NSW GOVERNMENT
Department of Planning

MAJOR PROJECT ASSESSMENT: Remediation of the Quix Service Station site, Lansvale

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

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EXECUTIVE SUMMARY

The Proponent (Mobil Oil Australia Pty Ltd) seeks approval to remediate contaminated groundwater at the Quix Service Station site, Lansvale. The Proponent intends to conduct remedial works on the site in order to prevent the migration of contaminated groundwater off-site and to remove hydrocarbon contaminants from the groundwater.

The Proponent has prepared a Voluntary Remediation Program, Remediation Action Plan and a Remediation Action Plan Addendum. The DEC has assessed these documents and supports the Proponent's approach. As such, the DEC has entered into a Voluntary Remediation Agreement (VRA) with the Proponent for the remediation of the site under the *Contaminated Land Management Act 1997*.

One submission on the proposal was received. In its submission Fairfield City Council stated that it was satisfied with the proposed remediation work.

The Department concurs with the conclusions reached by both the DEC and Council. After review of the Environmental Assessment, the Department is satisfied that the mitigation, monitoring and management measures described would ensure public safety and environmental protection. It is believed that this could be achieved while also meeting the desired remediation outcomes.

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1. BACKGROUND

1.1 Location

The proposed site is located at 161 Hume Highway in the suburb of Lansvale, situated approximately 35 kilometres west of the Sydney CBD. The site is located in a predominantly commercial / industrial area. The location of the site is illustrated in Figure 1.

The site consists of Lot 204 of DP 732440 and has an area of 1,894 m^2.

1.2 Existing Site

The site is currently used as a retail service station facility. The facility consists of a sales room (north-east of site), underground storage tanks (southern corner of site) and fuel dispensers (centre of site). A canopy extends from the sales room towards the underground tanks.

The surface of the site is largely concrete / bitumen, with minor vegetation located on the northern and southern boundaries adjacent to car parking bays.

1.3 Previous Planning Approvals

The site has been used as a retail service station since approximately 1961. In 1986 the site was re-furbished. Between 1961 and 1986 there may have been a mechanics workshop located on the site. Prior to 1961 the site was vacant.

The site is zoned as Zone 4(c) – Special Industrial under the *Fairfield Local Environmental Plan 1994 (LEP)*.

