

# Permit

*Environmental Protection Act 1994*

## **Environmental authority EPML00392513**

*This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.*

### **Environmental authority number: EPML00392513**

#### **Environmental authority takes effect on 2 November 2022.**

The anniversary date of this environmental authority remains the 28 October. An annual return and the payment of the annual fee will be due each year on this day.

#### **Environmental authority holder(s)**

| <b>Name</b>                            | <b>Registered address</b>                             |
|----------------------------------------|-------------------------------------------------------|
| Greenvale Silicon Pty Ltd              | Level 13, 20 Bridge Street SYDNEY NSW 2001            |
| Diatomaceous Earth Investments Pty Ltd | Suite 1, Level 5, 71 Macquarie Street SYDNEY NSW 2000 |

#### **Environmentally relevant activity and location details**

| <b>Environmentally relevant activity(ies)</b>                                                                                                                                 | <b>Location(s)</b>                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 21 - A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20                                                                     | ML10279                                                                     |
| 7 - Chemical manufacturing 4: Manufacturing, in a year, the following quantities of fertiliser (b) more than 5000t                                                            | 203 Plum Tree Road, Broughton – lot 5 Plan MPH40800 and lot 1 Plan MPH13840 |
| 8 - Chemical storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS1940 or dangerous goods class 3 under subsection (1)(c) |                                                                             |
| 8 - Chemical storage 4: storing 200t or more of chemicals that are solids or gases, other than chemicals mentioned in items 1 to 3, under subsection (1)(d)                   |                                                                             |
| 15 - Fuel burning: Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour                                                                  |                                                                             |

| Environmentally relevant activity(ies)                                                                                                                                                                                                                                 | Location(s) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 16 - Extractive and screening activities 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                                                                                                               |             |
| 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t                                                                                                                                 |             |
| 50 - Mineral and bulk material handling 1: Loading or unloading 100t or more of minerals in a day, other than loading or unloading mentioned in item 3, or storing 50,000t or more of minerals (a) within 5km of the highest astronomical tide or 1km of a watercourse |             |

### Additional information for applicants

#### Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

#### Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.



Signature

Teale Gibbs  
Department of Environment and Heritage Protection  
Delegate of the administering authority  
*Environmental Protection Act 1994*

2 November 2022

Date

**Enquiries:**  
Mineral Business Centre  
PO Box 7230  
CAIRNS QLD 4870  
Phone: (07) 4222 5334

**Obligations under the *Environmental Protection Act 1994***

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

## Conditions applying to the activities undertaken at ML10279

### Schedule A – General

#### Financial assurance

- (A1-1) Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.
- (A1-2) The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

#### Maintenance of measures, plant and equipment

- (A2-1) The holder must:
- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and
  - (b) maintain such measures, plant and equipment in a proper condition; and
  - (c) operate such measures, plant and equipment in a proper manner.

#### Monitoring

- (A3-1) Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2) Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

#### Storage and handling of flammable and combustible liquids

- (A4-1) Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with section 5.9 of AS 1940 – Storage and Handling of Flammable and Combustible Liquids of 1993.

#### Definitions

- (A5-1) Words and phrases used throughout this Environmental Authority are defined in the Schedule H – Definitions. Where a definition for a term used in this Environmental Authority is sought and the term is not defined within this Environmental Authority, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

END OF CONDITIONS FOR SCHEDULE A

## Schedule B - Air

### Dust Nuisance

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance, at any sensitive place.
- (B1-2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B-1):
- (a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulates – Deposited matter – Gravimetric method of 1991; and
  - (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time at a sensitive place downwind or the operational land, when monitored in accordance with:
    - Particulate matter - Determination of suspended particulate PM10 high-volume sampler size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high-volume sampler with size-selective inlet - Gravimetric method of 1990; or
    - Any alternative method of sampling PM10, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.
- NOTE: You must propose which monitoring method is appropriate in accordance with condition (B1-3) (a) or (b) or both.
- (B1-4) If monitoring indicate exceedance of the relevant limits in Condition (B1-3), then the environmental authority holder must:
- (a) address the complaint including the use of appropriate dispute resolution if required; or
  - (b) immediately implement dust abatement measures so that emission of dust from the activity do not result in further environmental nuisance.

END OF CONDITIONS FOR SCHEDULE B

## Schedule C – Water

### Release to waters

- (C1-1) Contaminants must not be released from the site to any waters or the bed and banks of any waters.
- (C1-2) Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule I – Map 1 and comply with the contaminant limits defined in Schedule C - Table 2.

**Schedule C - Table 1 (Receiving water monitoring locations and frequency)**

| Monitoring point | AMG Easting | AMG Northing | Monitoring frequency  |
|------------------|-------------|--------------|-----------------------|
| G1               | 269200 E    | 793460 N     | Annually <sup>1</sup> |

<sup>1</sup> Monitoring must represent the first rainfall of the wet season and equates to a 'first flush' of the licensed site.

**Schedule C - Table 2 (Receiving water contaminant limits)**

| Parameter              | Units    | Limit Type       | Contaminant Limits |
|------------------------|----------|------------------|--------------------|
| Total Dissolved Solids | mg/L     | Maximum          | 4000 <sup>1</sup>  |
| pH                     | pH units | Acceptable range | 6.5 – 9.0          |
| Turbidity              | mg/L     | Maximum          | 10% seasonal mean  |
| Sulphate               | mg/L     | Maximum          | 1000 <sup>1</sup>  |
| Fluoride               | Mg/L     | Maximum          | 2 <sup>1</sup>     |
| Cadmium                | mg/L     | Maximum          | 0.01 <sup>1</sup>  |
| Mercury                | mg/L     | Maximum          | 0.002 <sup>1</sup> |
| Arsenic                | mg/L     | Maximum          | 0.5 <sup>1</sup>   |
| Copper                 | mg/L     | Maximum          | 1 <sup>1</sup>     |
| Chromium               | mg/L     | Maximum          | 1.0 <sup>1</sup>   |
| Lead                   | mg/L     | Maximum          | 0.1 <sup>1</sup>   |
| Nickel                 | mg/L     | Maximum          | 1.0 <sup>1</sup>   |
| Zinc                   | mg/L     | Maximum          | 20 <sup>1</sup>    |

<sup>1</sup> These limits are derived from ANZECC 2000 water quality guidelines for livestock

- (C1-3) Subject to Condition (C1-2), if the receiving water contaminant limits defined in Schedule C – Table 2 are exceeded then the environmental authority holder must complete an investigation into the possible sources and the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

END OF CONDITIONS FOR SCHEDULE C

## Schedule D – Noise and Vibration

### Noise nuisance

- (D1-1) Subject to conditions (D1-2) and (D1-3), noise from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) Noise monitoring conducted must include:
- (a)  $L_{A, \max \text{ adj, T}}$  ;
  - (b) the level and frequency of occurrence of impulsive or tonal noise;
  - (c) atmospheric conditions including wind speed and direction; and
  - (d) location, date and time of recording.
- (D1-4) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement manual.

### Vibration nuisance

- (D2-1) Subject to conditions (D2-2) and (D2-3), vibration from the mining activity must not cause an environmental nuisance, at any sensitive place.
- (D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D2-3) Vibration monitoring conducted must include:
- (a) location of the plant(s) within the mining area (including which bench level); and
  - (b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
  - (c) location, date and time of recording.

