

Orica Botany Groundwater Survey Community Liaison Committee Newsletter

Issue 6

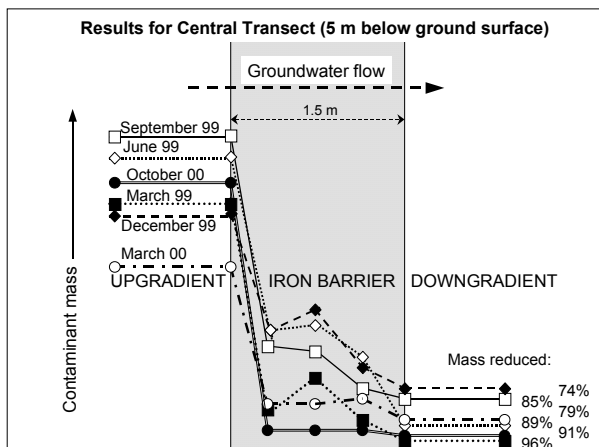
January 2001

Summary of Meeting No. 11

Community Liaison Committee Meeting No. 11 was held on Wednesday 22 November 2000 at Botany Town Hall.

Pilot Scale Reactive Iron Barrier

Performance monitoring of the reactive iron barrier continued in October (month 19). The barrier is destroying more than 80% of the mass of contaminants. Changes in mass reduction are mainly due to variable incoming contaminant concentrations. To date, several papers on the barrier's performance have been presented at conferences in Australia and overseas. Following recommendations by EnviroMetal Technologies, Inc. (ETI), Orica has installed two new monitoring points 20 cm from the front face of the iron bed to test for quickly degrading chemicals. Two core samples of iron were also collected (to assess potential mineral settling and microbiological fouling in the barrier, which can affect the iron's life span). The results are due in late January 2001.



The added data will be used to confirm ETI's preliminary design parameters for the full scale barrier. The full scale barrier is proposed to be 40 cm thick, 300 m long and 7 m deep. It is proposed to run diagonally across Orica Southlands Block 1, perpendicular to groundwater flow.

Monitoring Program

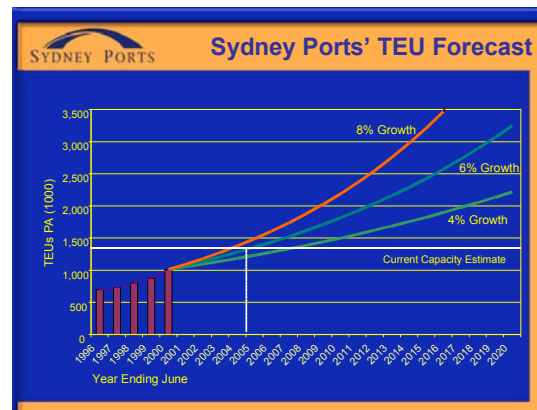
A summary report on air monitoring was issued by Orica to EPA NSW, Department of Health and Botany Bay City Council in October. It concluded there were no changes to the outcome of the Human Health Risk Assessment.

The latest round of surface water results has shown an upward trend in CHCs in Springvale Drain and Penrhyn Estuary. This is due to increased groundwater seepage into

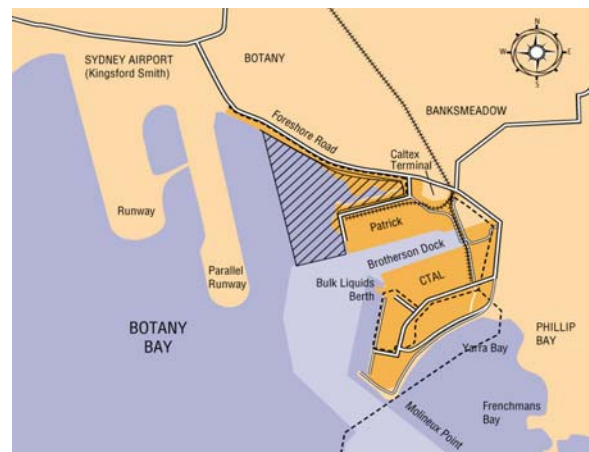
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Focus on *Ports 2000*

Sydney Ports Corporation has seen and is forecasting significant growth in the use of Port Botany, which handles most of Sydney's shipping containers. The graph below shows the growth expressed in twenty foot equivalents (TEUs, the international unit of measure for shipping containers).



