NSW GOVERNMENT
Department of Planning

MAJOR PROJECT ASSESSMENT: Chemsal Waste Chemical Storage and Treatment Facility St Marys

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

December 2006

Published December 2006
NSW Department of Planning
www.planning.nsw.gov.au

1. EXECUTIVE SUMMARY

Chemsal Pty Ltd (the Proponent) currently operates a chemical waste facility at Wetherill Park. In order to expand its operations, Chemsal now proposes to construct and operate a new chemical waste facility to 40 Christie Street, St Marys and relocate its current operations to this site.

The project involves retrofitting an existing warehouse on the site to enable use for the storage and processing of chemical wastes, and construction of a flammable goods storage area in the south western corner of the site. Once operational, the facility would treat and store a maximum of 5000 tonnes of chemicals per annum.

The Department has assessed the environmental impacts of the project, and is satisfied that the project would comply with relevant risk criteria and consequently would not pose a risk to surrounding properties. The Department is also satisfied that the project can be constructed and operated in a manner that achieves an acceptable level of environmental performance.

Importantly, the project would also generate social and economic benefits by creating 30 new jobs and allowing Chemsal to consolidate its NSW operations at the one site.

Overall, the Department is satisfied that the site is suitable for the project, is in the public interest, and should be approved subject to strict conditions of approval.

2. BACKGROUND

Chemsal Pty Ltd currently operates a chemical waste treatment facility at Wetherill Park, and as there are limited opportunities to expand operations at the Wetherill Park site, is proposing to construct and operate a new chemical waste facility at St Marys, and relocate its current operations to this site (See Figure 1).

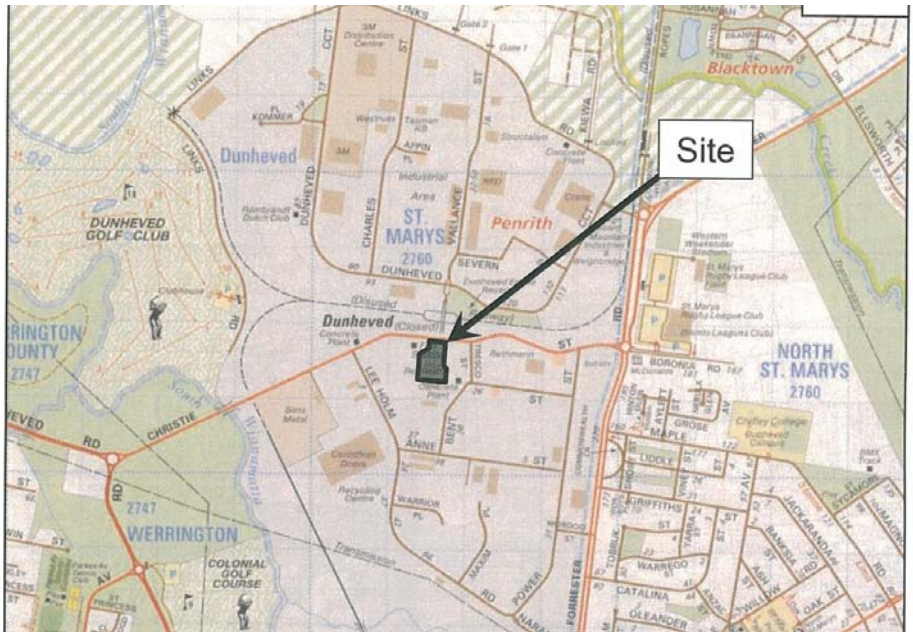

Figure 1: Site Location

The site is located in the St Mary's industrial area, was previously used as a timber yard, and currently includes a 4000m^2 warehouse, hardstand area and parking for 40 vehicles. The site is bounded by Christie Street to the north, and adjoins existing industrial land uses to the east and south and Dunheved Fire Station to the west (see Figure 2). The closest residential property is approximately 600 metres to the east of the site.

3. PROPOSED PROJECT

The project involves (see Figure 3):

- retrofitting the existing warehouse for storage and processing of chemical waste;
- constructing and operating a flammable goods storage area in the south western corner of the site;
- collecting, treating and storing waste chemicals from industries, households, schools, laboratories and hospitals; and
- transporting various residual waste materials to other specialists recycling facilities as required.

The project would have an estimated throughput of 5000 tonnes of chemical wastes per year, and operate between 6.00am to 6.00pm, 7 days per week.