END OF CONDITIONS FOR SCHEDULE D

## Schedule E – Waste

### Regulated Waste

- (E1-1) Regulated waste is not permitted to be released from any vehicle or any container transported by that vehicle other than at a proper and appropriate place that can lawfully accept such waste.
- (E1-2) Regulated waste must be handled and transferred in a proper and efficient manner to prevent any leakage or spillage of waste.

END OF CONDITIONS FOR SCHEDULE E



## **Schedule F – Land**

### **Rehabilitation landform criteria**

- (F1-1a) The maximum area of land authorised to be disturbed by the mining activities is 10.1 hectares, which is inclusive of a maximum 3.05 hectares of working pit.
- (F1-1b) The maximum area of land authorised to be disturbed does not include areas of working pit that are under rehabilitation or roads and access tracks.

### **Infrastructure**

- (F2-1) All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining land owner / holder.

END OF CONDITIONS FOR SCHEDULE F

## **Schedule G – Community**

### **Complaint response**

- (G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END OF CONDITIONS FOR SCHEDULE G

## Schedule H – Definitions

**“acceptance criteria”** means the measures by which the actions implemented to rehabilitate the land are deemed to be complete (same as completion criteria).

**“airblast overpressure”** means energy transmitted from the blast site within the atmosphere in the form of pressure waves. The maximum excess pressure in this wave, above ambient pressure is the peak airblast overpressure measured in decibels linear (dB).

**“ambient (or total) noise”** at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

**“authority”** means environmental authority (mining activities) under the Environmental Protection Act 1994.

**“blasting”** means the use of explosive materials to fracture-

- rock, coal and other minerals for later recovery; or
- structural components or other items to facilitate removal from a site or for reuse.

**“commercial place”** means a place used as an office or for business or commercial purposes, other than a place within the boundaries of the operational land.

**“competent person”** means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

**“environmental authority holder”** means the holder of this environmental authority.

**“ $L_{A\ 10, \text{adj}, 10 \text{ mins}}$ ”** means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10-minute measurement period, using Fast response.

**“ $L_{A\ 1, \text{adj}, 10 \text{ mins}}$ ”** means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

**“ $L_{A, \text{max adj}, T}$ ”** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

**“land”** in the “land schedule” of this document means land excluding waters and the atmosphere.

**“land capability”** as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

**“land suitability”** as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

**“land use”** term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

**“leachate”** means liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

**“noxious”** means harmful or injurious to health or physical well being, other than trivial harm.

**“non-standard”** means a mining operation that if in the opinion of the administering authority does not have a low risk of serious environmental harm and the activities can not comply with the criteria for standard mining activities prescribed in schedule 1A of the Environmental Protection Regulation 1998. The standard mining activity trigger criteria are as follows;

- the mining activities do not or will not cause more than 10 ha of land to be significantly disturbed at any one time;

- the mining activities do not or will not cause more than 5 ha of land to be significantly disturbed at any one time;
  - (a) in a riverine area;
  - (b) because of mine workings;
- the mining activities are not or will not be carried out in, or within 2 km of a category A Environmentally Sensitive Area;
- the mining activities are not or will not be carried out in, or within 1 km of a category B environmentally sensitive area;
- the mining activities do not include a level 1 environmentally relevant activity
- no more than 20 persons are carrying out or will, at any one time, carry out the mining activities;

**“offensive”** means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

**“protected area”** means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

**“progressive rehabilitation”** means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

**“rehabilitation”** the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

**“representative”** means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

**“residual void”** means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

**“self sustaining”** means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

**“significant disturbance”** – includes land

- (a) if it is contaminated land; or
- (b) it has been disturbed and human intervention is needed to rehabilitate it.
  - i. to a state required under the relevant environmental authority; or
  - ii. if the environmental authority does not require the land to be rehabilitated to a particular state – to its state immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

**“sensitive place”** means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical centre or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes which is not part of the mining activity and does not include employees accommodation or public roads.

**“stable”** means geotechnical stability of the rehabilitated landform where instability related to the excessive settlement and subsidence caused by consolidation/ settlement of the wastes deposited, and sliding / slumping instability has ceased.

**“trivial harm”** means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

**“waters”** includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part thereof.

END OF CONDITIONS FOR SCHEDULE H

**Schedule I –Maps / Plans**

Map 1 –Site Plan of ML10279 showing location of Water Monitoring Point (G1)

END OF CONDITIONS FOR SCHEDULE I  
END OF CONDITIONS FOR ACTIVITIES UNDERTAKEN ON ML10279

**Conditions applying to the activities undertaken at 203 Plum Tree Road, Broughton – Lot 5 Plan MPH40800 and lot 1 Plan MPH13840**

**Agency Interest: General**

**Extent of approval**

- G1 This approval authorises the operation of a facility for processing of up to 1,000,000t of Diatomaceous Earth per year. The approved plan for this development is shown in Schedule I – Map 2 - Approved Site Plan (Sealed and unsealed Surface Locations).

**Prevent and/or minimise likelihood of environmental harm.**

- G2 In carrying out the activities, all reasonable and practicable measures must be taken to prevent and/or minimise the likelihood of environmental harm.
- G3 This development approval does not authorise environmental harm unless a condition contained within this development approval explicitly authorises that harm. Where there is no condition or the development approval is silent on a matter, the lack of a condition or silence must not be construed as authorising harm.

**Maintenance of measures, plant and equipment**

- G4 The registered operator must:
- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this development approval; and
  - (b) maintain such measures, plant and equipment in a proper and efficient condition; and
  - (c) operate such measures, plant and equipment in a proper and efficient manner.

**Alterations**

- G5 No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to increase, the risk of environmental harm or environmental nuisance above that expressly proved by this development approval.

**Records**

- G6 The registered operator must record, compile and keep all monitoring results and reports required by this development approval and present any monitoring results or reports to the administering authority when requested, including in an electronic form if requested.
- G7 All records required by this development approval must be kept for at least five (5) years unless otherwise stated in this development approval.

**Equipment Calibration**

- G8 All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this development approval must be calibrated, and appropriately operated and maintained.
- G9 Records must be kept of calibration data for all instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this development approval and submitted to the administering authority when requested.

### Sample Analysis

- G10 All analyses and tests required to be conducted under this development approval must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification for such analyses and tests, except as otherwise authorised by the conditions of this development approval or the administering authority.

### Trained and experienced Operator(s)

- G11 All persons engaged in the conduct of the activities, including but not limited to employee(s) and contract staff must:
- (a) be trained in the procedures and practices necessary to;
    - i. comply with the conditions of this development approval; and
    - ii. prevent environmental harm during normal operation and emergencies; or
  - (b) be under the close supervision of a trained person; and
  - (c) maintain records of training required by this condition

### Spill kit

- G12 Appropriate spill kits, personal protective equipment and relevant operator instructions/emergency procedures for the management of wastes, chemicals and any hazardous product associated with the activities must be kept at the site.
- G13 Operator(s) and emergency response personnel under this development approval must be trained to manage potential incidents associated with the activities and in the use of the relevant spill kits.

### Site Based Management Plan

- G14 Prior to commencement of an activity to which this approval relates, a site based management plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all activities that are carried out.

