

Permit

Environmental Protection Act 1994

Environmental authority EPSL00051713

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

Environmental authority number: EPSL00051713

Environmental authority holder(s)

Name(s)	Registered address
Sunstate Sands Bundaberg Pty Ltd	23 Chapman Place EAGLE FARM QLD 4009

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Non-Scheduled, Mining Activity, Mineral Development Licence - MDL	MDL145
Resource Activity, Non-Scheduled, Mining Activity, Mining Lease - ML	ML1182
Resource Activity, Non-Scheduled, Mining Activity, Mining Lease - ML	ML1183
Resource Activity, Non-Scheduled, Mining Activity, Mining Lease - ML	ML1185
Resource Activity, Non-Scheduled, Mining Activity, Mining Lease - ML	ML100242

Additional information for applicantsEnvironmentally 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.

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.

Environmental authority EPSL00051713

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.



Signature

23 September 2021

Date

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

Enquiries:
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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)

Conditions of environmental authority

With the exception of any variations, the conditions of approval for this environmental authority include standard conditions contained within the attached document(s) entitled:

- *Eligibility criteria and standard conditions for mining lease activities - Version 2* (ESR/2016/2241, version 2.00)
- *Code of environmental compliance for exploration and mineral development projects, January 2001 – Version 0* (EM588)

The **holder of this environmental authority** must take all reasonable steps to ensure the relevant activity complies with the eligibility criteria for the activity.

The environmentally relevant activity(ies) conducted at the locations as described above must be conducted in accordance with the following conditions of approval:

Schedule A General Conditions

Environmental values

- A1** The **holder of this environmental authority** must consult with the **administering authority** to determine the specific values that must be preserved within the adjacent areas identified as an **environmentally sensitive area**.

Acid sulfate soils

- A2** You must comply with the latest edition of Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines.
- A3** **Acid sulfate soils** must be managed such that contaminants are not directly or indirectly released, as a result of the **activity**, to any waters or the bed and banks of any waters.

Complaints

- A4** The **holder of this environmental authority** must record all environmental complaints received about the mining activities including:
- a) name, address and contact number for of the complainant
 - b) time and date of complaint
 - c) reasons for the complaint
 - d) investigations undertaken
 - e) conclusions formed
 - f) actions taken to resolve the complaint
 - g) any abatement measures implemented
 - h) person responsible for resolving the complaint

- A5** The **holder of this environmental authority** must, when requested by the **administering authority**, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the **administering authority** to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the **administering authority** within 10 business days of completion of the investigation, or no later than 10 business days after the end of the timeframe nominated by the **administering authority** to undertake the investigation.

Schedule B – Air

- B1** The **holder of this environmental authority** shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the mining activities do not cause exceedances of the following levels when measured at any sensitive or commercial place:
- a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with the most recent version of *Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method*.
 - b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, for no more than five exceedances recorded each year, when monitored in accordance with the most recent version of either:
 1. *Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 high volume sampler with size-selective inlet – Gravimetric method*, or
 2. *Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 low volume sampler—Gravimetric method*.
 - c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of *AS/NZS3580.9.10 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM (sub)2.5(/sub) low volume sampler—Gravimetric method*.
 - d) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of *AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method*.

Schedule C – Waste Management

- C1** All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste

Schedule D – Noise

Noise limits

D1

The **holder of this environmental authority** must ensure that noise generated by the mining activities does not cause the criteria in **Table D1 – Noise limits** to be exceeded at a **sensitive place** or **commercial place**.

Table D1 – Noise limits

Noise limits Sensitive place						
Noise level dB(A) measured as:		Monday to Saturday			Sundays and public holidays	
7am to 6pm	6pm to 10pm	10pm to 7am		9am to 6pm	6pm to 10pm	10pm to 9am
LAeq, adj, 15 mins	CV = 50 AV = 5	CV = 45 AV = 5	CV = 40 AV = 0	CV = 45 AV = 5	CV = 40 AV = 5	CV = 35 AV = 0
LA1, adj, 15 mins	CV = 55 AV = 10	CV = 50 AV = 10	CV = 45 AV = 5	CV = 50 AV = 10	CV = 45 AV = 10	CV = 40 AV = 5
Commercial place						
Noise level dB(A) measured as:		Monday to Saturday			Sundays and public holidays	
7am to 6pm	6pm to 10pm	10pm to 7am		7am to 6pm	6pm to 10pm	10pm to 7am
LAeq, adj, 15 mins	CV = 55 AV = 10	CV = 50 AV = 10	CV = 45 AV = 5	CV = 50 AV = 10	CV = 45 AV = 10	CV = 40 AV = 5

