SECTION 2: GENERAL DESCRIPTION OF OPERATIONS

1.1 BACKGROUND

Helidon Resources is located at 293 Seventeen Mile Road, Helidon QLD. Helidon Resources is a small family business and is owned by Peter and Chris Stephens who are also the only employees of the business. The property has been owned by the family for 28 years.

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 Coffey’s 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.

1.2 Products and Process

Current operations are under the existing development approval and subsequent approval involves the extraction of sandstone for both the landscaping and building industry. No product or by-product from the extraction / mining process is considered waste. Any byproducts are stockpiled and can be processed further into road base, sand etc.

Benches of Sandstone are presently sawn, cut and ripped with a 30 ton excavator to produce boulders and rocks and landscaping blocks of various sizes by taking advantage of the fractures in the layers. NO percussion / impact attachments are used such as hydraulic breakers etc.

Boulders and rocks and blocks after sawing and 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 and can be later processed.
In brief it is proposed (once a mining lease has been granted) to small scale extract dimensional stone in sections where applicable as an extra product, in conjunction with the quarrying operations. The nature of the sandstone deposit in layers and fracture lines shall limit the yield of dimensional stone hence the need to combine the operations to produce a viable return to facilitate operations. Grain size and deposit thicknesses of the fine grained rock are not consistent and not all of the existing quarry area is applicable to dimensional stone limiting the area to where dimensional stone shall be cut and extracted.

The process for mining Dimensional stone shall be the exact same process used under the current operations by sawing of the sandstone with a tungsten wheel on an excavator. In dry / hot conditions, the use of some water to supress the dust from this process may be used. Additional non destructive Final cutting by Wire Saw (wet process) which is common practice with all neighbouring sandstone quarries in the Helidon area. Being a wet process means that very minimal dust be present.

No explosive blasting shall take place on site and no percussion / impact type machinery is used in the process. Extraction for quarry rock shall be of the same process regardless of grain size and market destination as it is expected dimensional stone yield to be low compared to other quarries.

Due to the size of the blocks and low projected yield of the dimensional stone in comparison to quarry products, it is proposed to stock pile the dimensional stone at the southern point of the extraction point in a safe area suitable for loading onto transport. The dimensional stone load-out area is different to the quarry products as loading is a different operation and due to weight of the stone the distance to move them shall be as short as possible.

1.3 REVIEW
As the business develops and grows, the Helidon Resources management will review this process and update the Environmental Management Plan on an annual basis to ensure its ongoing effectiveness.