The SBMP must address the following matters:

- (a) Environmental commitments – a commitment by senior management to achieve specified and relevant environmental goals.
  - (b) Identification of environmental issues and potential impacts.
  - (c) Control measures for routine operations to minimise likelihood of environmental harm.
  - (d) Contingency plans and emergency procedures for non-routine situations.
  - (e) Organisational structure and responsibility.
  - (f) Effective communication.
  - (g) Monitoring of contaminant releases.
  - (h) Conducting environmental impact assessments.
  - (i) Staff Training.
  - (j) Record Keeping.
  - (k) Periodic review of environmental performance and continual improvement.
- G15 The SBMP must not be implemented or amended in a way that contravenes any conditions of this approval.
- G16 An up to date copy of the SBMP must be kept at the approval place to which the plan relates and be available to the administering authority on request.



## Notification

- G17 A soon as practicable, but within twenty-four (24) hours of becoming aware of any emergency, event or incident which:
- (a) results in the release of contaminants not in accordance with, or reasonably expected to be not in accordance with the conditions of this development approval; and
  - (b) has the potential to cause material or serious environmental harm, the registered operator must notify the administering authority of the release by telephone.

*Please note: The pollution Hotline (ph. 1300 130 372) is the most appropriate after-hours contact Information About Spills.*

- G18 A written notice detailing the following information must be provided to the administering authority within 14 days of any advice provided in accordance with condition G17:
- (a) the name of the operator, including their approval/ registration number;
  - (b) the name and telephone number of a designated contact person;
  - (c) quantity and substance released;
  - (d) vehicle and registration details;
  - (e) person/s involved (driver and any others);
  - (f) the location and time of the release;
  - (g) the suspected cause of the release;
  - (h) a description of the effects of the release;
  - (i) the results of any sampling performed in relation to the release,
  - (j) actions taken to mitigate any environmental harm caused by the release; and
  - (k) proposed actions to prevent a recurrence of the release.

## Annual Monitoring Report

- G19 An annual monitoring report must be prepared each year and presented to the administering authority with the annual return. This report shall include but not be limited to:
- (a) a summary of the previous twelve (12) months monitoring results obtained under any monitoring programs required under this development permit and, in graphical form showing relevant limits, a comparison of the previous twelve (12) months monitoring results to both this development permits limits and to relevant prior results;
  - (b) an evaluation/explanation of the data from any monitoring programs;
  - (c) a summary of any record of quantities of releases required to be kept under this development permit;
  - (d) a summary of the record of equipment failures or events recorded for any site under this development permit; and
  - (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency by the monitoring or recording programs.

## Definitions

- G20 Words and phrases used in this development permit are defined in Schedule H - Definitions. Where a definition for a term used in this permit is not defined within this permit, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

## Agency Interest: Air

### Odour Nuisance

- A1 The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any nuisance sensitive or commercial place.
- A2 When requested by the administering authority, monitoring must be undertaken to investigate any complaint of environmental nuisance caused by odour and the results submitted to the administering authority within 14 days following completion of monitoring.
- A3 If monitoring indicates that environmental nuisance is caused or threatened by odour release from the activities, then the holder of this approval must:
- (a) address the complaint including the use of appropriate dispute resolution as required; and
  - (b) as soon as practicable implement odour abatement measures such that the release of odour from the activity will not result in further environmental nuisance.

### Dust Nuisance

- A4 The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance, at any nuisance sensitive or commercial place.
- A5 When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites.
- A6 Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial place:
- (a) Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); or
  - (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial, when monitored in accordance with:
    - i. Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method'; or
    - ii. any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

### Dust Control – Trafficable and Plant Areas

- A7 Trafficable and plant areas must be maintained, at all times, in a condition that minimises the release of wind blown or traffic generated dust.

### Dust Control – Solar Drying Pads

- A8 measures must be installed and operated on the solar drying pads necessary to minimise the release of dust and particulate matter to the atmosphere.

### Air Pollution control Systems

- A9 All effluent gases, dust and vapours releases to the atmosphere from point sources identified in Schedule A – Table 1 (Release Points) must be treated by pollution control equipment prior to release.
- A10 Point source emissions to air must not exceed the maximum contaminant concentrations listed in Schedule A Table 1 (release Points) when monitored at the frequency specified.
- A11 The release of contaminants to air must be;  
 (a) directed vertically upwards with no impedance; and  
 (b) In accordance with the velocity and minimum release height in Schedule A – Table 1 (Release Points).

**Schedule A - Table 1 (Release Points)**

| Locations         | Easting (MGA) | Northing (MGA) | Minimum Release Height (m)                                   | Minimum Release Velocity (m/s) <sup>1,4</sup> | Contaminant Parameter | Maximum Contaminant Concentration <sup>2,3</sup> | Frequency of Monitoring   |
|-------------------|---------------|----------------|--------------------------------------------------------------|-----------------------------------------------|-----------------------|--------------------------------------------------|---------------------------|
| Rotary Kiln (RK1) | 0430001       | 7782137        | 4m above surrounding roof peaks, or 6m whichever is greater. | 8 m/s                                         | Total particulates    | 50 mg/m3                                         | Once every six (6) months |
| Baghouse (BH1)    | 0429951       | 7782163        | 4m above surrounding roof peaks, or 6m whichever is greater. | 8 m/s                                         | Total particulates    | 50 mg/m3                                         | Once every six (6) months |

1. Average velocity based on four (4) consecutive sampling events.
2. All determinations of point source emissions to air are to be taken from isokinetic sample results.
3. All determinations of point source emissions to air are corrected to Dry @ Standard Temperature & pressure (273K, 101.3KPa).
4. Measurements taken to determine the velocity at the Baghouse release point must be taken within the stack and in the pipe work after filtering has occurred.

- A12 Monitoring of the release of contaminants to air must comply with the most recent edition of AS4323.1 Stationary source emissions method 1: Section of sampling provisions and be carried out in accordance with the most recent edition of the administering authority's Air Quality Sampling Manual.
- A13 The registered operator must maintain a current inventory of design data and maintenance requirements, including maintenance history for all air pollution control devices operated at the site.
- A14 Where pollution control systems are installed to treat exhaust gases, dust and vapours from the activities:  
 (a) They must be maintained and operated in accordance with the manufacturer's operating instructions or manufacture's specifications; and  
 (b) For fabric filter dust collectors, replacement bags must be available; and  
 (c) A standby power supply system must be installed to ensure continuous operation of the air pollution control equipment.
- A15 Where any scrubber(s) is used for treatment of emissions, then the scrubber must be fitted with:  
 (a) An equivalent back-up pump that must operate in event of failure of the primary pump;  
 (b) A device to monitor the flow rate of scrubber liquor that must indicate by both visual and audible alarm functions any failure of scrubber liquor recirculation; and

- (c) A device to monitor the quality of scrubber liquor that must indicate by both visual and audible alarm functions any deterioration in scrubber liquor quality that adversely affects the effectiveness of the scrubber.

- A16 Baghouses must be fitted with a device to monitor the pressure and flow rate of air to the unit to indicate by both visual and audible alarm functions if pressure or air flow failure to the unit occurs.
- A17 Where monitoring of air pollution control equipment indicates impaired operational performance, standby systems must operate to ensure continuous operation of the air pollution control system.
- A18 Where standby systems cannot operate, the plant services by the air pollution control systems must be safely shut down as soon as practicable, unless otherwise agreed by the administering authority.