Table D1 – Noise limits notes:

1. CV = Critical Value

2. AV = Adjustment Value

3. bg = background noise level (LA90, adj, 15 mins) measured over 3-5 days at the nearest sensitive receptor

4. To calculate noise limits in Table D1:

If $bg \leq (CV - AV)$:

Noise limit = $bg + AV$

If $(CV - AV) < bg \leq CV$:

Noise limit = CV

If $bg > CV$:

Noise limit = $bg + 0$

5. In the event that measured bg (LA90, adj, 15 mins) is less than 30 dB(A), then 30 dB(A) can be substituted for the measured background level

6. If the project is unable to meet the noise limits as calculated above alternative limits may be calculated using the processes outlined in the "Planning for Noise Control" guideline.

- D2** Noise monitoring and recording must include the following descriptor characteristics and matters:
- a) LAN,T (where N equals the statistical levels of 1, 10 and 90 and T = 15 mins)
 - b) background noise LA90
 - c) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to statistical levels
 - d) atmospheric conditions including temperature, relative humidity and wind speed and directions e) effects due to any extraneous factors such as traffic noise
 - e) location, date and time of monitoring
 - f) if the complaint concerns low frequency noise, Max LpLIN,T and one third octave band measurements in dB(LIN) for centre frequencies in the 10 – 200 Hz range.

Schedule E – Water

Groundwater – ML1183

- E1** Prior to the commencement of mining activities on ML1183, the **holder of this environmental authority** must provide for conducting monitoring and keeping records of the standing water level of groundwater along the boundary of the nearest excavations adjacent to Coonarr Creek.

Groundwater – ML100242

- E2** Mining activities on ML100242 must be carried out one metre or more above the surface of the uppermost **aquifer**.
- E3** Dewatering of groundwater must not be undertaken on ML100242.
- E4** Mining activities on ML100242 must be carried out 0.5 metres or more above the **indurated** sand layer (**coffee rock**).

Groundwater monitoring

- E5** The **holder of this environmental authority** must measure and record standing groundwater levels in metres, accurate to 0.01 metres. The elevation of the reference point, relative to Australia Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.01 metres.
- E6** Monitoring and sampling must be carried out in accordance with written procedures and must address the requirements of the latest version of the following documents unless otherwise approved by the **administering authority**:
- (a) for waters and aquatic environments, *Monitoring and Sampling Manual: Environmental Protection (Water) Policy*, (Department of Environment and Science 2018);

- (b) for groundwater, *Groundwater Sampling and Analysis – A Field Guide (2009:27 GeoCat#6890.1) and Australian Standard AS/NZS 5667.11:1998 Water quality—Sampling -Part 11: Guidance on sampling of groundwaters*

E7 All determinations of groundwater level, quality and monitoring must be recorded and performed by an **appropriately qualified person**.

Groundwater Monitoring Program – ML100242

E8 The **holder of this environmental authority** must measure and record groundwater quality and levels weekly for at least one month prior to any disturbance on ML100242 to establish baseline conditions.

E9 Monitoring required by condition E8 must be undertaken in accordance with the requirements of condition E10 and E11.

E10 A groundwater monitoring system must be installed and maintained on ML100242 by an **appropriately qualified person**.

E11 The groundwater monitoring system required by condition E10 must:

- include a sufficient number of groundwater bores installed at locations and depths that yield representative groundwater levels and quality samples from the uppermost **aquifer**
- establish:
 - the depth of the uppermost aquifer at locations representative of groundwater levels beneath mining activities
 - the depth of any coffee rock at locations representative of geological conditions beneath mining activities.
 - groundwater quality at locations surrounding the activities.

E12 Groundwater quality and standing water level must be monitored on ML100242:

- at the locations specified in Table E1 – Groundwater monitoring; and
- at the frequencies specified in Table E1 – Groundwater monitoring; and
- for the quality characteristics identified in Table E1 – Groundwater monitoring.

