

Environmental Protection Act 1994

Environmental Protection Order

This environmental protection order is issued by the administering authority pursuant to section Choose an item. of the Environmental Protection Act 1994.

Golden Ant Mining Pty Ltd (ACN: 010 723 154)
Level 1, 33 Colin Street,
WEST PERTH WA 6005

Cameron McLean
Director
Golden Ant Mining Pty Ltd
Via email: cmclean@greatnorthernminerals.com.au

cc. Madison Jackson
Team Lead – Approvals and Compliance
Wulguru Technical Services
permitcorrespondence@wulgurutechservices.com.au

Your reference: STAT-E-100504868

Our reference: STAT-E-100504868 101/0008153, C-CLPO-100504780, EPVL00241013

24/11/2023

Dear Mr McLean

Take notice: that under the *Environmental Protection Act 1994* (EP Act) this environmental protection order (EPO) is issued to Golden Ant Mining Pty Ltd, ACN 010 723 154 (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Science (the department).

The EPO is issued with respect to your activities of mining on land described as Amanda Bel project (which consists of the Golden Cup and Camel Creek mine sites) at ML4522, ML4525, ML4534, ML4540, ML6952, ML4524, ML4523 and ML4536 situated near Greenvale, QLD (the premises).

A. Grounds

This EPO is issued on the following grounds:

1. To require you to take reasonable measures to secure compliance with the “general environmental duty” pursuant to section 358(d)(i) of the EP Act. The general environmental duty is detailed in s319 of the EP Act as follows :
*‘A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm (the **general environmental duty**).*
2. To require you to take reasonable measures to secure compliance with conditions A3 and B3 of Environmental Authority EPVL00241013 (the EA) dated 13 May 2009, pursuant to section 358(d)(iii) of the EP Act. Conditions A3 and B3 are as follows:

Condition A3 of the EA:

tarig



The environmental authority holder must comply with each of the Standard Environmental Conditions contained in the 'Code of Environmental Compliance for Mining Lease Projects' dated January 2001 (the Code).

Condition 7 of the Code states:

The holder of the environmental authority must design, install, and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation of any Watercourse, Waterway*, Wetland* or Lake*.*

Condition 9 of the Code states:

The holder of the environmental authority must plan and conduct activities on site to prevent any potential or actual release of a Hazardous Contaminant.*

Condition B3 of the EA:

Subject to the release limits defined in Schedule B, all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater or water course.

The facts and circumstances forming the basis for these grounds are:

1. Golden Ant Mining Pty Ltd (you) is the holder of the environmental authority EPVL00241013 (the EA) which comprises of two (2) mine sites:
 - Camel Creek Mine site – ML4522, ML4525, ML4534, ML4540, ML6952, ML4524, ML4523.
 - Golden Cup Mine site – ML4536
2. You are:
 - a. the holder of mining leases identified above;
 - b. the holder of EA EPVL00241013; and
 - c. the person with possession and control over the premises.
3. EA EPVL00241013 (the EA) authorises environmentally relevant activities including various aspects of mining and associated activities at the premises, subject to the conditions of the EA.
4. You undertake activities on the premises including maintenance, monitoring and water management.
5. The department refers to the December 2019 *"Preliminary Dam Safety Inspection and Short Term Water Management Strategy Options"* report completed by ATC Williams who were commissioned by you when the site was acquired. The report notes at the Camel Creek Mine, the preliminary drainage from Heap Leach 1 (the larger heap leach pad of the project) follows the natural drainage patterns to the north-western side of the project, flowing off-site into an unnamed creek. Similarly, the Golden Cup drainage pathways assessment notes that, 'the preliminary drainage, from the north-western side of the Heap Leach, tends to also follow the natural drainage patterns and flows off-site'.
6. On 25 August 2021, departmental officers conducted an inspection of the Camel Creek site and observed Pit 17 releasing overland to a water course that flows to Black Cow Creek. The departments post-inspection letter, dated 4 November 2021, noted this matter as a potential non-compliance with conditions B3 and A3 of the EA and conditions 9, 23, and 24 of the Code. The letter noted that the department will continue to investigate and consider its response in relation to this matter. The department also requested that you repair and maintain the heap leach launders such that any leachate

is directed appropriately, repair and maintain erosion areas and ensure stormwater is managed accordingly. The letter also noted the absence of any pumping infrastructure on site to manage water.

