuum used in the shed? How is this operated?	The buildings will be fitted with an air emission control system that includes a fan to draw air from within the buildings. Each system would be operated continuously, to induce a flow of air into, rather than out of, the buildings.

ISSUE/QUESTION	ORICA RESPONSE
Is there a risk when digging to set up site works?	The Excavation Soil Building will be designed as far as practicable to be founded on uncontaminated material beyond the boundary of the CPWE. Disturbance of site soil would therefore be minimal whilst the building is being established. Similarly, the Feed Soil Building will be located over an existing concrete slab, and so disturbance of the underlying soil would be minimal.
Will an environmental security bond be established for the CPWE?	This is not usual practice, particularly where the company undertaking the works is financially sound, as is the case with Orica. However, this is ultimately a matter for the DoP or DEC to consider. It should also be noted that the project is only a short-term one.
What risk is created if there is not a shed to capture processing emissions?	If the works were conducted in the open, there would be increased risks to human health and the environment. To reduce such risks to the extent considered practicable, Orica has determined that it is appropriate that the excavation and feed soil operations are conducted in enclosed buildings.
AIR (DUST, VAPOUR)	
What types of gases are emitted during processing?	The main gases emitted from the DTD Plant are related to the combustion of natural gas (e.g. carbon dioxide). Contaminants are destroyed with a high efficiency in the thermal oxidiser. Levels of contaminants emitted as gas in the off-gas would be below any risk based standards, with the possible exception of mercury, which are predicted to comply with regulatory standards for stack concentrations.
Will dust suppression be utilised during excavation of the contaminated material?	Dust from the site works is not anticipated to be significant, as excavation of the contaminated material will be undertaken in an enclosed building.
What fugitive emissions are generated?	Fugitive emissions from the excavation and pre-treatment operations will be mitigated by the emissions control systems of both buildings. The carbon filters fitted to both systems are anticipated to be approximately 90% efficient in capturing volatile gaseous emissions from these activities. Also dust would be removed in a baghouse or equivalent to high efficiency. Fugitive emissions from the DTD Plant are anticipated to be relatively minor given that the plant is maintained under slight vacuum during operations by an induced draft fan that draws air and process gases through the plant prior to treatment in the plant off-gas treatment system.
What informed air quality assessment have you done? Do you know what's in the car park?	Testing on a range of media (air, water, and soil) in and around the CPWE has been undertaken periodically since 1997. This information has been used to inform the air quality assessment and HHIA with respect to the types of chemicals present. The contents of the CPWE have also been investigated several times, most recently in 2006, and are well characterised.

ISSUE/QUESTION	ORICA RESPONSE
How are air emissions managed?	Desorbed contaminants and water vapour from the DTD Plant rotary dryer are routed to a cyclone where large dust particles are removed and then to the Plant's thermal oxidiser where the contaminants are destroyed. Following oxidation, the off-gas is rapidly cooled in a quench to minimise dioxin reformation, passed through a baghouse to remove dust, and then treated to remove acids in the scrubber before being emitted to atmosphere via a stack.
Are dioxins and furans produced?	All combustion processes (where chlorine compounds are present) produce dioxins/furans. However, the plant will be designed to meet its licence conditions as well as those specified under the HCB Waste Management Plan. It will also meet best practice standards as set out in the Stockholm Convention for persistent organic pollutants.
Would WorkCover regulate the excavation process?	An OH&S Plan will be prepared for the project, in accordance with relevant WorkCover and legislative requirements. The Plan will be reviewed internally by Orica's engineers and occupational hygienist, and externally by an independent toxicologist with experience in this type of work. Once finalised the OH&S Plan would be provided to NSW Health and WorkCover for comment.
How are dioxin/furans treated?	Dioxins, if present in the desorbed contaminants, are initially destroyed in the thermal oxidiser by combustion. The thermal oxidiser off-gas passes through a quench to stop dioxin reformation and a scrubber to remove acid gases.
Is there a threat of acid rain?	No. Any acidic gases are removed to acceptable levels in the scrubber prior to the gas being emitted to the atmosphere.
Are cumulative effects on air quality of the project and other projects in the area included in the EA?	Yes. Background air quality data (from the BIP and other emission sources in the regional airshed) is considered in the modelling.
Are the GTP air impacts factored into the air quality study?	Yes, as indicated above.
How will dust from soil stockpiles be managed?	Only those materials that meet the site reuse criteria will be stockpiled external to the buildings. At such locations, a combination of sprinkler systems and "spraygrass" applied to the surface of the piles will be used to control dust emissions.
Is Orica continuing with the Community Air Monitoring Program?	Yes. This program was established voluntarily by Orica as part of the GTP project and still has two rounds of volatile organic compound monitoring planned to occur. If timing permits, one of those rounds could be conducted during remediation of the CPWE.

ISSUE/QUESTION	ORICA RESPONSE
SOIL OR WASTE MATERIAL	
Do different types of soil affect the application of each technology?	Yes. Typically, thermal technologies work most efficiently in sandy soil. The CPWE contains predominantly sandy soil.
Can Orica provide a 100% guarantee that contaminated soil from other sites will not be brought to Botany?	There are no current plans for waste from other sites to be brought to Botany for treatment, with the possible exception of the Pacific National stockpile. This 6,000 m^3 stockpile contains similar contaminants to the CPWE and is located just off the southern boundary of the BIP. However, a separate Environmental Assessment (or a modification to the CPWE EA) would need to be prepared and approval sought if this material was to be treated.
In the draft EA, the description of what happens to "oversize materials … crushed" is not clear. Further description of the treatment process is required.	Thiess explained that material up to 50 mm in size is acceptable to go in the DTD Plant, as is smaller sized material such as sand. If oversize material is found and requires treatment, the process is that bricks will be crushed, timber shredded and drums shredded. Although not anticipated, if a full drum is found, an assessment would occur before shredding is used. Descriptions of the material in the CPWE are provided in the EA. The EA also describes how oversized material will be assessed and the processing options available. The RAP includes similar descriptions. Orica acknowledges that the description of the oversized material is fragmented but this is so each process area can be described.
In the draft EA, there is reference to "Treatment of other wastes", what waste is it referring to?	This section of the draft EA is only referring to small amounts of other wastes within the CPWE (e.g. concrete, drums and timber). Orica has clarified the description in the EA and RAP.
A difficulty at the Rhodes site (DTD Plant) has been differing levels of contaminated material. Is there a great magnitude of difference in the contamination levels in the feed soil from the CPWE, and how will it be mixed?	Thiess advised that drilling results from CPWE samples (additional waste characterisation) showed gradual rather than distinctive layers. The chemical composition analysis showed different concentrations e.g. higher concentrations in the base than the top. Feed material will be homogenised by digging vertically. More details are available in the RAP.
Is there sufficient characterisation of the CPWE material?	Yes, 100 samples or more have been taken and analysed. More detail is provided in the RAP.
What risks arise when excavating soil for treatment?	The main risk is the potential for emissions of odour, vapour and dust. This risk would be minimised by enclosing the excavation works in the Excavation Soil Building.

