

*Environmental Protection Act 1986*

Section 41A(3)

STATEMENT OF REASONS

CONSENT TO UNDERTAKE MINOR or PRELIMINARY WORKS

**Proposal:** Ravensthorpe Gold Project

**Proponent:** ACH Minerals Pty Ltd

**Decision**

For the reasons outlined below, I, as a delegate of the EPA, have determined to consent to the minor or preliminary works outlined in Schedule 1 attached to this Statement of Reasons.

**Background**

On 13 December 2016, ACH Minerals Pty Ltd (ACH Minerals) referred the Ravensthorpe Gold Project to the Environmental Protection Authority (EPA) under section 38 of the *Environmental Protection Act 1986* (EP Act). The proposal is to mine and process gold and copper from the Kundip Mine Site and Myamba Mine Site, located approximately 17 kilometres (km) and 26 km respectively, southeast of Ravensthorpe in the Shire of Ravensthorpe (the proposal).

The proposal involves mining from multiple open-cut pits and underground, mining below the water table, a processing facility, Waste Rock Landform (WRL), a Tailings Storage Facility (TSF) and associated infrastructure. The Kundip and Myamba Mine Sites would be connected via a 7.5 km overland water pipeline that runs parallel to the Hopetoun-Ravensthorpe Road corridor and Kundip Nature Reserve. The proposal includes a disturbance footprint of 197 hectares (ha) within a 512 ha development envelope, across both sites, and water abstraction of up to 60 Megalitres (ML) per annum. Of the 197 ha of disturbance footprint, 151.8 ha would be clearing of native vegetation.

The proposal is a revision of the Phillips River Gold Project, which was assessed by the EPA and conditioned under Ministerial Statement 716 in 2006. To date the Phillips River Gold Project has not been implemented.

The EPA determined to assess the proposal at the level of Public Environmental Review with a four-week review period. The Environmental Scoping Document (ESD) for the proposal was proponent prepared and approved by the EPA on 26 February 2018. On submission of an adequate draft Environmental Review Document (ERD), the EPA will determine whether the document is suitable for public review.

In advance of a decision or agreement in relation to whether or not the Proposal may be implemented under section 45 of the EP Act, the Proponent has sought the EPA's consent to undertake minor or preliminary works related to the Proposal.

## Relevant Statutory and Administrative Provisions

After the EPA decides to assess a proposal, and before a decision or agreement is made under s45 of the EP Act, all persons are prohibited from implementing a proposal, and relevant decision making authorities are prohibiting from making a decision which would allow the proposal to be implemented, except in relation to minor or preliminary works which the EPA has consented may be implemented – see sections 41(4) and 41A(3) of the EP Act.

If the EPA consent to the minor or preliminary works being done, the person proposing to undertake those works may still need to obtain other authorisations from other decision making authorities.

Section 3.5 of the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016* guides what information the EPA requires from a person wanting to undertake minor or preliminary works.

In considering the request for consent, I considered whether the:

- work is associated with the implementation of the proposal;
- potential environmental impacts of the work are significant;
- work would constitute the irreversible and substantial implementation of the proposal; and
- work is justified.

## Materials considered in making this decision

In determining whether to consent to the minor or preliminary works I have considered the following:

1. Ravensthorpe Gold Project Request to Undertake Minor or Preliminary Work, May 2018, Animal Plant Mineral Pty Ltd on behalf of ACH Minerals (supporting documentation), providing the following:
  - the location, scope and methodology of the proposed works;
  - the relationship of the proposed works to the proposal;
  - details of the potential environmental impacts caused or likely to be caused by the work and how the potential impacts will be managed;
  - details of decommissioning and rehabilitation works which would be carried out should the overall proposal not be implemented; and
  - information explaining how the impact from proposed works would be reversed if the proposal is not implemented.
2. Spatial Data provided by Animal Plant Mineral Pty Ltd on behalf of ACH Minerals on 5 June 2018, showing the location of the change.
3. Consultation undertaken between ACH Minerals and the Department of Mines, Industry Regulation and Safety (DMIRS) regarding the proposed works.
4. Consultation undertaken between ACH Minerals and EPA Services at the Department of Water and Environmental Regulation.