Table E1 – Groundwater monitoring

Monitoring point	Location (GDA)	Quality characteristics	Frequency	Limits
Reference bore/s ¹	TBA ²	Standing Water Level, pH, Electrical	Monthly	N/A ³

Environmental authority EPSL00051713

TBA ²		Conductivity, Total Dissolved Solids		
Compliance bore/s	TBA ²			TBA ^{4.5}
TBA ²				

1. Reference monitoring points must:
 - a) have a similar flow regime to associated compliance monitoring points
 - b) be from the same bio-geographic and climatic region
 - c) have similar geology, ionic composition, soil types and topography
 - d) be located such that they are not affected by the mining activities
2. "TBA" means to be advised by the holder of this environmental authority via an application to amend this environmental authority to be submitted to the administering authority by <<insert 1 months from date of issue >> or 3 months prior to carrying out mining activities on ML100242, whichever comes first and is to be based on the groundwater monitoring system required by conditions E9 and E10 of this EA..
3. "N/A" means not applicable
4. "TBA" means to be advised by the holder of this environmental authority via an application to amend this environmental authority to be submitted to the administering authority and based a representative set of monitoring data collected at the site.
5. Interim limit is no deterioration of groundwater quality when compared to reference bore/s.

E13 Groundwater measured from any compliance bore specified in Table E1 – Groundwater monitoring must not exceed the corresponding limit specified in Table E1 – Groundwater monitoring.

E14 All activities on ML100242 must not cause environmental harm to any **groundwater dependant ecosystem (GDE)** located within and outside of ML100242 as indicated in Figure 1 of this environmental authority.

Water Use

E15 The **holder of this environmental authority** must not use ocean water in any process on any mining tenure included under this environmental authority.

Schedule F – Land

Location

- F1** The **holder of this environmental authority** must not carry out mining activities within:
- a) 200 metres of the high bank of Coonarr Creek; or
 - b) 50 metres of the **Burrum Coast National Park**; or
 - c) 100 metres of **Kinkuna Fish Habitat Area**
- F2** The **holder of this environmental authority** must not stockpile extracted product or overburden within 100 metres of **Burrum Coast National Park**.
- F3** The **holder of this environmental authority** must not carry out any mining activities on the foredune area within 50 metres of the western edge of stabilising Wallum vegetation on the frontal dune system along the eastern perimeter of mining leases 1182 and 1183 and ML100242.
- F4** The **holder of this environmental authority** must not carry out any mining activities on the foredune or within the **erosion prone area** on ML100242.

Rehabilitation

- F5** The **holder of this environmental authority** must;
- 1) Reprofile any disturbed dunes to match, as near as possible, their condition prior to disturbance; and
 - 2) Revegetate disturbed areas with plant species that are endemic to the surrounding natural ecosystem.
- F6** All disturbed areas must be rehabilitated as soon as practical but no longer than three (3) months after the completion of the disturbance **activity**.

Matters of State Environmental Significance – ML100242

- F7** **Significant residual impacts** to **prescribed environmental matters** are not authorised on ML100242 under this environmental authority or the *Environmental Offsets Act 2014*.
- F8** Records demonstrating that each impact to a prescribed environmental matter on ML100242 did not, or is not likely to, result in a **significant residual impact** to that matter must be:
- a) completed by an **appropriately qualified person**; and
 - b) kept for the life of this environmental authority.
- F9** An **appropriately qualified person(s)** must undertake a targeted survey prior to carrying out mining activities on ML100242 to detect the presence or absence of the Wallum froglet (*Crinia tinnula*) on ML100242.

- F10** The survey required by condition F9 must occur during suitable conditions (i.e. following suitable rainfall events and during known breeding periods) and in accordance with the most recent edition of the **administering authority's** *Target species survey guidelines: Wallum Froglet Crinia tinnula*.
- F11** Where monitoring is required by condition F9 to detect the presence of the Wallum froglet, the **holder of this environmental authority** must prepare and implement a species management plan to mitigate or minimise potential impacts of mining activities on the Wallum froglet and Wallum froglet habitat.

Definitions

Note that 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.