7. On 2 August 2022, departmental officers conducted an inspection and noted that Camel Creek Pit 17 was no longer releasing to the receiving environment, however, pit levels were still considered to be high with the potential risk of overflow to the receiving environment. This issue was noted by the department and identified as a Matter of Concern in the post-inspection letter sent to you on 26 September 2022. The department advised you that all reasonable and practical measures must be taken to lower the water level in Pit 17 and to prevent a release to waters. The department also requested you to inform the department of actions taken in this regard. You were also requested to repair the erosion and slumping to launder drains around heap leach structures and to ensure the appropriate direction of leachate on site. The letter further noted the absence of any pumping infrastructure to facilitate water management.
8. On 17 August 2023, authorised persons of the department conducted an inspection of Camel Creek and Golden Cup Mine sites and were accompanied during the inspection by Environmental Advisors of Wulguru Technical Services (WTS, the engaged environmental consultants) as your representatives.
9. Authorised persons observed significant quantities of stored water at the premises, and made the following observations during the inspection:

Golden Cup site -

- I. Launder drains at the heap leach were observed to be unlined and in need of maintenance to remove accumulated sediments and reinstate flow. A clear drainage line from the heap leach pad to the downstream impoundment dam was not present.
- II. A small trench containing liquid between heap leach and impoundment dam contained a pipe that was blocked with sediment.
- III. The drainage line from the impoundment dam to the pits was observed to be unlined and constructed with unconsolidated materials. Authorised persons observed that livestock had impacted the windrows to partially fill and compromise the drainage line in several places.
- IV. The heap leach structure exhibited erosion in a number of areas and appeared to be in need of general maintenance.
- V. Authorised persons confirmed that, during the inspection, there was no pumping infrastructure or fuel on site to manage water. Further, no measures appeared to have been taken to avoid any releases to a watercourse.
- VI. No active water management was observed at the time of inspection. Surface water drains were in place, however, no erosion or sediment controls were installed in these drains and no structures were observed to be present to prevent erosion.
- VII. The impoundment dam appeared to contain high levels of water, and there is the potential that this water may be released from the dam, should significant rainfall be received at the site. Authorised persons collected a water sample from the impoundment dam, which had total and dissolved Arsenic levels of 12.8mg/L and 11.6mg/L respectively.

Camel Creek site –

- I. Launder drains at heap leach structures were observed to be unlined and not clearly defined with a clear flow path for the management of leachate.
 - II. Heap leach structures exhibited rill erosion and were in need of general maintenance.
 - III. Water from Pit 17 was actively releasing overland to a water course which flows to Black Cow Creek. Water samples of this release were taken at a sampling point located approximately 230m downstream from Pit 17. Sample results exceeded the EA receiving water contaminant limit of 2mg/L for Fluoride (Schedule B – Table 2 of the EA), with 3.4mg/L of fluoride recorded at Pit 17, and 2.6mg/L of fluoride recorded at the downstream sampling location.
 - IV. Authorised persons observed no pumping infrastructure or fuel present on site to manage the water inventory. No measures were observed to have been taken to avoid a release to a watercourse.
 - V. No active water management was observed at the time of inspection. Whilst surface water drains were noted to be in place, no erosion or sediment control devices were installed in these drains, such as structures present to control water velocity and prevent erosion.
10. There is significant disturbed land and infrastructure on the premises, resulting from the mining activities with features onsite including, open cut pits, waste rock dumps, and heap leach pads.
11. There are significant risks of environmental harm associated with the mining activities carried out at the premises. This includes, but is not necessarily limited to:
- a. Environmental risks associated with the mobilisation of contaminants in rainfall runoff from disturbed areas;
 - b. Environmental risks associated with the discharges from the mine site (e.g. Pit 17 water);
 - c. Environmental risks associated with the seepages from stored water and disturbed areas.
12. Given the circumstances associated with the current discharge of water (Pit 17) at the Camel Creek site and water inventory at the premises, the department holds reasonable and significant concerns with respect to compliance with the following conditions:
- a. *Condition A3 of the EA:*
The environmental authority holder must comply with each of the Standard Environmental Conditions contained in the 'Code of Environmental Compliance for Mining Lease Projects' dated January 2001 (the Code).
 - i. *Condition 7 of the Code. states:*
The holder of the environmental authority must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation of any Watercourse, Waterway*, Wetland* or Lake*.*
 - ii. *Condition 9 of the Code states:*
The holder of the environmental authority must plan and conduct activities on site to prevent any potential or actual release of a Hazardous Contaminant.*
 - b. *Condition B3 of the EA:*

Subject to the release limits defined in Schedule B, all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater or water course.

