NSW GOVERNMENT | Planning

ASSESSMENT REPORT

Section 96(1A) Modification
Relocation of Orica's Sodium Hypochlorite Plant

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1. BACKGROUND

The Botany Industrial Park (BIP) is located in the suburb of Banksmeadow in the Botany Bay local government area, and covers an area of 74 hectares (see Figure 1). Three companies carry out operations within the BIP: Orica, Huntsman and Qenos.

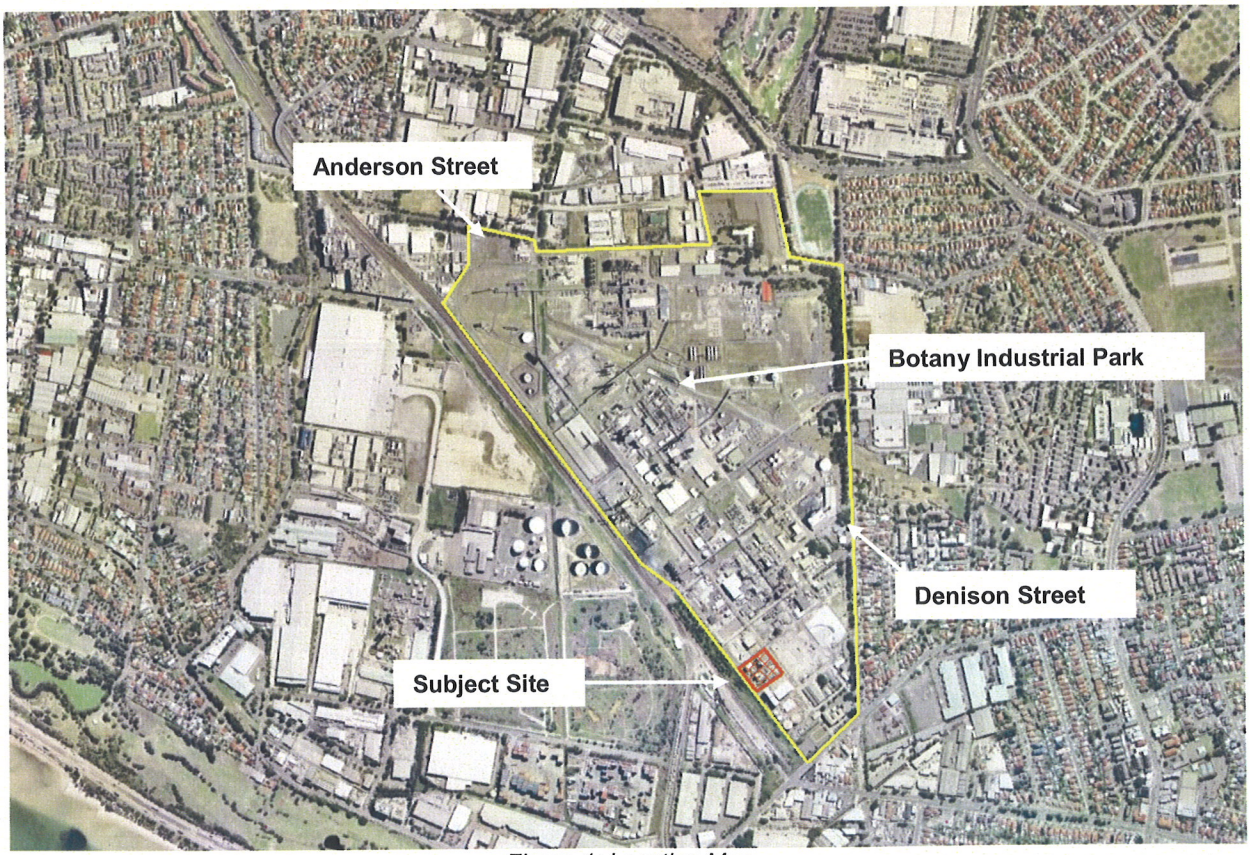

Figure 1: Location Map

Orica Australia Pty Ltd (Orica) has been manufacturing chemicals at the BIP since 1941, and currently operates a Chlor-Alkali Plant in the southern part of the BIP, which manufactures hydrogen gas, chlorine gas and caustic soda.

The original plant started operating in the 1940's, but on 6 November 1998 the Minister approved the construction and operation of a new Chlor-Alkali plant to replace the existing 1940's plant. The new Chlor-Alkali plant has been in operation since 2002 and the old Chlor-Alkali plant was demolished in 2007/8. Figure 2 shows the location of the old and new plants.