#### **Air Emissions Management Plan**

- A19 Within twelve (12) months of the date of this development approval the registered operator must, as part of the SBMP, develop, implement and submit to the administering authority an Air Emissions Management Plan. This plan must be prepared to demonstrate that emissions to air do not adversely affect the public amenity nor amenity of nearby land uses. The plan must include, but not necessarily be limited to:
  - (a) identification of point sources and fugitive emissions (including emissions from the solar drying pad) on a map; and
  - (b) description and location of air pollution control equipment; and
  - (c) quality control commitment in relation to emission sampling programs; and
  - (d) air emission reporting requirements and arrangements; and
  - (e) complaints management procedure for nearby land users and residents potentially affected by air emissions; and
  - (f) strategies for continuous improvement including the registered operators objectives and targets in relation to best practice industry technology; and
  - (g) actions required to implement the nominated strategies; and
  - (h) performance indicators against which the level of achievement of the stated objectives/targets will be measured; and
  - (i) timeframe in which each of the tasks and actions is to be carried out and/or completed.
- A20 The air emissions Management Plan must be reviewed at least every three (3) years.

## Agency Interest – Dams

- D1 The onus remains at all times on the registered operator of this development approval to determine whether any of the dams on the land to which this development approval applies are regulated dams, as defined herein, and if so to immediately comply with the standards required of a regulated dam, and to seek amendment of the relevant tables and schedules of this authority at the earliest possible time.

Note: A change of status of a dam might occur due to natural incremental increases in storage capacity or the nature of the material stored, or to changed conditions of use of the storage or of downstream activities (whether related to on-site operations or to the downstream environment) – resulting in an increased risk.

- D2 All pods used for the storage or treatment of stormwater at or on the site as defined in Schedule D – Table 1 (onsite water storage locations) must be designed, engineered, constructed, installed and maintained:
- (a) so as to minimise the likelihood of any release of contaminants through the bed or banks of the pond to any waters (including ground water); and
  - (b) so as to ensure the pond(s) structural integrity.

**Schedule D - Table 1 - Onsite water storage locations**

| Name                       | Easting (MGA) | Northing (MGA) | Purpose                                        |
|----------------------------|---------------|----------------|------------------------------------------------|
| Stormwater Catchment Dam A | 429336        | 7782177        | Collection of stormwater from site catchment A |
| Stormwater Catchment Dam B | 429654        | 7782442        | Collection of stormwater from site catchment B |
| Stormwater Catchment Dam C | 430256        | 778532         | Collection of stormwater from site catchment C |

### Agency Interest – Land

- L1            Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

#### **Storage and handling of chemicals, flammable and combustible substances**

- L2            All chemicals and fuels, including any spillage thereof, must be  
              (a) contained within an on-site containment system; and  
              (b) managed to prevent the release of liquids to land; and  
              (c) controlled in a manner that prevents environmental harm.
- L3            All flammable and combustible liquids must be stored and handles in accordance with AS 1940 Storage and handling of Flammable and Combustible Liquids.

## Agency Interest – Noise

### Noise Nuisance

- N1 Noise produced by an activity to which this development permit relates must not cause an environmental nuisance at any nuisance sensitive place or commercial place.
- N2 Ensure that noise generated by the licensed activities do not cause the criteria in Schedule D - table 1 (Noise Limits) to be exceeded.

**Schedule D – Table 1 (noise Limits)**

| Monday to Sunday                  | Noise Level [dB(A)] at a ‘sensitive Place’ expressed as |                          |                         |
|-----------------------------------|---------------------------------------------------------|--------------------------|-------------------------|
|                                   | L <sub>Aeq,adj,1hr</sub>                                | LA <sub>10,adj,1hr</sub> | LA <sub>1,adj,1hr</sub> |
| Daytime (dwelling for outdoors)   | 50                                                      | 55                       | 65                      |
| Evening (dwelling for outdoors)   | 50                                                      | 55                       | 65                      |
| Night-time (dwelling for indoors) | 30                                                      | 35                       | 40                      |

\* Noise limits based on Environmental Protection (Noise) Policy 2008 – Schedule 1 – Acoustic quality objectives.

### Noise Monitoring

- N3 When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.
- N4 Monitoring must include:
- Airblast overpressure (dD (Lin) Peak) –when relevant; and
  - L<sub>Aeq, adj, 1 hour</sub>; and
  - L<sub>A1, adj, 1 hour</sub>; and
  - the level and frequency of occurrence of impulsive or tonal noise from the activities; and
  - atmospheric conditions including wind speed and direction and atmospheric stability; and
  - if there were any effects due to extraneous factors such as traffic noise; and
  - location, date and time of recording; and
  - location of complainant (if relevant); and
  - details of measurement instrumentation and measurement procedure.
- N5 The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority’s Noise Measurement Manual or the most recent version of *AS1055 Acoustics – Description and measurement of environmental noise*.

## Agency Interest – Water

### Stormwater, Erosion and Sediment Control Plan

- WA1 Within six (6) months of the date of issue of this development approval a Stormwater, Erosion and Sediment Control Plan must be developed and implemented for all activities.
- WA2 The stormwater, Erosion and Sediment Control Plan mentioned in condition (WA1) must include, but is not limited to the below:
- a) the location of the discharge points; and
  - b) prevention of incident storm water run-off from contacting wastes or contaminants; and
  - c) diversion of upstream run-off away from areas where it may be contaminated by bulk products being loaded or unloaded, wastes, contaminants or other materials; and
  - d) collection, treatment and disposal of all contaminated stormwater run-off; and
  - e) diverting uncontaminated stormwater run-off around areas disturbed and where contaminants or wastes are stored or handled that may contribute to stormwater; and
  - f) contaminated stormwater runoff and incident rainfall is collected; and treated, reused, or released in accordance with the conditions of this development approval; and
  - g) roofing or minimising the size of areas where contaminants or wastes are stored or handled; and
  - h) revegetating disturbed areas as soon as predictable after the completion of works; and
  - i) using alternative materials and or processes (such as dry absorbents) to clean up spills that will minimise the generation of contaminated waters; and
  - j) erosion and sediment control structures are placed and maintained to minimise erosion of disturbed areas and prevent the contamination of any waters; and
  - k) an inspection and maintenance program for the erosion and sediment control features; and
  - l) identification of remedial actions that would be required to ensure compliance with the conditions of this development approval.

### Erosion protection measures and sediment control measures

- WA3 Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- WA4 Any stormwater runoff that is potentially contaminated by the activities on site must be directed to the sediment control system and stormwater storage ponds.

### Release of Contaminants

- WA5 Contaminants must not be directly or indirectly released from the premises to any waters or the bed and banks of any waters except as permitted under the water schedule of this development approval.
- WA6 The release of contaminants directly or indirectly to waters must not:
- i. produce any visible discolouration of receiving waters; or
  - ii. produce any slick or other visible floating oil, grease, scum, litter or other objectionable matter.
- WA7 The release of contaminants to waters must only occur from the release points specified in Schedule WA- Table 1 – (Locations and Frequencies of Contaminant release to water).
- WA8 Release of contaminants must only occur during periods of natural flow in the respective receiving waters.



