

# ASSESSMENT REPORT

## Modification to Project Approval Orica Car Park Remediation Project

### 1. BACKGROUND

Orica Australia Pty Ltd (Orica) is an Australian-based global company that produces mining, chemical and consumer products. Since 1941, Orica has been manufacturing chemicals at the Botany Industrial Park (BIP) in Banksmeadow (see Figure 1).



*Figure 1 – Site Location*

Between 1960 and 1991, Orica operated a solvents plant on the BIP site. This plant produced chlorinated solvents for use as dry cleaning fluids and refrigerants. Waste products from the plant were stored in drums located on a bed of boiler ash. Over time, the drums corroded and contaminated the ash bed and underlying soil with chlorinated hydrocarbons.

In 1980, the contaminated ash and soil was excavated and buried within a synthetic liner in the north-eastern corner of the BIP site. The area was then covered with bitumen and used as a car park.

The Car Park Waste Encapsulation (CPWE) site, as it is now referred to, currently contains about 70,000 tonnes of material that is contaminated with a range of chlorinated hydrocarbon wastes - including hexachlorobutadiene (HCB), tetrachloroethene (PCE), hexachlorobenzene (HCB) and octachlorostyrene (OCS) - semi-volatile organic compounds, polychlorinated biphenyls (PCBs), heavy metals, carbon dioxide, methane, and volatile chlorinated hydrocarbons.

On 12 November 2009, the Director-General (as delegate of the then Minister for Planning) approved a project application from Orica under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the remediation of the CPWE site.

Under this approval, Orica is allowed to:

- excavate and screen the contaminated material in an Excavation Soil Building;
- transfer the excavated material to a Feed Soil Building for further screening, drying and testing;
- treat the material in a Directly-heated Thermal Desorption (DTD) plant at very high temperatures;
- test the remediated material to ensure that it is suitable for reuse; and
- stockpile the soil before using it to reinstate the excavated car park site.

The general layout of the approved project is shown in Figure 2.

At this stage, Orica has commenced the DTD plant commissioning and proof of performance (CPoP) trials, and is scheduled to commence full-scale remediation operations in late July 2011.

## 2. PROPOSED MODIFICATION

In addition to the car park waste, Orica is storing around 16,000 tonnes of HCB contaminated material at various locations around the BIP site. As most of this material is significantly contaminated, and the treatment options for such material are limited, Orica will need to continue storing this material on the site indefinitely.

However, the material at Store E (see Table 1 below) has been classified as low level scheduled waste, and could be treated in the DTD Plant on the car park site.

**Table 1: Comparison contaminants in the additional materials versus CPWE materials**

	Material	Estimated tonnes	Maximum measured concentration mg/kg		
			HCB	HCB	Mercury
<b>Additional materials</b>	Concrete	480	260	4.7	1.4
	Soil	490	1,200	11	-
<b>CPWE</b>	Soil	70,000	641	11,700	14.7

To enable this to occur, Orica proposes to modify the car park remediation approval (see Appendix A). This proposal involves:

- putting the contaminated material into temporary containers at Store E (see Figure 1), and transporting it either to:
  - the HCB repackaging facility at Store J for crushing and screening before being repackaged (this is subject to a separate application, which is seeking to modify the HCB Repackaging Facility Project approval); or
  - Directly to the Feed Soil Building;
- treating this material in the DTD plant along with the other contaminated material from the car park site; and
- reusing the remediated material to reinstate the car park site.

Orica estimates that it would take 2-3 days to treat the additional material.