'acid sulfate soils' as defined in the Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines as: Acid sulfate soils (ASS): Soils, sediments or other materials containing iron sulfides and/or acidity generated by their breakdown. These materials are environmentally benign when left undisturbed in an aqueous, anoxic environment but when exposed to oxygen the iron sulfides break down, releasing large quantities of sulfuric acid and soluble iron. Both substances have considerable ability to degrade the natural and built environment, and the acid can additionally mobilise other pollutants (e.g. aluminium, lead, zinc). A more complete definition is contained in section 1.1.

'activity' means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

'administering authority' is the agency that administers the environmental authority provisions under the *Environmental Protection Act 1994*.

'appropriately qualified person' means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

'aquifer' means zones within the underlying geology of an area that are saturated with groundwater.

'Burrum Coast National Park' means an area dedicated under the *Nature Conservation Act 1992* as a national park.

'coffee rock' means a colloquial term for indurated sandy horizons that can form within mature Podzols. The sand is cemented together by iron- and aluminium-rich organic compounds washed out of surface horizons and concentrated at depth, generally at the top of the water table. Its appearance at the land surface along stretches of eroded sandy coastline has led to it being referred to as 'beach rock'.

‘commercial place’ means a workplace 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.

‘erosion prone area’ means an area declared to be an erosion prone area under section 70(1) of the *Coastal Protection Management Act 1995*.

‘environmentally sensitive areas’ refers to locations, however large or small, that have environmental values that contribute to maintaining biological diversity and integrity, have intrinsic or attributed scientific, historical or cultural heritage value, or are important in providing amenity, harmony or sense of community. Refer to Appendix 3.

‘Groundwater dependent ecosystems (GDEs)’ are ecosystems which require access to groundwater on a permanent or intermittent basis to meet all or some of their water requirements so as to maintain their communities of plants and animals, ecological processes and ecosystem services.

‘holder of this environmental authority’ means the environmental authority holder or any other works conducted by another entity on the approved leases.

‘indurated’ means in soil science, soils or sediments that have become physically compacted or chemically cemented.

‘Kinkuna fish habitat area’ as declared under the *Queensland Fisheries Act 1994* and defined in the Kinkuna Fish Habitat area outer boundary plan.

‘La 1, adj, 15 mins’ means the a-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 15-minute measurement period, using fast response.

‘prescribed environmental matters’ has the meaning in section 10 of the *Environmental Offsets Act 2014*, limited to the matters of State environmental significant listed in schedule 2 of the *Environmental Offsets Regulation 2014*.

‘sensitive place’ means:

- a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- b) a motel, hotel or hostel; or
- c) an educational institution; or
- d) a medical centre or hospital; or
- e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- f) a public park or gardens; or

g) a sensitive receptor

Note: The definition of '**sensitive place**' and '**commercial place**' is based on Schedule 1 of *Environmental Protection (Noise) Policy 2019*. That is, a sensitive place is inside or outside on a dwelling, library and educational institution, childcare or kindergarten, school or playground, hospital, surgery or other medical institution, commercial & retail activity, protected area or an area identified under a conservation plan under *Nature Conservation Act 1992* as a critical habitat or an area of major interest, marine park under *Marine Parks Act 2004*, park or garden that is outside of the mining lease and open to the public for the use other than for sport or organised entertainment. A commercial place is inside or outside a commercial or retail activity.

A mining camp (i.e., accommodation and ancillary facilities for mine employees or contractors or both, associated with the mine the subject of the environmental authority) is not a sensitive place for that mine or mining project, whether or not the mining camp is located within a mining tenement that is part of the mining project the subject of the environmental authority. For example, the mining camp might be located on neighbouring land owned or leased by the same company as one of the holders of the environmental authority for the mining project, or a related company. Accommodation for mine employees or contractors is a sensitive place if the land is held by a mining company or related company, and if occupation is restricted to the employees, contractors and their families for the particular mine or mines which are held by the same company or a related company.

For example, a township (occupied by the mine employees, contractors and their families for multiple mines that are held by different companies) would be a sensitive place, even if part or all of the township were constructed on land owned by one or more of the companies.

'**significant residual impact**' has meaning in section 8 of the *Environmental Offsets Act 2014*.