ISSUE/QUESTION	ORICA RESPONSE
WATER/GROUNDWATER	
Does Orica intend on using treated groundwater from the GTP as part of the project? Is it possible or will it interfere with DTD treatment? The community feels that treated groundwater should be used if possible.	Orica does not intend on using the GTP treated groundwater in the DTD processing as the supply has been allocated to existing industry on or near to the BIP, i.e. there is no water available for the DTD process. Orica is currently finalising arrangements with clients for the use of this water. These clients plan to use the treated water for a period of time far greater than the length of the DTD operation. The DTD Plant can use any reasonably clean water to wet the soil, trace levels of organics are acceptable. Orica has provided more detail in the EA.
How much water is required by the project?	Based on the volume of material, approximately 8,000 tonnes of water is required. A more accurate amount will be known once detailed design occurs.
In the draft EA, Figure 18 is titled *Water Management*. What does the figure mean?	In the draft EA, Figure 18 depicts the use of water on the CPWE site, including wash down processes and treatment of water that is contaminated on the site. Although a small amount of water will be treated, some recycling occurs in the DTD Plant and water from the stormwater retention basin can be used, potable water from Sydney Water's supply will be required. Orica moved Figure 18 closer to the appropriate discussion in the EA.
If Orica reaches the groundwater table during work, will it be prepared to manage groundwater issues?	Groundwater monitoring in the area of the CPWE provides good information about the depth to groundwater. The groundwater table is below (> 4 m) the base of the encapsulation and therefore it is unlikely that the remediation works will involve excavation to the groundwater level. If groundwater is encountered, Orica will need to undertake dewatering activities and will need to pump and treat the groundwater. Orica provided more information on groundwater and the depth to the water table in the RAP.
How will Orica be able to avoid reaching the groundwater?	As noted above, the groundwater table is below the base of the encapsulation. Orica will include more information on groundwater and the water table in the RAP.
Does water continue to accumulate once work starts?	No, further seepage will not occur since the excavation area will be covered by a shed.
How deep is water table?	Currently the water table is 4 to 5 m below the CPWE liner. The water table has been dropping, it was > 3 m a few years ago.
Could heavy rain affect the groundwater level and the project?	No, the water table is quite a distance below the base of the liner (> 3 m). It is not likely that the water level would raise that much, even with a large amount of rain.

ISSUE/QUESTION	ORICA RESPONSE
The RAP refers to seepage water, what is it and how is it treated?	Seepage water refers to the free water that may be present in the CPWE. As indicated above, Orica suspects that rainwater is leaking into the CPWE and Orica has a program in place to remove the water (through pumping) in the CPWE. The seepage water has been treated (in the past) at the Steam Stripping Unit and is proposed to be treated at the GTP in the future. Orica enhanced the description of seepage water in the final RAP.
Seepage water - what happens to it?	During the remediation, the seepage water will be treated through the water treatment plant in place for the duration of the project. Orica has expanded the discussion in the final RAP for clarity.
Is there groundwater in the bottom of the CPWE?	Groundwater is > 3 m below the liner and therefore it is unlikely that groundwater is seeping into the liner. However, as discussed above, Orica suspects that rainwater is leaking into the CPWE and this water would gravitate to the bottom of the CPWE.
Will water discharged into stormwater system from the work site be monitored?	Only water collected on the roof of the sheds will be discharged to the stormwater system. This rainwater would not be contaminated and monitoring will not be undertaken.
RESIDUES	
What is the quality and quantity of residues produced?	No residues are produced by the DTD Plant. Spent carbon, dust and contaminated filters will be produced from the building emissions control systems. Such materials will be disposed off-site or treated in the DTD Plant.
When the project is complete, will there be any contaminated waste?	Prior to decommissioning the DTD Plant, extensive testing will be undertaken of the CPWE and treatment areas to ensure that all materials that need treatment are in fact treated. This may include, for example, scabbling (scrapping off) of the floor slab of the Feed Soil Building if this is shown to be contaminated.
TECHNOLOGY	
Is accessibility to parts considered in planning?	The DTD Plant would be provided with an inventory of spare parts for normal operational requirements. Local sources of parts would also be identified or arrangement made to transport from overseas suppliers if necessary.
Is there the same amount of data on the successful implementation of each technology and how mature is each?	DTD technology has been in use since the mid 1980s and is a well-proven technology. In the US, DTD technology has been used on approximately 44 hazardous waste treatment projects and successfully treated about 739,000 tonnes of soil contaminated with chlorinated compounds.

ISSUE/QUESTION	ORICA RESPONSE
How many times has this technology been used for treatment of HCB?	Data from one US DTD project involving treatment of soil spiked with HCB is available. Data from the Allied Feeds site on the Rhodes Peninsula, where low levels of HCB are present, is also available.
What is the power/energy consumption?	Anticipated natural gas and electricity consumption is approximately 200,000 GJ and 993 MW respectively.
What are the Greenhouse Gas emissions?	Anticipated greenhouse emissions are: CO = 3.76 tonnes, CO_2 = 10,792 tonnes, NOx = 10.89 tonnes. CO_2 emission from electrical consumption is estimated at a further 400 tonnes.
Can you provide more information on best practice standards for dioxin emissions from plant operation?	The Stockholm Convention best environmental practice guidelines for the use of thermal oxidisers to treat hazardous waste nominate a dioxin emission standard of 0.1 to 0.01 ng/Nm3. The latter concentration is typically specified as an upper limit by DEC for thermal plant operations and is also specified in the HCB Waste Management Plan.
If you were a resident here, what remediation technology would you prefer? (question directed to Thiess consultant, John Hunt)	As a contractor, I would ask what are the risks for Indirect Thermal Desorption (ITD) and DTD, and are they manageable? Both processes are proven elsewhere in the world and DTD is currently being used at Rhodes. They will both meet relevant emission standards. The buildings that are proposed to enclose site works (e.g. excavation of material) would mitigate most risks associated with the balance of the project.
What is Orica's preferred thermal technology at workshop 2 (22 November 2005) and what are some important factors in the selection process?	Orica will select its preferred approach after considering the community comments raised in this series of workshops. Orica is still comparing the technologies available and is keen to select a technology that is simple and ideally one that limits the amount of waste created that could impact on other communities. ITD has one major disadvantage, compared with DTD, that being the generation of a concentrated waste stream that requires a second treatment step.
What are treatability trials and when are they undertaken?	A bench or pilot scale treatability trial is typically undertaken to determine soil treatment temperature, predict stack emissions and emission control system requirements before committing to full-scale treatment. Treatability trials are currently underway.
HAZARDS	
Can this technology operate within 50 to 100 m of residential area?	DTD technology has been approved for use within less than 150 m of residences on the Rhodes Peninsula. DTD systems have been used in the US within 50 m of residential areas.
What hazards are posed due to unplanned maintenance?	The type and nature of any hazard would be specific to the cause of the unplanned maintenance. Any unplanned maintenance would be subject to a risk assessment to identify any potential OH&S risks to operators in particular.