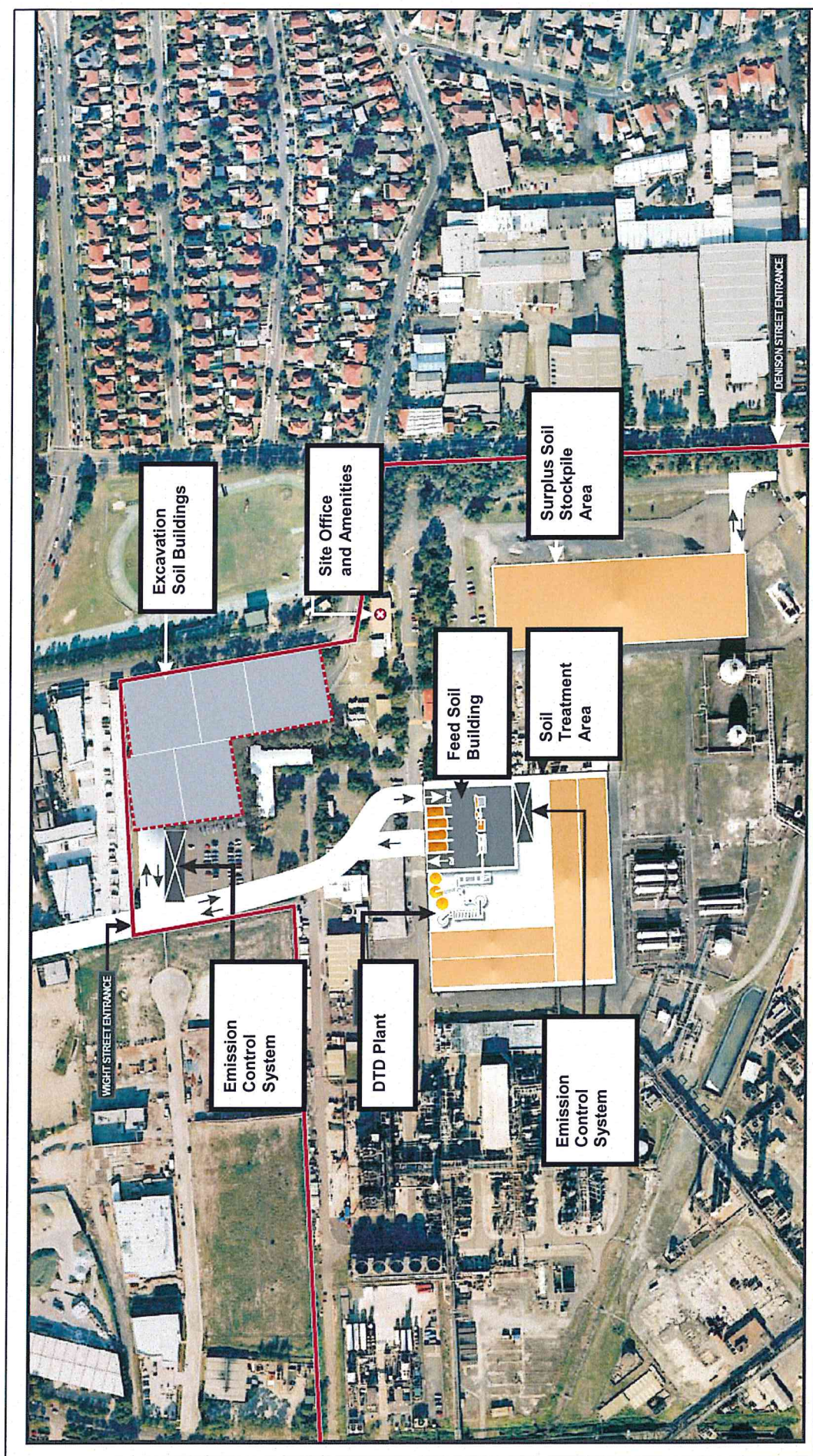


Figure 2: Approved CPWE site

### 3. STATUTORY CONTEXT

#### Approval Authority

The Minister was the approval authority for the original project approval, and is consequently the approval authority for this application.

However, under the former Minister's delegation of 25 January 2010, the Deputy Director-General may determine this application on behalf of the Minister. The Minister for Planning and Infrastructure has confirmed this delegation, subject to the local council not objecting to the proposal.

As the City of Botany Bay Council has not objected to the proposal, the Department is satisfied that the Deputy Director-General may determine the application under delegated authority on this occasion.

#### Section 75W

Under Section 75W of the EP&A Act, the Minister is obliged to be satisfied that what is proposed is indeed a modification of the original proposal, rather than being a new project in its own right.

The Department has reviewed the scale and nature of the proposed modification, and is satisfied that it can be characterised as a genuine modification of the original project as:

- it involves the treatment of a small amount of additional contaminated material (equating to approximately 0.01% of the total material to be treated at the DTD plant);
- the additional material contains similar contaminants to the material that is currently allowed to be treated in the DTD plant; and
- the environmental impacts of the proposed modification would be minor, and could be suitably regulated with some minor amendments to the existing conditions of approval.