The specific processing activities proposed are:

- decanting of Class 3 dangerous goods into large containers to enable resource recovery as a fuel;
- decanting of oil (Class C2 combustible liquid) into larger containers to enable resource recovery;
- use of a ultra high pressure densification device, known as the Hazpak unit, to separate paint from used paint cans. The paint cans would be formed into steel billets for use in metal recycling, and the paint would be transferred to another facility to be blended as a fuel;

- use of a fluorescent lamp processing unit to separate metal end caps and crush glass tubes for recycling, and recover mercury in a condenser; and
- shredding of metal, paper and glass prior to transportation to specialist recycling facility.

The type and maximum quantity of waste to be stored at the facility at any one time are outlined in Table 1.

The project has a capital investment value of $1 million and would employ 2 people during construction and up to 30 people during operation.

Figure 2: Site and Surrounding Land Uses

Table 1: Type and Maximum Storage Capacity of Waste

Dangerous Goods Classification		Maximum Quantity Stored on Site	Activities Undertaken on Site
Class	**Packaging Group**		
2	2.1	500kg	Storage in Class 2.1 storage area, then transfer to an alternative facility for treatment
3	PGI, PGII and PGIII	90,000L	Flammable storage packages and tank storage in Class 3 storage area, then transfer to an alternative facility for treatment
		1,500 L	Flammable processing (decanting), then transfer to an alternative facility for treatment
		500 L	HazPak
4	4.1	10kg	Consolidation and storage, then transfer to an alternative facility for treatment
	4.2	10kg	Consolidation and storage, then transfer to an alternative facility for treatment
	4.3	10kg	Consolidation and storage, then transfer to an alternative facility for treatment
5	5.1	200kg	Consolidation and storage in Class 5.1 storage area, then transfer to an alternative facility for treatment
	5.2	200kg	Consolidation and storage in Class 5.2 storage areas, then transfer to an alternative facility for treatment
6	6.1	10,000L	Consolidation and storage in Class 6.1 storage areas, then transfer to an alternative facility for treatment
	6.1 (sub Class 3)	500kg	Consolidation and storage in Class 6.1 (sub class 3) storage area, then transfer to an alternative facility for treatment
8	Acid	5000L	Consolidation and storage in acid storage area, then transfer to an alternative facility for treatment
	Alkali	5000L	Consolidation and storage in alkali storage area, then transfer to an alternative facility for treatment
	Mercury	500g	Removed from fluorescent lamps during processing, then transfer to an alternative facility for treatment
9		500kg	Consolidation and storage in Class 9 storage area, then transfer to an alternative facility for treatment
C2	Combustible liquid	2000L	Decanting, then transfer to an alternative facility for treatment.