## Consideration

1. Assessment details – proposed work associated with proposal

ACH Minerals has requested to undertake works within the Kundip Mine Site area of the proposal. The works include geotechnical test pits, resource definition drilling

at the proposed Flag deposit and drilling for sterilisation of areas that are planned to host elements of the proposal, including:

- the processing plant;
- Waste Rock Landform (WRL); and
- Tailings Storage Facility (TSF).

These activities all form part of the proposal description that was referred to the EPA, are necessary to be carried out prior to finalisation of the proposed site layout and disturbance footprint. These works may also inform the EPA's assessment.

## 2. Details of the proposed work

Figure 1 shows the location of the proposed works. ACH Minerals propose to conduct sterilisation drilling through utilisation and widening of existing tracks and establishment of new tracks, to approximately 3.5 metres (m) wide. Test pitting may also be undertaken in these areas.

ACH Minerals also propose to conduct drilling within the area of Flag deposit to further define the underlying resource. Works include the establishment of 18 drill pads (18 m by 15 m), designed to accommodate Reverse Circulation and Diamond drilling, and sumps up to 3 m deep to be contained within the drill pad.

The works associated with Flag deposit have been designed to occur within previously disturbed areas, with only minimal clearing of native vegetation required to widen access tracks.

Total disturbance associated with the preliminary works includes clearing of up to 2.97 ha of native vegetation within a 512 ha development envelope.

ACH Minerals notes that the preliminary works are justified to confirm the suitability of the proposed locations and size of the processing plant, WRL and TSF. ACH Minerals notes that optimisation of these elements is necessary in order to:

- avoid and minimise disturbance to significant flora, vegetation and fauna habitat;
- ascertain the underlying geology of the processing plant, WRL and TSF; and
- ensure that all landforms and infrastructure are constructed on non-mineralised and competent base materials.

ACH Minerals considers that confirmation of the final layout can only be achieved through drilling and recovery of physical samples.

The works are proposed to be undertaken over a nine week period, with immediate rehabilitation of all areas at completion of the works.

Considering the above, the proposed works are considered justified in their extent and timing.

## 3. Potential environmental impacts

The preliminary key environmental factors associated with the proposed Ravensthorpe Gold Project as identified in the ESD are:

- Flora and Vegetation;
- Terrestrial Fauna;
- Terrestrial Environmental Quality;
- Hydrological Processes; and

- Inland Waters Environmental Quality.

The proponent will be required to submit a Programme of Works and apply for a Clearing Permit by way of the Department of Mines, Industry Regulation and Safety (DMIRS), prior to undertaking the proposed works.

### *Flora and Vegetation*

A total clearing of 2.97 ha of native vegetation is required for the investigative works. The majority of clearing (2.31 ha) is required to establish drill lines for sterilisation of areas that are planned to host the processing plant, WRL and TSF. An additional 0.66 ha of clearing is required to facilitate resource definition drilling at Flag deposit.

The works have been designed to optimise use of existing tracks and previously disturbed areas. Areas that are required to be cleared of native vegetation have been designed to avoid impacts to two conservation significant communities:

- *Melaleuca* sp. Kundip Heath, Priority 1 Ecological Community (PEC); and
- Proteaceae Dominated Kwongan Shrublands, PEC/Threatened Ecological Community (TEC) (*Environmental Protection and Biodiversity Conservation Act 1999*).

Identified PEC and TEC areas will be clearly demarcated throughout the works. Any drilling that occurs within these communities will be restricted to existing access tracks and clearing of 0.024 ha of regrowth on a previously cleared drill line. No additional clearing in areas of conservation significant communities is required.