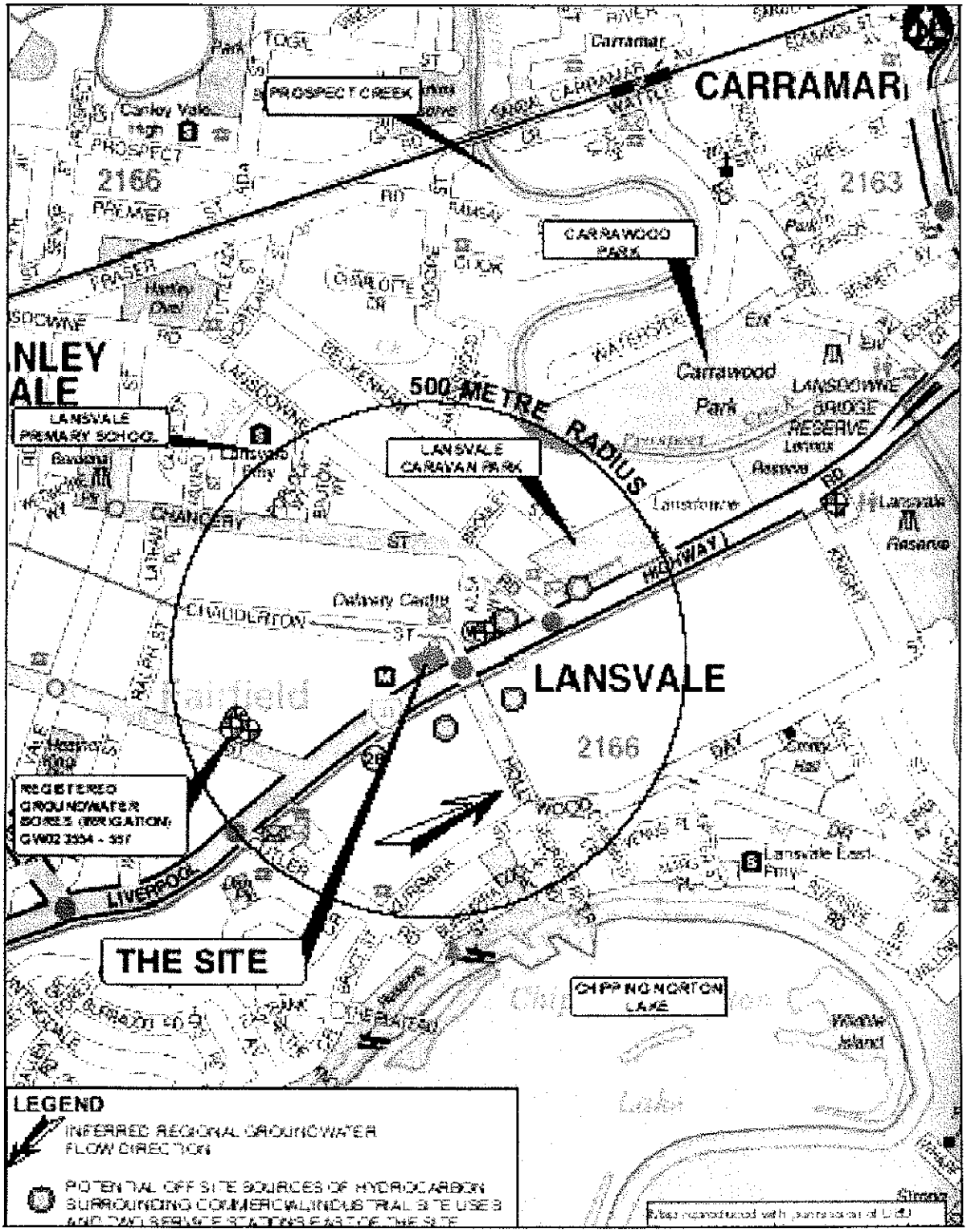
1.4 Surrounding Land Use

The site is bounded by vacant lots to the north and west, the Hume Highway to the south, and the intersection of the Hume Highway and Chadderton Street to the east.

The broader site area consists of commercial / light industrial properties lying to the north, south and east of the site, with a Motor Inn lying to the west.

The nearest environmental features are Prospect Creek located approximately 500 metres to the north east of the site, and the Chipping Norton Lakes located approximately 600 metres to the south. Prospect Creek is a tributary of the Georges River. Chipping Norton Lakes is a 160 hectare site that provides a water-based recreational area.

Figure 1: Site Location (reproduced from the Proponent's Environmental Assessment)



2. PROPOSED DEVELOPMENT

2.1 Project Description

The Proponent (Mobil Oil Australia Pty Ltd) seeks to remediate contaminated groundwater at the Quix Service Station site, Lansvale. The Proponent intends to conduct remedial works in order to remove the contaminants from the on-site groundwater and to prevent the migration of contaminated groundwater off-site. The service station would continue to operate whilst remediation activities are undertaken.

Previous investigations of the site have identified elevated concentrations of hydrocarbons in both the subsurface soils and groundwater. Based on these findings and in accordance with section 60 of the *Contaminated Land Management Act 1997* (CLM Act), the Department of Environment and Conservation (DEC) declared the site as being a site of significant risk of harm. Consequently, the DEC declared the site to be a remediation site in accordance with section 21 of the CLM Act.

The Proponent has since entered into a Voluntary Remediation Agreement (VRA) with the DEC with respect to the site, having prepared and submitted to the DEC a Remediation Action Plan, Remediation Action Plan Addendum and an Environmental Management Plan outlining the proposed remediation works.

The project would involve two separate remediation approaches. For the area adjacent to the underground storage tanks, the Proponent intends to extract the groundwater from beneath the site using pumps installed in the existing groundwater wells in that area. Extracted groundwater would be transferred to a holding tank for filtering and subsequent transfer to an air stripper for contaminant removal. Final filtering would then occur in granular activated carbon drums.