ISSUE/QUESTION	ORICA RESPONSE
Will bioremediation experiments interfere with thermal process if it is later used?	Water introduced during the bioremediation process may have some impact on the thermal process. If this occurs it would require more energy to be used to remove the excess water. Methane could also be a problem if produced at high concentrations.
Will a new hazard/risk analysis be undertaken for the BIP and/or the broader area?	The CPWE project would require a comprehensive risk/hazard analysis. The status of both the BIP Emergency Response Plan and the Botany Bay Disaster Plan will need to be considered.
How close is the HCB Repackaging Plant?	The HCB repackaging plant will be approximately 400 m from the proposed DTD Plant location.
Any risk of spontaneous combustion?	No. There is not enough "fuel" in the soil for spontaneous combustion to occur.
RISKS	
What planned maintenance will occur?	Planned maintenance is undertaken daily for minor items that can be undertaken hot. The plant is shut down weekly for cold maintenance items.
What risks are there during operation? For example, buried drums, penetration of liner.	Buried drums found during excavation would be shredded and their contents mixed with the contaminated soil for treatment. The liner will be excavated and removed only following a process designed to ensure that any free-standing water is removed.
What sort of working conditions will apply to thermal remediation?	Full safety plans would be prepared with stringent conditions. The workers will be required to wear personal protective equipment including respiratory protection. Heat stress is often a major consideration depending on the prevailing weather conditions. Typically, work shifts are shorter where heat is a problem.
How is risk to workers mitigated? Is there danger to people from these processes?	The main hazard faced by remediation workers will be exposure to contaminants within the Excavation and Feed Soil Buildings. Worker exposure will be controlled in three ways. First, each building will be provided with an emissions control system to draw fresh air into the building, thereby reducing the build up of contaminants. Second, air quality within the buildings will be monitored on a full time basis, and third, personal protective equipment, including respiratory protection will be used at all times when working inside the buildings. Workers will be fully inducted and trained and be required to wear the necessary personnel protective equipment at all times. An OH&S Plan will be established prior to commencement and monitored for the duration of the works.

ISSUE/QUESTION	ORICA RESPONSE
If something were to go wrong, would you bring people to clean up?	The project addresses diluted concentrations of pollutants in a large quantity of otherwise uncontaminated material. Accordingly, at any one time, there is only a very small quantity of contaminant in the Plant. The risk posed by this operation is therefore considered to be low in the context of the other operations that occur at the BIP and at chemical manufacturing plants in general. If an incident were to occur an appropriate cleanup would be conducted.
Can magnetic resonance be used to detect buried drums?	Orica has recently used ground penetrating radar scanning at the CPWE to determine if there are large items present e.g. concrete/rock or drums. Based on the test results, metal was detected in some small areas across the CPWE. Any such material found during excavation would be shredded and their contents mixed with the contaminated soil for treatment.
What contingency is there if any drums are found?	This is unlikely given that the waste was placed nearly 20 years ago, and as a result, any drums would most likely have corroded. However, a drum handling protocol will be established to deal with any drum encountered during the excavation works.
When the excavation building moves location to the next section, does the exposed portion of the encapsulation present a risk?	The batter of the excavation will be sealed and be covered with the car park liner and sealed as best as practicable before the building is moved to the next section to mitigate release of gaseous pollutants. If the liner cannot be reused, then alternatives such as covering the face with High Density Polyethylene (HDPE) or by some other appropriate means would be used to control fugitive emissions. This will be addressed during the detailed design.
Will the buildings have a backup electrical supply?	No. If there is a power failure, all operations in the buildings would cease. The building would be closed and in a static state, with no emissions to the environment. Operations would not be resumed until the emission control system is operational, including low explosion limit (LEL) checks. Under this failure scenario there are no emissions to the environment.
Was a plane crash or terrorism considered in the risk assessment?	Yes it was considered in the Preliminary Hazard Analysis (PHA). The likelihood of these events occurring was considered 'extremely unlikely'. More detail is provided in the PHA.
Hazards and risks studies always list everything as low but there are lots of low risks in our life, how many is the community expected to take on board?	The longer the CPWE remains the greater the hazard or risk it becomes to the community and the environment. Treatment of the waste will present hazards and risks but these are of a relatively short duration.

ISSUE/QUESTION	ORICA RESPONSE
TRAFFIC	
The draft EA states that "Traffic on local area impact is not significant", even though traffic has increased 300%. The draft EA refers to 24 hour operations and 12 hour operations, what is the time span of the 12 hourly blocks?	The traffic impact has been assessed as not significant since most truck movements will occur on the BIP site. External movements would occur during the approximate five month construction period and this is anticipated to increase existing traffic movements by 1%. Operations (24 hours), hence traffic movements, will occur within the Feed Soil Building. The 12 hours of truck movements (7am – 7pm) will occur within the BIP between the Excavated Soil Building and the Feed Soil Building. Operational hours are described in the RAP. Orica enhanced the discussion on Transportation and Access in the EA to describe: access, transport for project and transport of material.
In the draft EA, traffic statistics used are based on 2002 data. The traffic amounts have changed a lot since 2002 with new businesses established. The draft EA refers to two options for the traffic route. One option goes past Pagewood Public School and the community thinks it would be better if Orica can avoid Holloway/Page Streets and minimise impact on the school and residential areas.	The 2002 RTA traffic data is the latest available. In the draft EA, two different traffic routes were provided for site access and will be used primarily during the construction period that is relatively short (approximately five months). Orica agreed that avoiding the school is a good idea and reviewed the traffic route options suggested.
TIMEFRAME	
How long will the project take to complete?	Subject to the final quantity of material that is treated, the project duration is estimated to be approximately 18 months from mobilisation.
When will Orica make a recommendation to the Board and communicate to DEC?	When a technology has been demonstrated to be effective a budget can be developed and the Board can consider its position. Any proposals would be subject to approval by the regulating authority.
What is the timing?	The current timeframe aims for approval in 2007, with mobilisation to site to construct buildings and facilities proposed to commence late 2008.
If the DTD proposal is approved, why will it take so long to remediate the site?	The required time frame allows for project planning, community consultation, preparation of environmental assessment and technology application, review by statutory authorities, exhibition, consideration of submissions, determination of the development application, further site investigations, site establishment, the availability of the DTD Plant, operation of plant, and decommissioning at completion.

ISSUE/QUESTION	ORICA RESPONSE
Will you need to extend the time required for the project?	The project is now three months later than originally anticipated.
PLANNING PROCESS	
What planning process is required for this project?	The project requires assessment and approval under Part 3A of the Environmental Planning and Assessment Act. As such, the Minister for Planning is the approval authority. The precise form of environmental assessment is determined by the Director-General of the DoP. The bioremediation trials did not require DoP approval, as they were not considered a development. DEC has a key approval role with DTD technology. The DEC assessment process follows the National Protocols, which have been developed to provide guidance for assessing projects relating to specific scheduled wastes. The protocols specify information, which must be provided to the DEC. An public exhibition period and opportunity for community feedback is a key part of the determination process.
Who identifies what environmental assessment process is required?	State Environmental and Planning legislation stipulates how developments are assessed in NSW. This legislation, together with further requirements from the DoP, stipulates what must be covered under the environmental assessment.
It is likely that an EA will be required for thermal technology? After the 30 day exhibition period, how does the DoP direct the proponent to respond to issues raised by the community?	Yes. An EA is required for the DTD proposal. Under the recent planning reforms, the proponent of a project may be required to report how they have responded to concerns raised in submissions from the public. This is done by preparing a Preferred Project Report (PPR). The PPR is required to outline proposed changes to the project to minimise its environmental impact. If significant changes are proposed, the Director-General of the DoP may require the proponent to make the PPR available to the public.
What is the appropriate site use?	The land is zoned for industrial use.
What land use is proposed for the area of the CPWE once it is remediated?	It is not proposed that the land use will change once the CPWE is remediated. It will remain as an industrial zone, consistent with the BIP zoning.

