

Permit

Environmental Protection Act 1994

Environmental authority EPML00594013

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

Environmental authority number: EPML00594013

Environmental authority takes effect on 28 April 2020

Environmental authority holder(s)

Name(s)	Registered address
ZEDEMAR HOLDINGS PTY. LTD.	Suite 12, Portman Place 220 Boundary Street SPRING HILL QLD 4000 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 20: Clay pit mining, dimension stone mining or mining gemstones (including the material from which gemstones are extracted) (c) more than 1,000,000t in a year	ML4712

Additional information for applicants

Environmentally relevant activities

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

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

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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 an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
- c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Juliana McCosker
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 28 April 2020

Enquiries:
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Department of Environment and Science

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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)

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Conditions of environmental authority

Agency interest: General	
Condition number	Condition
A1	Maintenance of measures, plant and equipment The holder must: 1. install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and 2. maintain such measures, plant and equipment in a proper condition; and 3. operate such measures, plant and equipment in a proper manner.
A2	Monitoring 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	A competent person must conduct any monitoring required by this environmental authority.
A4	Storage and handling of flammable and combustible liquids Spillage of any flammable or combustible liquids or other chemicals must be contained and rectified to prevent environmental harm (other than of trivial nature).
Agency interest: Air	
Condition number	Condition
B1	Dust nuisance The release of dust or other particulate matter resulting from the mining activities must not cause an environmental nuisance at any sensitive place in the opinion of an authorised person.
B2	For the purposes of condition B1, the mining activities will not cause environmental nuisance where dust or other particulate matter resulting from the activities does not exceed the following limits when measured at any sensitive place: 1. Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method; or 2. A concentration of suspended particulate matter with an aerodynamic diameter of less than 10 micrometres (PM10) of 150 micrograms per cubic metre over a 24 hour averaging time at a sensitive place downwind, when monitored in accordance with: a) Australian Standard AS 3580.9.6 Methods for sampling and analysis of ambient air – Determination of particulate matter – PM (sub) 10 high-volume sampler with size-selective inlet – Gravimetric method; or 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.
B3	Dust or other particulate monitoring must be undertaken as directed by the administering authority to investigate any complaint of environmental nuisance, which in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief, and the results thereof notified to the administering authority within 14 days following completion of monitoring. Monitoring must be

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	carried out at a site relevant to the potentially affected sensitive place and at upwind control site(s) and must include: 1. for a complaint alleging dust nuisance, dust deposition; and for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of suspended PM10 over a 24hr averaging time.
B4	If an authorised person's opinion is that environmental nuisance is being caused by dust or other particulate matter from the mining activities, the holder must: 1. address the complaint including the use of appropriate dispute resolution if required; or 2. immediately implement abatement measures so that emission of dust or other particulate matter from the activities does not result in further environmental nuisance.
B5	Odour nuisance The release of noxious or offensive odour or any other noxious or offensive airborne contaminant resulting from the mining activities must not cause an environmental nuisance at any sensitive place in the opinion of an authorised person.
B6	Odour monitoring must be undertaken as directed by the administering authority to investigate any complaint of environmental nuisance, which in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief, and the results thereof notified to the administering authority within 14 days following completion of monitoring. Monitoring must be carried out at a site relevant to the potentially affected sensitive place and at upwind control site(s).
B7	If an authorised person's opinion is that environmental nuisance is being caused by odour or any other noxious or offensive airborne contaminant from the mining activities, the holder must: 1. address the complaint including the use of appropriate dispute resolution if required; or 2. immediately implement abatement measures so that emission of odour or any other noxious or offensive airborne contaminant from the activities does not result in further environmental nuisance.
Agency interest: Water	
Condition number	Condition
C1	Contaminants must not be released directly or indirectly to any waters except as permitted under the conditions of this environmental authority.
C2	Release to waters Surface waters must monitored at the locations and frequency specified in Table C1 Surface water monitoring locations and depicted in Figure 1 Surface Water Monitoring Locations, for each quality characteristic stated in Table C2 Contaminant trigger levels.
C3	Exceedance Investigation If quality characteristics of the water at the monitoring point EW33 as specified in Table C1 Surface water monitoring locations, exceeds any of the trigger levels specified in Table C2 Contaminant trigger levels, during discharge, the environmental authority holder must: 1. notify the administering authority via WaTERS within 24 hours of receiving the result; and 2. complete an investigation into the potential for environmental harm and provide a written report to the administering authority via WaTERS within 28 days of receiving the result, outlining: a) details of the investigations carried out; and