The second approach would be used on the eastern side of the site, where soil permeability is not suitable for the use of groundwater extraction pumps. The Proponent intends to use an enhanced bio-remediation system whereby oxygen is introduced into the groundwater via existing monitoring wells in the area. The oxygen would enhance the biological degradation of the hydrocarbons.

2.2 Project Need

The proposed site remediation is required to prevent the migration of the contaminated groundwater plume off-site and to reduce groundwater hydrocarbon concentration levels. Plume control and groundwater treatment would prevent the site from becoming a site of significant risk of harm to human health or the environment.

3. STATUTORY CONTEXT

3.1 Major Project

The project is declared to be a Major Project under *State Environmental Planning Policy (Major Projects) 2005* because it is development for the purpose of remediation of land on land declared to be a remediation site under Division 3, Part 3 of the *Contaminated Land Management Act 1997*. The project will therefore be assessed and determined by the Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979* (the Act).

3.2 Permissibility

The proposed remediation site is zoned "Special Industry" under the *Fairfield Local Environmental Plan 1994*. Development for the purpose of remediation is not described as a prohibited use in that zone.

Irrespective of this, *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) specifies that the project constitutes a category 2 remediation work and is therefore permissible without development consent. Clause 19(1) provides that SEPP 55 prevails over the LEP to the extent of any inconsistency. The remediation is therefore permissible.

3.3 Minister's Approval Power

The application and Environmental Assessment were placed on public exhibition from Thursday 1 June 2006 to Friday 30 June 2006 and submissions invited in accordance with Section 75H of the Act. The Department has met all of its legal obligations so that the Minister can make a determination about the project.

4. CONSULTATION AND ISSUES RAISED

The Department received one submission on the project during the exhibition of the Environmental Assessment. This submission was made by the Fairfield City Council. While the submission did not state whether Council supported the proposal, it did state that Council was satisfied with the proposal and works to be undertaken in the Voluntary Remediation Agreement.

5. ASSESSMENT OF ENVIRONMENTAL IMPACTS

After review of the submission and the Environmental Assessment for the project, the Department is of the opinion that the environmental impacts of the project are minimal and have been addressed as part of the Proponent's Statement of Commitments, Voluntary Remediation Proposal and Environmental Management Plan.

The proposal seeks to recover all hydrocarbons to the maximum extent possible and to prevent the off-site migration of groundwater impact. It is proposed that this would be achieved when the recovery rate and hydrocarbon thickness in the monitoring recovery wells reaches asymptotic levels, and when groundwater contaminants are not detected at elevated concentrations in the off-site monitoring wells. To this end, a comprehensive monitoring program would be undertaken involving the regular assessment of remediation performance. This is specified in the Voluntary Remediation Proposal.

The DEC is satisfied with this approach, having entered into a Voluntary Remediation Agreement with the Proponent. The DEC has formed this view after having reviewed the Proponent's Voluntary Remediation Proposal, Remediation Action Plan and Remediation Action Plan Addendum for the proposed remediation works.

The Department concurs with the DEC and is satisfied that the mitigation, monitoring and management measures to be applied during the remediation process would ensure environmental protection and public safety. It is believed that this could occur while also achieving the desired remediation outcomes.

6. CONCLUSION

The Department has assessed the Environment Assessment, Statement of Commitments, Voluntary Remediation Proposal, Remediation Action Plan, Remediation Action Plan Addendum, and Environmental Management Plan and considered the submission received on the proposal. Subsequently, the Department has formed the opinion that the proposed remediation project could be undertaken in a manner that would ensure an acceptable level of environmental performance.

The proposed remediation would have a positive environmental planning outcome by removing the contamination that may pose a significant risk of harm. The Department is satisfied that proposal would allow this outcome to be realised while doing so in a manner that would ensure public safety and environmental protection.

7. RECOMMENDATION

The Department recommends that the Minister for Planning consider the findings and recommendations of the Departments report and grant approval to the proposal, subject to the recommended conditions of approval.

