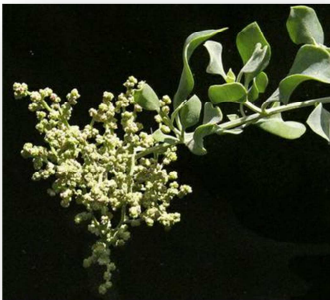


# Hanson Bacchus Marsh (Coimadai) Quarry

## FLORA AND FAUNA

Excerpt from *Coimadai Sand Quarry, Environment Management Program, September 2015, pp7-8*

One plant species of state significance (Fragrant Saltbush *Rhagodia parabolica*) and two plant species of regional significance (Thick-fruit Buttercup *Ranunculus pachycarpus*, Hawkbit Fireweed *Senecio picridioides*) were identified. Their occurrence falls within the buffer between the proposed pit and the western boundary of Goodman Creek. These areas will be surrounded by a 1.2m stock proof fence prior to commencement of works.



*Fragrant Saltbush*



*Thick-fruit Buttercup*



*Hawkbit Fireweed*

For the remainder of the site that, at any time has not been extracted, the following will occur:

- Identification and control of weeds.
- Additional planting.
- Drainage works and erosion control.

The following elements are also incorporated in the management framework to:

- Develop and implement a native vegetation plan to achieve net gain goals, including (where appropriate):
  - Enhancing areas of the site not critical to the operation for habitat improvement and preservation;
  - Implementing appropriate re-instatement of indigenous vegetation; and
  - Carrying out weed control or other environmental improvement.
- Limit disturbances to as small an area as needed to efficiently operate the site.

- Rehabilitate areas progressively and quickly with indigenous vegetation.
- Implement control measures to avoid introducing plants, animals and pathogens not indigenous to the area.
- Seek the advice of local council, land care groups and local wildlife groups.
- Seek guidance from Department of Environment, Land, Water and Planning on expected or anticipated revegetation. If the revegetation progress is not satisfactory, seek expert advice.
- Ensure all staff are familiar with the need to protect specific areas of the site and any flora and fauna management plan that may be in place.
- Encourage staff to be familiar with significant species which they may encounter, and are aware of what protective action to take.
- Ensure that all landscape and other planting is limited to use of local indigenous species, grown where possible from local provenance stock.
- Ensure that all plantings from seed, only high quality seed free from any noxious weeds and pest plants is used.
- Avoid the inadvertent introduction of pest plants by ensuring that the species selected for all plantings is appropriate for the area, and that any organic mulches used are free of seeds of noxious weeds and pest plants.
- Prevent the introduction of plant diseases and plant pathogens to the site, or their transfer to another site, by ensuring that all heavy equipment entering the site, or leaving the site, are thoroughly cleaned of all soil and organic matter.
- Ensure that soil or subsoil likely to contain seed or pathogen is stockpiled to avoid product contamination.
- Interact with the local Landcare Group to develop regional strategies to eradicate regional noxious weeds and pests.
- Maintain a high standard of housekeeping and ensure that materials likely to attract vermin are disposed of properly.

## WEEDS

Excerpt from *Coimadai Sand Quarry, Environment Management Program, September 2015, P11*

The site has been examined by the Hanson Compliance Officer / Biologist and a week plan has been drawn up showing the type of infestation and control programs. The plan is updated annually.

The main weeds of concern at Coimadai are:

- Serrated Tussock *Nassella trichotoma*  
Weed of National Significance; Declared Noxious Weed (VIC)
- African Boxthorn *Lycium ferocissimum*  
Weed of National Significance; Declared Noxious Weed (VIC)
- Patterson's Curse *Echium plantagineum*  
Declared Noxious Weed (VIC); Schedule 2 – Regionally Controlled in Port Phillip and Western Port Catchment Management Authority
- Artichoke Thistle *Cynara cardunuculus*  
Declared Noxious Weed (VIC); Schedule 2 – Regionally Controlled
- Galenia *Galenia pubescens*  
Not a declared noxious weed, however locally very invasive and under-rated
- Inkweed *Phytolacca octandra*  
Not a declared noxious weed, but is invasive in the area.



*Serrated Tussock*



*Galenia*

### Weed Management Plan

DATE / TIMEFRAME	WORKS / TARGETS	METHOD
August - October	Serrated Tussock Artichoke Thistle	<ul style="list-style-type: none"> <li>· Spray before flowering and seed set in late spring</li> <li>· Spot spray small infestations</li> <li>· Large concentrated areas may require boom-spraying.</li> </ul>
August - April	African Boxthorn	<ul style="list-style-type: none"> <li>· Cut and paint in growing season with recommended herbicide. Avoid fruiting period as fruits consumed by native wildlife.</li> <li>· Physical removal should also be considered</li> </ul>
October - April	Galenia	Spot spray in growing season.
September ongoing	Patterson's Curse Inkweed	<ul style="list-style-type: none"> <li>· Spray limited patches in September / October before seeding. Target: eliminate.</li> <li>· Physical removal possible.</li> </ul>
Quarterly	Surveillance of known weeds and possible high-threat weeds	<ul style="list-style-type: none"> <li>· Serrated Tussock, African Boxthorn, Patterson's Curse, Artichoke Thistle, Galenia, and Inkweed.</li> <li>· Potential weeds to check for include Gorse, Boneseed, Blackberry, Prickly Pear (and other <i>Opuntia ssp</i>), Chilean Needle Grass, Horehound, Phalaris Brooms and other thistles.</li> </ul>

## Monitoring

### SCHEDULE

#### Flora and Fauna

ITEM	TEST	DONE BY	FREQUENCY	STANDARD	CRITERIA
Western Buffer	Visual	Hanson personnel	Quarterly	On conservation management plan	Keep clear of weeds and vermin

#### Weeds

ITEM	TEST	DONE BY	FREQUENCY	STANDARD	CRITERIA
Entire site	Visual	Hanson personnel	Quarterly	Hanson Weed Management Plan	Keep clear of weeds and vermin

## References

- Mineral Resources (Sustainable Development) Act 1990
- Planning and Environment Act 1987
- Mineral Resources (Sustainable Development) (Extractive Industries) Regulations 2010
- Extractive Industries Development Act 1995
- *Restoring our catchments : Victoria's draft native vegetation management framework*, Department of Natural Resources and Environment, August 2000
- *Native Vegetation: sustaining a living landscape*, Department of Sustainability and Environment, March 2006
- *Native Vegetation Management: a framework for action*, Department of Sustainability and Environment, June 2006

## Further information

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