### 4. CONSULTATION

Under Section 75W of the EP&A Act, the Department is not required to notify or exhibit the application. However, due to the potential public interest in the proposal, the Department exhibited the application from Wednesday 16 February 2011 to Friday 18 March 2011:

- on the Department's website;
- at the Department's Information Centre;
- at Botany Bay City Council's offices; and
- at the Nature Conservation Council's offices.

The Department also advertised the public exhibition in the Southern Courier and Sutherland Shire Leader, and sought comment from the Office of Environment and Heritage (OEH) and Botany Bay City Council.

Following the exhibition period, the Department received two submissions on the proposal: one from the OEH and the other from the Botany Environment Watch community group (see Appendix B for a copy of each of these submissions).

OEH indicated that the proposed treatment of the additional wastes is appropriate, and that the current approval and licensing regime is sufficient to control any environmental impacts associated with the treatment of the additional material. However, it recommended that Orica be required to prepare a management plan to minimise the potential impacts associated with packaging the additional contaminated material at Store E and relocating it to the Excavation Soil Building on the car park site.

In its response to submissions (see Appendix C), Orica has agreed to prepare such a plan.

The Botany Environment Watch supported the proposal, but criticised Orica for not having suitable public liability insurance in place to cater for any significant incidents that could occur during the remediation process.

While Council did not make a formal submission on the proposal, it advised the Department verbally that it had no concerns about the proposal provided Orica was made to comply with the existing conditions of approval.

## 5. ASSESSMENT

During its assessment of the merits of the proposed modification, the Department has reviewed the:

- environmental Assessment of the original proposal;
- existing conditions of approval;
- environmental Assessment of the proposed modification;
- submissions on the proposed modification; and
- relevant policies and guidelines.

A summary of the conclusions of this assessment are included in Table 2.

**Table 2 – Assessment of Key Issues**

Issue	Consideration	Recommendation
Relocation of the contaminated material from Store E to the Excavation Soil Building or Store J	<ul style="list-style-type: none"> <li>• The packaging and transportation of the contaminated material could generate minor dust, vapour, and odour emissions.</li> <li>• These potential emissions can be easily controlled with the implementation of standard mitigation measures, principally: <ul style="list-style-type: none"> <li>– the use of water sprays to minimise the generation of any emissions during the packaging and loading of the material at Store E;</li> <li>– the collection and treatment of any wastewater generated during the packaging and loading operations at the BIP's wastewater treatment plant; and</li> <li>– the implementation of Orica's standard procedures for the transport of contaminated material around the BIP site.</li> </ul> </li> </ul>	Prior to the relocation of any contaminated material from Store E, Orica must prepare a management plan to minimise the potential impacts associated with the relocation to the satisfaction of OEHL and the Director-General.
Remediation of contaminated material	<ul style="list-style-type: none"> <li>• While the additional material contains a higher concentration of HCB than the material approved for treatment, it is important to recognise that it would still fall within the classification of low level scheduled waste, and is therefore generally consistent with the contaminated material that is currently allowed to be treated in the DTD plant.</li> <li>• OEHL is satisfied that the contaminant mass loading to the DTD plant could be suitably managed to ensure that it remains within the parameters established for the project.</li> <li>• It also noted that a higher desorption temperature could be used to achieve an adequate desorption of the HCB contaminants in the additional material.</li> </ul>	Comply with the controls in the existing conditions of approval.
Air Quality	<ul style="list-style-type: none"> <li>• The project as modified would comply with the existing air quality limits.</li> </ul>	No change.
Noise	<ul style="list-style-type: none"> <li>• The project as modified would comply with the existing noise limits.</li> </ul>	No change.
Safety	<ul style="list-style-type: none"> <li>• The project as modified would not alter the safety risks of the project.</li> </ul>	No change.

## 6. CONCLUSION

The Department has assessed the merits of the proposal in accordance with the requirements of the EP&A Act.

This assessment has found that:

- the additional contaminated material could be treated in the DTD plant on the car park site without increasing the approved impacts of the original project; and
- the treatment of this material is in the public interest as it would reduce the environmental risks of the BIP as a whole.

Consequently the Department believes the proposal should be approved subject to some minor amendments to the existing conditions of approval (see Appendix D for a copy of the proposed notice of modification and the consolidated conditions of approval).

## 7. RECOMMENDATION

It is RECOMMENDED that, as delegate for the Minister, the Deputy Director-General:

- **consider** the findings and recommendations of this report;
- **determine** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approve** the application subject to conditions; and
- **sign** the proposed notice of modification.

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