ISSUE/QUESTION	ORICA RESPONSE
What is on the land that will be where the treatment plant will be built? Is there any contamination there?	The thermal plant will be located on the former Propathene plant site. The contamination status of this site is not fully known. However, other than demolition of some existing concrete plinths, and provision of services, excavation of the site is not proposed. Further, the treatment plant and Feed Soil Building areas will be prepared by construction of a new concrete slab over the existing pavement. Accordingly, there would be negligible risk posed by any existing site contamination.
State significant projects are now known as major projects, what determines a major project? Is it a financial or environmental decision?	The new State Environmental Planning Policy for Major Projects outlines when a project is considered a "Major Project". The criteria depend on the precise nature of the project but can include financial and risk considerations and specific categories of projects. The Policy also has specific criteria for various areas including the BIP. Any development in the BIP or Sydney Ports area that the Minister considers potentially hazardous and that involves significant quantities of dangerous goods or a waste facility is defined as a Major Project. The Minister for Planning has ultimate discretion to decide if a project is classified as a Major Project. Depending on the precise proposal, any thermal desorption technology project at BIP is likely to be considered a major project because it involves the treatment of waste.
Since the auditor role for Rhodes is included in the conditions of consent for that project, could the CPRC have a copy of those conditions? Are the conditions from the Rhodes project useful for DEC when assessing the CPWE project?	Orica has provided a copy of the Rhodes Conditions of Consent to the CPRC. DEC advised that as the Rhodes project uses the same technology as is proposed for the CPWE the conditions were likely to be similar if the project is approved. DEC explained that the Rhodes project also has an independent environmental planning expert.
Who oversees the Statement of Commitments?	The proponent provides a Statement of Commitments in the EA. The DoP reviews the SoC as part of determination of the EA and uses these as the basis for developing consent conditions. The proponent must meet the conditions of consent and report compliance to the DoP. Compliance with conditions of consent that are in the environmental protection licence is also monitored by the DEC.
What options are there for a community challenge once approval has been granted?	DoP advised that upon the Minister's decision, if a community member had made a submission, they have 28 days to challenge.

ISSUE/QUESTION	ORICA RESPONSE
PREFERRED PROJECT REPORT	
Do the key government agencies look at the PPR?	Yes. DoP would review this report and it would also be provided to the Minister. Other agencies, such as DEC, may also review the report.
Is there legislative basis for Orica to send out the PPR to the public?	If the PPR proposes significant changes to the original proposal then the Director-General may require it to be made available to the public.
How is the PPR to be exhibited? Is it legislated?	If the Director-General considers that significant changes are proposed to the nature of the project, the Director-General may require the proponent to make the PPR available to the public. The precise exhibition requirements have not yet been determined by DoP, but exhibition may be for 30 days.
GOVERNMENT ASSESSMENT OF PROPOSAL	
Is DEC's input legislated? Or does DoP overrule?	Under the new planning reforms the DoP does not overrule the requirement for Orica to obtain an EPL (or amend its current licence) under the *Protection of the Environment Operations Act*. DEC is expected to have a major role in assessing any thermal remediation project, including setting licence conditions.
What resources does DEC have to undertake an assessment? Will this be sufficient to assess Orica's proposal?	We understand that DEC has in-house environmental scientists, laboratories, engineers, and emissions, air and waste specialists. DEC also uses external experts from time to time. Orica anticipates that DEC will undertake a rigorous assessment process. The time required for assessment may be longer if several proposals are under assessment at the same time.
Asked at the Question and Answer session on the draft EA held in December 2006: can the DEC advise of its view on the draft EA?	Comments had not been collated at the time of the Q&A session in December 2006. The draft EA was distributed to internal units in the DEC for review and the feedback has been considered in finalising the EA.
PLANT OPERATION	
15.1. What are the operating hours?	The DTD plant will operate 24hrs/day, 7 days/week, with typically one day per week set aside for planned maintenance.
Will enough contaminated material be excavated in the 12 hours for continual 24 hour operation of the DTD plant?	Trucks on site will move enough contaminated material in 12 hours for the plant to run 24 hours/day. Contaminated material will be stockpiled for treatment in the Feed Soil Building. Details are provided in the RAP.
At what rate will treatment occur?	Subject to the detailed design, the plant will have a nominal treatment capacity of approximately 25 to 35T/hr.

ISSUE/QUESTION	ORICA RESPONSE
Is treatment of 35 tonnes/hour feasible or ambitious?	The CPWE is 5 to 6 m deep - the top 4 to 5 m mainly dry and approximately 10% of the waste material is moist (near the bottom of the liner). This is the right level of moisture for treatment. The difficulties experienced at Rhodes are due to issues such as feed material size. The sandy waste in the CPWE is ideal for DTD treatment.
Is thermal technology labour intensive?	No. About 10 workers over two shifts are required to operate a thermal plant.
Is the whole operation undercover?	Only the excavation and pre-treatment/feed soil processes will be housed within buildings.
What type of trucks are used? What sort of controls do they have?	Twelve tonne capacity bogie drive tip trucks fitted with closed bodies will be used to transport soil from the Excavation Soil Building to the Feed Soil Building. The bodies will be designed to minimise the potential for contamination during loading by the use of covers or shields.
What is the quality of the material and how much of it is there?	There is approximately 45,000m^3 of waste in the CPWE. In addition, some of the overlying capping and underlying natural soils may also need to be treated.
How many trucks will there be?	Nominally, three trucks will be used to transport soil to the Feed Soil Building.
What happens to trucks after hours?	Trucks generally would be retained on site for the duration of the contaminated soil excavation works. After the project is finished, they will be decontaminated prior to removal from the site.
Are the required skills available to operate the plant?	Trained experienced technicians would initially be sourced from the US. However, local plant operators would be trained to carry out most roles.
Will the plant be computerised?	Yes. A purpose built control room incorporating a range of electronic data acquisition and control equipment will be used to control the DTD Plant.
What utilities are fed into the plant?	Natural gas, electricity and water are required for DTD operations. In addition, the plant has its own compressor for air.
Do you expect any technical “hiccups” during the DTD operation as experienced with the GTP operation?	The commissioning phase is critical for addressing any upfront operational issues. The project will have the benefit of further knowledge/improvements made during the commissioning/operation of the DTD Plant at Rhodes. Notwithstanding this, it is possible that additional improvements in operating processes and equipment may be implemented from time to time.