Adjacent to the Chlor-Alkali Plant, and forming part of the broader Chlorine area, are four sub-plants, including the:

- Hydrogen Chloride Plant;
- Ferric Chloride Plant;
- Sodium Hypochlorite Plant; and
- Hypochlorite loading bay and electrolysis area.

The Chlorine area, including the Chlor-Alkali Plant and four sub-plants operate under the Minister's consent of 1998 (DA 35/98) and have been modified twice:

- MOD-12-1-2006-i for demolition of the decommissioned Chlor-Alkali Plant; and
- MOD-180-11-2005-i for replacement of the hypochlorite loading bay, upgrading the hypochlorite tank farm and replacement of the technicians' change room. Upgrade of the hypochlorite tank farm did not proceed due to economic constraints at the time.

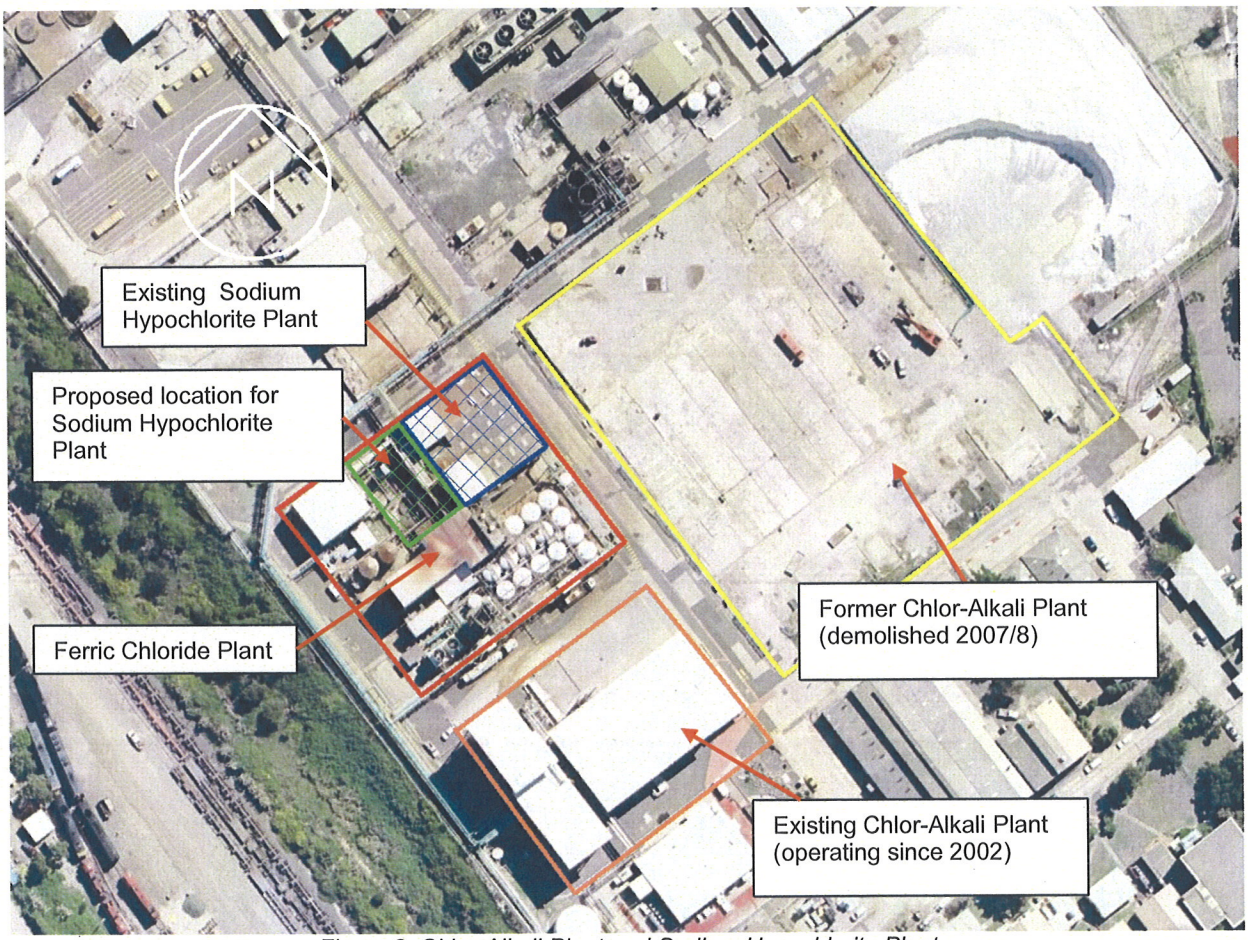

Figure 2: Chlor-Alkali Plant and Sodium Hypochlorite Plant

The Sodium Hypochlorite Plant (the Hypo Plant), shown in blue hatching on Figure 2, is a downstream operation that takes the chlorine and caustic soda produced at the Chlor-Alkali Plant and combines it with water to produce sodium hypochlorite. Sodium hypochlorite is used in the disinfection of water (pool chlorine), as cleaning products and bleaches and is stored on site in tanks before being transferred to customers via road tanker.