APPENDIX A – RECOMMENDED CONDITIONS OF APPROVAL

APPENDIX B – STATEMENT OF COMMITMENTS

Further analysis is made in Section 6.2– Specific Commitments, in relation to potential environmental impacted identified with the project, and proposed mitigation measures. Further, proposed timing and type of monitoring of the environmental risks are detailed within Table 2 of the EMP – Environmental Control Measures, to ensure potentially significant residual environmental impacts are identified after application of proposed mitigation measures.

5.3.1 IMPACT ASSESSMENT

Appendix D (Environmental Management Plan) outlines the likely environmental impacts from the proposed activity and associated control measures proposed. The plan details the environmental, safety and materials management strategies proposed. The EMP also details the specific monitoring procedures for each aspect of the works.

6 STATEMENT OF COMMITTMENTS

Mobil proposes *General* and *Specific* commitments. The *General Commitments* detail the commitment made to the community in relation to remediation of contaminated groundwater and compliance with the VRA. The *Specific Commitments* detail the environmental impact mitigation measures proposed to be implemented to ensure that *General Commitments* can be delivered with minimal environmental and social impacts.

6.1 GENERAL COMMITMENTS

Mobil makes a commitment to:

- Remediate the groundwater within the site area to the requirements of the VRA;
- Comply with all conditions imposed by the DIPNR for approvals applying to the site, and
- Ensure the impacts of remediation are appropriately managed via the implementation of mitigation measures.

6.2 SPECIFIC COMMITMENTS

The following has been based on the Environmental Management Plan (Appendix D), in relation to the key assessment requirements identified by the Director-General and General Environmental Risk Analysis:

Table 6: Specific Commitments

Environmental Aspect and Impact	Commitment /Control Measure(s)
Waste Management	
Erosion • excavation	• area of excavation to be kept as small as possible. • material will be temporarily stockpiled in dedicated areas and will be barricaded with hay bales and/or silt fences to prevent runoff. • waste skips/drums will be used (where possible) to avoid soil stockpiles. • erosion control measures will be installed in accordance with NSW Department of Housing's *Managing Urban Stormwater: Soils and Construction (1998)* guide. • regular inspections and maintenance of erosion and sediment control measures, including immediately after rain events.
Surface Water • spills • erosion • adjoining properties	• storm water drains will be sand bagged off to prevent any waste material from entering them during the construction phase of works. • potential spills from improper pipe connection and commissioning activities will be minimised by the isolation of all pipes and equipment prior to work being commenced. • provision of secondary containment for work areas where a potential for spills exists, including bunding, drain covers or stormwater cut off valves. • provision of spill absorption material and spill kits coincident with size of potential spill. • limiting quantities of chemicals and hazardous materials held on site (refer Hazardous Materials below). • following construction of the remediation system, rainwater which falls within the treatment facility will be directed into the treatment facility sump. Overflows/spills of PSH/groundwater from the remediation system will be contained by the treatment facility bunding.
Groundwater	• groundwater generated from the construction and commissioning of the remediation system will treated by the system prior to disposal to sewer (where permitted).

Environmental Aspect and Impact	Commitment /Control Measure(s)
Contaminated Soil • excavation of contaminated soil • stockpiles • transport	• if contaminated soil is encountered during excavation work it shall be segregated and stockpiled in a dedicated area on site in preparation for offsite disposal in accordance with regulatory requirements. • Waste skips/drums will be used (where possible) to avoid soil stockpiles.
	• deodorants will be used to minimise odour if waste material is encountered to minimise short term nuisance odours. • transportation of waste will be by appropriately-license contractors.
Waste • Waste generated during excavation/construction works	• the purchase and use of products with minimal packaging waste and methodologies for waste minimisation on the site where possible. • the removal of packaging waste from the site where appropriate. • separation of waste materials into their respective waste stream skips at convenient locations on the site. • receptacles to store all waste generated onsite will be provided. The receptacles will be emptied regularly. • use of proprietary waste collection and storage systems and the use of appropriately licensed waste management companies for the removal and disposal of waste materials from the site. • collection of waste materials by a licensed waste contractor for recycling as a first option, or disposal as a second option at a frequency which ensures that waste materials are not allowed to build up to an unacceptable level on the site.
Air Quality	
Air Quality • venting of off gases • pipe leaks • excavation works • vehicular traffic erosion (refer Erosion above)	• application of odour and volatile suppressing agents to exposed surfaces/stockpiles, as required. • all loads entering and leaving the site will be securely covered. • off gas from the remediation system will be directed through the activated carbon bed prior to discharge to the atmosphere. • off-gas emissions will be monitored on a regular basis using LEL installed before and after the carbon bed.
	• water sprays may be used across the site to suppress dust if required.
	• all stockpiles of materials left on the site for more than 24 hours will be covered. • surface cover will be removed in stages to minimise exposed areas.