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	b) whether the result is directly associated with discharge from Ebenezer Tailings Dam, and, if so: - whether environmental harm has occurred, and - actions taken to prevent environmental harm. Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with C3 (2) of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.
C4	Water General All determinations of water quality must be: - performed by a person or body possessing appropriate experience and qualifications to perform the required measurement; - made in accordance with methods prescribed in the latest edition of the administering authority's Water Quality Sampling Manual; and - laboratory testing must be undertaken using a laboratory accredited for the method of analysis being used.
C5	Annual Water Monitoring Data Submission 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 via WaTERS by 1 March each year for the previous year of monitoring: - the date on which the sample was taken; - the time at which the sample was taken; - the monitoring point at which the sample was taken; and - the results of all monitoring and details of any exceedances with the conditions of this environmental authority.
C6	Water management plan A Water Management Plan must be developed by an appropriately qualified person and implemented. This Plan must be made available to the administering authority on request

Table C1 Surface water monitoring locations

Monitoring point	Monitoring point location description	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)	Monitoring frequency
EW1	Ebenezer Creek upstream site	-27.69449922138	152.64209822303	Once daily for 3 days then weekly during periods of flow
EW7	Ebenezer Creek downstream of ML4712	-27.67661942771	152.66139622144	
EW33	Tailings dam overflow	-27.67539600710	152.65754814620	Once daily during discharge for 3 days then once weekly during discharge
EW34	Culvert from spoil dump to Ebenezer Creek	-27.67889236819	152.65216537993	
EW35	Discharge from adjacent to out of pit dump	-27.68993812929	152.64132471882	

Table C2 Contaminant trigger levels

Quality characteristic	Units	Trigger level
pH	pH units	6.0 – 9.0
Electrical conductivity	µS/cm	2,350
Total suspended solids	mg/L	50

Agency interest: Acoustic	
Condition number	Condition
D1	Noise nuisance Subject to conditions D2 and D3, noise from the mining activities must not cause an environmental nuisance at any sensitive place in the opinion of an authorised person.
D2	Noise monitoring must be undertaken as directed by the administering authority to investigate any complaint of environmental nuisance caused by noise, which in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief, and the results thereof notified to the administering authority within 14 days following completion of monitoring. For the purposes of this condition, noise monitoring must be done in accordance with the latest edition of the Environmental Protection Agency Noise Measurement Manual and include: 1. LA, max adj, T; 2. LA10, adj, 10 mins; 3. LA1, adj, 10 mins; 4. dB (Lin) Peak; 5. relevant background sound level; 6. the level and frequency of occurrence of impulsive or tonal noise; 7. atmospheric conditions including wind speed and direction; and 8. location, date and time of recording.
D3	For the purposes of condition D1, the mining activities will not cause environmental nuisance where noise from the activities does not exceed the limits specified in Table D1 Noise limits at a sensitive place or Table D2 Air blast overpressure level – sensitive place.
D4	Blasting must not be carried out other than during the times specified in Table D2 Air blast overpressure level – sensitive place.
D5	If an authorised person's opinion is that environmental nuisance is being caused by noise from the mining activities, the holder must: 1. address the complaint including the use of appropriate dispute resolution if required; or 2. immediately implement noise abatement measures so that emissions of noise from the activities does not result in further environmental nuisance.
D6	Vibration nuisance - Vibration emissions from blasting Subject to conditions D7 and D8, vibration from the mining activities must not cause an environmental nuisance at any sensitive place in the opinion of an authorised person.
D7	Vibration monitoring must be undertaken as directed by the administering authority to investigate any complaint of environmental nuisance caused by vibration, which in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief, and the results thereof

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	notified to the administering authority within 14 days following completion of monitoring. For the purposes of this condition, vibration monitoring must include: 1. location of blast(s) (including bench level); 2. peak particle velocity; 3. atmospheric conditions including temperature, relative humidity and wind speed and direction; and 4. location, date and time of recording.
D8	For the purposes of condition D6, the mining activities will not cause environmental nuisance where vibration from the activities does not exceed the limit specified in Table D3 Vibration limits – sensitive place.
D9	If an authorised person's opinion is that environmental nuisance is being caused by vibration from the mining activities, the holder must: 1. address the complaint including the use of appropriate dispute resolution if required; or 2. immediately implement vibration abatement measures so that vibration from the activities does not result in further environmental nuisance.

