Appendix 10

Environmentally Relevant Activity Plan and Compliance Statement

ERA 16 2(b)

1. Introduction
This document is for Helidon Resources to conduct Extractive Industry operations on Lot 2 RP 182760, Seventeen Mile Road, Helidon. The plan is based on conditions and requirements set by DERM in its relevant documents. It should be noted that the current Extractive Industry Operations (removal of rock and boulders at approximately 5,000 t/a to 10,000 t/a) are significantly different to the original operations planned for the site (1995) so that a number of conditions in the Planning Consent do not apply. The differences have been addressed in the previous E.R.A.P 12/09/2006.

Copies of the current Environmental Authority No Mic200934509 (Permit no ENRE00614406), the Extractive Industry Permit and Mining Lease are attached for reference, see Appendix 9.

2. Purpose of the works
The purpose of works is to extract sandstone boulders and other sandstone products from the mine workings and existing stockpiles on site. The key potential uses of the sandstone identified on site are:

- Road Base – The high quartzite sandstone, combined with the presence of iron pisoliths on the surface, will provide the constituents of a quality road base. Road base samples have been tested by Coffeys and appear to meet Department of Main Roads & Transport (DMRT) Type 2.1 specifications.
- Sandstone boulders – Surface expressions of the sandstone indicate the presence of a large quantity of small to medium sized boulders. It is also likely that reasonably sized landscaping boulders can also be extracted from the Resource.
- Split or cut landscaping boulders and rocks.
- Construction sand – Large quantities of high silica sandstones are located on site that can produce a construction sand product.
- Dimension stone – A significant part of the Resource is suitable for production of dimension stone under the appropriate mining approval.
3. General Description of Site works

The sandstone is currently being extracted from existing stockpiles and mine faces that are located on site. Many of the boulders and stockpiles have been placed and won in previous years of workings on the site under previous permits and form a major part of the current operation.

Boulders and rocks varying in sizes are transported to the relevant stockpile areas. Sorting of rock takes place both at rock face and in stockpile areas depending on sizes, colour and hardness. Excavated rock and overburden material is transported to a raw stockpiling area where the material is accumulated to be crushed and screened using mobile plant equipment (contractor).

Drawing HR-SMP-001 shows a site plan of Lot 2 on RP 182760. Drawing HR-SMP-002 shows a general view of the proposed main working area including the site infrastructure. Drawing HR-SMP-003 shows the stockpile and disturbed area and current workings.

The location of the crusher and screening plant with an appropriate mobile crushing EPA which will be mobilised when required is adjacent to the quarrying area (DWG HR-SMP-003) and is dependent on the volumes of appropriate material available and this varies within different parts of the quarry. Other factors influencing the location of the crushing plant are,

- The availability of material available directly from mining at the face;
- The actual noise level of the contract crushing and screening plant;
- Whether a screening plant only is required.

Photo 1 shows the existing quarrying face on the property where landscaping rock and crushable rock has been extracted. There are four existing stockpiles of sandstone boulders and gravel on the site that are processed and are drawn upon on an as need basis. Clean up on the site occurs as each area is worked.

The four main stockpiles areas are described in TABLE 1 and numerous smaller stockpiles of unprocessed rock. HR-SMP-001 and 003 both show the areas of the stockpiles. The processed and unprocessed rock total to a mass of approximately 24,000 tonnes. This provides production for three years at a rate of 8,000 t/a or four years at a rate of 6,000 t/a.

At this stage a crushing and screening plant has not been utilised. This is because there is no immediate requirement. Within the next 2 years of operation, it is likely that a contract screening plant will be utilised on site.
Also attached are drawings prepared for previous submissions for reference. It can be seen that the current operations are a continuation of workings from previous years. Figure 1-1 shows the original location of site workings (Tennent Isokangas) and Figure 1-2 shows a topographical on lot 2.

<table>
<thead>
<tr>
<th>Stockpile Number</th>
<th>Description</th>
<th>Volume (m³)</th>
<th>Mass (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Small stockpile</td>
<td>328</td>
<td>656</td>
</tr>
<tr>
<td>2</td>
<td>Large stockpile</td>
<td>3,440</td>
<td>6,879</td>
</tr>
<tr>
<td>3</td>
<td>Large stockpile with grisly on top of it</td>
<td>3,555</td>
<td>7,110</td>
</tr>
<tr>
<td>4</td>
<td>Stockpiles around working face of quarry</td>
<td>1,887</td>
<td>3,773</td>
</tr>
<tr>
<td>5</td>
<td>Miscellaneous stockpiles</td>
<td>2,763</td>
<td>5,526</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>11,97</strong></td>
<td><strong>23,945</strong></td>
</tr>
</tbody>
</table>