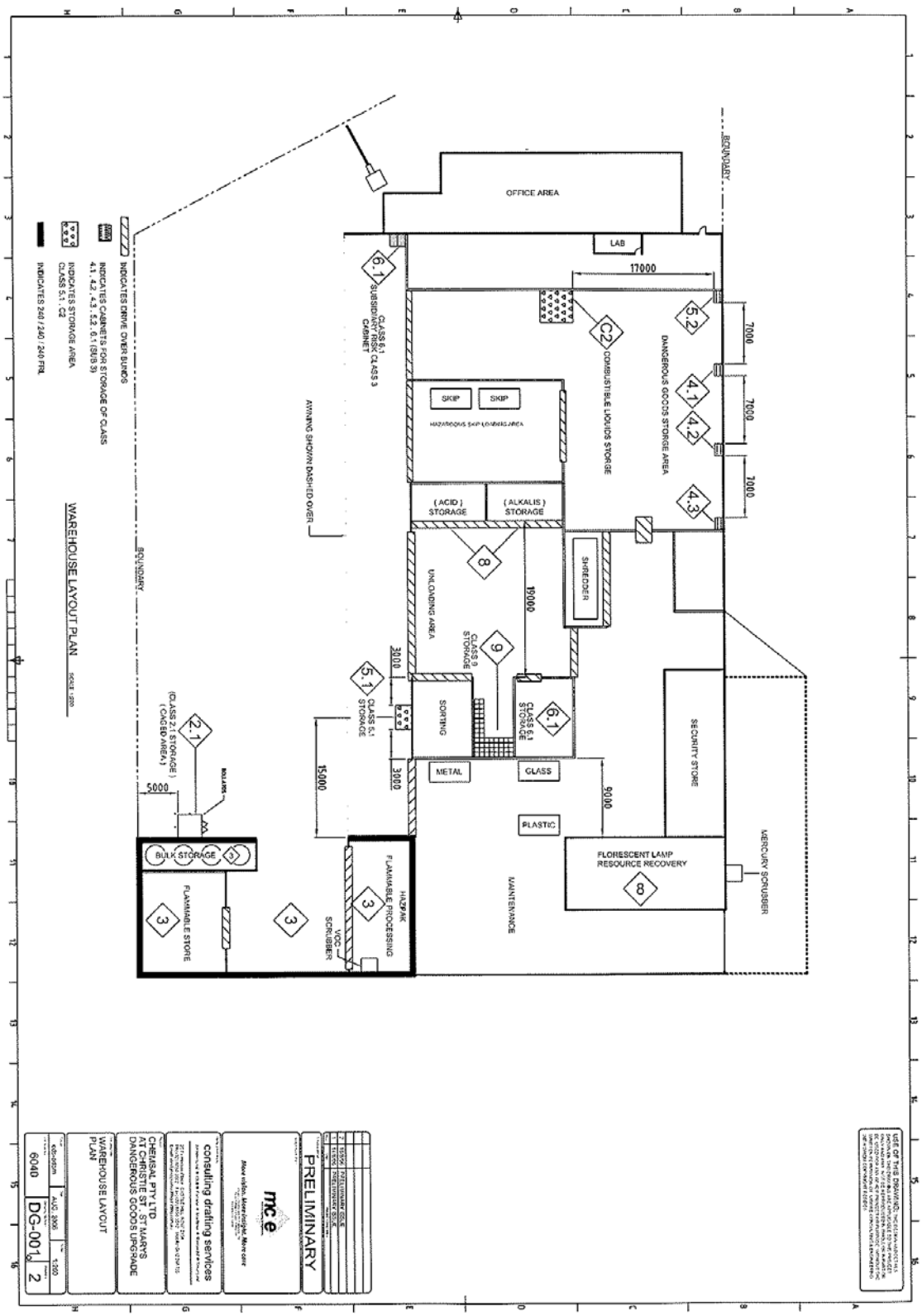

Figure 3: Proposed Site Layout

3. STATUTORY CONTEXT

3.1 Major Project

The proposal is classified as a Major Project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it complies with the criteria in Schedule 1 of the *State Environmental Planning Policy (Major Projects) 2005* being a development for a hazardous waste facility that would transfer, store or dispose of solid and liquid waste classified in the *Australian Dangerous Goods Code,* that handles more than 1,000 tonnes per year of waste. Consequently, the Minister is the approval authority for the project.

3.3 Permissibility

The site is zoned 4(a) General Industrial under the *Penrith Local Environmental Plan (Industrial Lands) 1997* (the LEP), and is permissible with consent in this zone.

3.4 Environmental Planning Instruments (EPIs)

Under Section 75I(2) of the EP&A Act, the Director-General's report on this project is required to include a copy of or reference to the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project.

The Department has assessed the project against the relevant provisions of the following planning instruments (see Appendix F):

- *State Environmental Planning Policy No 33 – Hazardous and Offensive Development;*
- *State Environmental Planning Policy No.55 – Remediation of Contaminated Land;*
- *Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River (No. 2) 1997*
- *Penrith Local Environmental Plan (Industrial Land) 1996;* and
- *Penrith Local Environmental Plan (Environmental Heritage Conservation) 1991*.

The Department is satisfied that the project is generally consistent with the aims and objectives of these instruments.

4. CONSULTATION AND ISSUES RAISED

The Environmental Assessment was exhibited from 30 August 2006 until 3 October 2006. During the exhibition period, the Department received 7 submissions on the project:

- 3 submissions from government agencies (1 from the Department of Environment and Conservation and 2 from the NSW Fire Brigade);
- 1 submission from the NSW Fire Brigades Employees Union; and
- 3 submissions from the general public.

A summary of issues raised in the submissions is provided below.

The DEC raised no objections to the project. The Fire Safety Division of the NSW Fire Brigade also did not object to the project, but recommended that a comprehensive fire safety study be undertaken prior to the commencing operations at the site.