**Schedule WA - Table 1 - Locations and Frequencies of Contaminant release to water**

| Monitoring point | Description                            | Easting (MGA) | Northing (MGA) | Monitoring frequency                                                                                      |
|------------------|----------------------------------------|---------------|----------------|-----------------------------------------------------------------------------------------------------------|
| SW1              | Spillway of Stormwater Catchment Dam A | 429255        | 7782161        | The first sample must be taken within 2 hours of commencement of release and then weekly during discharge |
| SW2              | Spillway of Stormwater Catchment Dam B | 429693        | 7782524        |                                                                                                           |
| SW3              | Spillway of Stormwater Catchment Dam C | 430255        | 7782617        |                                                                                                           |

WA9 Monitoring must be carried out during a release at the locations and frequencies specified in Schedule WA Table 1 (Locations and Frequencies of Contaminant release to water) and Schedule WA – Table 2 (locations and frequencies of Receiving Environment Monitoring) for each quality characteristic specified in Schedule WA – Table 3 (Contaminant Release to Water Limits).

**Schedule WA - Table 2 - Locations and Frequencies of Receiving Environmental Monitoring**

| Monitoring point | Description                                   | Easting (MGA) | Northing (MGA) | Monitoring frequency                                                                                      |
|------------------|-----------------------------------------------|---------------|----------------|-----------------------------------------------------------------------------------------------------------|
| DSW1             | Downstream Monitoring point – Gladstone Creek | TBD*          | TBD*           | The first sample must be taken within 2 hours of commencement of release and then weekly during discharge |
| USW1             | Upstream Monitoring point – Gladstone Creek   | TBD*          | TBD*           |                                                                                                           |
| DSW2             | Downstream Monitoring point – Plumtree Creek  | TBD*          | TBD*           |                                                                                                           |
| USW2             | Upstream Monitoring point – Plumtree Creek    | TBD*          | TBD*           |                                                                                                           |

*Note: Easting and Northing to be provided by Development Approval holder prior to the commencement of activities*

WA10 The release of contaminants to waters must not exceed the contaminant limits for each quality characteristic stated in Schedule WA – Table 3 (Contaminant Release to Water Limits).

**Schedule WA - Table 3 – Contaminant Release to Water Limits**

| Quality Characteristic        | Test Value | Contaminant Limits <sup>3</sup>                                                                  |
|-------------------------------|------------|--------------------------------------------------------------------------------------------------|
| pH (pH unit)                  | Range      | Greater than 4, less than 9 <sup>2</sup>                                                         |
| EC (µS/cm)                    | Maximum    | 5970 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest |
| Total Nitrogen (mg/L)         | Maximum    | 9 <sup>5</sup>                                                                                   |
| Total Phosphorus (mg/L)       | Maximum    | 2 <sup>5</sup>                                                                                   |
| Total Suspended Solids (mg/L) | Maximum    | 500 <sup>5</sup>                                                                                 |
| Sulphate (mg/L)               | Maximum    | 1000 <sup>1</sup>                                                                                |
| Fluoride (mg/L)               | Maximum    | 2 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest    |
| Aluminium (mg/L)              | Maximum    | 5 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest    |
| Arsenic (mg/L)                | Maximum    | 0.5 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest  |
| Cadmium (mg/L)                | Maximum    | 0.01 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest |
| Chromium (mg/L)               | Maximum    | 1 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest    |
| Cobalt (mg/L)                 | Maximum    | 1 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest    |
| Copper (mg/L)                 | Maximum    | 1 <sup>1.4</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest  |
| Lead (mg/L)                   | Maximum    | 0.1 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest  |
| Nickel (mg/L)                 | Maximum    | 1 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest    |
| Zinc (mg/L)                   | Maximum    | 20 <sup>1</sup> or 95 <sup>th</sup> percentile of reference <sup>6</sup> , whichever is lowest   |

**Notes:**

<sup>1</sup> Contaminant limit based on ANZECC & ARMICANZ (2000) stock water quality guidelines 'low risk' trigger values.

<sup>2</sup> Page 4.2-15 of ANZECC & ARMICANZ (2000) "Soil and animal health will not generally be affected by water with pH in the range of 4-9".

<sup>3</sup> Total measurements (unfiltered) must be taken and analysed.

<sup>4</sup> Trigger value specific to cattle

<sup>5</sup> Based on Queensland water Quality Guidelines (2009) 8.1 Urban stormwater quality characteristics for Agricultural purposes "upper" limit.

<sup>6</sup> 80<sup>th</sup> and 95<sup>th</sup> percentiles are calculated using ANZECC (2000) methodology (section 7.4.4.1)

- WA11 If quality characteristics of the release, when measured at the contaminant release points specified in Schedule WA – Table 1 (Locations and frequencies of Contaminant release to water) exceed any of the trigger levels specified in Schedule WA – Table 4 – (Contaminant release to Water Trigger Levels) during a release event, the holder of this environmental authority must compare the results measured during that release event at the monitoring points specified in Schedule WA – Table 4 – (Contaminant release to Water Trigger Levels) and;
- If the level of contaminants at a downstream compliance points is the same or a lower value than the trigger level value for the quality characteristic during the release event then no action is to be taken; or
  - If the level of contaminants at a upstream reference points is the same or a higher value than the trigger level value for the quality characteristic during the release event then no action is to be taken; or
  - If the level of contaminants at a downstream compliance site is greater than the trigger level value complete an investigation in accordance with the ANZECC & ARMICANZ 2000

methodology, into the potential for environmental harm and provide a written report to the administering authority within 3 months, outlining:

- i. details of the investigations carried out; and
- ii. actions taken to prevent environmental harm.

*Note: Where an exceedance of a trigger level occurred and is being investigated, in accordance with this condition, no further reporting is required for subsequent trigger events for that quality characteristic.*

**Schedule WA - Table 4 – Contaminant release to Water Trigger Levels**

| Quality Characteristic        | Test Value | Contaminant Limits <sup>3</sup>                                                                    |
|-------------------------------|------------|----------------------------------------------------------------------------------------------------|
| pH (pH unit)                  | Range      | Greater than 6.5, less than 8 <sup>2</sup>                                                         |
| EC (µS/cm)                    | Maximum    | 310 <sup>7</sup> or 80 <sup>th</sup> percentile of reference, whichever is highest                 |
| Turbidity (NTU)               | Maximum    | 50 <sup>2</sup>                                                                                    |
| Total Nitrogen (µg/L)         | Maximum    | 500 <sup>2</sup>                                                                                   |
| Total Phosphorus (µg/L)       | Maximum    | 50 <sup>2</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest  |
| Total Suspended Solids (mg/L) | Maximum    | 10 <sup>2</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest  |
| Sulphate (mg/L)               | Maximum    | 80 <sup>th</sup> percentile of reference <sup>5,6</sup> ,                                          |
| Aluminium (µg/L)              | Maximum    | 55 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest  |
| Arsenic (µg/L)                | Maximum    | 24 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest  |
| Cadmium (µg/L)                | Maximum    | 0.2 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest |
| Chromium (µg/L)               | Maximum    | 1 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest   |
| Cobalt (µg/L)                 | Maximum    | 2.8 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest |
| Copper (µg/L)                 | Maximum    | 1.4 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest |
| Lead (µg/L)                   | Maximum    | 3.4 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest |
| Nickel (µg/L)                 | Maximum    | 11 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest  |
| Zinc (µg/L)                   | Maximum    | 8 <sup>1</sup> or 80 <sup>th</sup> percentile of reference <sup>5,6</sup> , whichever is highest   |

**Notes:**

<sup>1</sup> Contaminant trigger based on ANZECC & ARMCANZ (2000) Table 3.4.1 95% species eco-toxicology protection levels.