Attachments - Figure 1 – Groundwater Dependent Ecosystems and Fish Habitat Areas

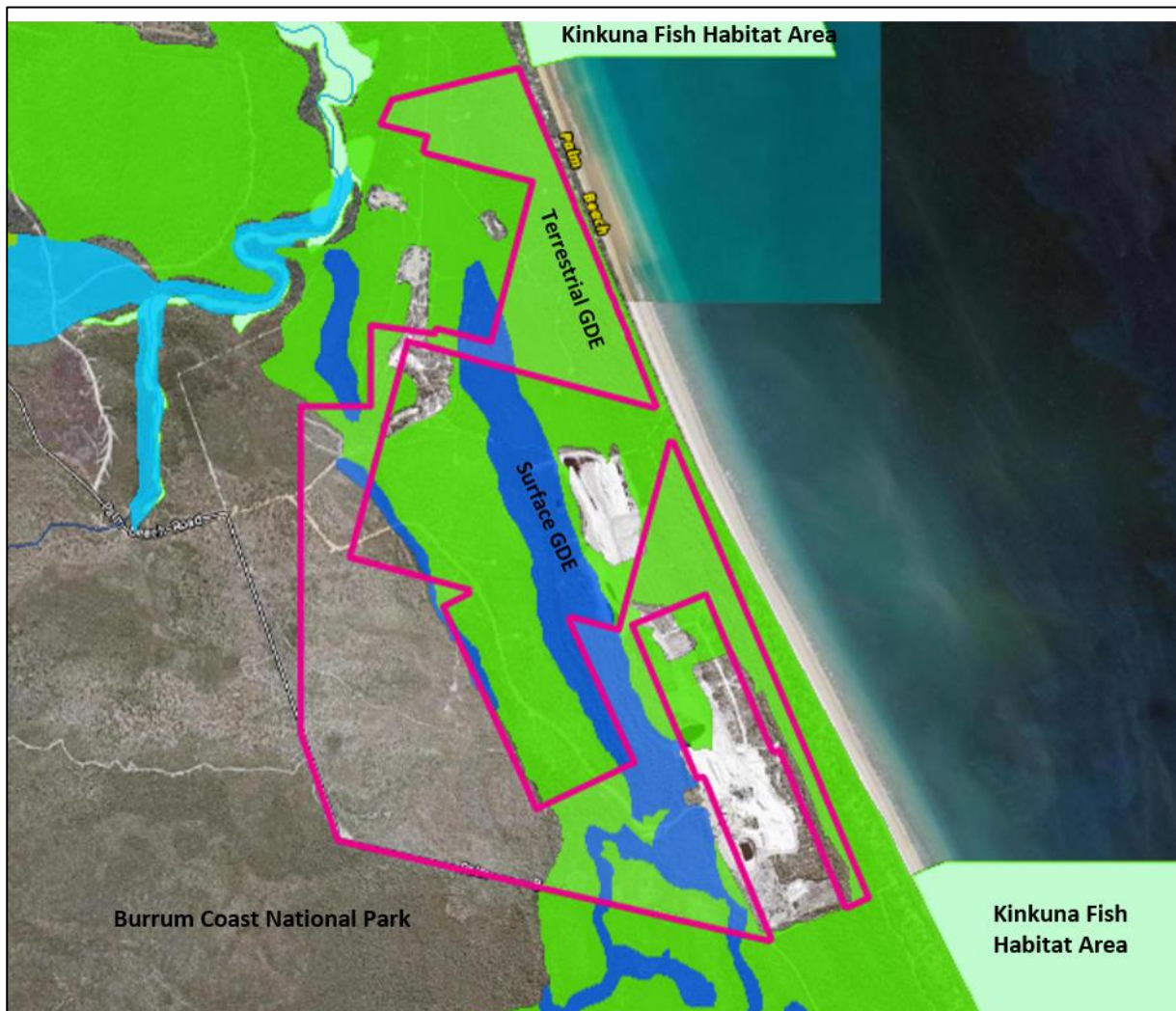


Figure 1. Groundwater Dependent Ecosystems and Fish Habitat Areas. Indicative location of ML100242 (pink outline), GDEs and Fish Habitat Areas. Surface GDEs are coloured blue. Terrestrial GDEs are coloured neon green (Source: Queensland Globe, 17 November 2020).

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