ISSUE/QUESTION	ORICA RESPONSE
What happens to excavated material that is too large to go into the DTD Plant?	The material is initially tested and either crushed to a smaller size for treatment or disposed to landfill as discussed above.
MONITORING	
Will you test emissions constantly?	A range of plant performance parameters will be tested on a continuous basis and other parameters will be tested periodically, in accordance with licence requirements.
Is it technically possible to report continuous monitoring of the operations of the plant to the public?	Continuous monitoring of specified stack parameters is typically standard. Periodic reports will be required by licence conditions and these will be made available to the public. We would also provide updates on how the project was progressing at the community/CPRC meetings. This would include reporting of emission results and other monitoring, such as noise.
What will be done to make emissions safe?	Continuous monitoring supplemented by periodic compliance tests will be implemented to ensure that stack emissions criteria are satisfied. Where non-compliance is indicated, corrective measures will be implemented immediately.
Given the problems with the GTP are you confident about the people who will be operating the DTD Plant?	Yes. There are excellent examples of this treatment technology in the US and more recently here in Australia. We are very confident.
How will ongoing monitoring be conducted and reported?	An extensive program of monitoring for both stack emissions and ambient air quality in the surrounding area will be implemented for the duration of the project. Stack monitoring will involve both periodic and continuous elements. All data generated from the monitoring program will be made available to the community.

ISSUE/QUESTION	ORICA RESPONSE
The conclusion in section 8.6.5 of the draft EA states: "Provided that appropriate, environmental safeguards…are implemented". How are recommendations in the EA monitored? Who checks that Orica has complied?	Mitigation measures included in each section of the EA also appear in the SoC and would be included in the DoP conditions of approval (if the project is approved). An EPL will also be required from DEC that will specify discharge limits and monitoring requirements. The requirements will be reflected in any approval granted by DoP. Orica will need to prepare a number of management plans for environmental management during construction and operation of the remediation works. In addition to wanting to fulfil its commitments generally, if Orica breaches its Licence, Orica may be prosecuted – a further incentive to ensure appropriate environmental safeguards are implemented and maintained. The Rhodes DTD Plant included the DEC licence requirements in the DoP conditions of consent. An auditor explanation/organisation chart was provided at the 13 February 2007 CPRC meeting to assist in explaining this.
COST	
What is the cost of the project?	The anticipated cost of the project is $30M as noted on the Major Projects Application submitted with the draft EA to DoP.
What financial back up has Orica provided? Is it in the SoC?	Orica has allocated funds for the project, it is a short-term project so it is not anticipated that financial backup is required.
The CPRC requested an explanation of the differing dollar amounts allocated by Orica for the CPWE remediation as listed in stock exchange information. The announcement states that $60M (pre tax) provision to deal with stored HCB and the CPWE has since been increased by $49M (post tax).	The estimates reported in the stock exchange information cover costs for both the CPWE remediation and the export of HCB waste. They are based on discounted cash flows, which are required by the accounting standards. The important point is that Orica has provided sufficient funds, based on its best estimates for both projects.
LICENSING	
Will the CPRC be given the opportunity to comment on a draft licence?	DEC advised that it hopes to achieve public input through the planning process (e.g. EA public exhibition) and not during the licensing process so a draft licence is not publicly available for comment.
Will a copy of DEC licences be provided to the CPRC?	DEC advised that the licences are publicly available through their website. Orica offered to distribute the licence to the CPRC.

ISSUE/QUESTION	ORICA RESPONSE
INDEPENDENT REVIEW	
Will the IRP be involved in the review of this project?	The IRP Terms of Reference do not include the CPWE. However, Orica would be open to exploring community access to independent technical advice. Having said that, It is important to identify the right expertise and skills required.
Will Orica be required to undertake an independent review of the project and provide feedback to the community?	There is no legislative requirement to have the project independently reviewed. However, during the project, Orica has and will continue to engage many independent consultants who are acknowledged specialists in this field.
Is there sufficient auditing of the project? How will the community be kept informed of the results?	An EPA accredited Contaminated Land Auditor will oversee the project. The DEC outlines auditing requirements in consent conditions and also provides guidance for Auditors. Orica will provide audit information to the CPRC through meetings/correspondence and the broader community through newsletters and local newspaper columns.
It was suggested that an independent (i.e. someone that the community has confidence in) site auditor be appointed to assess Orica's compliance with DEC requirements and DEC's monitoring of the project. This person would then report back to the CPRC. The community wants to know if conditions are being met and if incidents occur e.g. malfunctions of plant.	Orica advised that an EPA accredited Contaminated Land Auditor will be appointed to assess compliance with the RAP. Orica explained that the EPA accredited Auditor does not check compliance with operating licence conditions, but confirms that the site has been remediated to the extent explained in the RAP, i.e. signs off that the site is appropriate for future industrial use. The community requested broader auditing than this. Thiess described the auditing process used at Rhodes, i.e. computer reporting/DEC review, independent expertise provided to the community and monthly community meetings. Orica offered to appoint a compliance auditor similar to the role that Ken Holmes (from KMH Environmental Pty Ltd) provides for the GTP project. The community agreed this is worthwhile. Orica agreed to include this in the SoC in the final EA.
Could Orica prepare a model/organisation chart of the auditing process proposed for the project that would be useful for community?	Orica prepared an auditing chart and distributed it at the 13 February CPRC meeting.
When will Orica engage an independent Contaminated Land auditor?	Orica advised that an independent Contaminated Land Auditor will be engaged in 2007. This was indicated in the RAP.
OTHER STAKEHOLDER VIEWS	
What are the views of the green groups?	Through the CPRC and the community workshops, Orica is providing opportunity for green groups to express their views on the remediation options.

ISSUE/QUESTION	ORICA RESPONSE
There is 70,000 tonnes of waste in the CPWE, how is that compared to a football field?	If the CPWE waste was spread across the playing area of a football (soccer) field the waste would be approximately 10 m deep.
What are the views of the regulators?	Orica has been liasing with the DEC and DoP during the development of remediation options. This process will continue throughout the consultation and approvals process.
COMMUNITY CONSULTATION	
What is required of the community in the consultation process?	The CPRC meetings, community workshops and consultation processes enable the community to express concerns and raise issues relating to remediation options. Orica will gather this information to select an option, investigate, report and further consult on the project.
Will the community be making a decision on the option selected?	Orica will select the remediation option. However, all community concerns and issues will be considered in making this decision.
What ongoing consultation will occur and how will it be built into the planning stages?	Orica will continue its consultation with the community in accordance with a Communications and Consultation Plan. This plan will meet the approval condition.
Allow plenty of time for community input e.g. 60 days if EA is required rather than statutory 30 days.	Orica formally commenced its consultation process on the options in May 2005 and will continue to seek and capture the community's views throughout the planning process including an exhibition period as required.
Will the CPRC have the opportunity to review the draft EA?	Yes, Orica will make the draft EA available to the CPRC during the government agency adequacy review period.
Please ensure that leaflets, in addition to the newspaper, used to advertise the workshops are distributed widely.	Orica advertised Workshop 2 through two local newspapers, the website, the CPRC and distributed leaflets to the local area. Orica all further workshops using a similar approach and expanded the leaflet distribution area.
It is important to let the community know that the options are being narrowed down.	Orica updates the community on the progress of the CPWE project through the CPRC, regular columns in two local newspapers, regular newsletters and workshops.
Will the Questions and Answers from the workshops be consolidated?	Yes. Orica will consolidate the Questions and Answers from all the workshops. It is also valuable to report on the issues raised at each individual workshop.
It is important to go beyond the CPRC with community consultation.	Orica's Communication and Consultation Plan targets the community immediately adjacent to the CPWE in addition to the CPRC and wider community.