Environmental Aspect and Impact	Commitment /Control Measure(s)
	• bulk earthworks will be scheduled to avoid particularly dry or windy weather conditions.
	• where dusty conditions occur at the site, site works will case until the dust source is removed or weather conditions are more suitable.
	• if complaints are received at the site, dust monitoring will be undertaken and the results and any additionally recommended mitigation measures required will be implemented.
	• traffic associated with earthworks will be required to clean track/wheels to prevent tracking of mud and generation of dust as it is leaving the site. • regular sweeping of haul routes to remove any accumulated materials.
	• no material will be burnt on site.
Noise • excavation • compaction • concreting • traffic • system operation	• works on the site will only be carried out between 7.00 am to 6.00 pm Monday and Friday and 8.00 am to 1.00 pm Saturday, or as otherwise approved by Council. No work is to be undertaken on Sundays or Public Holidays.
	• all heavy vehicles working on site and visiting the site (compressors and other associated plant utilised as part of the construction work) will be fitted with appropriate silencing devices.
	• activities that generate high noise levels will be scheduled to short term duration wherever possible and to times of the day which would be least intrusive.
	• all remediation equipment which generates noise (i.e. air compressor, pumps, blowers) will be fitted with appropriate silencing devices or housed within noise abatement enclosures.
Flora and Fauna	
• excavation • traffic	• retention of existing trees on the site regardless of whether they are native or introduced species. • Any grass areas disturbed during the excavation works will be reconstructed to their original condition as much as possible. • No vehicular traffic will be allowed in the grassed areas.
Heritage Impact	
• none identified	• none identified.
General Environmental Risks	

Environmental Aspect and Impact	Commitment /Control Measure(s)
Vibration • Compaction	• activities that generate vibration will be scheduled to short term duration wherever possible and to times of the day which would be least intrusive.
Visual amenity • Stray Light	• Lighting of the construction site will be directed so as not to cause nuisance to owners or occupiers of adjoining premises or motorists on adjoining or nearby roads.
Electrical Hazards (Hot works)	• hot work permits will be obtained on a daily basis, as per Mobil Specifications. • all electrical wiring installation works will be performed by an AIP trained licensed electrician. • details of the work permit system, procedures and forms will be included in the Health and Safety Plan.
Fire	• no fires will be permitted on the site. • anti-flash screens will be used when welding. • hot work areas are to be kept clear of flammable materials.
Traffic	• no vehicles are to arrive at the site outside the site working hours. • a traffic management plan will be prepared to minimise disruption to traffic associated with site operations. • a designated on-site parking area will be provided on the site for the duration of the proposed works. • all vehicles will enter and exit the site via nominated entry/exit points. • all vehicles will be required to comply with all road traffic rules. • all vehicles leaving the site will be inspected and cleaned (if required) to ensure that no material is on the vehicle exterior that could be deposited off-site.
Hazardous Substances	• A register of all hazardous materials used and stored on site will be kept onsite. MSDS for all these materials will also be kept onsite.
	• Handling of potentially contaminated groundwater, chemicals and hazardous materials will be undertaken as per Site Specific Health and Safety Plan. Handling and storage of chemicals and hazardous substances will also be carried out in accordance with the manufacturer's Material Safety Data Sheet.
	• The plant will be secured by a locked security fence and will not be accessible to the public.

APPENDIX C – ENVIRONMENTAL ASSESSMENT