Ports 2000 includes Sydney Ports' vision for Port Botany. About 70 hectares is planned to be added to the port facility (see diagram). In the last five years improvements in the rail system have led to an increase in the rail system's share of cargo movements from 14% to 24% currently. As part of the expansion, rail services will be improved to raise rail freight movement to 40%.



Penrhyn Estuary would be affected by the expansion. Sydney Ports has a number of options in mind for the Estuary, which may include filling or encapsulating the area, or perhaps creating a wetland area. Open channels would be constructed to allow discharge of Springvale and Floodvale Drains and to continue to provide a dewatering function for the area. They would be constructed in such a way to ensure no negative impact on up-gradient areas.

Presently Sydney Ports is awaiting Ministerial approval before proceeding to EIS and public consultation stages.

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the Drain following the completion of repairs to the Orica stormwater pipes (reported previously).

Surface water and groundwater monitoring will continue.

Springvale Drain Sediment Removal and Drain Reconstruction

It is estimated around 1000 m³ of contaminated sediments will be excavated from the currently bypassed section of Springvale Drain running through Orica Southlands and placed into a sediment containment structure pending testing to determine treatment and disposal options. A Development Application for the work has been submitted to BBCC. Reconditioning the original alignment of the Drain will enable it to be recommissioned so that the realigned section can be converted into a wetland for the shallow groundwater containment process (see below).

EDC Plume Containment

The proposed shallow groundwater containment system (reported previously) has now been designed and subjected to Orica's safety studies. Orica has received approval for the process from EPA NSW. Orica's operating licence has been amended to accommodate the new process. Orica is now entering the approval process with BBCC. The targeted date for construction is mid-2001.

Orica has completed a desktop feasibility study of deep groundwater containment. This would involve much greater masses/volumes of groundwater and likely treatment on the operating site. However, extracting and treating deep groundwater may not be feasible. Orica's preferred option is bioremediation (see below).

Contaminant Source Zone Investigation

As part of its obligations under the Voluntary Remediation Agreement, Orica has been investigating possible source areas of contaminants. A report was issued to EPA NSW in October 2000. It included a review of all previous investigations, as well a recent work on the former CTC and TCE Plants and the northern EDC plumes.

Recent work on the northern plumes has led Orica to reassess the inferred source areas and possible causes. Also, some areas have notably lower concentrations than previously indicated. Investigations will continue.

Bioremediation Program

Promising results from the microcosm studies of EDC-contaminated groundwater and soil from Orica Southlands by the University of Toronto, Canada, under the direction of Dr David Major (Geosyntec Consultants) have suggested that

moving to field scale trials is now warranted. Two trials have been suggested:

- Injecting a nutrient to enhance/accelerate bioremediation; and
- Circulating deep (higher concentration) groundwater into the shallow aquifer where there are more active bacteria.

A report on the field trials could be expected at end of 2001.

Voluntary Remediation Agreement

The Voluntary Remediation Agreement between Orica and EPA NSW was signed on 24 February 2000. Briefing meetings with interested owners and occupiers of affected land are continuing as part of the required notification process. Orica has also issued two reports to EPA NSW required under the Agreement.

Ports 2000

Sydney Ports Corporation has developed a vision, called *Ports 2000*, for the expansion of Port Botany to meet growing demand. Sydney Ports presented details of their plan at the meeting (see "Focus On ..." on page 1). β

About this Newsletter

This newsletter aims to keep the Randwick and Botany communities informed about progress of the Orica (formerly ICI Australia) Botany Groundwater Stage 3 Remediation Program. The newsletter is prepared by Orica on behalf of the CLC following each quarterly meeting of the CLC.

Who's on the Committee?

The CLC was formed at the start of the Survey to involve the community in the process. It comprises representatives from **government** (Environment Protection Authority (EPA), Botany Bay City Council (BBCC), Randwick City Council, Department of Land & Water Conservation (DLWC), South Eastern Sydney Public Health Unit, National Parks & Wildlife Service, Freightcorp and Sydney Ports Corporation), **local residential groups** (BBPPC, BEREPA and Botany Environment Watch), and **industry** (Orica, Amcor Packaging and Solvay Interlox). The independent Chair for the Committee is Assoc. Prof. Ronnie Harding from UNSW Institute of Environmental Studies.

Who Receives this Newsletter?

This newsletter is distributed throughout the suburbs neighbouring Orica's Botany Site including Banksmeadow, Botany, East Botany, Hillsdale, Matraville

Meeting No. 12 will be held at Botany Town Hall on Wednesday, 14 March 2001, starting at 1 p.m. If you wish to enquire about the CLC or its meetings, please call Orica's Community Hotline 1800 025 138.