

Mr David English
Project Manager
Sirius Gold Pty Ltd
PO Box 1011
BALCATTA WA 6914

Our Ref 14-848947
Enquiries Tim Gentle
Phone 6145 0809

Dear Mr English

**NOTICE UNDER SECTION 39A(3)
*Environmental Protection Act 1986***

PROPOSAL: Nova Nickel Project
LOCATION: Fraser Range
LOCALITY: Shire of Dundas
PROPONENT: Sirius Gold Pty Ltd
DECISION: Not Assessed – Public Advice Given

The Environmental Protection Authority (EPA) understands that you wish to undertake the above proposal which has been referred to the Authority for consideration of its potential environmental impact.

This proposal raises a number of environmental issues. However, the EPA has decided not to subject this proposal to the environmental impact assessment process and the subsequent setting of formal conditions by the Minister for Environment under Part IV of the *Environmental Protection Act 1986* (EP Act). Nevertheless, the EPA provides the attached advice to you as the proponent, and other relevant authorities on the environmental aspects of the proposal.

The EPA's decision to not assess the proposal is open to appeal. There is a 14-day period, closing 1 September 2014. Information on the appeals process is available through the Office of the Appeals Convenor's website, www.appealsconvenor.wa.gov.au, or by telephoning 6467 5190.

Yours sincerely



Anthony Sutton
Director
Assessment and Compliance Division

18 August 2014

Encl

Public Advice Under Section 39A(7)

Environmental Protection Act 1986

Proposal Title and Location

Proposal: Nova Nickel Project (Sirius Gold Pty Ltd), Fraser Range, Shire of Dundas

Level of Assessment: Not Assessed – Public Advice Given

Level of Assessment Published: 18 August 2014

Summary

The Environmental Protection Authority (EPA) has received a referral from Sirius Gold Pty Ltd for mining of nickel and copper in the Fraser Range, Shire of Dundas. The EPA considers that the proposal, if implemented, is not likely to result in significant effects on the environment, and that any potential environmental impacts could be adequately evaluated, regulated and mitigated under the *Mining Act 1978* and under Part V of the *Environmental Protection Act 1986*.

The EPA has considered the proposal in accordance with the requirements of the *Environmental Protection Act 1986* (EP Act) and the Environmental Impact Assessment Administrative Procedures 2012. In making its decision on whether to assess the proposal, the EPA considered the values of the environment, the extent of the likely impacts, policies, guidelines, procedures and standards against which a proposal can be assessed, and the presence of other statutory decision-making processes which regulate the mitigation of the potential effects on the environment (see Section 7 Significance Test Administrative Procedures).

Proposal and Potential Environmental Factors

Sirius Gold Pty Ltd proposes to establish an underground mine for nickel and copper in the Fraser Range, Shire of Dundas, 110 kilometres east of Norseman. The total proposed area of ground disturbance is approximately 1,100 hectares (ha) comprising 400 ha for the mine and 700 ha for the access road and associated borrow pits. The proposed mine is located in the Great Western Woodlands and in an area remote from human settlements. Product would be transported from the mine by truck in closed containers to the Port of Esperance for export by sea.

The EPA identified the following preliminary environmental factors for the proposal:

- (a) Flora and Vegetation
- (b) Terrestrial Fauna
- (c) Rehabilitation and Closure

Public Comments

The EPA published the referral information for public comment on whether the EPA should formally assess the proposal. The public comment period closed on 9 July 2014. Two comments were received, comprising comments from:

- The Wildflower Society of WA (Inc)
- The Wilderness Society WA Inc

Both commentators expressed the view that the proposal should be assessed at the level of Public Environmental Review on the grounds that the proposal involves a large amount of clearing (1,100 ha) in the Great Western Woodlands, an area of high biodiversity value, and because rehabilitation in this area could be problematic. Concerns were also raised about transport risks from road train movements going to and from Esperance and risk to surface and groundwater from mine discharges, including long-lasting waste piles.