Table D1 Noise limits at a sensitive place

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am-6pm	6pm-10pm	10pm-7am	9am-6pm	6pm-10pm	10pm-9am
Noise measured at a Noise sensitive place						
L _{A10} , adj, 10 mins	b/g + 5	b/g + 5	b/g + 0	b/g + 5	b/g + 5	b/g + 0
L _{A1} , adj, 10 mins	b/g + 10	b/g + 10	b/g + 5	b/g + 10	b/g + 10	b/g + 5
Noise measured at a Commercial place						
L _{A10} , adj, 10 mins	b/g + 10	b/g + 10	b/g + 5	b/g + 10	b/g + 10	b/g + 5
L _{A1} , adj, 10 mins	b/g + 15	b/g + 15	b/g + 10	b/g + 15	b/g + 15	b/g + 10

Note: The method of measurement and reporting of noise levels must comply with the latest editions of the administering authority's Noise Manual.

Table D2 Airblast overpressure level - Sensitive place

Noise parameter	Monday to Friday 9am - 3pm Saturday 9am - 1pm	Other times and public holidays
Air blast overpressure level (dB linear peak)	115dB (80 th percentile)	Nil unless required under the Coal Mining Safety and Health Regulation 2001
Air blast overpressure level (dB linear peak)	120dB (maximum)	

Note: The method of measurement and reporting of noise levels must comply with the latest editions of the administering authority's Noise Manual.

Table D3 Vibration limits - Sensitive place

Vibration parameter	Monday to Friday 9am - 3pm Saturday 9am - 1pm	Other times and public holidays
Peak particle velocity	5mm/second (80 th percentile)	Nil unless required under the Coal Mining Safety and Health Regulation 2001
Peak particle velocity	10mm/second (maximum for any blast)	

Note: The method of measurement and reporting of noise levels must comply with the latest editions of the administering authority's Noise Manual.

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Agency interest: Waste	
Condition number	Condition
E1	Waste This schedule only permits storage and disposal of tyres sourced from the mining activities the subject of this environmental authority.
E2	Storage of tyres Tyres stored awaiting disposal, recycling or removal must be stockpiled less than 3m in height and 200 square metres in area and at least 10m from any other tyre storage area.
E3	Reasonable and practicable fire prevention measures must be implemented for scrap tyre storage areas, including removal of grass and other materials within a 10 metres radius of such an area.
E4	Disposal of tyres Where practicable, scrap tyres can be disposed of in underground stopes provided this practice does not cause an unacceptable fire risk or compromise mine safety.
E5	Disposing of scrap tyres in spoil areas is acceptable, provided the tyres are placed as deep in the spoil as possible but not directly on the pit floor.
E6	Disposal of scrap tyres must not impede saturated aquifers nor compromise the stability of the consolidated landform.
Agency interest: Land	
Condition number	Condition
F1	Rehabilitation landform criteria All areas significantly disturbed by mining activities must be rehabilitated in accordance with Table F1 Final land use and rehabilitation schedule.
F2	Progressive rehabilitation must be achieved for disturbed areas not required for the ongoing conduct of the mining activities.
F3	Grazing pasture outcome Areas which are to be progressively rehabilitated to grazing pasture must comply with the following rehabilitation outcomes: 1. self-sustaining vegetation with projective cover of suitable pasture species (e.g. rhodes grass) in Table F1 Final land use and rehabilitation schedule; and 2. all areas disturbed by mining activities must be rehabilitated to the landform design criteria defined in Table F1 Final land use and rehabilitation schedule; and 3. the productivity of Class 4 Post Mine Capability rehabilitated areas for grazing will support one beast per 5 hectares except in seasons when average rainfall is less than the 20th percentile.
F4	Residual void outcome Residual voids must comply with the following rehabilitation outcomes: 1. residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than environmental harm caused by the existence of the residual void per se, and subject to any other condition of this authority; and

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	2. residual void design must comply with Table F2 Residual void design.
F5	Complete an investigation into rehabilitation of residual voids and submit a report to the administering authority proposing rehabilitation acceptance criteria relevant to the rehabilitation outcomes in Condition F4 and relevant to the rehabilitation and landform design criteria in Table F1 Final land use and rehabilitation and Table F2 Residual void design by 31 July 2006.
F6	Infrastructure All infrastructure for the mining activities, including water storage structures, must be removed from the subject land prior to mining lease surrender, except where otherwise agreed to in writing by the post mining land owner.