ACH Minerals has designed the works to avoid known populations of conservation significant flora within the Kundip Mine Site. Known populations and individuals of priority flora will be demarcated and provided a minimum 50 m buffer from any clearing or drilling locations. Any new individual or populations of Priority 1 conservation significant flora identified through the course of these investigative works will be avoided and provided a 50 m buffer including, but not limited to, the following:

- *Calothamnus roseus*;
- *Melaleuca sophisma*;
- *Acacia* sp. Ravensthorpe Range;
- *Lepidosperma* sp. Elverdton; and
- *Lepidosperma* sp. Mt. Short.

ACH Minerals will be required to apply for a licence under the *Wildlife Conservation Act 1950* if any other individual conservation significant flora is identified during the course of these works, and avoidance is not possible.

ACH Minerals provided the following management measures to minimise indirect impacts to Flora and Vegetation:

- progressive clearing and rehabilitation will be undertaken to reduce exposure from fugitive dust and particulate matter;
- water sprays and dust suppressants will be used to minimise dust generation from cleared areas; and

- a hygiene plan will be implemented on site to reduce the risk of introducing *Phytophthora cinnamomi* (Dieback) to the Kundip Mine Site. All vehicles will be washed prior to arrival on site, and investigative works will not be undertaken during wet soil conditions.

Based on the information above, it is unlikely that Flora and Vegetation will be significantly impacted by the works.

#### *Terrestrial Fauna*

The works will result in clearing and disturbance of up to 2.97 ha of terrestrial fauna habitat. The works have been designed to utilise existing disturbance and access tracks where possible, to reduce the amount of clearing required and the risk of fragmentation of fauna habitat.

Clearing associated with the works intersects three fauna habitat types recorded within the Kundip Mine Site. The fauna habitat types are not restricted to the Kundip Mine Site and found extensively throughout the Ravensthorpe Range and Kundip Nature Reserve, adjacent to the Kundip Mine Site.

ACH Minerals note that appropriate fauna surveys have been undertaken within the greater Kundip Mine Site, with the following conservation significant fauna recorded:

- Carnaby's cockatoo (*Calyptorhynchus latirostris*) (Endangered);
- chuditch (*Dasyurus geoffroyi*) (Vulnerable);
- malleefowl (*Leipoa ocellata*) (Vulnerable);
- Ravensthorpe Range slider (*Lerista viduata*) (Priority 1);
- western brush wallaby (*Macropus Irma*) (Priority 4); and
- western whipbird (mallee) (*Psophodes nigrogularis oberon*) (Priority 4).

ACH Minerals notes that, although malleefowl have been recorded on site, no active mounds have been located within the greater Kundip Mine Site. One historic mound has been located on site, which will be avoided and provided a 50 m buffer as to not be disturbed by the works (Figure 1). All tracks and drilling locations will be searched for mounds prior to commencement of clearing or drilling.

The works have been designed to avoid habitat suitable for conservation significant species, including avoidance of large trees that provide habitat for the Carnaby's cockatoo and historic mine shafts that provide refugia for chuditch and other small mammals, reptiles and invertebrates.

ACH Minerals provided the following management measures to reduce the risk of impacts to fauna:

- specialist consultants will be engaged to relocate fauna prior to clearing;
- restriction of vehicles to access tracks and imposed speed reduction of vehicles to reduce the risk of fauna injury or death;
- works will be undertaken in daylight hours only to reduce the risk of impacts to fauna from light spill and noise/vibration; and
- sumps and test pits will be appropriately ramped to allow fauna egress.

Due to limited clearing of 2.97 ha of native vegetation, the abundant presence of 'good' to 'excellent' quality vegetation that surrounds the proposed drill locations and access tracks, and that fauna habitat types are not restricted to the Kundip

Mine Site, it is unlikely that Terrestrial Fauna will be significantly impacted by the investigatory works.