Schedule B - Table 2.;

Schedule B - Table 2 (Receiving water contaminant limits)

Parameter	Units	Maximum (samples can be filtered)
pH	-	6-9
TDS	mg/L	4000
Sulphate	mg/L	1000
Nitrate	mg/L	400
Aluminium	mg/L	5
Arsenic	mg/L	0.5
Cadmium	mg/L	0.01
Copper	mg/L	1
Lead	mg/L	0.1
Fluoride	mg/L	2
WAD CN	mg/L	0.018

13. It is unclear how you intend to manage the risks associated with the high-water level on site and what actions you are taking to reduce the water level to comply with conditions (A3 and B3) of the EA.
14. Sample results taken from the leachate onsite at Golden Cup (total Arsenic level of 12.8mg/L) and Cammel Creek site (total fluoride of 3.4mg/L) indicate that in the event of a discharge, leachate will cause an exceedance of receiving water contaminant limits specified in Schedule B, Table 2 of the EA, which states that the contaminant limit for arsenic is 0.5 mg/L and fluoride 2 mg/L.
15. Additionally, ANZECC & ARMCANZ (2000) guidelines identifies that, the total concentrations of arsenic in drinking water for livestock exceeding 0.5 mg/L may be hazardous to stock health, (noting where arsenic is not provided as a food additive and natural levels of arsenic in the diet are low, a level of 5 mg/L in drinking water may be tolerated), consequently the department considers there is the potential to cause environmental harm.
16. The department issued EPO STAT1170 to Golden Ant Mining Pty Ltd on 14 September 2017 in response to the potential risk of environmental harm and as a result of an unauthorised release of contaminants from site. EPO STAT1170 required the ongoing controls and management to prevent the unauthorised release of contaminants from the project site to the receiving environment. Actions required by this EPO remain unaddressed as noted in post inspection correspondence issued by the department in 2019, 2021, 2022 and 2023.
17. The December 2019 "Preliminary Dam Safety Inspection and Short Term Water Management Strategy Options" report completed by ATC Williams noted that the site EA pre-dates 'The Manual for assessing consequence categories and hydraulic performance of structure' and so no Consequence Category Assessment had previously been made of water storage structures on the site. The report details an assessment of Design Storage Allowance (DSA) and Mandatory Reporting Level (MRL) made relative to both the High and Significant Consequence Categories to provide an indication the current hydraulic performance of the site. The assessment concluded that the Golden Cup Mine (GCM) and Camel Creek Mine (CCM) sites do not meet DSA requirements for either 'High' or 'Significant' Consequence Category or the MRL for the 'High' Consequence Category.
18. The department considers that there are further reasonable and practicable measures that can and should be taken to secure compliance with the EA and general environmental duty. Such actions include

for example adopting appropriate industry practices, complying with your EA conditions, having in place a documented management plan to lawfully manage water within dams, pits, and other water containment features on site.

B. Requirements

In accordance with this EPO, you are required to do the following:

1. From the date of this EPO, you must take all necessary actions to prevent an unauthorised release of contaminants from the premises to the receiving environment.
2. By **5 January 2024**, you must submit a management program to the department prepared by an appropriately qualified person (AQP) that covers the 2023/2024 wet season, to effectively minimise the risk of an unauthorised release of contaminants from the premises to the receiving environment.
3. The management program required under requirement two (2) above, must include:
 - a. Detail the ongoing controls and proposed water management operating strategy for the 2023/2024 wet season.
 - b. Describe an effective site water management system and include ongoing controls and management to prevent the unauthorised release of contaminants from the project site.
 - c. Identify the actual and potential risks of environmental harm that may be caused as a result of implementing the proposed water management operating strategy (including risks associated with any areas where there are no management actions proposed);
 - d. Assess erosion and stability of heap leach stockpiles at both Golden Cup and Camel Creek mines;
 - e. Assess the current structural state and hydraulic performance of all water storages, including process ponds and ancillary works associated with the heap leach stockpiles;
 - f. The assessment must be in accordance with the 'Manual for assessing consequence categories and hydraulic performance of structure' (ESR/2016/1993);
 - g. Identify all potential sources of contaminants on site including exploration activities and disturbance types listed in Schedule C – Table 2 (Final Land Use and Rehabilitation Approval Schedule) of the EA;
 - h. Identify contamination pathways from identified contaminant sources to the receiving environment;
 - i. Where contamination pathways have been identified, the program must detail the control measures to be implemented to prevent the unauthorised release of contaminants to the receiving environment;
 - j. Define the infrastructure (including pumps and pipes), resources, management actions and critical controls necessary to comply with this EPO and the EA and effectively minimise the risks of environmental harm;
 - k. Provide a timeline for implementation of the management program; and
 - l. Include ongoing monitoring of the site and continuous review of the management program.
4. By **19 January 2024**, you must consider and implement any comments from the department with regard to the management program as outlined under Requirement 3 of this notice.
5. By **5 February 2024**, you must commence implementing the management program prepared as per requirement 2, as per the timeline specified in the program.
6. At all times you must have available:
 - a. Appropriately qualified and experienced staff to ensure compliance with this EPO;