ISSUE/QUESTION	ORICA RESPONSE
In the draft EA, the description of the external neighbours and relevant food manufacturing sites is incomplete. The 19A Baker Street complex includes Nutrisoy (soy products), Kensington Produce (pet food producers) and Bakers Maison (bakery). A further review of any food production on Corish Circle is required.	Prior to finalising the EA, Orica committed to: • undertake door knocking/consultation to confirm business types and obtain contact details; and • update maps in the final EA to reflect new information and all relevant food businesses. These things were done prior to submitting the EA.
Have all the school or children related premises been considered e.g. Dudley Street preschool?	Prior to finalising the EA, Orica checked the location of Dudley Street preschool and any other child care centres in the vicinity of the project. We have shown close-by sites in the relevant figure in the final EA.
Will the role of the CPRC change during this project?	The role of the CPRC is outlined in the HCB Waste Management Plan. The CPRC are currently developing Terms of Reference.
Will the CPRC be given regular reports on issues at the plant e.g. accidents/health concerns during the operational life of the project?	Orica intends to report to the CPRC on matters such as community feedback, complaints, incidents, and operations - this point was added to the SoC in the EA. A description of how health concerns/accidents will be managed and reported was included in the RAP, an appendix to the EA.
Will the complaints register include complaints regarding health of workers or residences or matters such as TV reception? And will details of the complaints register be reported to the CPRC?	Yes. As above.
What would be the format of the complaints database?	Orica recently introduced Darzin software to record community feedback. An electronic complaints system using the Lotus Notes database is also used at Orica. So any complaints will be electronically recorded with details of time, date, nature of complaint and the response.

ISSUE/QUESTION	ORICA RESPONSE
The EA states that a new Community Consultation Committee (CCC) is proposed. The CPRC feels that this is taking away the role and duties of the CPRC. The CPRC also feels that this approach means Orica is moving away from the requirements of the HCB Waste Management Plan. It was noted that the CPRC is "up to speed" on the project and a new committee will not be aware of the issues.	Orica explained that the CCC approach was an attempt to try to target businesses/residents in the immediate vicinity of the proposed DTD Plant who may not have attended any CPRC meetings or community workshops so far and to focus discussion purely on remediation of the CPWE. Orica also advised that Thiess has a close role in managing the project and they have used a CCC approach at Rhodes. The community recommended that a sub-committee of the CPRC be set up to focus on the CPWE remediation project, and that it include interested people such as close by businesses. The CPRC agreed that the sub-committee should be open for anyone to attend. Orica noted that the frequency, format, timing and location of the meetings would need to be considered taking into account the requirements of all stakeholders. Orica will consider all stakeholder feedback in developing the next phase of the consultation approach. No final decisions regarding the consultation format during remediation works, if approved, have yet been made.
Does the DEC keep up with monthly community meetings at Rhodes?	DEC advised that they do attend the monthly community meetings at Rhodes.
Can the community have more time to consider the draft SoC?	Yes. Orica welcomes all feedback and requests feedback is submitted by early February 2007.
Will the CPRC have further time to forward comments on the draft EA?	Yes, Orica agreed that further comments could be provided prior to finalising the EA.
Will Orica arrange site tours for the community?	Yes. Orica is planning to offer community site tours of the BIP again in 2007. This program will also be extended to cover the CPWE project.
DATA IN ENVIRONMENTAL ASSESSMENT	
In the draft EA, the aerial photograph is six years old and consequently does not depict more recent buildings, would expect a more recent photo.	The aerial photos used in the draft EA are the most recent available.
A reference was made to the consistent use of "would" and "may" in the draft EA document. It was noted that this didn't give the community confidence that certain things "will" be done.	Orica explained that the writing style is used because the impact assessment is prepared before the project is approved.

ISSUE/QUESTION	ORICA RESPONSE
OTHER WASTE AND THE DTD PLANT	
What is the status of other HCB related contamination on the BIP site?	This issue was discussed in a Briefing Paper and presentations to the CPRC at its November 2006 meeting. Orica is investigating other contaminated areas on site and will continue to share information and remediation options with the CPRC and the wider community. Once enough information has been collected remediation options will be evaluated. No decisions have been made yet as to how or when that other waste will be treated.
If any other waste on site is found, will it go through the DTD Plant?	The DTD Plant is temporary and is proposed to be constructed for the treatment of the CPWE contaminants and removed when complete. However, as updated to the CPRC at its November 2006 meeting, Orica is undertaking investigations on HCB related waste and these have focussed on known HCB contaminated areas. When information is gathered, an evaluation of the best treatment options will be made. Treatment using the DTD Plant may be one consideration. If other waste is identified as suitable for treatment using this technology, then Orica would consult with the community and the regulators. Such a proposal would require additional assessment and may require additional licensing and applications.
Will Orica use the treatment facility to treat other waste in the BIP?	As described above.
Will this remediation technology only be used to treat the CPWE or does Orica plan to bring in other contaminants?	As described above.
OTHER ISSUES	
Will the GTP be used to treat any water from the CPWE?	The only water from the CPWE to be treated in prior to the remediation works is that described as seepage water on page 17 of this report. This water has been treated at the Steam Stripping Unit in the past and may be treated at the GTP. That treatment is only for water pumped out prior to remediation works. Any water found in the CPWE during the remediation works will treated through a water treatment facility which is part of the CPWE project.
Will the HCB Waste Management Plan change?	The DTEWR has advised that the Plan will not be reviewed until the approvals process has been completed.
Is it time to review the HCB Waste Management Plan?	DTEWR has advised that the Plan will not be reviewed until the approvals process has been completed.

ISSUE/QUESTION	ORICA RESPONSE
Does the Car Park Waste come under the Stockholm Convention?	HCB is listed in Annex C of the Stockholm Convention. The DTD Plant will be designed to comply with the requirements of the Convention.
Is there more information/data sheets available for the Hypalon liner or information from the manufacturer?	Some technical specifications for the Hypalon liner are available. They were supplied at the time of installation.
Can you provide an update on bioremediation directly from the EBCRC?	Updates on Bioremediation research will continue to be provided to the CPRC.
Do you think that the port expansion project will have commenced when this project occurs?	There may be some overlap but the timing of that project is uncertain.
Declaration of contaminated sites - what is the requirement or policy of the DEC for investigations to commence at a possible contaminated site?	Under the Contaminated Land Management Act 1997, various parties have obligations to advise DEC of possible land contamination that may constitute a significant risk of harm. DEC may declare such sites to be investigation sites. In addition, a request for a change in land use may also trigger a consideration of contamination.