<sup>2</sup> Based on Queensland Water Quality Guidelines (2009) 3.2.1 Central Coast Queensland Regional guideline values for physio-chemical indicators (slightly to moderately disturbed waters) for Lowland streams.

<sup>3</sup> Dissolved measurements (filtered) must be taken and analysed.

<sup>4</sup> Contaminant limit based on ANZECC & ARMCANZ (2000) stock water quality guidelines 'low risk' trigger values.

<sup>5</sup> Reference sites must comply with the following criteria:

- i. be from the same bio-geographic and climatic region;
- ii. have similar geology, soil types and topography;
- iii. contain a range of habitats similar to those at the potentially impacted sites;
- iv. have a similar flow regime; and
- v. not be so close to the potentially impacted sites that any disturbance at the potentially impacted sites also results in a change at the reference site.

<sup>6</sup> 80<sup>th</sup> and 95<sup>th</sup> percentiles are calculated using ANZECC (2000) methodology (section 7.4.4.1)

<sup>7</sup> Based on Queensland Water Quality Guidelines (2009) Table G. 1 EC percentiles for Queensland Salinity Zones – Burdekin – Bowen Basin 80<sup>th</sup> percentile

- WA12 All determinations of water quality must be:
- (a) Performed by a person of body possessing appropriate experience and qualifications to perform the required measurements;
  - (b) Made in accordance with methods prescribed in the latest edition of the Administering Authority's monitoring and sampling manual;
  - (c) Collected from the monitoring locations identified within this development permit, within 2 hours of each other (reference/downstream) where possible;
  - (d) Carried out on representative samples; and
  - (e) Laboratory testing must be undertaken using laboratory accredited (e.g. NATA) for the method of analysis being used.
- WA13 The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format when requested:
- (a) The date on which the sample was taken;
  - (b) The time at which the sample was taken;
  - (c) The monitoring point at which the sample was taken;
  - (d) The measured or estimated daily quantity of the contaminants released from all release points;
  - (e) The release flow rate at the time of sampling for each release point; and
  - (f) The results of all monitoring and details of any exceedances with the conditions of this environmental authority.

#### Groundwater

- WA14 Contaminants must not be directly or indirectly released to groundwater except as permitted under the water schedule of this development approval.
- WA15 Groundwater monitoring bores must be constructed at the locations identified by schedule WA – Table 5 (groundwater Monitoring Locations and Frequency) and operated in accordance with methods prescribed in the latest edition of the ARMCANZ manual titled *Minimum Construction Requirements for Water Bores in Australia*.
- WA16 Groundwater quality and level must be monitored at the locations and frequencies defined in Schedule WA – Table 5 (Groundwater Monitoring Locations and Frequency) for quality characteristics identified in Schedule WA – Table 6 (Groundwater Quality Limits).

**Schedule WA - Table 5 – Groundwater Monitoring Locations and Frequency**

| Monitoring point | Easting (MGA) | Northing (MGA) | Monitoring frequency |
|------------------|---------------|----------------|----------------------|
| Bore 1           | 429295        | 7782210        | quarterly            |
| Bore 2           | 429545        | 7782406        |                      |
| Bore 3           | 430272        | 7782589        |                      |
| Bore 4           | 430274        | 7782179        |                      |
| Bore 5           | 429742        | 7781869        |                      |

**Schedule WA - Table 6– Groundwater Quality Limits**

| Quality Characteristic       | Unit  | Contaminant Limit                                                                                         |
|------------------------------|-------|-----------------------------------------------------------------------------------------------------------|
| pH                           | pH    | 5.0 (minimum)<br>9.0 (maximum)                                                                            |
| Electrical Conductivity      | µS/cm | 896 for Bore 1 and 3 <sup>1</sup><br>3,790 for Bore 5 <sup>1</sup><br>5,024 for Bore 2 and 4 <sup>1</sup> |
| Sulphate                     | mg/l  | 3 for Bore 1 and 3 <sup>1</sup><br>21 for Bore 2, 4 and 5 <sup>1</sup>                                    |
| Total nitrogen               | mg/l  | 1.2 <sup>1</sup>                                                                                          |
| Total phosphorus             | mg/l  | 0.5 <sup>1</sup>                                                                                          |
| Dissolved aluminium          | mg/l  | 0.055 <sup>2</sup>                                                                                        |
| Dissolved arsenic            | mg/l  | 0.013 for Bore 1,2 and 5 <sup>2</sup><br>0.084 for Bore 3 <sup>1</sup><br>0.022 for Bore 4 <sup>1</sup>   |
| Dissolved cadmium            | mg/l  | 0.0002 <sup>2</sup>                                                                                       |
| Dissolved cobalt             | mg/l  | 0.0014 for Bore 3 <sup>2</sup><br>0.0042 for Bore 1,2,4 and 5 <sup>1</sup>                                |
| Dissolved copper             | mg/l  | 0.0034 <sup>1</sup>                                                                                       |
| Dissolved zinc               | mg/l  | 0.008 <sup>2</sup>                                                                                        |
| Chloride                     |       | Interpretation purposes only                                                                              |
| Calcium Carbonate (Hardness) |       | Interpretation purposes only                                                                              |

**Note:** all metals and metalloids must be measured as total (unfiltered) and dissolved (filtered).

Total metals must be monitored for interpretive purposes.

<sup>1</sup> Contaminant limit based on site specific monitoring data.

<sup>2</sup> Contaminant limits based on ANZG 2018, Australian and New Zealand Guidelines for Fresh and Marine Water Quality, and 95% Species Protection Level for toxicants in slightly-moderately disturbed systems.

## Groundwater Quality

- WA17 Results of groundwater monitoring from water quality compliance bores identified in **Table 5 - Groundwater Monitoring Locations and Frequency**, must not exceed any of the Contaminant Limits specified in **Table 6 - Groundwater Quality Limits** on three (3) consecutive occasions.
- WA18 If groundwater from water quality compliance bores identified in **Table 5 - Groundwater monitoring locations and frequency** exceed the Contaminant Limits specified in **Table 6 - Groundwater quality limits** on **three (3)** consecutive occasions, the holder of the environmental authority must:
- notify the administering authority within **24 hours** of receiving the results.;
  - complete an investigation to identify the potential cause of the exceedance and the potential for environmental harm being caused or likely to be caused by the exceedance; and
  - provide a written report to the administering authority within (3) months of the date of the original exceedance, outlining:
    - details of the investigation carried out; and
    - actions taken to prevent environmental harm

## Agency Interest – Waste

- W1 Waste generated in the carrying out of an activity to which this development permit relates must be stored, handled and transferred in a proper and efficient manner so as to prevent spillage or contamination of land or waters.
- W2 Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this development approval.

## Waste Handling

- W3 All regulated waste removed from the site must be removed by a person that holds a current approval to transport such waste in accordance with the provisions of the Environmental Protection Act 1994 and sent to a facility that is permitted to accept such waste.