The Hypo Plant has been in operation on the site since 1944. The plant is located on a concrete slab with a surrounding steel structure covered with an asbestos cement roof. The steel structure is approximately four stories high and is severely corroded. Temporary structures have been erected to maintain operational safety, however the design of the structure does not facilitate long-term repairs, therefore the structure needs to be replaced. The asbestos cement roofing is over 50 years old and has become friable due to weathering. Improvements are also required to meet the Department of Environment, Climate Change and Water's (DECCW) bunding requirements.

2. PROPOSED MODIFICATION

Orica is seeking to relocate the Hypo Plant and remove the existing deteriorated structure to ensure continued safe operation of the Hypo Plant. The existing structure can no longer be repaired, contains asbestos and does not meet relevant bunding requirements. Therefore, Orica is seeking to modify the project approval under Section 96(1A) of the *Environmental Planning and Assessment Act, 1979* (EP&A Act) to relocate the plant. Relocation of the Hypo Plant is consistent with Orica's on-going program to modernise and improve the operating efficiency of the Botany site.

The proposed modification involves relocation of the Hypo Plant immediately adjacent to the existing plant, see Figure 3. The works would involve:

- dismantling existing structures at the new site, including a steel gantry and concrete slab;
- dismantling the deteriorated steel structure covering the existing Hypo Plant and removing the asbestos cement roofing. The concrete slab would remain in place;
- construction of a new steel support structure with a colorbond roof approximately three stories high and fully bunded;
- relocation of the existing Hypo Plant including the primary hypo make tower, ferric backing tower, recirculation tanks, pumps and heat exchangers; and
- installation of two additional hypochlorite storage tanks within a dedicated bund adjacent to the proposed Hypo Plant location. This would increase the storage capacity from 250m^3 to 550m^3. Note, upgrade of the hypochlorite tank farm, including an increase in storage up to 550m^3 was approved via a consent modification in 2005 but did not proceed due to economic constraints. These works would now be undertaken as part of the relocation of the Hypo Plant.

No new production facilities are proposed and separation distances to off-site receptors would not decrease. The proposed relocation works have a capital investment value of $10.5 million.

