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Mr. John Fraser
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Re: Jandakot Airport Development – Restrictions of Land Use

With respect to the results of CyMod Systems' solute transport modelling of the superficial aquifer at Jandakot, please find below some suggestion for restrictions of the types of business activities in Development Areas 5, 6 and 6A.

Classification of Impacts

The impacts on the superficial aquifer at Jandakot have been classified into two types as described below.

Low Level Operational Impacts

Long term low level operational impacts are described by small amounts of contaminants entering the superficial aquifer over the course of years which may result in concentrations of contaminants exceeding the Australian Drinking Water Guidelines.

Operational impacts may arise from businesses storing and utilising solvents, cleaning agents and other hazardous materials that spill regularly, in small quantities, due to the nature of the business. These spills are considered to be 'part-and-parcel' of operating such businesses.

Such operations include, but are not limited to:

- service stations;
- nurseries;
- dry cleaners;
- automotive repair shops;
- painters, finishers and polishers, and
- galvanizing and metal treatment;

High Level Accidental Impacts

High level accidental impacts are described as unforeseen large spills of liquid contaminants where such spill events are not considered part of normal operations. Such spills may be caused by leaks, ruptures and other accidents to storage containers, facilities, and transportation vehicles.

Such impacts may arise from operations including, but not limited to:

- bulk storage of fuels and chemicals associated with terminals;
- chemical mixing, household chemical production, and coating preparation (paint, sealants, solvents etc);
- agricultural storage and processing facilities (fertilizers, packaging/storage of herbicides and pesticides; and
- manufacturers of industrial products that involve liquid based operations such as pickling, surface activation, and metal cleaning requiring the use of large quantities of acid and basic liquids.

While there is always some risk of a large scale accidental spill, significant mitigation of this risk is possible given appropriate operating guidelines and standards.

Recommended Precautions

The possibility of aquifer remediation and recovery in the event of a high level impact at Jandakot Airport is discussed in CyMod Systems' solute transport modelling report. As indicated in the report, low level impacts are not readily remediated and hence should be prevented.

Material Safety Data Sheets (MSDS, www.msds.com) can provide data and information pertaining to industry best practices with respect to transporting and handling many solids, liquids and gases, and assisting in the identification and tracking of contaminants stored or spilled at the development areas. It is recommended that all businesses at Jandakot Airport engage and adhere to the information and guidelines available in the MSDS, and that JAH have up to date records of all MSDS from each of their tenants to ensure compliance with lease provisions.

It is recommended that to eliminate or minimise aquifer contamination in the event of a spill of contaminants, the following precautions be abided by:

1. There should be no underground storage of any potential contaminants and any above-ground storage tanks or barrels/drums should be volume-limited to a specified maximum (e.g. 240 litres or similar) to limit the potential spill size.
2. All storage tanks or barrels/drums should be stored undercover and in a bunded area, to ensure rain water is segregated from spills and washdown water used to clean up the spill, and prevent contamination of the rainwater runoff disposal system.
3. All storage tanks or barrels/drums should be stored on sealed surfaces such as concrete or asphalt. No storage of any chemicals should be allowed on bare ground.

Best regards