## Off-site Movement of Waste

- W4 Where regulated waste is removed from the site (other than by a release as permitted under another conditions of this development approval), the registered operator must monitor and keep records of the following:
- (a) The date, quantity and type of waste removed; and
  - (b) The name of the waste transporter and/or disposal operator that removed the waste; and
  - (c) The intended treatment, disposal, and destination of the waste.

*Note: Trackable wastes are listed in Schedule 1 of the Environmental Protection (waste Management) regulation 2000 are not covered by this condition. Trackable wastes have similar recording requirements to this condition in accordance with a waste tracking system established under the above regulation.*

## Agency Interest – Social

### Complaint Response

- S1            The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:
- (a) time, date, name and contact details of the complainant;
  - (b) reasons for the complaint;
  - (c) any investigation undertaken;
  - (d) conclusions formed; and
  - (e) any actions taken.

## Schedule H – Definitions

For the purpose of this Development Approval the following definitions apply. If there is no definition below the Environmental Protection Act 1994 and the Environmental Protection Regulation 2008 definition applies.

**“act”** means the *Environmental Protection Act 1994*

**“activity”** means the environmentally relevant activities carried out by the registered operator.

**“administering authority”** means the Department of Environment and Heritage Protection or its successor.

**“authority”** means environmental authority or a development approval .

**“background noise level”** means the sound pressure level, measured in the absence of the noise under investigation, as the L A90, T being the A-weighted sound pressure level exceeded for 90 percent of the measurement time period T of not less than 15 minutes, using Fast response.

**“bed and banks”** for a watercourse or wetland means land over which the water of the watercourse or wetland normally flows or that is normally covered by the water, whether permanently or intermittently; but does not include land adjoining or adjacent to the bed or banks that is from time to time covered by floodwater.

**“best practice environmental management”** of an activity means the management of the activity to achieve an ongoing minimisation of the activity’s environmental harm through cost-effective measures assessed against the measures currently used nationally and internationally for the activity. In deciding the best practice environmental management of an activity, regard must be had to the strategic planning by the person carrying out, or proposing to carry out, the activity, the administrative systems put into effect by the person, including staff training and monitoring and review of the systems, the public consultation carried out by the person, the product and process design and waste prevention, treatment and disposal.

**“bund or bunded”** in relation to spill containment systems for fabricated or manufactured tanks or containers designed to a recognised standard means an embankment or wall of brick, stone, concrete or other impervious material which may form part or all of the perimeter of a compound and provides a barrier to retain liquid. Since the bund is the main part of a spill containment system, the whole system (or bunded area) is sometimes colloquially referred to within industry as the bund. The bund is designed to contain spillages and leaks from liquids used, stored or processed above ground and to facilitate clean-up operations. As well as being used to prevent pollution of the receiving environment, bunds are also used for fire protection, product recovery and process isolation.

**“commercial place”** means a work place used as an office or for business or commercial purposes, which is not part of the petroleum activities and does not include employees accommodation or public roads.

**“competent person(s)”** means has the appropriate skills, training and experience to conduct the monitoring.

**“dam”** means a land-based structure or a void that is designed to contain or control flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works. A dam does *not* mean a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container.



**“day”** means a business day.

**“development approval”** means this development approval as defined under the Sustainable Planning Act 2009.

**“dust collector”** means a device used for filtering particulate from the air which is otherwise free from fume or gaseous contaminants.

**“dwelling”** means any of the following structures or vehicles that is principally used as a residence;

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land; or
- a water craft in a marina.

**“environment”** includes:

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) all natural and physical resources; and
- (c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and
- (d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

**“environmental relevant activities”** is any activity mentioned in schedule 2 Chapter 4 in the *Environmental Protection Regulation 2008*.

**“environmental nuisance”** means unreasonable interference or likely interference with an environmental value caused by –

- (a) aerosols, fumes, light, noise, odour, particles or smoke; or
- (b) an unhealthy, offensive or unsightly condition because of contamination; or
- (c) another way prescribed by regulation.

**“indicators”** and water quality guidelines for an environmental value are decided using the following documents –

- (a) site specific documents for the water;
- (b) the “QWG guidelines”;
- (c) the ‘AWQ guidelines’;
- (d) other relevant documents published by a recognised entity’.

**“infrastructure”** means water storage dams, roads and tracks, buildings and other structures built for the purpose and duration of the conduct of the environmentally relevant activities, but does not include other facilities required for the long term management of the impact of those activities or the protection of potential resources. Such other facilities include dams other than water storage dams, waste dumps, voids, or stockpiles and assets that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

**“land”** means any parcel of land *and* area of ground together with any trees, crops or permanently attached buildings and including the airspace above land; and land that is, or is at any time, covered by waters; and waters. Land includes sealed and unsealed areas, road, dirt and soil.

**“ $L_{(Amax, adj, 15 mins)}$ ”** means the average maximum A-weighted sound pressure level; adjusted for noise character and measured over a time period of 15 minutes, using Fast response.

**“ $L_{Amax}$ ”** Means the instantaneous maximum A-weighted sound pressure level; using Fast response.

**“levee”, “dyke” or “bund”** means a long embankment that is designed only to provide for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from releases from other works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of water or flowable substances at any other times.

**“holder”** means:

- (a) where this document is an environmental authority, any person who is the holder of, or is acting under, that environmental authority; or
- (b) where this document is a development approval, any person who is acting under that development approval.

**“mg/L”** means milligrams per litre.

**“maximum”** means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

**“minimum”** means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

**“NATA”** means the National Association of Testing Authorities, Australia.

**“normal operations”** means if the cogeneration facility is operating at a constant rate, whether or not it is operating at full capacity.

**“nuisance sensitive place”** means any of the following;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- library and educational institution (including a school, college and university; or
- childcare centre or kindergarten; or
- school or playground; or
- hospital, surgery or other medical institution; or
- protected area, or an area identifies under a conservation plan under the Nature Conservation Act 1992 as a critical habitat or an area of major interest; or
- marine park under the Marine Parks Act 1992; or
- park or garden that is open to the public (whether or not on payment of an amount) for use other than for sport or organised entertainment; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

**“occasion”** means any four samples results for metals and any (4) four 24 hour period where continuous samples indicate an exceedance.

**“operational plan”** means a document that amongst other things sets out procedures and criteria to be used for operating a dam during a particular time period. The operational plan as defined herein may form part of a plan of operations or plan otherwise required in legislation.

**“process contaminants”** means liquids and slurries used in the processing of bauxite to alumina and does not include hydrocarbons.

**“QWQ guidelines”** means the document called ‘Queensland water quality guidelines 2009’ or more recent versions.

**“range”** means that the measured value of the quality characteristic or contaminant must be less than the higher release limit stated and greater than the lower release limit stated.

**“recognised entity” means –**

- a) a local government; and
- b) a public sector unit; and
- c) an agency of the Commonwealth or another State, however called, with similar functions to the functions of the chief executive; and
- d) a ministerial council established by the Council of Australian Government; and
- e) the commonwealth Scientific and industrial Research Organisation; and
- f) a research centre completely or partly funded by the Commonwealth; and
- g) an Australian university; and
- h) a Queensland regional NRM body; and
- i) healthy Waterways Limited CAN 137 943 554; and
- j) any other international best practice guideline including NEPM groundwater investigation level or Dutch Intervention Guidelines target value.

