SECTION 4: ENVIRONMENTAL ASPECTS AND IMPACTS

4.1 OBJECTIVES
To identify environmental aspects and evaluate the potential environmental impacts arising directly or indirectly from the mining / extraction operations.

This section includes:
- How to determine environmental aspects;
- Recording environmental aspects; and
- How to determine whether an aspect represents a significant environmental impact.

4.2 DEFINITIONS
Environment: surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.

Environmental Aspect: an element of an organization’s activities, products or services that can interact with the environment.

Significant environmental aspect: an environmental aspect that has or can have a significant environmental impact.

Environmental impact: any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization’s activities, products or services.

Environmental Specialist: meets environmental auditor qualifications or equivalent criteria as defined in ISO 14012: 1996 Guidelines for Environmental Auditing – Qualification Criteria for Environmental Auditors.

4.3 ACTION ITEMS

4.3.1 Aspects and Impacts Identification
The process of identifying environmental aspects and impacts shall include consideration of:
- Legal requirements;
- Potential emissions to atmosphere, water, groundwater and land (controlled and uncontrolled);
- Impact on local community (noise, odour and aesthetics);
- Management of solid and other wastes;
- Use of natural resources; and
- Heritage and habitat issues.

The process will include consideration of impacts or likely impacts of environmental aspects arising as a consequence of:
- Normal and abnormal (start up and shut down) operation conditions; and
- Potential incidents, accidents and emergency situations.
4.3.2 Environmental Aspects and Impacts Register
The environmental aspects/impacts register shall record each aspect and include:
- A short description of the activity, product or service;
- A short description of the event or process which causes the environmental impact (adverse or beneficial);
- The (potential) environmental impact resulting from the activity, product or service; and
- Significance rating of the impact.

The aspects register will be set out in the following format:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Aspect</th>
<th>Potential Environmental Impact</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key operating activity/service or product</td>
<td>How activity interacts with the environment</td>
<td>Air- Water- Land- Community Impact/Nuisance- Waste- Natural Resources &amp; Energy- Heritage &amp; Habitat-</td>
<td>Significant or Medium significance or Insignificant (for each impact group)</td>
</tr>
</tbody>
</table>

4.3.3 Significance Ratings
Environmental aspects/impacts will be assigned a significant, significant – positive (for good environmental practice), medium significance or insignificant rating. This significance is based on the scale, frequency, severity and sensitivity of the environmental issues as determined by judgmental considerations of Helidon Resources Management who have proven experience in this field and wherever necessary in consultation with qualified environmental specialists.

The following risk assessment matrix indicates the issues that contribute to defining the significance of environmental impacts.

**Significance (Risk) Assessment Matrix**

<table>
<thead>
<tr>
<th>Priority</th>
<th>Accountability</th>
<th>Liability</th>
<th>Compliance</th>
<th>Conservation / Heritage Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant</td>
<td>Community would be outraged.</td>
<td>High cost impact.</td>
<td>Legislative breach.</td>
<td>Wasteful use of resources. Heritage disrespect.</td>
</tr>
<tr>
<td>Medium Significance</td>
<td>Community involvement and concern likely.</td>
<td>Moderate cost impact.</td>
<td>Potential to breach legislation.</td>
<td>Resource management and heritage consideration.</td>
</tr>
<tr>
<td>Insignificant</td>
<td>Community unlikely to be affected.</td>
<td>Low cost.</td>
<td>Unlikely to result in non-compliance.</td>
<td>Responsible use of resources. Respect of Heritage.</td>
</tr>
</tbody>
</table>
A “Significant” impact is derived from the above matrix. If any of the impacts touch on any significant priority component, then it is rated as significant. (Example: an impact may have a low cost liability however it may cause community outrage, therefore this impact is to be rated as “Significant”).

The significant environmental aspects/impacts will be controlled through the development of operational environmental management plans.

4.3.4 Objectives and Targets & Environmental Management Programme(s)
Environmental objectives and targets will be managed through the Aspects and Impacts Assessment Register. This register will take the impacts identified in section 4.1 and further document the actions of Helidon Resources and score each impact accordingly. Actions for the high risk scores will be determined and the impact will be re-assessed, hence setting priorities for the site management.

4.4 RESPONSIBILITIES
Site Management will:
• ensure all environmental aspects/impacts which can be controlled or influenced are identified and recorded in a register;
• ensure objectives and targets for reducing adverse environmental impacts are included in Environmental Management Programme(s);
• review and update the aspects/impacts register every six months, or when a new product or process is introduced
• ensure new equipment, or changes to process are evaluated by the Site Safety and Environment Representative to identify and control significant aspects prior to being used at site.

Site Safety and Environment Representative will:
• assist with identifying environmental aspects and to quantify the environmental impact associated with those aspects;
• maintain the aspects/impacts register; and
• maintain a system of assessment for new products & process or changes to identify and control significant aspects.

4.5 DOCUMENTATION
Section 3 Process Flow Chart
Section 4.1 Helidon Resources Aspects Register
Aspects and Impacts Assessment Register HR-2-003