Table F1 Final land use and rehabilitation schedule

Disturbance type	Disturbance area (ha)	Pre-mine land description	Post-mine land description	Pre-mine land capability ¹	Post-mine land capability ¹	Cover (%)	Slope Range (%)
Infrastructure	12.2	Light Grazing	Light Grazing	3, 4, 5	4, 5	50	<10
Haul roads	15.0	Light Grazing	Light Grazing	4	4	50	<10
Topsoil stripped ahead of mining	11.6	Grazing	Light Grazing	3, 4	4	50	<10
Tailings ponds	31.7	Light Grazing	Fauna habitat	4, 5	5	N/A	<10
Active Pit (final void)	45.9	Grazing	Water Storage Fauna Habitat	3, 4, 5	5	N/A	Competent rock <70 Incompetent material <45
Dams and ponds	8.4	Grazing	Water Storage Fauna Habitat	3, 4, 5	5	N/A	<10
Spoil area	42.0	Grazing	Light Grazing	3, 4	4, 5	30	<18

1. land capability is defined in the Queensland Department of Mines and Energy Technical Guidelines for Environmental Management of Exploration and Mining in Queensland, 1995.

Table F2 Residual void design

Void identification	Void wall – competent rock slope (%)	Void wall – incompetent rock slope (%)	Void maximum surface area (ha)
Lanes Pit	<70	<45	32
Iron Bark North Pit	<70	<45	12
Ti Tree West Pit	<70	<45	25

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Agency interest: Social	
Condition number	Condition
G1	Complaint response All complaints received must be recorded including details of the complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority upon request.

Definitions

Key terms and/or phrases bolded in this environmental authority are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

“EMOS” means the environmental management overview strategy report titled Environmental Management Overview Strategy Ebenezer Mine: ML4712 dated January 2004. Where required, interpretation of this authority should be in the context of the EMOS.

“acceptance criteria” means standards by which actions implemented to rehabilitate land are deemed to be complete.

“administering authority” is the agency that administers the environmental authority provisions under the Environmental Protection Act 1994.

“airblast overpressure” means energy transmitted from blasting through the atmosphere in the form of pressure waves. The maximum excess pressure in which a wave above ambient pressure is the peak airblast overpressure measured in decibels linear (dBL).

“ambient (or total) noise” means the levels of noise at a place from all sources, measured as the Leq for a relevant time interval.

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

“b/g” means relevant background sound level measured in accordance with the administering authority’s Noise Manual.

“blasting” means the use of explosive materials to fracture:

1. rock, coal and other minerals for later recovery
2. 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, which is not part of the mining activity and does not include employees’ accommodation or public roads.

“competent person” means a person with sufficient demonstrated skill, knowledge and qualifications required to carry out a task to a necessary standard for protection of the environment.

“holder” for a mining tenement, means the holder of the tenement under the *Minerals Resources Act 1989*, and the holder of the associated environmental authority under the *Environmental Protection Act 1994*.

“infrastructure” means water storage dams, levees, roads and tracks, buildings and other structures built for the purpose of mining activity.

“LA1,adj, 10mins” means the A-weighted sound pressure level, (adjusted for tonal characteristics and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response.

“LAeq, 1hour” means the time-averaged A-weighted sound pressure level over a one hour measurement period.

“LA, max adj, T” means the average maximum A-weighted sound pressure level, adjusted for tonal or impulsive noise character, and measured over any 10 minute period, using Fast response.

“LA10, adj, 10mins” 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.

“land in the land schedule” of this document means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the *Environmental Protection Act 1994*. For the purposes of the *Acts Interpretation Act 1954*, it is expressly noted that the term **land** in this environmental authority relates to physical land and not to interests in land.

“land use” refers to description of the purpose(s) for land after cessation of mining activities thereupon.

“mining activities” has the meaning given in the *Environmental Protection Act 1994* and the *Mineral Resources Act 1989*.

“noise sensitive place” means -

1. a dwelling, mobile home or caravan park, residential marina or other residential premises;
2. a motel, hotel or hostel;
3. a kindergarten, school, university or other educational institution;
4. a medical centre or hospital;
5. a protected area; and
6. a park or gardens; and
7. includes the curtilage of any such place.

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

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

“peak particle velocity (ppv)” means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms).

“progressive rehabilitation” means rehabilitation (defined below) undertaken progressively or in stages as mining activities or operations are ongoing.

“protected area” means

1. a protected area under the Nature Conservation Act 1992; or
2. a marine park under the Marine Parks Act 1992; or
3. a World Heritage Area.

“rehabilitation” means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria, and where relevant includes remediation of contaminate 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.

“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.

“sensitive place” means:

1. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
2. a motel, hotel or hostel, or
3. an educational institution; or
4. a medical centre or hospital; or
5. a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area, or
6. a public park or gardens.

“stable” means geotechnical stability of the rehabilitate landform where instability caused by settlement and subsidence has ceased.