**“rehabilitation”** means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

**“Regulated dam”** means any dam in the significant or high hazard category as assessed using the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams* (EM635) published by the administering authority.

**“sensitive receptor”** means any of the following;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- library and educational institution (including a school, college and university; or
- childcare centre or kindergarten; or
- school or playground; or
- hospital, surgery or other medical institution; or
- protected area, or an area identified under a conservation plan under the *Nature Conservation Act 1992* as a critical habitat or an area of major interest; or
- Marine park under the *Marine Parks Act 2004*; or
- a place used as a workplace, an office or for business or commercial purposes; or
- and includes a place within the curtilage of such a place reasonably used by persons at that place.

**“site”** means the land to which the development approval attaches.

**“spillway”** means a weir, channel, conduit, tunnel, gate or other structure designed to permit discharges from the dam, normally under flood conditions or in anticipation of flood conditions.

**“stable”** in relation to land, means land form dimensions are and will remain within tolerable limits now and in the foreseeable future. Issues to be properly considered in regard to whether or not the landform is stable include geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, leachate and related contaminant generation.

**“topsoil”** means the surface (top) layer of a soil profile, which is more fertile, darker in colour, better structured and supports greater biological activity than underlying layers. The surface layer may vary in depth depending on soil forming factors, including parent material, location and slope, but generally is not greater than about 300mm in depth from the natural surface.

**“trigger levels”** means an indicator for an environmental value is a physical, chemical, biological or other property that can be measured or decided in a quantitative way.

**"waters"** includes all or any part of a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water in natural or artificial watercourse, bed and bank of a watercourse, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater.

**"watercourse"** – means a river, creek or stream in which water flows permanently or intermittently:

- (a) in a natural channel, whether artificially improved or not; or
- (b) in an artificial channel that has changed the course of the watercourse; but in any only:
- (c) unless a regulation under paragraph (d), (e) or (f) declares otherwise - at every place upstream of the point (point A) to which the high spring tide ordinarily flows and reflows, whether due to a natural cause or to an artificial barrier; or
- (d) if a regulation has declared an upstream limit for the watercourse - the part of the river, creek or stream between the upstream limit and point A; or
- (e) if a regulation has declared a downstream limit for the watercourse – the part of the river, creek or stream upstream of the limit; or
- (f) if a regulation has declared an upstream and a downstream limit for the watercourse – the part of the river, creek or stream between the upstream and the downstream limits.

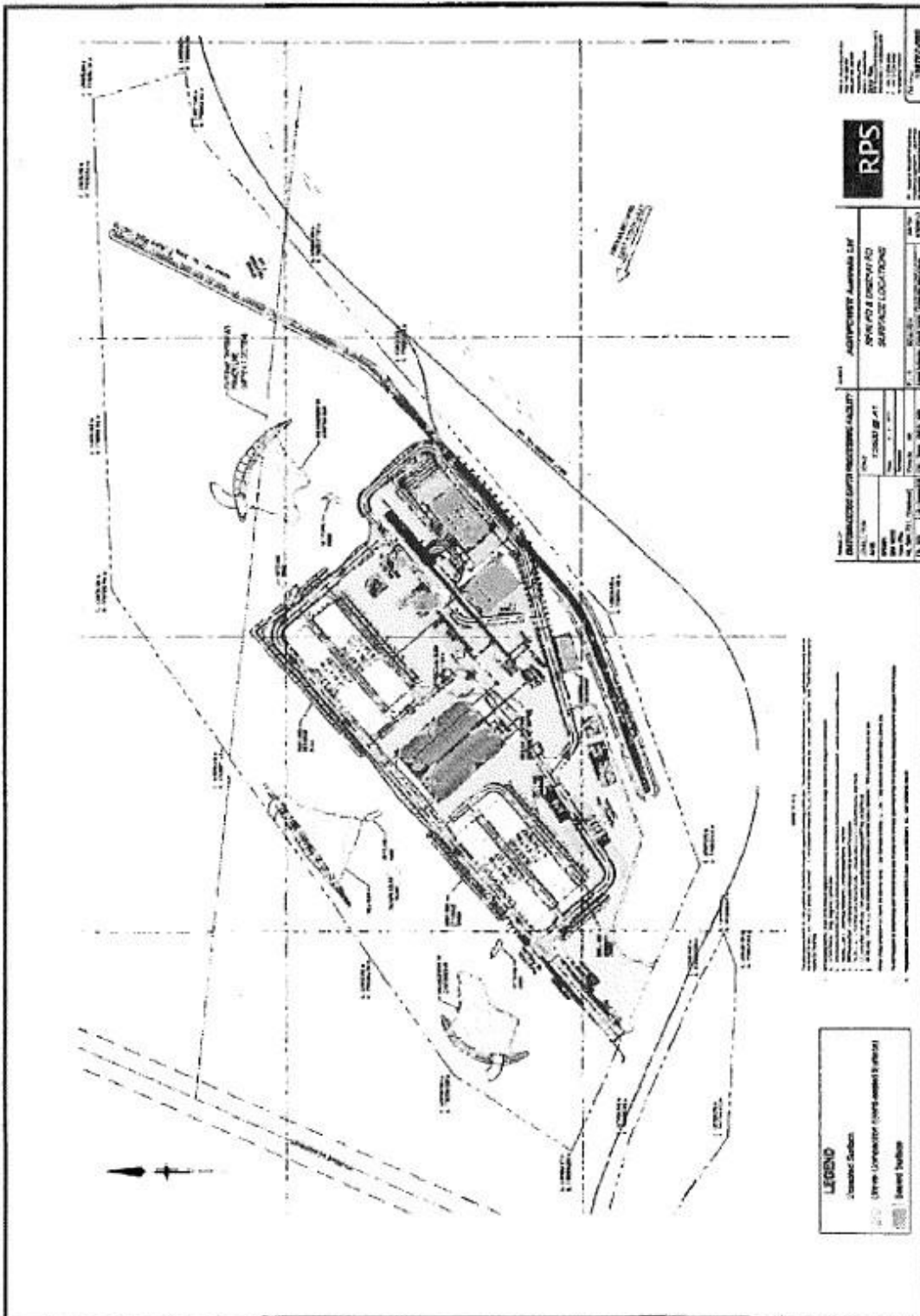
**"water quality guidelines"** are quantitative measures or statements for indicators, including contaminant concentration or sustainable load measures of water that protect a stated environmental value.

**"wetland"** means an area shown as a wetland on a 'Map of referable wetlands', a document approved by the chief executive (environment). A map of referable wetlands can be viewed at [www.des.qld.gov.au](http://www.des.qld.gov.au).

END OF CONDITIONS FOR SCHEDULE H

**Schedule I – Map 2 - Approved Site Plan (Sealed and unsealed Surface Locations)**

Schedule I – Approved Plans



Note: This permit does not authorise the construction or operation of the pictured rail siding.

Page 24 of 25 • 120607 • Version 1  
Department of Environment and Heritage Protection  
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END OF CONDITIONS FOR ACTIVITIES UNDERTKEN AT 203 PLUM TREE ROAD, BROUGHTON – LOT 5  
PLAN MPH40800 AND LOT 1 PLAN MPH13840

END OF ENVIRONMENTAL AUTHORITY