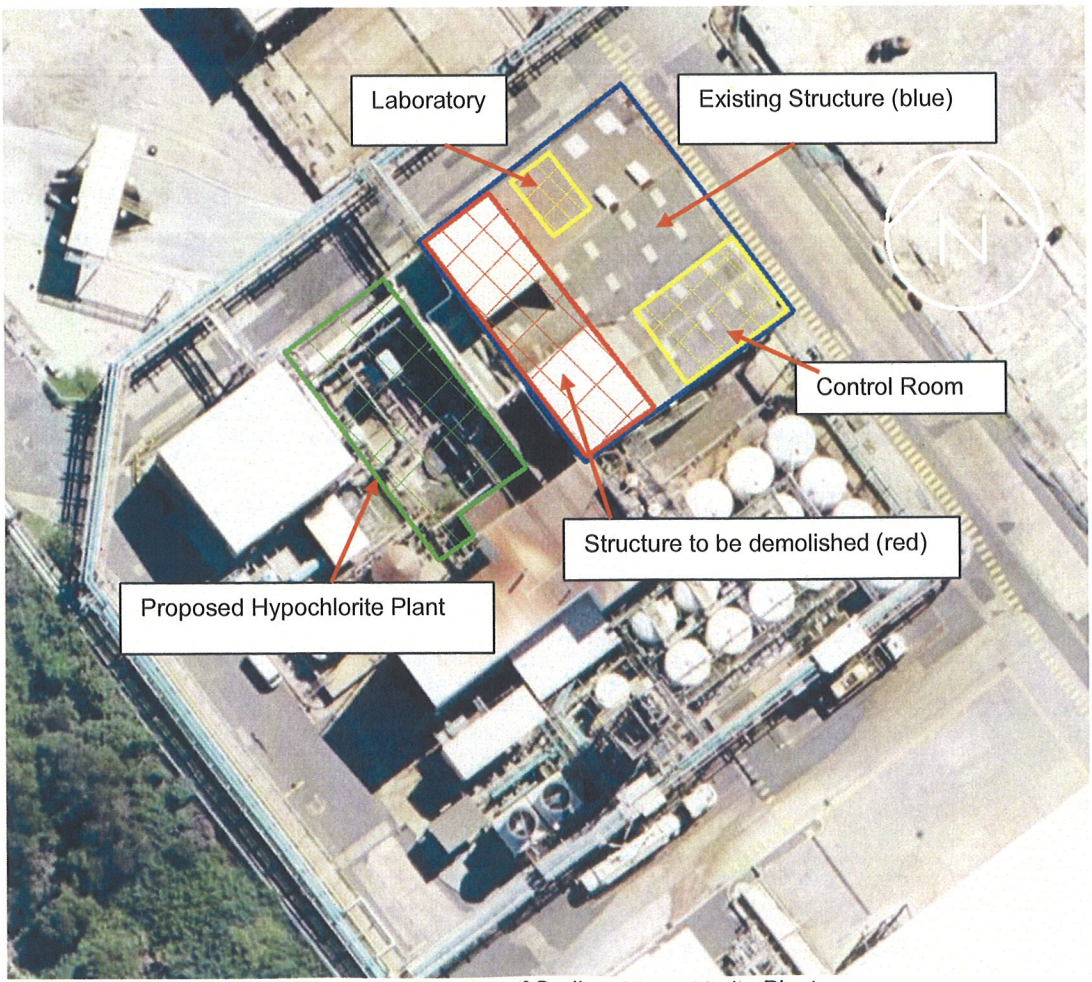

Figure 3: Relocation of Sodium Hypochlorite Plant

3. STATUTORY CONTEXT

The Minister was the consent authority for the original development application, and is therefore the consent authority for this application. However, on 4 March 2009, the Minister delegated her powers and functions as an approval authority to modify certain project approvals under section 96(1A) of the EP&A Act to the Executive Director. This modification application meets the terms of this delegation. Under these circumstances, the Executive Director may determine the application under delegated authority.

The Department has considered the application on its merits in accordance with the statutory requirements in Section 96 of the EP&A Act (see Appendix A). The Department is further satisfied that the development as modified would remain substantially the same development, as there would be no change to operation of the plant or production rates and the plant would remain within the existing Chlorine area, moving approximately 10 metres from its original location. The Department has reviewed the extent of the proposed modification and considers that the scale of the development would not increase and environmental impacts would be adequately managed.

Consequently, the Department considers that the application should be assessed and determined under Section 96(1A) of the EP&A Act rather than requiring a new development or project application to be lodged.

4. CONSULTATION

Under Section 96(1A) of the EP&A Act, the Department is not required to undertake consultation; however, the Department discussed the application with the Department of Environment, Climate Change and Water (DECCW). DECCW did not raise any issues with the project and provided input to the recommended conditions regarding contamination.

5. ASSESSMENT

The Department has assessed the merits of the proposal in accordance with the relevant statutory requirements (see Appendix A), and considers the key issues relate to contamination, waste and hazards.

Contamination and Waste

It is proposed to relocate the Hypo Plant to the area formerly used as the hypochlorite loading bay. There is potential for the area to contain contamination due to past industrial use, however the contamination status is unknown. The site is also located close to the former Chlor-Alkali plant which has the potential to contain mercury contamination.

Construction of the foundations for the steel structure for the relocated Hypo Plant would require removal of approximately 100m^3 of soil from the former hypochlorite loading bay area. There is potential that this material may be contaminated. Orica proposes to screen and test the soil before disposal off site. The Department requires via the modified conditions, that all excavated material is tested, particularly for mercury and hexachlorobenzene, and disposed of in accordance with the DECCW *Waste Classification Guidelines 2008*. Contaminated materials shall be disposed of to appropriately licensed facilities and shall not be reused on site for any purpose. Given the small quantity of material to be excavated, the potential impacts associated with contaminated material are considered to be minimal.

No wastes are generated from the production of sodium hypochlorite, therefore there would be no wastes generated from the relocated plant. Wastes generated during construction include steel, concrete and asbestos cement sheeting. Orica proposes to test all waste materials for contamination in accordance with the DECCW *Waste Classification Guidelines 2008*. Materials that are not contaminated will be either recycled or disposed to landfill. It is anticipated that the steel would be recycled and the concrete disposed to landfill.

Asbestos cement sheeting would be removed from the existing Hypo Plant structure and disposed of to an appropriately licensed facility. The Department requires, via the modified conditions, that asbestos is removed from the site in accordance with the requirements of WorkCover NSW.

No other conditions are considered necessary for the management of waste.