TABLE 1 – Stockpile Summary Information

Photo 1– Existing Quarry Face & Stockpile (Stockpile 4)
Photo 2 – Stockpiles of Boulders/ Rocks

Photo 3 – Boulders
3. Operations

3.1 Type and capacity of plant and machinery used in the activity
The following machinery shall be utilised on-site but not limited in the extraction process:

1. Excavator 30 t
2. Front end loader (FEL) approximately Caterpillar 966G size
3. Site restricted dump truck 20-25t
4. Mobile screening equipment for sizing of material (150 t/h)
5. Future processing and mobile crushing plant (150 t/h)
6. Water truck
7. Mobile fuel tank on towable trailer or utility (road registered).

Semi tippers and truck and dog (Contractors) will be used to transport the material from site. Truck movements are expected to average 2 truck loads per day for approximately 150 days/annum with some days up to 6 loads and others none at all. This equates to a total annual production of 7500 t/a using 25t capacity trucks.

3.2 Method of extraction (Refer to mining area plan and detailed mining plan)
1. Identify land peg boundary lines and perform maintenance on access road if required. Current survey data is based on NRM digital Elevation Data. A full site survey (GDA94) had been completed.
2. Establish site infrastructure and prepare crushing and screening areas in accordance with design. This is nearly completed.
3. Clean up site and begin production of sandstone boulders from existing stockpiles on site. This is in progress.
4. Once the on-site stockpiles have been cleaned up and processed, extraction of other sandstone products can commence from the existing quarry face and other suitable areas onsite. Material will be transported to the crushing / loading area where the material will be stored on this site and crushed in campaigns and screened if required.
5. Bunding will be placed around the stockpiles of crushed material to prevent erosion and trap silt.
6. Material will be loaded onto trucks as required, maintaining adequate stocks of material in the crushing / loading area.

3.3 Processes to be used (e.g. crushing, screening, stockpiling)
- Initially rock from existing stockpiles will be screened and sorted in the crushing / screening area.
- As mining progresses material extracted from the quarry face will be screened and crushed on a campaign basis as required.
- Sandstone and other material from the quarry will be excavated using a 30 t excavator.
• Stockpiles of up to 1,000 t of crushed rock for transport will be located on-site on the loading area.

3.4 Daily operating times
Quarry operating times will be:
6am – 6pm (Monday – Friday)
6am – 12pm (Saturday)

Truck movement/ operating times will be:
7am – 6pm (Monday – Friday)
7am – 12pm (– Saturday)

Trucking times will be in accordance with approvals by the Lockyer Valley Regional Council. Appropriate Council requirements in regard to travelling past schools during school times will be adhered to.

3.5 On-site fuel storage
The first years production shall utilise a mobile fuel tank, 400litre vehicle mounted.

With increased production fuel may be stored on-site (5000litre tank) and an oil spillage kit (recommended type ASK 240GP – Absorb Environmental Solutions) will be kept on-site to contain spills or leaks in the case of an emergency either resulting from spillage during refuelling or due to a tank rapture. On site fuel storage will be appropriately bunded and will comply with the appropriate Australian Standards. (AS1940 – The Storage and Handling of Flammable and Combustible Liquids and, AS1692 – 1989, Steel tanks for Flammable and Combustible Liquids). The fuel will be stored within the fenced compound (HR-SMP-002) for security reasons.

Fire extinguishers will be kept on all mobile equipment and fuel dispensing tanks. Fuel and oil storage shall be to an area minimal to fire risk(cleared compound area). Oil drums shall be stored on pallets and contained within a bunded area.

3.6 Duration of Extraction
The duration of the extraction is expected to be indefinite, dependent on supply requirements from contractors and other parties. Initially, only processing of already mined material, which had been dumped on site, will be carried out. Future operations will depend on the demand requirements of customers and will come from existing already established quarry locations on site.

3.7 Proposed End Use of Site
The proposed end of use of the site will be as an industrial site. Quarry benched will be made safe and the quarry used as an industrial site for storage equipment. The disturbed quarry site will be fenced.
4. Description of Site (Environmental & Topographical)

4.1 Site Location
The site is located approximately 4 km north-east of Gatton on Seventeen Mile Road. Access to the quarrying operation is from Seventeen Mile Road. (Refer Quarry Layout and Access, HR-SMP-001). There is a natural vegetation barrier to the road and it is planned to leave this vegetation buffer. There is a small cleared area at the access gate and this shall be utilised as a turn around and off-site parking area. This area shall also be utilised as the emergency muster area. This area is also utilised as a truck queuing and marshalling area (off road) before loading.