- b. Measures, plant, and equipment necessary to ensure compliance with this EPO; and
 - c. Fuel supplies and access to power to ensure the ongoing operation of measures, plant, and equipment to ensure compliance with this EPO.
7. All measures, plant, and equipment necessary to ensure compliance with this EPO must be maintained in a functional and operable manner.
8. You must not, without the department's prior written approval, dispose of, materially alter, or remove any measures, plant, and equipment on the premises, necessary to ensure compliance with the requirements of the EPO and that reasonably reduces the risk of an unauthorised release of contaminants from the premises.
9. By 1st day of each month, beginning **January 2024**, you must provide a written report to the department which details:
 - for the monthly reporting period, details of actions undertaken to comply with his EPO;
 - for the monthly reporting period, daily rainfall totals for the premises or the closest monitored rainwater gauge to the premises.
 - for the monthly reporting period, the actions taken to reduce the water inventory over the reporting period including the estimated total volume of water removed from the water inventory, listed for each day, separated by removal method, and including details of the measurements, calculations, and assumptions that the estimate is based upon.
10. You must notify the department within 24 hours of becoming aware of any non-compliance with the requirements of this EPO.
11. Any written notification or submission to the administering authority, as required by this notice, must be provided via email to estownsville@des.qld.gov.au and/or post to PO Box 5391 TOWNSVILLE, QLD 4810.

C. Obligations

If you propose to dispose of the place or business to which the EPO relates, you **must** advise the buyer of the existence of this EPO.

If you cease to carry out the activity to which this EPO relates, you **must** give written notice of ceasing to carry out the activity to the department within 10 days of ceasing the activity.

Take notice:

- the requirements of this order take effect immediately upon service of the order;
- failure to comply with this order is an offence under the EP Act;
- this order remains in force until further notice from the administering authority.

D. Penalty

It is important that you know the impact to you personally as an individual or as a corporation for not meeting your obligations.

Failure to comply with an EPO is an offence.

- The maximum penalty for wilfully contravening an EPO is 6250 penalty units, totalling \$ 967,500 or five years imprisonment for an individual or \$ 4,837,500 for a corporation.
- The maximum penalty for contravening an EPO is 4500 penalty units, totalling \$ 696,600 for an individual or \$ 3,483,000 for a corporation.

Failure to provide written notice to the buyer of the existence of the order is an offence.

- The maximum penalty is 50 penalty units, totalling \$ 7,740, for an individual or \$ 38,700 for a corporation

Failure to provide written notice to the department within 10 business days of ceasing the activity to which an environmental protection order relates is an offence.

- The maximum penalty is 50 penalty units, totalling \$ 7,740 for an individual or \$ 38,700 for a corporation.

Section 3 of the *Penalties and Sentences Regulation 2015* prescribes the monetary value of a penalty unit.

E. Reviews and appeals

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the EP Act.

A person who is dissatisfied with an original decision made by the Department of Environment and Science (the department) may apply to have that decision internally reviewed.

Information about initiating an appeal in relation to this notice is contained within the [Internal Reviews and Appeals Information Sheet](#) (available at www.qld.gov.au using the publication number ESR /2015/1742 as a search term)

A request for review or appeal is to be made using the approved form '[Application for review of original decision](#)' (available at www.qld.gov.au using the publication number ESR/2015/1573 as a search term.

Applications for reviews are to be sent to Permit and Licence Management, Department of Environment and Science: via email at palm@des.qld.gov.au , or by mail to the following address: GPO. Box 2454, Brisbane, QLD, 4001.

Where an application has been made for a decision to be reviewed, the applicant may also apply to the relevant court for a stay of the decision to secure the effectiveness of the review.

Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

A person whose interests are or would be adversely affected by a decision of the department may be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

You may have other legal rights or obligations and should seek your own legal advice.

Pursuant to section 540 of the Act, the department is required to maintain a register of certain documents and information authorised under the Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety unless alteration is required by the Act. There is no general discretion allowing the department to withhold documents or information required to be kept on the public register. For more information on the department's public

Notice
Environmental Protection Order

register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Should you have any queries in relation to the notice, please contact Nicole Jarmey on (07) 4722 5322 .

Tariq Khan

Signature

24/11/2023

Date

Tariq Khan

A/Manager Compliance

Delegate of the Chief Executive

Department of Environment and Science

Environmental Protection Act 1994

Enquiries:

COMPLIANCE CENTRE: Townsville

Ph: (07) 4722 5353

Email: ESTownsville@des.qld.gov.au