Hanson Bacchus Marsh (Coimadai) Quarry

SURFACE WATER

Excerpt from *Coimadai Sand Quarry, Environment Management Program, September 2015, pp6-7*

The site slopes generally from north to south. The working / development plan shows the pit floor contours decreasing to the south east corner, where a settling pond may form. Purpose built drains will be shallow and, if required, may have other velocity reducing structures installed.

Special consideration should be given to the proximity of the site to Goodman Creek, a feature within an Environmental Significance Overlay. It is especially important to direct water to the settling pond, to be monitored before leaving the site. Any overburden mounds placed along the western boundary of the extraction limit will be revegetated immediately to avoid erosion.

In addition, the following measures will be implemented to protect surface water:

- Construct water storage structures to comply with site needs.
- Utilise any site special structures and equipment to enhance water quality.
- Regularly monitor properties of surface water before dewatering or discharging to surface waters.
- Design an adequate stormwater system to ensure stormwater from roofed areas is directed and reuse on site where possible.
- Discharges from vehicle washing areas (manual or automatic) should be directed to sewer, if available, in accordance with the local water authority's requirements or recycle on site where practical.
- Regular cleaning of sediment dams to maintain adequate capacity.
- Protection measures should be designed to minimise risk of failures during heavy storms or flooding.
- Identify key water quality objectives such as turbidity and salinity. The relevant State Environment Protection Policies (SEPPs) relating to the water environment or the *ANZECC / NHMRC Australian Water Quality Guidelines for Fresh and Aquatic Waters* provide guidance on the water quality parameters to monitor.

GROUNDWATER

Excerpt from *Coimadai Sand Quarry, Environment Management Program, September 2015, p7*

There are currently two boreholes in the vicinity of the site (refer to map overleaf). The following measures will be undertaken to manage groundwater:

- Develop a site specific monitoring program for the testing and analysis of groundwater.
- Design and install facilities on-site such as the refuelling area to minimise any risk of contamination of groundwater.

- Identify key water quality objectives such as turbidity and salinity. The relevant SEPPs relating to the water environment or the *ANZECC / NHMRC Australian Water Quality Guidelines for Fresh and Aquatic Waters* provide guidance on the water quality parameters to monitor.
- Define appropriate sampling locations / sites for surface and groundwater monitoring.
- Specific sampling frequency, either continuous or at a defined interval.

Monitoring

The surface water monitoring location is shown on the *Monitoring and Conservation Management Plan* (refer to map below). It will comprise surface water samples from an on-site dam. Monitoring will also be undertaken when dam is dry.

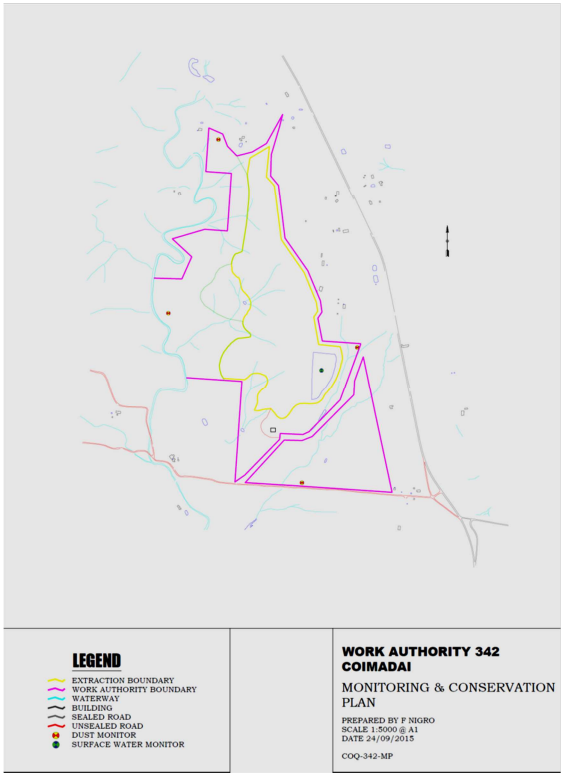
SCHEDULE

Surface Water

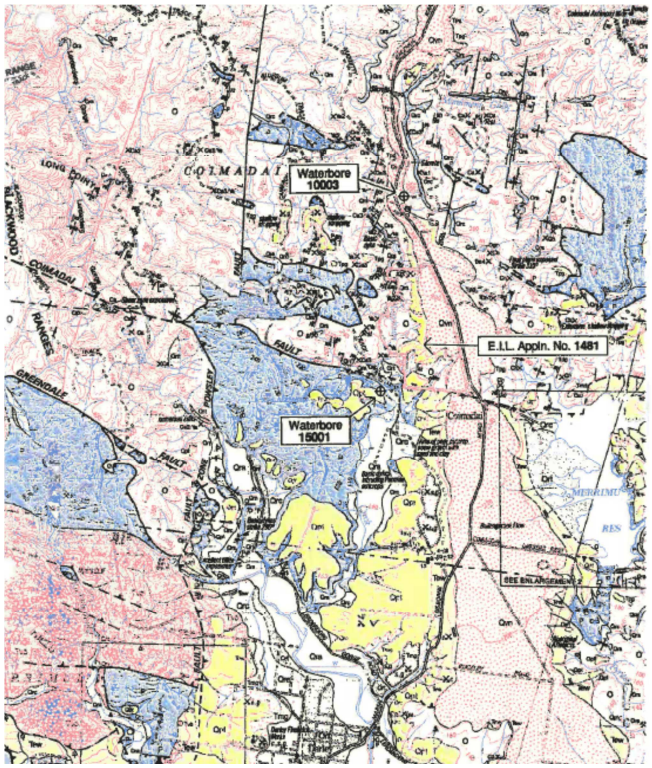
ITEM	TEST	DONE BY	FREQUENCY	STANDARD	CRITERIA
Site Dam	TDS / Turbidity	Hanson personnel	Annually	Comparison to baseline data from first year of testing	No suspended solids outside periods of flood

Groundwater

ITEM	TEST	DONE BY	FREQUENCY	STANDARD	CRITERIA
External Bores	Standing water levels, pH, TDS, BOD and Nitrates	Consultant	Annually	Comparison to baseline data	None



Location of surface water monitor



Locations of external water bores

References

- Mineral Resources (Sustainable Development)n Act 1990
- Planning and Environment Act 1987
- Mineral Resources (Sustainable Development) (Extractive Industries) Regulations 2010
- Extractive Industries Development Act 1995
- State Environment Protection Policy (Groundwaters of Victoria) 1997
- State Environment Protection Policy (Waters of Victoria) 1988
- Environmental Guidelines: Management of Water in Mines and Quarries, Earth Resources Regulation
- Victoria's Salinity Management Framework: Restoring our catchments, Department of Sustainability and Environment, August 2000

Further information

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