#### *Other factors*

ACFI Minerals notes that the works require use of diesel fuel and oil in drill rigs and vehicles, as well as lubricants and oil for use in drilling. The following measures are proposed to reduce the potential impacts from hydrocarbons:

- no chemicals or hydrocarbons will be stored on site;
- vehicles will be fuelled offsite and serviced prior to deployment;
- drill rigs and support vehicles to be equipped with spill kits and drip trays; and
- any spills will be cleaned up immediately and contaminated soil will be stored and removed appropriately.

ACFI Minerals notes that drilling conducted at the Flag deposit is likely to intersect groundwater. Any water that is extracted as part of the works will be captured in sumps for evaporation prior to backfilling. Sumps have been designed to an appropriate size to contain any water and sediment encountered during the drilling program.

The works do not intersect surface drainage lines, and no discharge of waste to the surface water systems is proposed. Exposed ground will be limited to narrow tracks and drill pads, with clearing undertaken progressively as to reduce the risk of erosion and sedimentation of the surrounding environment and waterways.

Based on the information above, it is unlikely that the works will significantly impact Terrestrial Environmental Quality, Hydrological Processes or Inland Waters Environmental Quality.

#### 4. Proposed rectification actions

On completion of the works, the following rectification measures will be undertaken:

- drill holes will be plugged/capped and secured immediately after drilling;
- all compacted areas will be scarifying/ripped on the contour;
- access tracks will be blocked to prevent use by the public;
- drill sample piles will be rehabilitated or buried where appropriate;
- all rubbish will be removed site;
- sumps, costeans, test pits or any other areas excavated as part of these works will be backfilled prior to rehabilitation; and
- standard rehabilitation procedures will be implemented on all disturbed areas, including:
  - topsoil will be kept and stored during the proposed works and re-spread during rehabilitation; and
  - revegetation will be monitored and managed if required to aid in the reestablishment of suitable vegetation communities.

In accordance with the *Mining Act 1978*, all ground disturbing activities must be rehabilitated within 6 months of completion of the investigative works. ACH Minerals is required to provide a rehabilitation report to DMIRS on submission of its Programme of Works application. These measures are considered appropriate to ensure that the impacts of the works can be rectified.

## Schedule 1

### Minor or Preliminary Works

**Table 1: Authorised Minor or Preliminary Implementation Work (s)**

| Authorised Work(s)   | Location        | Authorised extent   |
|--|-----------------|---|
| <p>The following works are authorised in their entirety:</p> <p>Construction, operation and maintenance of:</p> <ul style="list-style-type: none"> <li>• drill lines and pads for sterilisation drilling of the processing plant, Waste Rock Landform and Tailings Storage Facility;</li> <li>• widening of access tracks to 3.5 metre width;</li> <li>• 18 drill pads with sumps for resource drilling at the Flag deposit,</li> </ul> <p>up until such time as the later of one of the following occurs:</p> <ol style="list-style-type: none"> <li>a. notice issued under s 45(8) of the EP Act; or</li> <li>b. statement issued under s45(5) of the EP Act is final (that is, after period in which to lodge an appeal under s 100(3) has expired, or appeal decision under s109(3), in respect of an appeal lodged under s 100(3), is published).</li> </ol> <p>and;</p> <ol style="list-style-type: none"> <li>c. rehabilitation of the area/s identified in Figure 1 in accordance with current EPA rehabilitation guidance, or if an implementation statement is issued for the Proposal, in accordance with any implementation conditions relating to rehabilitation</li> </ol> | <p>Figure 1</p> | <p>Clearing of up to 2.97 ha, being:</p> <ul style="list-style-type: none"> <li>• 2.31 ha for drill lines and access tracks; and</li> <li>• 0.66 ha for drill pads, clearing and resource drilling at Flag deposit,</li> </ul> <p>Within a 512 ha development envelope.</p> |