Photo 5 Front access – Vegetation to remain, Muster Area, Off street truck parking.

4.2 Nearest Residence
Figure 4-1 shows the location of the nearest residence (sensitive receptor – house) which is located on the western side of Seventeen Mile Road. It is approximately 1.7 km from the main gate. It should be noted that Helidon Sandstone Industries (HSI) are located between the proposed project and this house.
4.3 Existing Tracks and Fire Breaks
Figure 4-2 shows the existing tracks and fire breaks. There is no requirement to increase the number of tracks on site, only to carry out regular maintenance. Cleaning and maintenance has been carried out in June 2006 and again in April 2009.
The tracks are regularly traversed and maintained as and when required.

A further fire break/track has been constructed to the north eastern area of the disturbed area.
- A 145m no disturbance buffer zone has been established and maintained at all times between the disturbed area and the State Forest and this zone shall have appropriate barriers and signage;
- A fence as requested has been constructed along this break.

4.4 Proposed Site Drainage and Creek Lines
HR-SMP-004 shows the site drainage plan. A sedimentation dam has been constructed in the gully adjacent to Wrights Creek. This shall be utilised as the main sedimentation dam to capture runoff from the western side of the property and western side of the disturbed area (Photo 6). An allowance of 200m3 per hectare distributed (total 800m3) has been made for the main sedimentation dam. In addition a smaller dam will be located in the south-eastern corner of the distributed area adjacent to the access track. This dam will have a pipe overflow which will run beneath the road and capture surface runoff from the eastern side of the working area above the existing quarry face. The total combined capacity of the dams is around 1200 - 1300m3, the western dam being approximately 800m3. The dams will be constructed using site materials and have a design freeboard of 0.5m.
At the lowest point in the quarry pit a sedimentation barrier shall be constructed to catch immediate run-off out of the pit before entering the natural bushland. See HR-SMP-004.

The construction and moving of sedimentation berms, barriers and bunds shall be an ongoing process as each area is opened or closed to quarrying works.
Photo 6 – Western Sedimentation Dam.

4.5 Site Water Supply
Water is required on site for the following uses;
- Potable water;
- Road watering to reduce dust;
- Addition to screened products to achieve required moisture content.

The following sources of water exist on the site:
- Natural pond located 50m east of the existing quarry, adjacent to power pole);
- Sedimentation dams;
- Dam site (water will need to be pumped up to the working areas);
- Potable water in 10000 L storage tank adjacent to building.

The following additional sources shall be added to the site,
- Potable water in 2 x 18000 L storage tanks adjacent to office.
- Potable water in 18000 L storage tank adjacent to shed.

There is also the opportunity to clean and pump on an existing bore adjacent to the compound area.

It is expected that during intermittent activities on site the average daily consumption of water will be 25 kL. The total annual consumption is expected to be in the range 1.25 ML to 3 ML.
4.6 Site infrastructure

Current Site infrastructure consists of:
- Site access and parking area adjacent to gate;
- Existing site roads and fire breaks;
- A compound for fuel storage and secure equipment parking;
- A light vehicle parking area adjacent to the compound;
- A shed, lockable office and potable water supply;
- Fences surround the site.

An application for separate D.A. for approval to construct site infrastructure is in progress. When approved the following shall be constructed and is detailed on HR-SMP-002.
- Site office, crib room, first aid.
- Unisex ablutions block.
- 3 x 18000 L potable water tanks.
- 10 person sewerage treatment system.
- Maintenance shed and storage containers.
- Fuel storage.

Electricity (3 phase) has been connected to the site.

The above buildings are of portable construction and can be moved in future years should the requirement be needed.
5 Environmental Issues – Land and Water

These issues are covered in the Environmental Impact Statement (Vol1, Vol2) prepared by TIP in 1995 which includes an Environmental Management Plan. The Stage 1 extraction area has been cleared. It is approximately 5.4 ha. Including the site access and roads and firebreaks is assessed to be 6.0 ha. Recent disturbance has been carried out on previously disturbed areas and has been a part of a site cleanup and re-establishment of tracks. No logging is required on site as there is no intention to remove additional trees, except regrowth in cleared areas. The following are the key changes relevant to the current application.