EPA Consideration

Flora and vegetation

The proponent's flora and vegetation surveys determined that no conservation significant flora species (Declared Rare Flora or priority species) occur in the proposal footprint. There are no Threatened Ecological Communities in the area, however two Priority Ecological Communities (PECs) are found in the vicinity of the proposal. The proponent has liaised with the Department of Parks and Wildlife in regard to the location of the PECs and the proposal footprint has been designed so as to almost entirely avoid any clearing of PECs. The EPA's view therefore is that potential impacts on flora and vegetation can be adequately evaluated and regulated by the Department of Mines and Petroleum (DMP) under Part V Division 2 (Clearing of native vegetation) of the *Environmental Protection Act 1986*.

Terrestrial Fauna

The proponent commissioned surveys for the endangered malleefowl and their nest mounds. Although there are a considerable number of old malleefowl mounds in the area, no recent nesting activity was recorded. No evidence of malleefowl was recorded from sightings, footprints or other evidence. It is clear that malleefowl were more abundant in the past but are currently not as evident. Nevertheless any disused mounds should be avoided wherever possible as they provide potential breeding sites in the future if the population increases after beneficial management measures such as fox control are instigated.

In light of the above the EPA is of the view that it is most unlikely that there would be significant impacts on this species from implementation of the proposal, and that, therefore, this factor does not require assessment by the EPA. Through the approvals process for mining proposals under the *Mining Act 1978*, the DMP can impose legally-binding requirements for avoidance of disturbance to malleefowl

mounds, and for other appropriate management measures such as vehicle speed limits to protect malleefowl and other native fauna species which may occur in the area.

Rehabilitation and closure

The proposal is for an underground mine and it is planned to dispose of the bulk of tailings underground, however there will still be a requirement for a surface tailings storage facility (TSF). Results of geochemical testing commissioned by the proponent indicate that sulphur-bearing materials associated with the deposit are predominantly pyrrhotite (as opposed to the more reactive pyrite). Results from static and kinetic geochemical tests indicate that, provided the tailings are kept contained and in a saturated condition, the primary potential issue for long term tailings management is expected to be highly saline seepage from use of hypersaline process water rather than acid and metalliferous drainage (AMD).

The proponent has advised that the TSF will be lined and will have a "moisture store and release" cover at closure in order to maintain the tailings in saturated condition and thereby manage the potential for tailings oxidation and subsequent generation of AMD. The cover will also be designed to shed excess water in periods of high rainfall. This approach to TSF cover design is consistent with current best practice for facilities of this type. Similar covers will be required for rock waste dumps which contain material with the potential for generating AMD.

The proponent has also provided results of tests for asbestiform materials (which may sometimes be associated with nickel deposits). No asbestiform materials were detected.

Based on the above, the EPA is of the view that potential environmental impacts associated with rehabilitation and closure are not so significant as to require assessment by the EPA and can be adequately evaluated, mitigated and regulated by the DMP. The EPA notes that, under the provisions of the *Mining Act 1986*, the DMP will require the proponent to submit and implement a mine closure plan in accordance with the *DMP/EPA Guidelines for Preparing Mine Closure Plans*. A workable mine closure plan must be submitted and approved prior to commencement of mining. This will include ensuring that the TSF is located, designed and constructed so as to mitigate the potential for generation of AMD and to ensure that any seepage (including hypersaline seepage) would be managed so as to avoid significant environmental impacts. There will also need to be provision for post-closure monitoring and maintenance. Through this process the DMP can ensure that the EPA's objective for rehabilitation and mine closure is met.

Other matters

Any discharge of water from dewatering would be regulated by the Department of Environment Regulation through Part V Division 3 (Works approvals and licences) of the *Environmental Protection Act 1986*. The proponent has advised that there will be no requirement to discharge water from mine dewatering to the environment as, with the exception of the first year of operations, all such water will be used in processing. There will be an excess of water in the first year but the proponent proposes to store this water temporarily until it is utilised for processing.

The mine will require additional water for processing and dust control and this would be sourced from groundwater bores licensed by the Department of Water under the *Rights in Water and Irrigation Act 1914*.