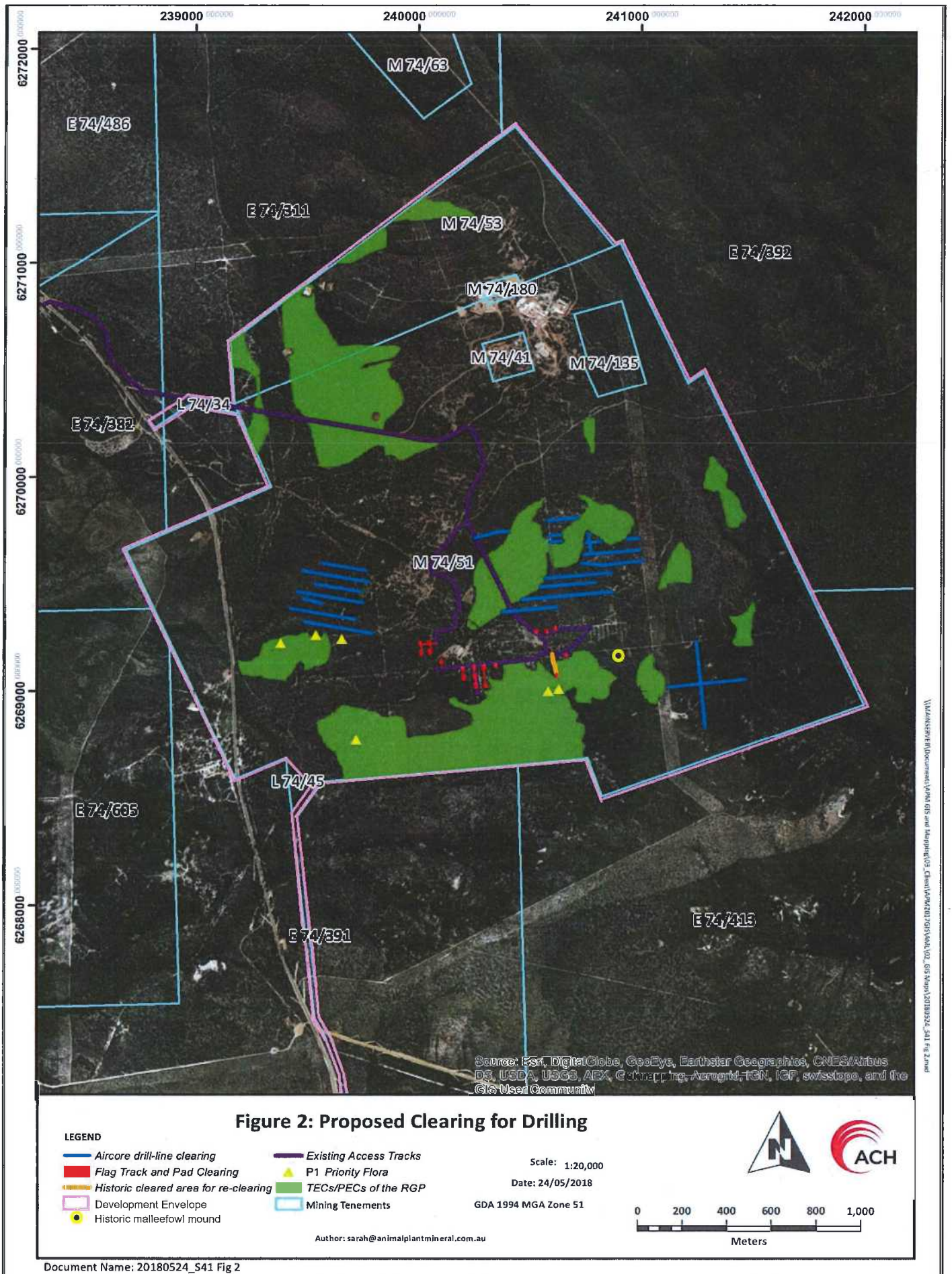


Figure 1: Location of the Minor and Preliminary Works (Kundip Mine Site)