- Vol 1 Section 2.1.4: material will be extracted for building stone only (up to 40 t/day). Only sand from screening will be produced.
- Vol 1 Section 2.1.6: No further blasting will be carried out for five years and is subject to approval.
- Vol 1 Section 2.2.1: There will be no classifying plant, or any employees living on site. Employees will only be on site to load trucks or sort material. A transportable chemical toilet will be provided.
- Vol 1 Section 2.2.6: If necessary Gravimetric Dust Monitors will be provided on site, no drilling will be carried out.
- Vol 1 Section 2.2.7: A portable water tank exists on site (FIGURE 8). Only dam three will be used. Sedimentation Barriers will be constructed around the dam to collect sediment from the quarry operation after rainfall events.
- Vol 1 Section 3.2.2: Truck counts will average two per day but may be up to eight.(i.e. one trip)
- Vol 2 Section 2.1.6A: Not Applicable.
- Vol 2 Section 2.2.5A: No blasting for five years and subject to approval.
- Vol 2 Section 2.2.7A Minimum water storage for dust control will be maintained on site. There will be no black/grey water.

The following (in addition to Appendix 5-A) addresses the key issues on accordance with the EcoAccess Information Sheet (Environmental Operations).

5.5 Disruption of habitats.
There will be limited or no impact on the terrestrial environment. This is because:

- The applicant has no intention to remove vegetation except to widen access tracks and maintain firebreaks.
- The land had been cleared for approximately ten years and contains a number of connected habitats. Limited further clearing is required.
- Blasting will not occur for the first four to five years of operation.

A flora and fauna assessment was completed in October 1995. Refer Supplementary Report (Appendix 5-A). Refer also to the study completed on September 2006 by Austral AsianResource Consultants (AARC).
5.6 Sites of Cultural Significance
There are no sites of cultural significance registered on the proposed area for the Extractive Industry. There appear to be no site of Aboriginal cultural heritage located on site. If Aboriginal cultural sites are discovered on site appropriate consultation will be conducted with the Jagara-Darin people, who currently have a Native Title claim on the area.

5.7 Soils requiring Specific Management
There are no soils requiring specific management, in fact, topsoil is extremely limited on the site. There are no acid sulphate soils, acid soils or dispersive clays.

5.8 Slope Stability Management
There are a number of steep slopes on the site, particularly adjacent to the creek. These are up to 60 degrees. It is not intended to extract sandstone from these slopes. The slopes to be worked are in the range 5 to 15 degrees.

5.9 Site Remediation
Refer Environmental Management Plan.

The regeneration of site species occurs very quickly. Photo 9 shows the regeneration 5 years after vegetation had been disturbed. Photo 10 shows the boundary between the cleared vegetation and the natural vegetation which will remain undisturbed. As part of the regeneration process vegetation matter will be raked back over the disturbed area to encourage regeneration. For further information refer to the AARC Ecological Assessment (2006).

Photo 9 Regeneration (mainly wattle) in disturbed area.
5.10 Flora and Fauna assessment
A separate report, entitled 'TSI Enterprises – Ecological Assessment' provided by AARC (September 2006) covers full flora and fauna studies on the site. The regional ecosystem map and the environmentally sensitive area map are shown in Appendix 5-B. Mitigation strategies for the management of the flora and fauna species have been presented in the report. They include:

- Keeping disturbed area to a minimum;
- Having appropriate erosion and sedimentation controls;
- Methodologies such as habitat matching of species should be employed when rehabilitating the site;
- Locally occurring flora species should be chosen to encourage returning of native fauna;
- Infrastructure planning should avoid the creation of shallow water areas as the attract cane toads which are lethal to most fauna species when ingested.
- Current fire breaks on and around the site should be maintained;
- If native animals are encountered whilst clearing the activity should temporarily cease and allow the animal time to move off on its own accord;
- A 145m no disturbance buffer zone should be established and maintained at all time between the disturbed area and the State Forest and this zone shall have appropriate barriers and signage, this has been established;
• Monitoring of weeds of management concern should be undertaken by site personal and any weeds of management concern that are identified should be eradicated in accordance with local best management practice and/or Department of Natural Resources, mines and Water Pest Fact sheets;
• Weed management should be included as part of the site induction.

5.11 Buffer Zones
Drawing HR-SMP-001 shows the buffer zones developed based on the AARC report and existing zones. These are:

• Eastern zone adjacent to Seventeen Mile Road;
• The zone around Wright Creek from 235 m RL in the west to 220 RL in the east;
• The 145 m zone buffering the state forest to the north. This zone is delineated approximately by the fire break to the north of the proposed quarrying area. There as another fire break on the fence boundary.

Photo 12 Buffer fence 145m in from northern boundary.
5.12 **Pollution control and waste management.**
As mentioned earlier in this document pollution from spillages will be handled by an onsite oil absorbent kit. All site rubbish will be collected and removed off site to an appropriate waste dumping facility. Limited maintenance will be carried out on site other than servicing as the extraction process will be on a campaign basis. Where possible, scrap metals, (bucked teeth and consumables) will be recycled.