6 Consultation Documents

Table 6.1 presents a list of the documents used in consultation with community on the remediation of the CPWE. Copies of these are mostly available on Orica's website www.oricahcb.com and can also be obtained by contacting Orica's community hotline 1800 025 138.

Table 6.1 List of Consultation Documents

DOCUMENT TYPE	DOCUMENT TITLE	AUDIENCE	DATE
Newsletters	HCB CPRC update	Approx. 5,500 local residents/businesses	May 2007
			Dec 2006
			Aug-Sep 2006
			Apr-May 2006
			Sep-Oct 2005
			Mar-Apr 2005
Meeting papers	Minutes and presentations available	CPRC	13 Feb 2007
		CPRC and broader community for presentations through website *(CPRC agreement provided from 14 Nov 06 only)*	14 Nov 2006
		CPRC	8 Aug 2006
			9 May 2006
			7 Feb 2006
			8 Nov 2005
			9 Aug 2005
			10 May 2005
			14 Apr 2005
			8 Feb 2005
			9 Nov 2004
Community Workshop Reports	Question & Answer session on draft EA	CPRC/community	5 Dec 2006
	Update on bioremediation trial and DTD selection	CPRC/community	19/22 Aug 2006
	EA Scoping Report	CPRC/community	27 Jun 2006
	Community Briefing Session	Community	17 Jun 2006
	Bioremediation update and selection of DTD as backup option	CPRC/community	7 Feb 2006
	Bioremediation update, backup thermal options, planning & approvals processes	CPRC/community	22 Nov 2006
	Remediation options	CPRC/community	11 Oct 2006
Community correspondence	Flyer	Local community/HAFUT	19/22 Aug 2006
	Flyer	Local community/HAFUT	27 June 2006
	Flyer	Local community/HAFUT	7 Feb 2006
	Letter	Local community/HAFUT	22 Nov 2005
	Letter	Local community/HAFUT	26 Jul 2005
Website	www.oricahcb.com	Broader community	Ongoing, approx. bi-monthly updates

DOCUMENT TYPE	DOCUMENT TITLE	AUDIENCE	DATE
Newspaper columns	Update on EA timing as a results of treatability trials	Broader community	April 2007
	Update on EA timing		Mar 2007
	Report Q&A session, promote CPRC meeting		30 Jan 2007
	Report Q&A session		19 Dec 2006
	Promote CPRC Q&A session		28 Nov 2006
	Promote CPRC meeting & Q&A session		31 Oct 2006
	Promote CPRC meeting		26 Sep 2006
	Report on 27 June workshop, promote 19/22 Aug workshop & CPRC meeting		25 Jul 2006
	Report on 17 June briefing session, promote 27 June workshop		27 Jun 2006
	Promote 27 Jun workshop		30 May 2006
	Report on CPRC tour of Rhodes DTD plant		23 Mar 2006
	Report on 7 Feb workshop & CPRC meeting		28 Feb 2006
	Promote 7 Feb workshop & CPRC meeting		31 Jan 2006
	Promote CPRC meeting		20 Dec 2005
	Report on: 22 Nov workshop; short-term remediation & CPRC		29 Nov 2005
	Workshops: report on 11 Oct, promote 22 Nov		26 Oct 2005
	11 Oct workshop advertisement		27 Sept 2006
	General update		30 Aug 2005
	Monitoring, short term remediation, long term investigations, CPRC		5 Jul 2005
	Report on CPRC		21 Jun 2005
	Report on Bioremediation		7 Jun 2005
Newspaper advertisements	workshop	Broader community	19/22 Aug 2006
	workshop		27 Jun 2006
	Community Briefing Session		17 June
	workshop		22 Nov 2005

7 Ongoing Consultation

During the exhibition of the EA, Orica understands that the DoP will advertise public display details. Orica plans to hold a community drop in session to respond to any queries that people may have during the exhibition period. Orica will also prepare and overview document of the EA for distribution to the local community during the exhibition period and will continue to provide project updates in the CPRC newsletters and our regular newspaper columns whilst the EA is being reviewed and a determination made.

Orica intends to continue a comprehensive consultation approach through the implementation phase of the CPWE remediation project if approved. Orica proposes to update the consultation plan for the next phase of the project. The plan will draw upon the existing communication approaches and tools and would consider the requirements for all project stakeholders.

Orica is grateful for the feedback and commitment provided by the CPRC and other project stakeholders to date and greatly values the contribution that effort has made to developing the remediation option presented in the EA. A continuation of this collaborative approach going forward through future project phases is anticipated and welcomed by Orica.

Appendix A

Summaries of Discussions Between Orica and the CPRC

The following is a summary of discussions with the Community Participation and Review Committee (CPRC) about the Car Park Waste Encapsulation (CPWE) and the process Orica worked through, in consultation with the community, to investigate a number of options to determine the most appropriate means of remediating the CPWE.

Discussions about this issue date back to August 1999 when Orica released its action plan for the contaminated soil. However, for the purposes of this document, the following meetings and workshops summarised below focus on discussions from late 2004 until January 2007.

- **CPRC Meeting – 9 November 2004**

There was discussion at the meeting about information presented by Orica relating to air emission testing for the CPWE. Orica reported all emission sampling undertaken to the Department of Environment and Conservation (DEC) in early October and provided an undertaking to the CPRC to perform further testing away from the site and outside the boundary. Orica stated that these results would be reported back to the CPRC.

- **CPRC Meeting – 8 February 2005**

Questions were asked by members of the CPRC about the data on air emissions, as discussed at the last meeting, and whether there was hexachlorobutadiene (HCBD) contamination in the groundwater. It was noted that there had been some spikes in the testing. Orica responded to this observation by saying that the reason for the higher levels was not known but that it was most probably due to disturbances in the soil during investigations. It was communicated that for this reason, Orica had repeated the testing and there were no high spikes.

- **CPRC Extraordinary Meeting – 14 April 2005**

The extraordinary meeting was held in order to present the findings of a Human Health Risk Assessment (HHRA) for air emissions from the CPWE as well as the Feasibility Study based on the Technology Review of treatment options for the CPWE.

Participants asked questions about the three technologies selected for further evaluation, including questions on the length of treatment time, whether the treatment was *in situ* or *ex situ* and whether there were any waste by-products from the treatment process.

At the end of the meeting the CPRC agreed that Orica should progress work on the three thermal options proposed by GHD Pty Ltd (GHD) to provide a more comprehensive evaluation that identified the key issues associated with each option, as well as continuing to work on the bioremediation project.

- **CPRC Meeting – 10 May 2005**

There was a presentation and more detailed discussion on options for the remediation of the CPWE: bioremediation; and, three thermal options arising from a feasibility study produced by GHD, Thiess Services Pty Ltd (Thiess) and Focus Environmental Inc. (Focus). A representative from Thiess presented information on *ex situ* thermal treatment processes and undertook to present on *in situ* processes at

the following meeting. The CPRC asked about environmental controls during the work. Thiess described controls such as the construction of a large shed over the site and an exhaust system at emission points.

