



**SINO STEEL MIDWEST CORPORATION LIMITED**

**ENVIRONMENTAL DRILLING  
MUNGADA BLUE HILLS**

**PROPONENT INFORMATION**

**MARCH 2015**

## 1. Proposal

The proposal is for clearing of access tracks and clearing, levelling and cut and fill of drill pads for exploration drilling at blue hills on Mungada ridge.

The extent of clearing is no more than 0.175 ha for access tracks and 0.48 ha for 16 drill pads within a 36.96 ha development envelope.

## 2. Management

### 2.1 Exploration Environmental Management Plan

SMC's Environmental Management Plan (Exploration) July 2010 sets out the standard management procedures for clearing and rehabilitation of exploration pads and tracks. Specifically, sections 8, 9, 10, 11, 12, 13, 17 of the EMP provide for a very high level of management to avoid potential environmental impacts. More specifically, SMC will undertake the following rehabilitation measures:

1. Cleared vegetation will be separated and stored so that it can be spread on the final rehabilitated landform;
2. The rock underlying the topsoil layer will be used to construct the cut and fill pad;
3. Topsoil from cut and fill pads will be separated from the underlying rock and stored in such a manner such that it can be replaced on top of the reconstructed pad.
4. An excavator will be used to rehabilitate cut and fill pads to minimise disturbance of surrounding vegetation and allow more precise reconstruction of the landform. This will occur as soon as practicable after drilling activities have finished;
5. A specific management plan will be developed for the drilling program; and
6. The Botanic Parks and Gardens Authority will be consulted to provide input into the management plan.

### 2.2 Avoidance of Declared Rare Flora

SMC will avoid direct clearing of *A. woodmaniorum* however, a DER Permit to Take will be required as each plant has a 50m zone which is designated as an Environmentally Sensitive Area and drilling will occur within 50m of *A. woodmaniorum*. The location of every *A. woodmaniorum* plant was recorded by GPS waypoint during the survey over the area covered by the drilling program. This will allow SMC to implement the drilling program so that *A. woodmaniorum* is avoided.

### 2.3 Geofencing

Electronic data collected from on-ground environmental surveys will be used to develop GIS mapping for this program. Where environmentally significant areas and species have been found, these are recorded on the database and can be recorded on the Geofencing GPS map as places to be avoided. The software will also be used to restrict operations to a specific area i.e. within the approved area of clearing for pads and tracks. The software can also provide information in the event of an incident.

The device will record the location of the operator (even when turned off) in relation to protected areas and show details such as the time, date, and location etc. of an incident.

Any breach of a geo-fencing boundary is immediately sent to the site supervisor, and other management by email, SMS, pager etc. This allows the site supervisor to immediately intervene and prevent any further unauthorised clearing to occur.

## 2.4 General Management

- Disturbed areas will be rehabilitated as soon as practicable after drilling and will adhere to all approvals;
- Long-term visual impact will be minimised by creating landforms which are comparable with the adjacent landscape;
- Compacted surfaces will be ripped or scarified to a depth of approximately 300mm should ground conditions allow;
- Where practicable, natural drainage patterns will be reinstated;
- Disturbed areas will be re-covered with topsoil and rock to match adjacent undisturbed areas;
- Weeds will be managed in rehabilitated areas;
- Sinosteel Midwest will restore the surface profile and prepare the surface to a condition of roughness to resist erosion and accelerate natural revegetation by containing runoff, ensuring infiltration and seed trapping;
- Rehabilitation of pads and tracks will consist of the following methods as required: cross ripping, deep rip, shallow rip, multi-tyne rip, single-tyne rip, scarify, harrow, mini moonscape reshape or any combination of these;
- Disturbance to vegetation and soils will be minimised, through minimising clearing and employing appropriate clearing techniques;
- SMC will avoid long continuous rip lines along tracks, especially down slopes, and will control runoff through the use of appropriately spaced bunds.
- PVC collars will be cut off below ground level, with the PVC wastes being removed from site;
- Drill holes will be plugged 40cm below the surface of the soil, with an appropriate plug and will be backfilled with soil;
- Sample bags will be removed to a storage area or disposed of appropriately;
- Drill sumps will be backfilled after drying out and rehabilitated. Topsoil will be separated from subsoil at construction to be redeployed after backfilling ; and
- Drill pads will be re-shaped to pre-existing contours and ripped or mini-moonscaped. Topsoil will be removed and stored separately in low piles at construction for redeployment as soon as possible after re-shaping.

## 2.5 Rehabilitation Research

SMC has not selected specific locations of where rehabilitation research works are to be undertaken however, the following approach has been discussed with the BGPA:

1. Conduct research trials on old pads (greater than 2 years) which have been previously rehabilitated to include landform reconstruction but not vegetation restoration;

2. Conduct research trials on recently rehabilitated pads (less than 2 years); and
3. Conduct research trials on newly constructed pads. Drill pads from this drilling program will be used to underpin the research program.

The research will be conducted on drill pads and tracks located at Blue Hills in 2015.

### **3. Supporting Information**

The following documentation is provided to support the assessment of the drilling program:

- Botanic Parks and Gardens Authority Letter to SMC;
- Botanic Parks and Gardens Authority Executive Summary;
- Fauna survey memorandum;
- Program of Works Application;
- Flora survey report; and
- SMC response to further information request – September 2014