Hazards

The proposed relocation would not change the process by which sodium hypochlorite is produced on site, nor are any new production facilities proposed. The quantity of sodium hypochlorite produced would not change. The separation distance to off-site land uses would not be affected as a result of the relocation. As such, the Department concludes that the hazards and risks would not change as a result of the modification.

The increase in storage capacity of sodium hypochlorite from 250m^3 to 550m^3 was previously assessed in a modification approved by the Department in 2005. The additional storage tanks would be fully bunded and designed to meet NSW Dangerous Goods storage requirements.

Orica proposes to update the existing Fire Risk Management Plan to cover the new plant and additional tanks and provide the Department with a Construction Safety Management Plan and a list of HAZOP study actions.

The Department considers the above studies to be an important aspect for managing hazards associated with the existing Hypo Plant and storage tanks and has incorporated them into the recommended modified conditions. The Department is satisfied that these conditions are adequate for managing potential hazards associated with the modification.

Other

Traffic, noise, wastewater and air emissions would not change as a result of the modification as the production of sodium hypochlorite would continue in the same manner as the existing plant.

Construction activities would generate minor traffic movements with an estimated 50 truck movements over the 20 week construction period. The additional 2.5 trucks per week would be negligible in the context of existing traffic movements on the BIP and within the local area.

Some noise would be generated by dismantling the existing structures such as the cutting of structural steel. Trucks bringing materials to the site and removing wastes would also generate noise. The proposed works are located approximately 250m from the nearest residences at Denison Street, are shielded by the Huntsman Surfactants Plant and are therefore unlikely to be discernible from the general industrial noise of the BIP. Noise impacts from construction would be minor and short-term. Orica must comply with the existing noise limits contained in their Environment Protection Licence for all site activities, including the relocation works.

Whilst no heritage items are located in the area of the Hypo Plant, the 1998 development consent required a photographic record and documentation of the history of equipment and structures that would be demolished. Orica has committed to preparing a supplementary report to that provided for the Chlor-Alkali plant to document the existing Hypo Plant structure and will submit the report to the City of Botany Bay Council and the Department. The modified conditions reflect this commitment.

Conclusion

The Department is satisfied that the proposed modification presents no discernible change in environmental impacts compared to the existing operation. A minor volume of demolition waste would be generated and there is the potential for some excavated soil to contain contamination. However, the modified conditions provide an appropriate mechanism for managing these impacts such that residual impacts would be minimal. The proposed modification is necessary for the continued, safe operation of the Hypo Plant.

The Department recommends ten minor amendments to the development consent, see notice of modification in Appendix B.

7. RECOMMENDATION

It is RECOMMENDED that the Executive Director, Major Development Assessment:

- approve the proposed modification; and
- sign the attached notice of modification (tagged A).

Deana Burn
Planner, Industry
Major Development Assessment

24/9/09

David Kitto
Director

29.9.09

Chris Wilson
Executive Director

APPENDIX A - STATUTORY CONSIDERATION, Section 96(1A) of EP&A Act

Under Section 96(1A) of the EP&A Act, a consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if:

Provision	Comment
a) it is satisfied that the proposed modification is of minimal environmental impact.	Complies (refer to Section 5 above).
b) it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all).	Complies (refer to Sections 3 and 5 above).
c) it has notified the application in accordance with: i) the regulations, if the regulations so require, or ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent	No requirement to notify.
d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.	No submissions received.

In determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in Section 79C(1) as are of relevance to the development the subject of the application:

Provision	Comment
a) the provisions of: i) any environmental planning instrument, and ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the draft instrument has been deferred indefinitely or has not been approved), and iii) any development control plan, and iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and iv) the regulations (to the extent that the prescribe matters for the purpose of this paragraph: • in the case of a development application for the carrying out of development in a local government area referred to in section 92 of the EP&A Regulation and on land to which the Government Coastal Policy applies, the provisions of that Policy, • in the case of a development application for the demolition of a building, the provisions of AS 2601.	The following environmental planning instruments (EPIs) apply to the proposed modification: • *Botany Local Environmental Plan 1995;* • *SEPP 33 - Hazardous and Offensive Development; and* • *SEPP 55 – Remediation of Land.* The proposed modification is not inconsistent with these EPIs.
b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	Refer to Section 5 above.
c) the suitability of the site for the development	The site remains suitable for the proposed development.
d) any submissions made in accordance with this Act or the regulations	No requirement to notify the application.
e) the public interest	The proposed modification is generally in the public interest as it would facilitate the operation of the facility without changing the environmental impacts of the approved development.

APPENDIX B – NOTICE OF MODIFICATION