The NSW Fire Brigade and the NSW Fire Brigades Employees Union raised concerns about the potential impacts on Dunheved Fire Station including:

- the hazardous nature of the project and the increased risk to fire fighters;
- long term health impacts resulting from air emissions from the site; and
- interference with the operation of the fire station in the event of an incident at the Chemsal site.

The key concerns raised in public submissions related to air quality impacts, traffic impacts on Christie Street and risks to public safety associated with transport of chemical waste on public roads.

A copy of the submissions is provided in Appendix D, and the Department has assessed the relevant issues raised in the submissions in Section 5 of this report.

5. ASSESSMENT

5.1 Safety and Hazards

As the proposed development involves the transportation and handling of Class 3 flammable goods and Class 6.1 toxic substances above thresholds identified in *Applying SEPP 33, Hazardous and Offensive Development Application Guidelines* (Department of Planning 1994), a Preliminary Hazards Assessment (PHA) was included in the EA. The PHA indicated that the fatality risk criteria at neighbouring sites would meet the relevant fatality risk criteria for industrial development, as outlined in the *DUAP Risk Criteria for Land Use Safety Planning – HIPAP No. 4*

During the exhibition period, concerns were raised by the NSW Fire Brigade and the NSW Fire Brigades Employees Union that the proposal would pose a risk to fire fighters who occupied the neighbouring Dunheved Fire Station 24 hours per day.

The Department subsequently required the Proponent to demonstrate that the fatality risk criteria for residential development be met at the fire station. In order to meet the residential criteria at the fire station, the Proponent agreed to reduce the amount of Class 6.1 toxic substances stored on the site from 30,000 litres to 10,000 litres. The PHA was subsequently revised and demonstrated that the fatality risk criteria for residential development would be met at the fire station, and the fatality risk criteria for industrial development would be met at the other neighbouring developments. A copy of the revised PHA is included in the Response to Submission (see Appendix C).

A Fire Safety Study (FSS) was also included in the EA that identified the potential fire hazards at the facility and the proposed protection and detection systems to be installed. The FSS demonstrated that the design of the proposed development would meet the statutory requirements for fire protection. In particular, the project would have adequate separation distances between Dangerous Goods to meet the Australian Standards and provide suitable storage facilities for toxic and flammable materials. The FSS indicated that Chemsal would provide adequate resources on site to respond to fire including fire extinguishers, hose reels, foam induction facility, smoke and fire detection equipment and an automatic dial out to the NSWFB. The FSS also indicated that the project would have sufficient bund capacity to contain fire water.

The Department has reviewed the PHA and FSS, and is satisfied that the project would not pose an unacceptable risk to human and environmental safety (including at the Dunheved Fire Station) provided that recommendations contained in the PHA and FSS are implemented.

To ensure this occurs, the Department's recommended conditions of approval require the Proponent to prepare and implement a Construction Safety Study prior to the commencement of construction, and a final Fire Safety Study, Hazards Operability Study and Final Hazards Study prior to the commencement of operation. The conditions also require the Proponent to prepare and implement a Safety Management System and Emergency Management Plan outlining management of hazardous goods and emergency response procedures for the site.

To address the NSW Fire Brigade's concerns about interference with operations at the Dunheved Fire Station, the Department has also recommended that the Proponent install early warning systems to ensure minimal response time to any incidents on the site.

5.2 Air Quality

The project involves a number of processes that would result in the emissions of pollutants into the atmosphere, namely:

- decanting of the Class 3 Dangerous Goods and processing of paint through the Hazpak system would generate volatile organic compounds (VOCs) which would be captured in a TeeMark charcoal collection and filtration system prior to discharge into the atmosphere; and
- processing of fluorescent lamps would generate mercury, which would be recovered in a condenser, with residual elements directed through an activated carbon bed prior to discharge. There would be no emissions of phosphorous, as any phosphorous generated from the processing of fluorescent lamps would be captured by the HEPA filter.

In accordance with the DEC's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC 2005), the Proponent used the AUSPLUME air dispersion model to predict the maximum concentrations of emissions from the facility at surrounding sites. The modelling indicated that the maximum concentration of VOCs and mercury resulting from the project would be less that the DEC's air quality impact assessment criteria for these pollutants (see Table 2).