There was also a report presented on bioremediation of the CPWE by the Environmental Biotechnology Cooperative Research Centre (EBCRC) covering the scope of the research project, the processes and the results to date. The CPRC queried the length of time it would take to remediate the waste in the car park using this method and was provided with a rough estimate of 4 to 5 years. There was also discussion about the type of monitoring process that would be used in such a project.

- **CPRC Meeting – 9 August 2005**

As agreed at the previous meeting, Thiess gave a presentation on *in situ* thermal desorption (ISTD) or Terratherm for the CPWE. This is one of three thermal options prescribed by the GHD/Thiess feasibility study. Orica informed members that technology investigations were continuing in parallel with the bioremediation trials, that the trials were producing favourable results, and that it had submitted a proposal to DEC to undertake a field trial for bioremediation to the CPWE. CPRC members were directed to the website: www.terratherm.com for more information. Orica also advised that it had requested summaries of the three treatment options and that several workshops would be offered to the CPRC and wider community to better understand the options being considered.

- **Workshop 1 - 11 October 2005**

The first workshop was held at Hillsdale Bowling Club on 11 October 2005, providing background on investigations for options for the car park waste, including bioremediation. A representative from Thiess presented technical information on the three options of Indirect Thermal Desorption (ITD), Direct Thermal Desorption (DTD) and ISTD. The key issues raised at the workshop related to:

- the content of a Human Health Risk Assessment;
- the composition of air emissions and how they would be treated;
- the risks and hazards;
- the approvals process;
- the nature and proposed management of residue from each process; and
- the process of bioremediation.

- **CPRC Meeting – 8 November 2005**

The CPRC was informed that the bioremediation proposal for field trials had been submitted to the DEC for review and approval.

An update was provided by Orica on the first CPWE workshop and new information was provided about another workshop scheduled for 22 November 2005 that would focus on specific issues raised in the first workshop.

- **Workshop 2 - 22 November 2005**

The second workshop was held at Orica on 22 November 2005. Orica advised that ISTD would no longer be considered an option because:

- the risk for adverse impact on the groundwater was considered to be unacceptable; and
- there was less experience with the application of the process on a project scale similar to the CPWE compared with the other treatment options.

Presentations were made by the Department of Planning (DoP), the DEC, the EBCRC, Thiess and GHD. The topics presented and discussed were:

- an update on the bioremediation option
- a revision of thermal treatment options
- hazards and risks of thermal treatment options.

At the end of the workshop, participants agreed that Orica should present its preferred thermal technology to a third workshop for further input.

- **Workshop 3/CPRC Meeting – 7 February 2006**

The third workshop was held at Orica on 7 February 2006. As agreed at the previous workshop Orica presented on bioremediation and the preferred thermal technology that was proposed for use should bioremediation prove to be unsuitable. Orica explained that it had selected DTD as the preferred thermal technology because:

- DTD technology had been used on many remediation projects around the world (over 120 examples);
- it is relatively simple technology when compared with ITD (less operational risk);
- stack emissions can be maintained well within best practice standards;
- there are no contaminated residues, and therefore no additional disposal step is required unlike ITD; and
- the duration of the project, and all its associated impacts, would be significantly reduced by DTD compared with ITD.

A presentation on DTD technology was made by Thiess.

- **Tour of DTD Plant at Rhodes – 25 February 2006**

The CPRC were invited to tour the DTD Plant at Rhodes, which was in the commissioning phase. Attendees stated that the tour was very interesting and noted how hot it would be for the workers at the plant who have to wear full protective clothing.

- **CPRC Meeting – 9 May 2006**

Based on the agreement at the second workshop that Orica would present to the community on its preferred thermal option, CPRC members were advised that Orica's Environmental Assessment (EA) for the CPWE would focus on the two options of bioremediation and DTD technology.

It was reported that the *in situ* bioremediation trials had not been conclusive to date due to difficulties in retaining soil moisture and distributing the treatment solution. Given these difficulties, Orica proposed to undertake a further *in situ* trial using a polymer to assist with moisture retention. An *ex situ* bioremediation trial was also proposed inside large sealed containers. An emissions control system would be in place for all excavation work.

- **Community Briefing Session – 17 June 2006**

On 17 June, two half-day community information sessions were held at Orica to update the wider community on the various remediation projects proposed or underway at Orica's Botany site, including the remediation of the CPWE. The sessions succeeded in attracting a wider section of the community than had previously attended face-to-face briefings.

- **Workshop 4 – 27 June 2006**

The fourth workshop was held at Orica on 27 June 2006. A presentation was made by HLA Envirosciences Pty Ltd (HLA) on the Environmental Assessment Scoping Report (EASR) after which community members commented on what they thought were the high priority issues. Before submitting the Report to the DoP, Orica incorporated the changed status of these issues into the document.

As agreed at the previous workshop, discussion focussed on the report and the finer detail of the DTD process in terms of risk to people and the environment. There were also questions relating to:

- the planning approval process such as the length of the exhibition period;
- the technology assessment process;
- the advantages and disadvantages of DTD compared with bioremediation; and
- traffic impacts and how they would be managed.

A presentation was also made on bioremediation. At the end of the meeting, Orica agreed to keep the community informed of the progress of the *ex situ* bioremediation trials.

- **CPRC Meeting – 8 August 2006**

Orica advised the CPRC at this meeting that bioremediation would be unlikely to be further considered for the remediation of the CPWE as trials had shown that it was not effectively treating the contaminants in the soil. However, Orica advised it would continue investigations into bioremediation and potentially use it at other areas of the site to treat contaminated soil. Therefore, the CPRC was informed that Orica would progress its proposal to use DTD technology to remediate the soil. Details of the content and timeframe of the EA were discussed.

- **Workshop 5 – 19/22 August 2006**

This workshop was held at Orica on the Saturday morning of 19 August and repeated on the evening of 22 August to enable as many people to attend as possible. As informed at the last CPRC meeting, Orica advised community members that the results of the bioremediation trials had been inconclusive in terms of the field scale application of that technology for remediation of the CPWE, and that significantly more work (potentially many years) may be required to refine the bioremediation technology to suit Orica's requirements. Orica therefore advised that it had formed the view that DTD technology should become the preferred option for remediation of the CPWE.

An overview of the progress of the EA and the various impact assessments and supporting studies was provided prompting discussion and questions on health and safety risks, operating risks, the progress of the remediation work, and emissions management and monitoring.

- **CPRC meeting – 14 November 2006**

Orica updated the CPRC on the status of preparation of the draft EA for the CPWE and discussed holding a CPRC Question and Answer session. Orica also advised that treatability trials would be undertaken and that a Technology Approval is required.

- **CPRC Question & Answer session on the draft EA for the remediation of the CPWE - 5 December 2006**

Orica distributed a copy of the draft EA to the CPRC while it was undergoing an adequacy review by the DoP. The CPRC asked questions and provided feedback on the document. The key issues discussed related to: the impact of traffic and noise on residents and businesses, independent auditing of the project, the possibility of other waste being treated at the proposed facility and the role of the CPRC throughout the life of the project.