Weed Management Plan

Mark Lardner Excavations
White Hills Pit
Irishtown Road, Beacom Hills

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Prepared by

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1.0 Background

The following weed management plan has been prepared for the White Hills Pit, Beacom Hills, Smithton. The White Hills Pit is situated on Crown Land containing Mining Lease; 16M/1993.

The Site is situated adjacent to farmland and other quarries (Figure 1). There are two key aspects to the management of weeds onsite:

- Prevention of movement of weeds on and off the Site.
- Prevention of competition by the weeds that are already established with the revegetation efforts on the Site.

The Site is relatively weed free, with only two main areas of weed colonisation. The adjacent farmland and quarries have generally higher rates of weed infestations than the quarry Site itself. This proximity to potential weed propagation sources show that there is an inherent risk of re-colonisation unless sufficient preventative measures are taken after the weed removal (control) has been undertaken on Site.

Figure 1. Aerial photograph of site, with lease boundaries highlighted.
2.0 Weeds

The significant weeds present onsite and their local council management status are displayed in Table 1. Each Tasmanian local council is classified into one of two zones (Zone A and B) for the purpose of implementing weed management strategies.

- Zone A:
  - Minimal or no weed infestations.
  - Prevention of colonisation.
  - Eradication of weed species colonised site.

- Zone B:
  - Extensive or persistent infestations.
  - Control of spread and reduction of infestation size.

The management method for Zone A is eradication. This applies when the area has little or no weeds present, thus the weed management plan for a site is developed accordingly. Management methods for those local councils in Zone B, are to contain and minimise spread of the weed. The council is zoned as such because of widespread infestations of the weed. Weeds of National Significance are deemed as such due to their invasiveness, potential to spread and detrimental pastoral and environmental effects. The management approach is co-ordinated through all stakeholders, including state, territory and federal governments, facilitating national and cross jurisdictional action plans to control the weed. Those weeds listed as “Not Declared”, “Environmental Weed” or “High Threat” are listed as such because they are not a declared weed by the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE). However, they still pose an environmental threat and should be treated as a declared weed.

A survey of the weeds present onsite was undertaken on the 13/11/2013 by ES & D which showed that there are two main areas on the lease where there are weeds present; the southern face and the area near the waste rock pile (Figure 2). The weeds range from *Cirsium vulgare* (Spear Thistles), *Ulex europaeus* (Gorse) and various other species present on the lease, with the thistles the most numerous (Figure 3). Immediately adjacent to the Site there are *Rubus fruticosus* (Blackberries), Gorse and Thistles in high numbers. Therefore, it is imperative to maintain a strict management program of the weeds onsite.
Figure 2. Location of weeds onsite and near the mining lease. The weed locations are highlighted in red with the lease shown in yellow.
Figure 3. Examples of weeds present on the lease. 1. Dock and thistle on southern ridge. 2. Small thistles and small gorse plant on southern ridge. 3. Example of thistle. 4. Thistles on southern ridge. 5. Small thistles and gorse on southern ridge. 6. Thistles on waste rock pile.
Table 1. Significant weed species present on site. Both botanical and common names are given. In the case which the weed cannot be identified to species level, the genus is given.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
<th>Management Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dock</td>
<td><em>Rumex sp.</em></td>
<td>Not Declared</td>
</tr>
<tr>
<td>Paterson’s Curse</td>
<td><em>Echium plantagineum</em></td>
<td>Zone B</td>
</tr>
<tr>
<td>Sow Thistle</td>
<td><em>Sonchus sp.</em></td>
<td>High Threat (Not Declared)²</td>
</tr>
<tr>
<td>Spear Thistle</td>
<td><em>Cirsium vulgare</em></td>
<td>Not Declared</td>
</tr>
</tbody>
</table>

3.0 Management Methods

Due to the persistent nature and proximity to potential weed sources, stringent management will need to be undertaken. Routine spot spraying of the weeds will be undertaken by the proponent. Physical removal of some plants (Gorse for instance), is recommended to assist in the control of weeds. It is also of importance that the site remain weed free when rehabilitation is occurring, particularly in the early stages of rehabilitation prior to the colonisation of the topsoil by native vegetation. By spot spraying the weed species in the newly spread topsoil, it will allow for the revegetation to be more effective, which will act to out compete the weed species once established, thus preventing long term weed colonisation issues on Site.

The most likely means by which new weed seed will transport to the Site is through invasion from adjacent colonies. Weed seed may also be transported into the Site by vehicles and machinery. To prevent this, vehicles or machines to be used within the Site should be cleaned free of soil and vegetation matter prior to entry and exit of the Site. The *Tasmanian Washdown Guidelines for Weed and Disease Control; Machinery, Vehicles & Equipment; Edition 1* (Appendix 1), should be followed.

There are three main objectives of the weed management plan;

- To control existing weeds and to prevent further colonization by weeds at the Site.
- To allow optimum conditions for the establishment and re-vegetation of areas that are not to be mined at the Site, by native species.
- Prevent Site becoming a source of weeds to neighbouring properties.

These objectives are able to be achieved through the following processes;

- Isolation of any area of known weed infestation until treatment has been undertaken, by restricting access and vehicle movements through such areas.
- Prevention of spread of weed onto transport pathways, such as; roads and drains, by implementing proper boundary control.
- Maintain suitable records vehicle movements onto the site, in order to track potential external weed sources.
- Six monthly review of weeds and appropriate treatment of occurrences on the premises including; on Site access roads and rehabilitation areas.
- Use of suitable resources and personal protective equipment for the undertaking of successful weed controls on Site, including both chemical and physical methods.
- Restrict Site access by maintaining fenced perimeter and locked gate to control vehicle and stock movements from the adjacent properties, thereby isolating potential weed transfer vectors into the Site.
- Wash down facilities to undertake cleaning and maintenance of equipment and vehicles prior to accessing the Site, and upon leaving the Site (Appendix 1).
- Liaison and cooperation with external bodies in regional weed eradication programs, including periodic review of weed management activities.

The chemical sprays to be used in the weed control will be of minimal lasting environmental impact, breaking down to safe levels within seven days. Each spraying event will be documented in Appendix 3. Brief notes are to be recorded on the state of the weeds onsite once every six months or after each spraying event.
### 4.0 Management Commitments

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible</th>
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<tbody>
<tr>
<td>Review of weeds and spraying and/or physical removal of occurrences on the premises including; on Site access roads and rehabilitation areas.</td>
<td>Quarterly</td>
<td>Mark Lardner</td>
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<tr>
<td>Vehicle wash down.</td>
<td>On going</td>
<td>Mark Lardner</td>
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<td>Rehabilitation by spreading topsoil and ensuring native vegetation colonisation.</td>
<td>On going</td>
<td>Mark Lardner</td>
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<td>Visual maintenance checks of perimeter fencing and gates.</td>
<td>Monthly</td>
<td>Mark Lardner</td>
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<tr>
<td>Records of vehicle movements.</td>
<td>On going</td>
<td>Mark Lardner</td>
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</table>
Appendix 1. Tasmanian Vehicle Washdown Guidelines
## Appendix 2. Weed Control Register

<table>
<thead>
<tr>
<th>Date</th>
<th>Chemicals Used</th>
<th>Target Species</th>
<th>Signature - Completed</th>
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