Table 2: Maximum Predicted Concentrations and Impact Assessment Criteria

Pollutant	Maximum Predicted Concentration (mg/m^3)	Impact Assessment Criteria (mg/m^3)
VOCs	0.683	3.2
Mercury	0.00000207	0.0018

It is also noted that the concentration of odourous VOCs would be below the relevant odour based impact assessment criteria, and consequently odour impacts from the facility are considered unlikely.

The DEC is generally satisfied with the Proponent's air quality assessment, but has recommend that the height of the stack discharge be a minimum of 3 metres above the roof ridge and the stack exit velocity be at least 10 metres per second to ensure the project meets the relevant DEC air quality criteria. The DEC has also recommended that no offensive odours be generated from the site.

The NSW Fire Brigades Employees Union raised concerns that the project could result in the release of asbestos, lead and lead compounds into the atmosphere. In response to this concern, the Proponent noted that as asbestos would only be accepted and stored on site in wrapped sheeting, there would be no risk of release of asbestos fibres into the environment. The Proponent has also noted that temporary storage of lead acid batteries and decanting of lead based paint on site would not result in any potential exposure risk to humans.

The Department is satisfied with the Proponent's air quality assessment, and that the project would comply with relevant DEC air quality in the areas surrounding the site. Consequently, the Department is confident that the proposed facility can be operated in a manner that does not pose an unacceptable risk to surrounding industrial uses, Dunheved Fire Station, or local residents. Notwithstanding, the Department has incorporated DEC's recommendations into the recommended conditions of approval to ensure that the project would meet relevant impact assessment criteria.

5.3 Traffic

The project would generate up to 10 traffic movements a day during construction and up to 12 truck movements and 60 light vehicle movements a day during operations. The Proponent's traffic assessment indicates that this level of traffic generation represents a very minor increase (less than 0.5%) in local traffic volumes, and is therefore unlikely to result in any significant impacts of the performance of the local road network. The traffic assessment also indicates that the provision for parking on the site (40 spaces) would be sufficient to cater for the ongoing operation of the project.

The Proponent's PHA assessed the potential hazards associated with the transportation of waste chemicals to and from the site. As discussed above, this assessment found that the facility would comply with all risk criteria outlined in *DUAP Risk Criteria for Land Use Safety Planning – HIPAP No. 4*, including those relating to transport.

The Department is satisfied with the Proponent's traffic impact assessment, and agrees with the Proponent's assessment that the project would not result in any significant impacts of the performance of the local road network or the safety of road users.

However, to ensure that there are adequate procedures in place for the transportation of hazardous goods, the Department believes the Proponent should be required to incorporate safety related procedures, responsibilities and policies associated with the transportation of hazardous materials in the Safety Management System for the site.

5.4 Noise

The project is unlikely to generate significant levels of off-site noise, and any noisy equipment would be housed within the warehouse or the flammable good storage area. Given that the nearest residential receiver is located around 600 metres from the site, the Proponent argues that there would be no noticeable impacts on residential receivers in the area.

The NSW Fire Brigade has raised concern about noise impacts from the project on the Dunheved Fire Station. However, the Proponent notes that the site is located in an industrial area, and that a similar facility operated by the company in a similar industrial area in Victoria has never received any noise related complaints.

The Department is generally satisfied that the project would not generate any significant levels of noise that would affect the operations of the fire station or other surrounding industrial land uses, and notes that the facility would only operate during the day and would therefore not affect fire fighters who may be sleeping at the fire station at night. The Department is also satisfied that the project would not result in any noticeable noise impacts at residences in the area.

Notwithstanding, the Department has recommended conditions of approval that require the Proponent to comply with relevant DEC noise criteria.

6. CONCLUSION

The Department has assessed the EA, submissions on the project, and the Proponent's response to submissions in accordance with the requirements of the *Environmental Planning and Assessment Regulation 2000*, and is satisfied that the project:

- complies with all relevant risk criteria;
- can be constructed and operated in a manner that achieves an acceptable level of environmental performance; and
- would generate social and economic benefits by creating 30 new jobs and allowing Chemsal to consolidate its NSW operations at the one site.

Consequently, the Department is satisfied that the site is suitable for the project, is in the public interest, and should be approved subject to strict conditions of approval that protect the safety of local residents and surrounding businesses.

7. RECOMMENDATION

It is RECOMMENDED that the Minister:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions, under section 75J of the *Environmental Planning and Assessment Act 1979*; and
- sign the attached project approval (see Appendix A).

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