“the Act” means the Environmental Protection Act 1994.

“water” is defined under Schedule 4 of the Water Act 2000.

“watercourse” has the same meaning given in the Water Act 2000.

“water quality” means the chemical, physical and biological condition of water.

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

“WaTERS” means Water Tracking and Electronic Reporting System or subsequent updated system, used to submit monitoring data and notify the Queensland Government.[<https://waters.ehp.qld.gov.au/>] or psd.help@qld.gov.au.

Appendices

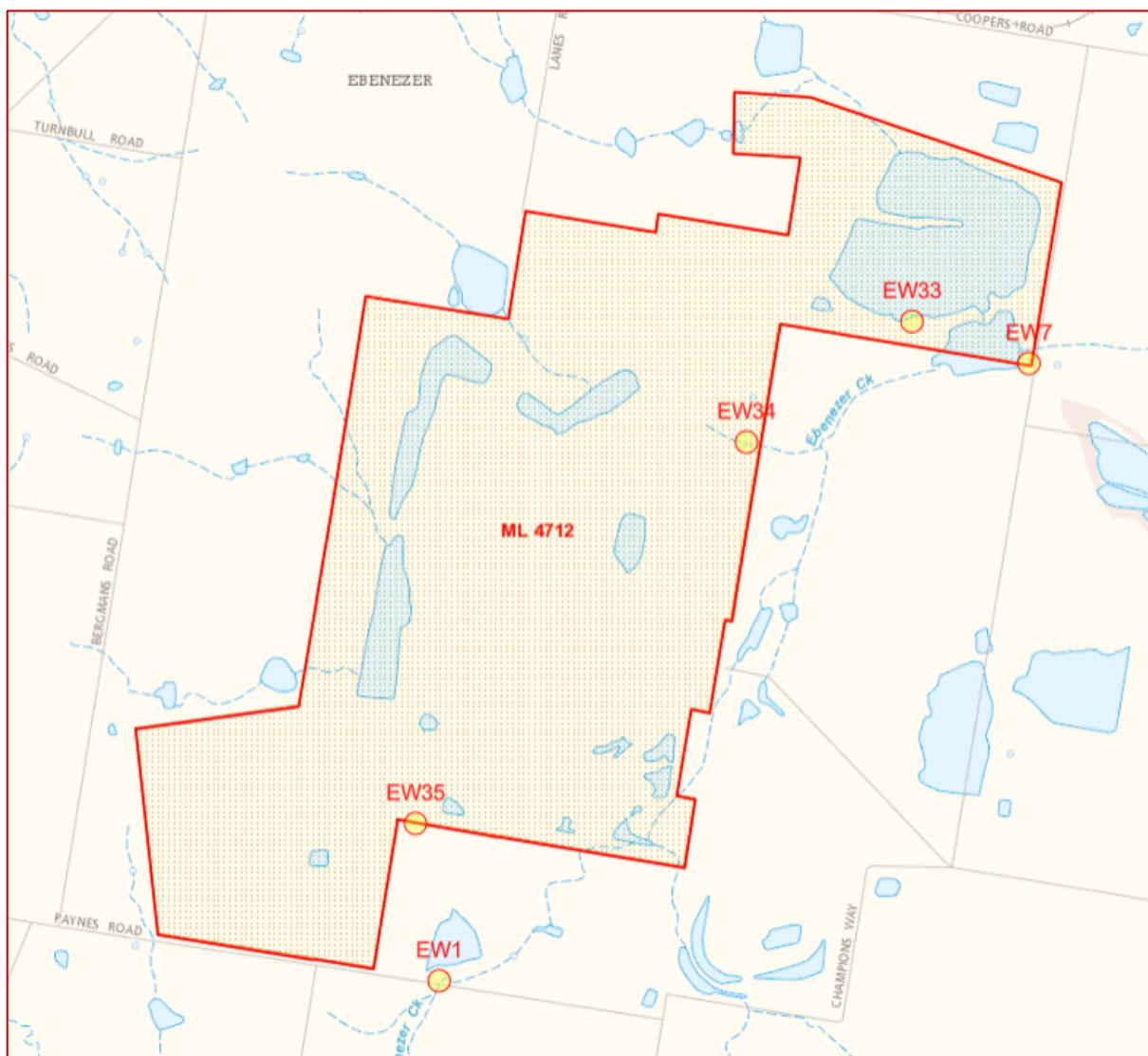


Figure 1 – Surface Water Monitoring Locations (2019 mapping)

END OF ENVIRONMENTAL AUTHORITY